July 2024

Installation and Operation Manual

Blackmagicdesign

HyperDeck Shuttle HD



HyperDeck Shuttle HD

Languages

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Welcome

Thank you for purchasing your Blackmagic HyperDeck Shuttle HD disk recorder!

When we designed the original Blackmagic HyperDeck disk recorders we wanted to make it easier to record and play back video using fast SSD storage. Now we are excited to introduce HyperDeck Shuttle HD!

HyperDeck Shuttle HD is a small, portable HDMI video recorder designed for your desktop. A large search dial and familiar transport controls let you operate the recorder with one hand which makes HyperDeck Shuttle HD the perfect companion for live production with an ATEM Mini switcher. You can even use HyperDeck Shuttle HD as a teleprompter!

HyperDeck Shuttle HD records to SD cards or external flash disks using ProRes, DNxHD or H.264 codecs for lightning fast recording and playback.

Please check the support page at www.blackmagicdesign.com for the latest version of this manual and updates to the HyperDeck software. Keeping your software up to date will always ensure you get all the latest features. When downloading software, please register with your information so we can keep you updated when new software is released. We are constantly working on new features and improvements, so we would love to hear from you!



Grant Petty
CEO Blackmagic Design

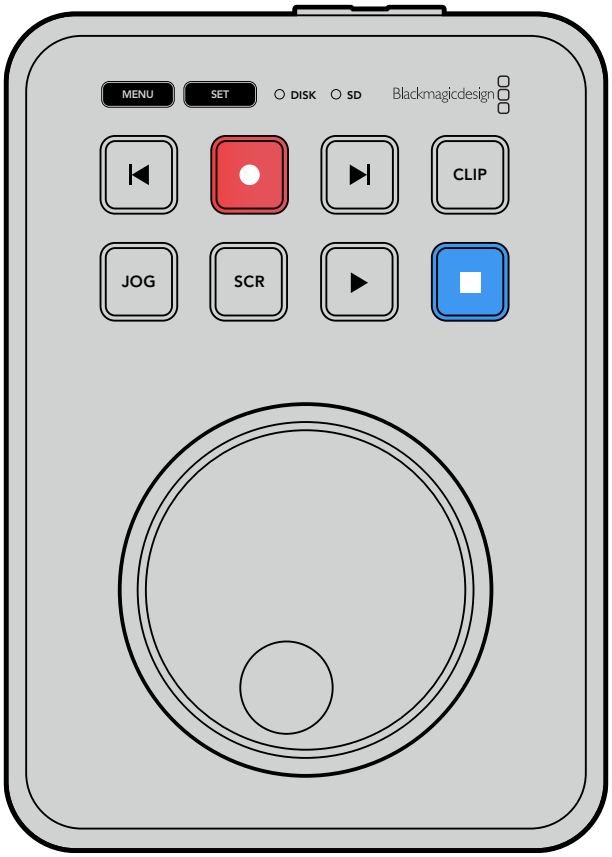
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Getting Started

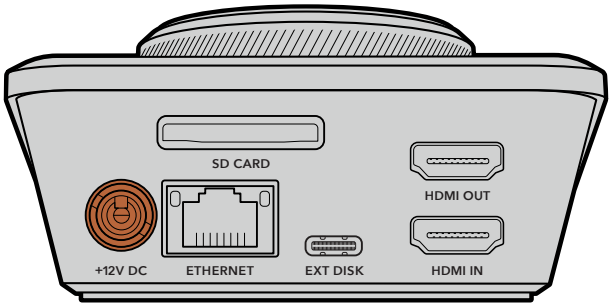
Getting started with your HyperDeck Shuttle HD is as easy as connecting power, plugging in an HDMI video source, inserting an SD card or external media, then pressing record!

This section of the manual shows how to get started using your HyperDeck Shuttle HD.



Plugging in Power

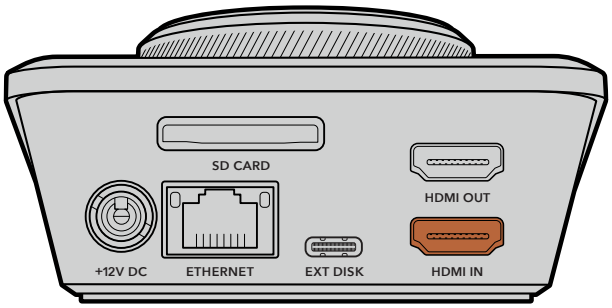
To power your HyperDeck Shuttle HD, plug the supplied power adapter into the power input on the rear panel. Tightening the locking ring secures the power cable to prevent accidental disconnection.



Secure the power adapter into HyperDeck Shuttle HD's power input

Connecting Video and Audio

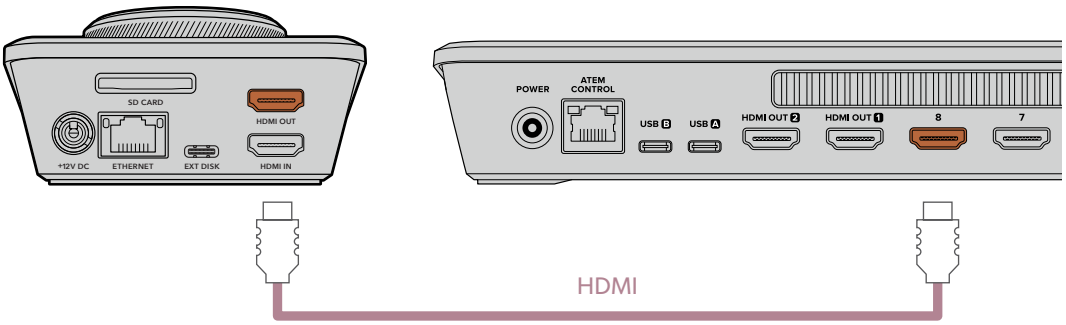
To connect video to your HyperDeck Shuttle HD, plug an HDMI video source into the HDMI input on the rear panel.



Connect your destination equipment to the HDMI output. For example, an ATEM Mini switcher or an HDMI television.

The HDMI output is also used to view the settings menu when changing settings for your HyperDeck. This is because the settings menu is viewed via video overlay on the HDMI output. More information about the menu settings can be found in the ‘changing settings’ section later in this manual.

TIP If you cannot see your input video source on the connected display, you may be in playback mode. Press the record button to enable record mode.



Plug the HDMI output into your destination equipment, such as an HDMI television or ATEM Mini switcher

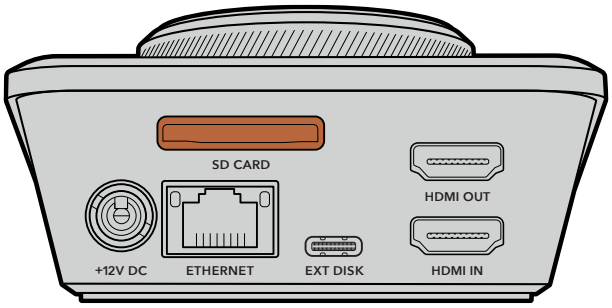
Plugging in Media

All HyperDeck Shuttle HD disk recorders ship ready to record immediately without having to configure any settings. All you need is a formatted SD card or external disk.

You can easily format media via the menu settings. You can also format using a computer. Refer to the ‘formatting media’ section in this manual for more information. You can also find information about the types of media that are best for recording video and a list of recommended SD cards and external disks.

To plug in an SD card:

1 Hold the SD card with the gold connectors facing up and align it with the media slot. Now gently push the card into the slot until you feel it lock firmly into place.



2 Your HyperDeck will verify the SD card. This is shown by an illuminated green SD indicator on the top of the HyperDeck Shuttle HD. Once verified, the indicator will turn off.



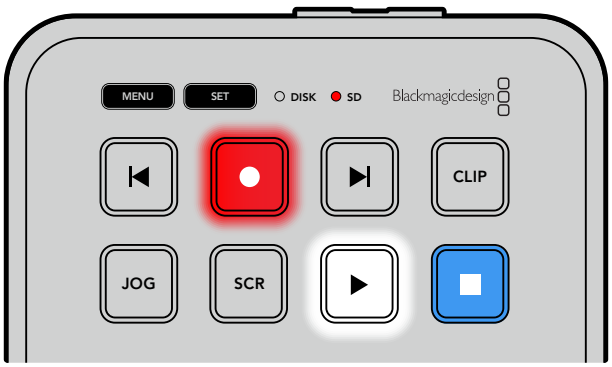
That's all there is to getting started and your HyperDeck Shuttle HD is now ready for recording and playback!

Keep reading this manual for detailed information about how to record and play back clips, change settings, and much more.

Recording Video

After confirming that your video source is displayed on the HDMI destination equipment, you can start recording straight away!

To start recording, press the record button. When recording to an SD card, the SD indicator will illuminate red and the record and play buttons will also illuminate. When recording to an external disk, the disk indicator will illuminate red.



To finish recording, press the stop button.

Playback

Press the ‘play’ button to start playback. During playback, the play button will illuminate and the ‘disk’ or ‘SD’ media slot indicator will illuminate green.

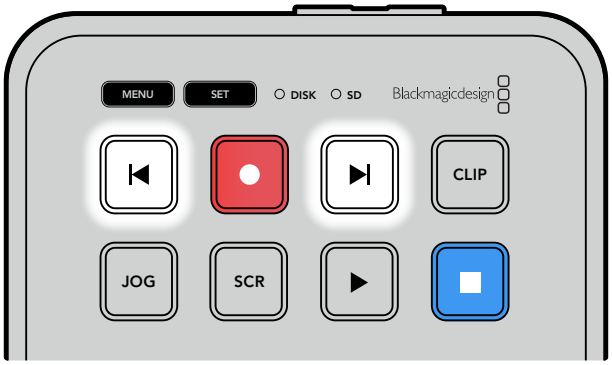
If there are multiple clips that have been recorded, you can quickly move through them by pressing the forward and backward skip buttons.



Using the Skip Buttons

Press the backward skip button to cue the clip at the start. Pressing more than once will move back through previously recorded clips.

Press the forward skip button to move forward through your clips. The skip buttons will also flash when the ‘identify HyperDeck’ checkbox is selected using HyperDeck Setup utility.



Use the forward and backward skip buttons to cue to the start of each clip

TIP To play back video files on your HyperDeck, you will need to set the codec to match the codec used to record the files. You can do this using the menu. Refer to the ‘changing settings’ section later in this manual for more information.

Looping Clips

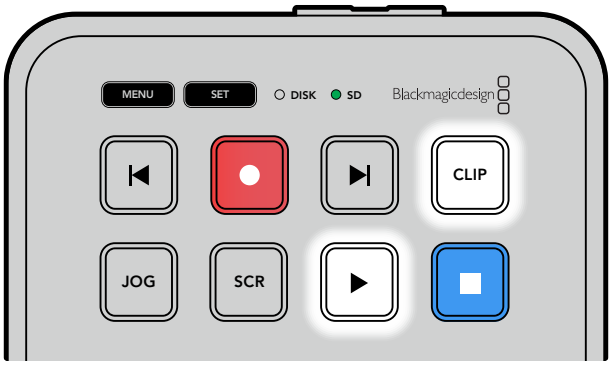
During playback, pressing the ‘play’ button again will set your HyperDeck Shuttle HD to loop all clips until you press the ‘stop’ button.

If you want to loop a single clip, set your HyperDeck to ‘clip’ mode and press the ‘play’ button once to play and again to loop.

Loop all clips	During playback, press the ‘play’ button a second time to loop all recorded clips
Loop current clip	When in clip mode, press the ‘play’ button a second time to loop the current clip

Clip Mode

Clip mode lets you limit playback to a single clip. For example, with clip mode enabled you can shuttle or skip to a clip and then press play knowing that playback will stop when the clip ends.



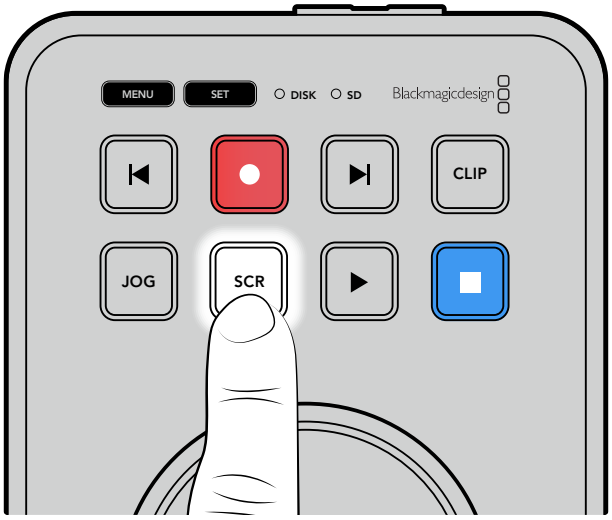
When clip mode is selected, pressing play a second time will loop the current clip

Using the Search Dial

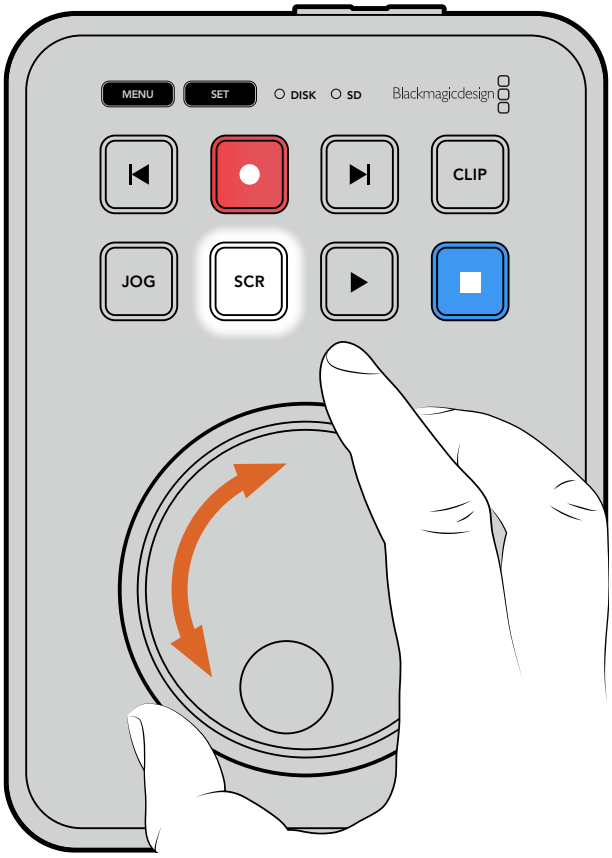
The search dial provides a fast way to move through your clips and select specific moments to play, or review them frame by frame. This can be important if you need to locate a specific moment by visually monitoring the clip as you turn the dial. It is also helpful for parking the playhead at a specific cue point, ready for the clip to be rolled to air during a live broadcast.

Search dial modes include Jog, Scroll and Shuttle.

JOG	**Jog**	Plays through the clip frame by frame allowing precise control.
SCR	**Scroll**	Scroll mode lets you quickly move forwards and backwards through all your recorded media. As you turn the search dial, scroll is locked to your movement so you have total control over where to position playback. The scroll button will also bring up the volume navigation window which shows you the file path of the video that you are currently playing. More information about the volume navigation function can be found in the ‘volume navigation’ section later in this manual.
JOG SCR	**Shuttle**	Press the ‘jog’ and ‘scr’ buttons simultaneously to enter shuttle mode. Once in shuttle mode you can rewind or fast forward through your media by turning the dial left or right. As you turn the dial, the media will shuttle faster until you reach the maximum speed of x50. To slow the shuttle speed to a stop, turn the dial back to the start position. To stop at a specific point during shuttle, press the stop button, or press play to resume playback at the current position. It’s worth noting the maximum shuttle speed can be lowered using the setup menu. For more information, see the ‘Settings’ section later in this manual.



Press the dedicated ‘JOG’ or ‘SCR’ buttons
to select jog and scroll search modes



Once a search mode is selected, turn the search dial

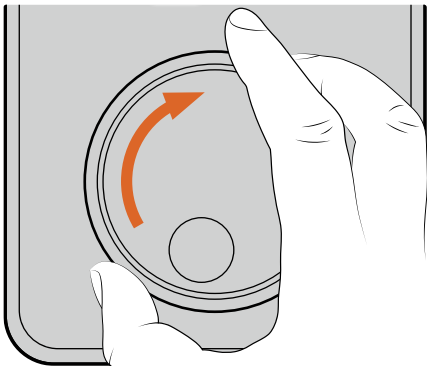
TIP To resume normal playback, press the ‘play’ or ‘stop’ button.

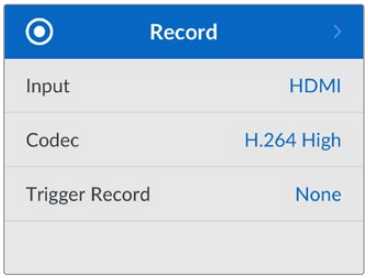
Changing Settings

Pressing the ‘menu’ button will open the settings menu, which will appear as a video overlay on the bottom left corner of your connected HDMI display.

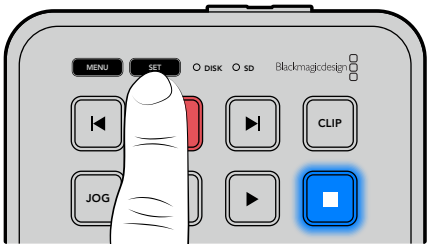


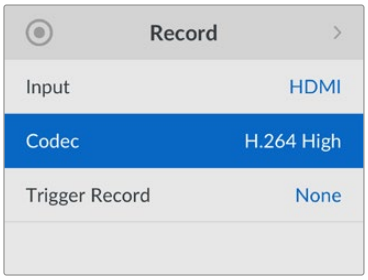
Press the menu button to open the settings menu





Use the search dial to navigate to the submenu or setting





Press the ‘set’ button to select the submenu or setting

Adjust settings using the search dial or the forward and backward skip buttons. Confirm the selection by pressing the ‘set’ button.

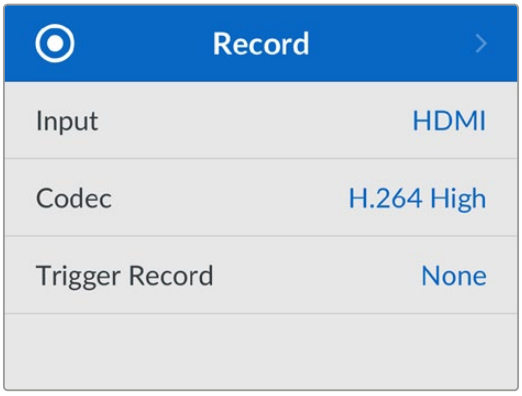
To leave the menu, press ‘menu’ to step back through the options and return to the home screen.

TIP You can position the menu to any of the four corners of your display using the setup menu. We recommend turning the menu off when you have finished changing settings to make sure the HDMI output is a clean feed when connected to an HDMI switcher, such as ATEM Mini Extreme.

Settings

The settings menu is arranged into 5 distinct categories, including record, monitor, audio, storage and setup. Each of these submenus contain related settings, most of which can be adjusted using the HyperDeck Shuttle HD control panel. Some settings are display only and will appear greyed out, for instance, filename prefix. In this case, the setting can be adjusted via the HyperDeck Setup utility.

Record Menu



Input

Displays the HyperDeck Shuttle HD HDMI input.

Codec

HyperDeck Shuttle HD can record compressed video using H.264, Apple ProRes and DNxHD codecs. To use the teleprompter function, select ‘teleprompter’.

Trigger Record

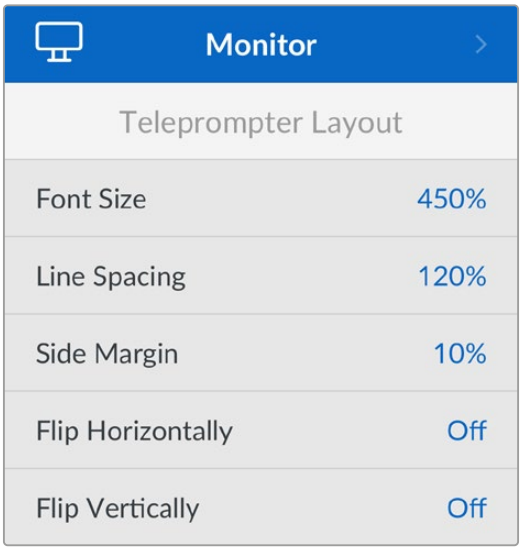
There are two trigger record modes available, including video start/stop and timecode run.

Some cameras, such as Blackmagic Pocket Cinema Camera 4K, send a signal over HDMI to start and stop recording on external recorders. Selecting ‘video start/stop’ will trigger the HyperDeck to start or stop recording when the record button is pressed on the camera.

Use the ‘timecode’ run option to trigger the unit to start recording when it receives a valid timecode signal via the HDMI input. When the signal stops, recording will also stop. Disable trigger recording by selecting the ‘none’ option.

NOTE When recording from an HDMI camera, make sure the output is clean with overlays turned off as any overlays that are present in your camera’s video output will be recorded with your image.

Monitor Menu



Teleprompter Layout

The monitor menu contains all the settings for when using HyperDeck Shuttle HD as a teleprompter.

Font Size

Adjust the size of the text by selecting the font size option and pressing set. Turn the dial clockwise to increase, or counterclockwise to decrease.

Line spacing

Turn the dial to increase or decrease the line spacing.

Side Margin

Adjust the widths of the side margins on both sides of the teleprompter display.

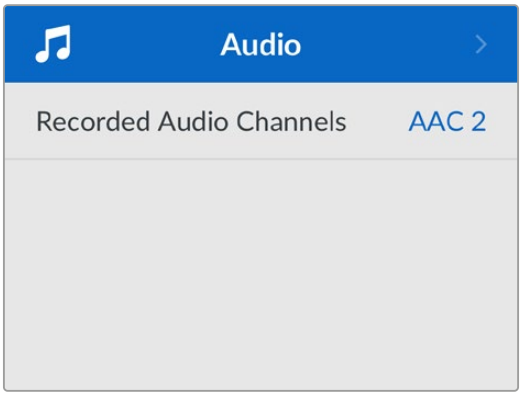
Flip

If your teleprompter monitor is set up to reflect onto glass, such as in front or a camera or at a speakers podium, you will need to use the flip settings to make it readable for the presenter. There are two flip modes available:

Flip Horizontally - Use this when the bottom of the teleprompter monitor is mounted closest to the base of the glass.

Flip Vertically - Use this when the bottom of the teleprompter monitor is mounted away from the base of the glass.

Audio Menu



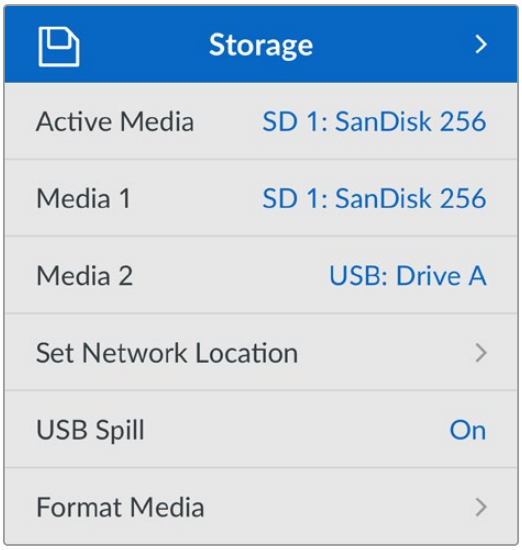
Recorded Audio Channels

HyperDeck Shuttle HD can record up to 8 channels of PCM audio at a time. To select the number of channels to record, expand the recorded audio channels list and select 2, 4 or 8 channels.

If the codec is set to H.264, you can also select 2 channels of AAC audio so you can upload recordings directly to YouTube.

Storage Menu

Connected media will appear in the storage settings. Media 1 will list the name of the connected SD card and media 2 will display any USB flash disk plugged into to the ext disk connector. When using a USB hub, such as Blackmagic MultiDock 10G, the active disk is displayed.



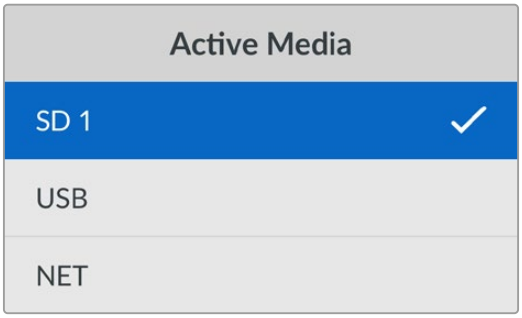
Active Media

When using HyperDeck Shuttle you can connect one SD card, multiple external drives and network storage all at once. This means you can access terabytes of recording space all from the one HyperDeck Shuttle disk recorder!

If you only have a single SD card or drive connected, it is your active media for all playback and recording. If you are using more than one you can select which one you want to use for recording and playback.

Selecting your active media:

1. Using the search dial, highlight ‘active media’ in the storage menu and press the flashing set button.
2. Attached media will appear in the list. Using the search dial select the media you want to record to.

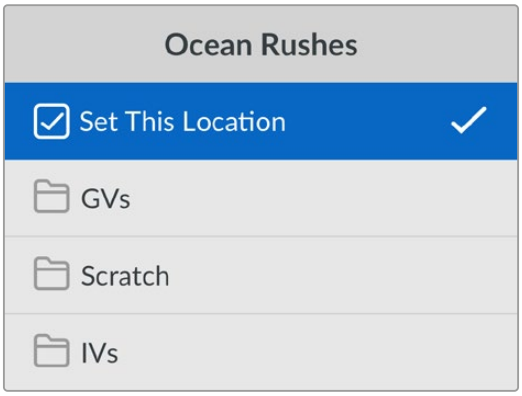


Set Network Location

HyperDeck Shuttle can play HD media from Blackmagic Cloud and other network access storage via Ethernet.

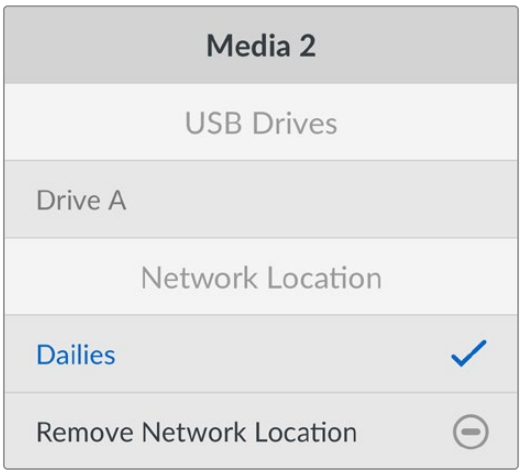
To connect to a network storage folder:

1. Using the search dial and set button, select ‘set network location’. A local network search dialog will appear.
2. Any servers found on your local network will appear in a list. Highlight the server name using the search dial and press ‘set’ to select. A list of available shares on the server will appear. Using the search dial highlight the share you want to select and press ‘set’ and continue until the folder you want to use is displayed at the top of the screen.
3. The folder name will now appear at the top of the LCD screen. To select this folder for recording and playback use the search dial to select ‘set this location’ and press set. A tick will appear to the right.



4. Once connected, the location will appear in the media 2 storage list under network locations.

The second media slot on HyperDeck Shuttle disk recorders is allocated for both USB and connected network folders. To select between connected USB drives and network storage, select ‘media 2’ from the storage media menu and press the flashing ‘set’ button. From the media 2 list select the storage you want to use and press set button. You will now be returned to the storage menu. You can also remove network storage using the media 2 menu and selecting ‘remove network location’ at the bottom of the menu.



NOTE When playing from a network volume, HyperDeck Shuttle HD assumes guest login on the server. Server access that requires a login and password is not currently supported using the menu and set buttons but you can enter credentials using HyperDeck Ethernet Protocol.

USB Spill

If you are using a Blackmagic MultiDock 10G or similar to connect more than one drive via the ‘ext disk’ usb connection, turning USB spill on will ensure that recording will spill from one external disk to the next.

Format Media

SD cards and media connected via the rear ext disk connection can be formatted directly on the unit or via a Mac or Windows computer.

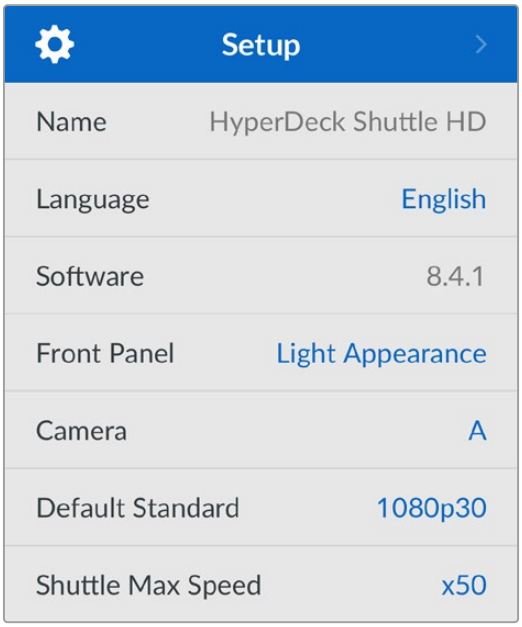
Preparing Media on HyperDeck Shuttle HD:

1. Using the search dial and set button, select format media.
2. Select the media to format from the list and press set.
3. Choose the format and press set.
4. A confirmation window will appear detailing which card is to be formatted and the selected format option. Select format.
5. A formatting window will appear once completed. Select OK.

HFS+ is also known as Mac OS X Extended and is the recommended format as it supports ‘journaling’. Data on journaled media is more likely to be recovered in the rare event that your storage media becomes corrupted. HFS+ is natively supported by Mac. exFAT is supported natively by Mac and Windows without needing any additional software but does not support journaling. To format media on a Mac or Windows computer, refer to the ‘formatting media’ section.

Setup Menu

The setup menu contains settings including language selection and default standard as well as sections for the menu display, network settings and timecode options.



Name

When more than one HyperDeck Shuttle HD is on the network, you may wish to give them discrete names to help identify the different units. This can be done via Blackmagic HyperDeck Setup or Blackmagic HyperDeck Ethernet Protocol using a terminal application. The name will appear in the setup menu.

Language

HyperDeck Shuttle HD supports 13 languages, including English, Chinese, Japanese, Korean, Spanish, German, French, Russian, Italian, Portuguese, Turkish, Ukrainian and Polish.

To select the language:

1. Once the setup menu is highlighted, press set.
2. Scroll the search dial down to select language and press set.
3. Use the search dial to select the language and press set. Once selected you will automatically return to the setup menu.

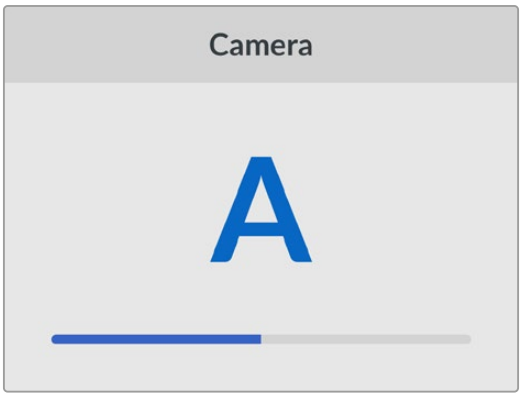
Software

Displays the current software version.

Camera

This setting is helpful when using HyperDeck to record ISO files from multiple cameras and then editing them on a multicamera timeline in DaVinci Resolve.

Each individual camera identification letter will appear in the files' metadata, allowing DaVinci Resolve to identify each angle easily when using the sync bin feature.



Assign your camera using characters 1–20 or A-Z

Default Standard

Sometimes the HyperDeck Shuttle HD does not know what video standard you want to use. This setting will let the HyperDeck know the video standard you want to use most of the time.

A good example is if you have turned on a HyperDeck Shuttle HD, it has no video input connected and you insert a disk with files on it with 2 different video standards. Which video standard should the HyperDeck play? The default video standard will give it an indication which video standard you prefer and it will switch to that format and play those files.

The default video standard is also useful when you first turn on a HyperDeck Shuttle HD and it has no video input and no media disk inserted. In this case, the HyperDeck does not know which video standard to use for the monitoring output. The default video standard will guide it on what to do.

However, the default video standard is only a guide. It won't override anything. So if you had a media disk with only 1 type of video file on it and you press play, the HyperDeck disk recorder will switch to that video standard and play. It will ignore the default video standard because it's obvious you just want to play the files on the disk.

It's a similar situation with recording. If you press record, the HyperDeck will just record whatever video standard is connected to the video input. Plus, once you have done the recording, the HyperDeck Shuttle HD will playback the same video standard files on the disk, even if there are other files on the disk that match the default video standard. It's assumed you want to playback the same video standard as you just recorded. If you unplug the media disk and plug it back in again, only then will the default video standard be used to choose which type of files to play back.

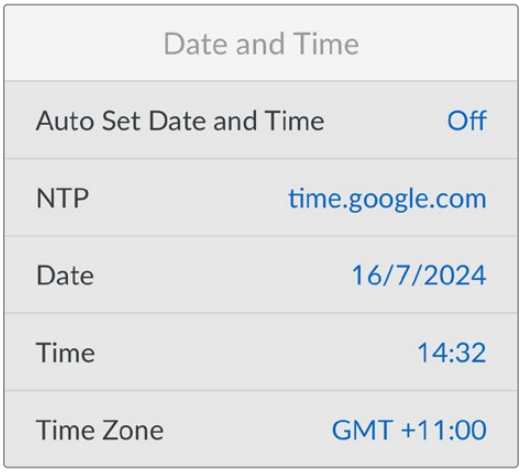
The default video standard is only a guide to help the HyperDeck Shuttle HD make decisions about what to do when it's not sure. It's not an override that forces the deck to behave in any specific way.

Shuttle Max Speed

The maximum shuttle speed on HyperDeck Shuttle HD is x50 speed. If you want to reduce this speed, you can select from one of the other speed presets.

Date and Time

Setting the date and time correctly ensures your HyperDeck Shuttle has the same time and date information as your network and also prevents conflicts that can occur with some network systems.



Auto Set Date and Time

To set your date and time automatically select set the auto set date and time option to 'on'. When setting the date and time automatically, the HyperDeck will use the network time protocol server set in the NTP field. To override the date and time manually, select 'off'.

NTP

The default NTP server is time.cloudflare.com, but you can also manually enter an alternate NTP server using HyperDeck Setup. For more information on setting the NTP server, refer to HyperDeck Setup later in this manual.

Date

To enter the date manually, select the date field and press set. Using the menu dial you can select the day, month and year.

Time

To adjust the time, select time and press set. Use the menu dial to adjust the hours and minutes. The internal clock is a 24 hour clock.

Menu Settings

Using the menu settings you can adjust the location and appearance of the menu on the connected HDMI display.



Appearance

Set your HyperDeck's onscreen menu to dark or light mode. Light mode will offer more contrast when media is dark, or when you are in teleprompter mode.





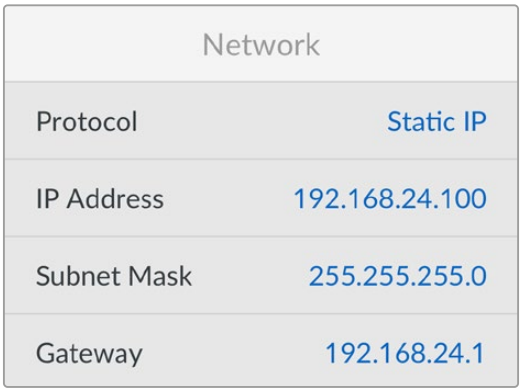
Opacity

Adjust the levels to reduce the opacity of the menu overlay on the connected display from the default 100% to 20%.

Position

The menu overlay will default to the bottom left hand corner of the screen. To move the menu to a different location, select 'position' and press the 'set' button. Now you can select the top left, top right, bottom left or bottom right corner of the screen.

Network Settings



Protocol

Blackmagic HyperDeck is shipped set to DHCP, so once connected, your network server will automatically assign an IP address and no other network settings will need to be adjusted. If you need to set a manual address, you can connect via a static IP.

With ‘protocol’ selected press the ‘set’ button to access the menu, scroll to ‘Static IP’ and press ‘set’.

IP Address, Subnet Mask, Gateway, Primary DNS and Secondary DNS

Once Static IP is selected, you can enter your network details manually.

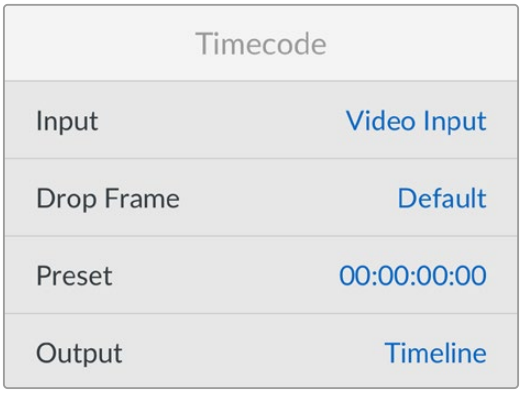
To change the IP address:

1. Use the search dial to highlight ‘IP address’ and press the ‘set’ button on your HyperDeck’s control panel.
2. Using the search dial, adjust the IP address, rotate the search dial to adjust your IP address, pressing ‘set’ to confirm before adjusting the next set of values.
3. Press ‘set’ to confirm the change and move to the next value.

When you have finished entering your IP address, you can repeat these steps to adjust the Subnet Mask and Gateway. Once finished, press the ‘menu’ button to exit and return to the home screen.

Timecode Settings

Set your timecode input and output options, including choosing between recording the source timecode, time of day timecode or setting your timecode manually.



Input

There are four timecode input options available when recording.

Video Input	Selecting video input will take the embedded timecode from HDMI sources with SMPTE RP 188 metadata. This will maintain sync between your HDMI source and the file recorded on the HyperDeck Shuttle HD.
Internal	Use this option to record time of day timecode via the built in timecode generator.
Last Clip Regen	By selecting ‘last clip regen’ for your timecode input, each file will start one frame after the last frame of the previous clip. For example, if your first clip ends on 10:28:30:10, the next clip timecode will start at 10:28:30:11.
Preset	If you want to set a timecode manually, select the preset option. Recorded clips will start at the timecode set via the ‘preset’ setting as shown later in this section.

Drop Frame

For NTSC sources at frame rates of 29.97 or 59.94, you can select ‘drop frame’ or ‘non-drop frame’ timecode. If the source is unknown, select ‘default’. This will maintain the standard of the input, or default to drop frame if there is no valid timecode.

Preset

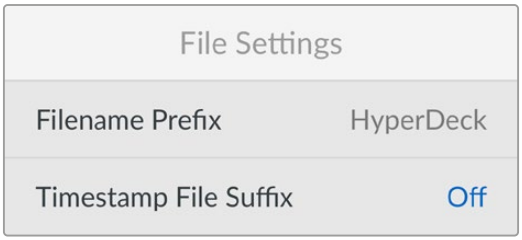
You can set your timecode manually by pressing the set button and entering the start timecode using the search dial and set button. Make sure the ‘preset’ option is selected under the input menu.

Output

Select your timecode options for your outputs.

Timeline	To output a continuous timecode for all clips recorded on a card or drive, select timeline.
Clip	Selecting the clip option will output the timecode of each individual clip.

File Settings



Filename Prefix

When first set up, your HyperDeck Shuttle HD will record clips to your SD Card or USB flash disk using the following filename convention.

HyperDeck_0001	
HyperDeck_0001	**Prefix**
HyperDeck_**0001**	**Clip Number**

You can change the filename prefix via the HyperDeck Setup utility. For more information, refer to ‘Blackmagic HyperDeck Setup’ later in this manual.

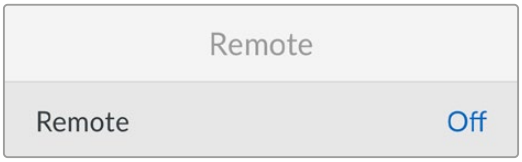
Timestamp File Suffix

The timestamp added to the filename is turned off by default. If you would like the date and time recorded in your filename, toggle the 'timestamp file suffix' option to on.

HyperDeck_2201061438_0001	
HyperDeck_2201061438_0001	**Filename Prefix**
HyperDeck_**22**01061438_0001	**Year**
HyperDeck_22**01**061438_0001	**Month**
HyperDeck_2201**06**1438_0001	**Day**
HyperDeck_220106**14**38_0001	**Hour**
HyperDeck_22010614**38**_0001	**Minute**
HyperDeck_2201061438_**0001**	**Clip Number**

Remote Settings

The remote setting lets the HyperDeck be controlled remotely by other video equipment, for example an ATEM Mini Extreme switcher.



Remote

Select 'remote' to enable remote control via Ethernet. Deselect remote to control the unit locally.

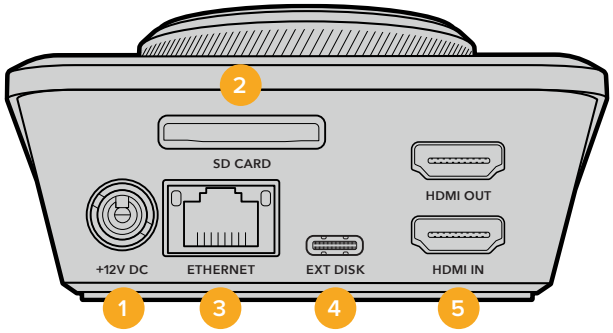
Reset Settings



Factory Reset

Highlight 'factory reset' in the setup menu to restore your HyperDeck to factory settings. Once you press 'set', you will be prompted to confirm your selection.

Rear Panel



1 Power

HyperDeck Shuttle HD is powered via an AC plug pack. The supplied power cable included features a locking connector to prevent disconnection, but you can also use any 36W 12V power cable to power the HyperDeck Shuttle HD.

2 SD Card

Insert SD cards into the slot for recording and playback.

3 Ethernet

The Ethernet port lets you connect to your network for recording to network storage, fast ftp transfers and http transfers via the web media manager. In addition you can remotely control the unit using REST API or the HyperDeck Ethernet Protocol. For more details on transferring files via the web media manager or an FTP client, see the ‘transferring files over a network’ section later in this manual.

When connected to the same network shared with an ATEM switcher, you can also control your HyperDeck using the ATEM switcher or an ATEM hardware panel.

4 Ext Disk

Connect a flash disk to the USB-C connector so you can record to external disks at up to 5Gb/s. You can also connect to multi port USB-C hubs or Blackmagic MultiDock 10G to connect one or multiple SSDs.

5 HDMI

Connect the HDMI output to HDMI televisions, monitors or even a switcher, such as ATEM Mini Extreme. The HDMI output is also used to view the menu overlay.

Storage Media

SD Card

For high quality HD recording we recommend high speed UHS-I SD cards. These cards need to be capable of write speeds above 220MB/s for recording up to Ultra HD 2160p60.

However, if you are recording at a lower bit rate with higher compression you might be able to use slower cards. Generally, the faster the cards the better.

It's worth regularly checking the latest version of this manual for more up to date information and can always be downloaded from the Blackmagic Design website at www.blackmagicdesign.com/support

What SD cards should I use with HyperDeck Shuttle HD?

The following SD Cards are recommended for 1080p up to 60 fps:

Brand	Model	Capacity
Angelbird	AV PRO SD UHS-II 300MB/s V90 SDXC	256GB
Angelbird	AV PRO SD UHS-II 260MB/s V60 SDXC	128GB
Angelbird	AV PRO SD UHS-II 260MB/s V60 SDXC	64GB
SanDisk	Extreme Pro UHS-I 95MB/s SDXC	64GB
Wise	SD2-64U3 UHS-II 285MB/s SDXC	64GB
Lexar	Professional 1000x UHS-II 150MB/s SDXC	128GB
SONY	Tough SF-G128T	128GB
Kingston	CANVAS GO! Plus 170MB/s V30	64GB
Kingston	CANVAS GO! Plus 170MB/s V30	128GB
Kingston	CANVAS GO! Plus 170MB/s V30	512GB
ProGrade Digital	SDXC UHS-II V90 300R	64GB
ProGrade Digital	SDXC UHS-II V90 300R	128GB
SONY	Tough SF-G64T UHS-II SDXC	64GB
Delkin Devices	Black UHS-II V90 SDXC	256GB
Delkin Devices	Power UHS-II V90 SDXC	128GB
Delkin Devices	Power UHS-II V90 SDXC	256GB
Delkin Devices	Black UHS-II V90 SDXC	128GB
Exascend	Essential SDXC UHS-II V90 R 300MB/s	64GB
Exascend	Essential SDXC UHS-II V90 R 300MB/s	128GB
Exascend	Catalyst SDXC UHS-II V90 R 300MB/s	64GB

EXT Disk

All HyperDeck models can record directly to USB-C flash disks. These fast, high capacity drives allow you to record video for long periods. You can then connect the flash disk to your computer and edit directly from them!

For even higher storage capacities, you can connect a USB-C dock or external hard drive. To connect your Blackmagic MultiDock 10G or USB-C flash disk, connect a cable from your USB-C connected device to the 'ext disk' port on the rear panel of your HyperDeck.

What USB-C drives should I use with HyperDeck Shuttle HD?

The following USB-C drives are recommended for 1080p ProRes HQ at up to 60 fps:

Brand	Model	Capacity
Wise	PTS-256 Portable SSD 4K	256GB
OWC	Envoy Pro Ex	240GB
BUFFALO	SSD-PHE500U3-BA	500GB

The following USB-C drives are recommended for 1080p ProRes HQ at up to 60 fps:

Brand	Model	Capacity
OWC	Envoy Pro Ex	240GB

The following USB-C drives are recommended for 1080p H.264 at up to 60 fps:

Brand	Model	Capacity
OWC	Envoy Pro Ex	240GB

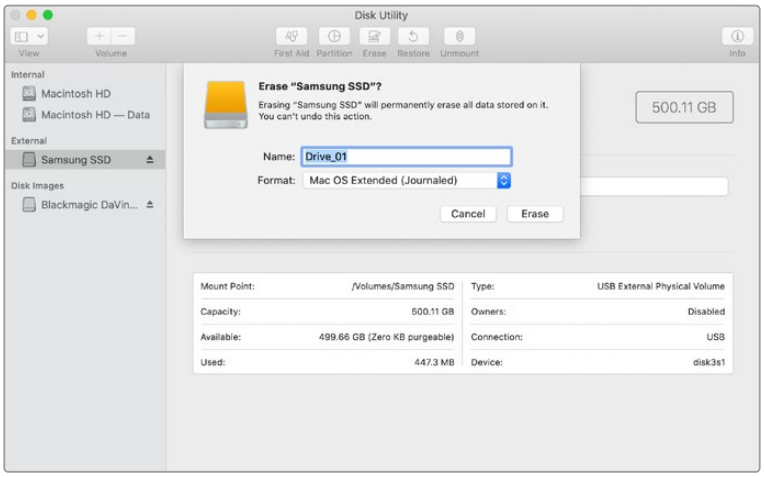
Formatting Media

Formatting Media on a Mac Computer

The Disk Utility application included with Mac can format a drive in the HFS+ or exFAT formats.

Make sure you back up anything important from your disk as you will lose everything on it when it is formatted.

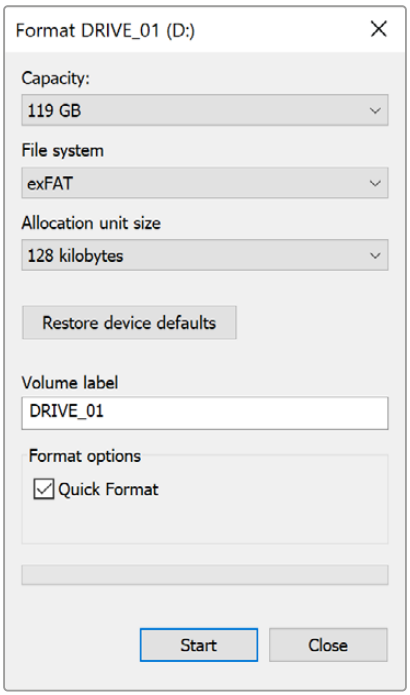
1. Connect a USB flash disk to your computer with an external dock or cable adapter and dismiss any message offering to use your SSD for Time Machine backups. For SD cards, connect it to your computer via an external card reader.
2. Go to applications/utilities and launch Disk Utility.
3. Click on the disk icon of your SD card or USB flash disk and then click the erase tab.
4. Set the format to Mac OS Extended (Journaled) or exFAT.
5. Type a name for the new volume and then click erase. Your media will quickly be formatted and made ready for use with HyperDeck.



Formatting Media on a Windows computer

The format dialog box can format a drive in the exFAT format on a Windows PC. Make sure you back up anything important from your SSD or SD card as you will lose everything on it when it is formatted.

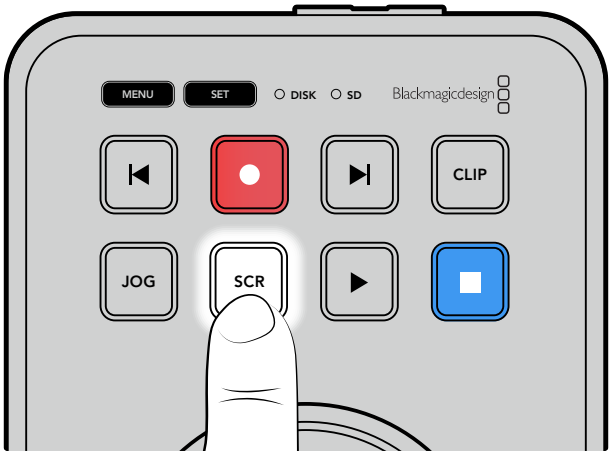
1. Connect a USB flash disk to your computer with an external dock or cable adapter. For SD cards, connect it to your computer via an external card reader.
2. Open the start menu or start screen and choose computer. Right-click on your USB flash disk or SD card.
3. From the contextual menu, choose format.
4. Set the file system to exFAT and the allocation unit size to 128 kilobytes.
5. Type a volume label, select quick format and click Start.
6. Your media will quickly be formatted and made ready for use with HyperDeck.



Volume Navigation

Volume navigation lets you open a file path overlay so you can locate clips on media cards, disks and network drives. When enabled, the overlay appears on the HDMI output and you can then navigate through directories using the scroll button, clip button and jog wheel.

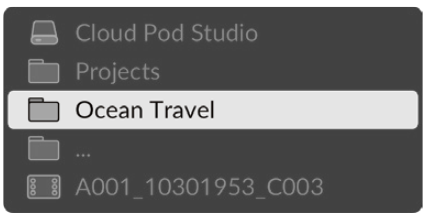
1 Open the volume navigation window by pressing the scroll button marked SCR.





Press the scroll button to open the volume navigation window on the HDMI output

2 Scrub or skip through the footage on display until you find a clip from the folder you are interested in.



3 Press the scroll button to move down through the volumes and the clip button to move up.

To close the volume navigation window press the stop button, or press ‘play’ to close the window and immediately start playback.

NOTE To view clips that were recorded using a different codec, resolution or frame rate, set your HyperDeck’s codec and default standard to match.

Using the Teleprompter Function

Using a standard RTF or plain TXT file, you can use Blackmagic HyperDeck Shuttle HD as a teleprompter. Create your file in TextEdit or WordPad and save as a rich text format or plain text file in any of the 13 supported languages. Once opened with HyperDeck Shuttle HD, you can adjust the font size and line spacing of your script.

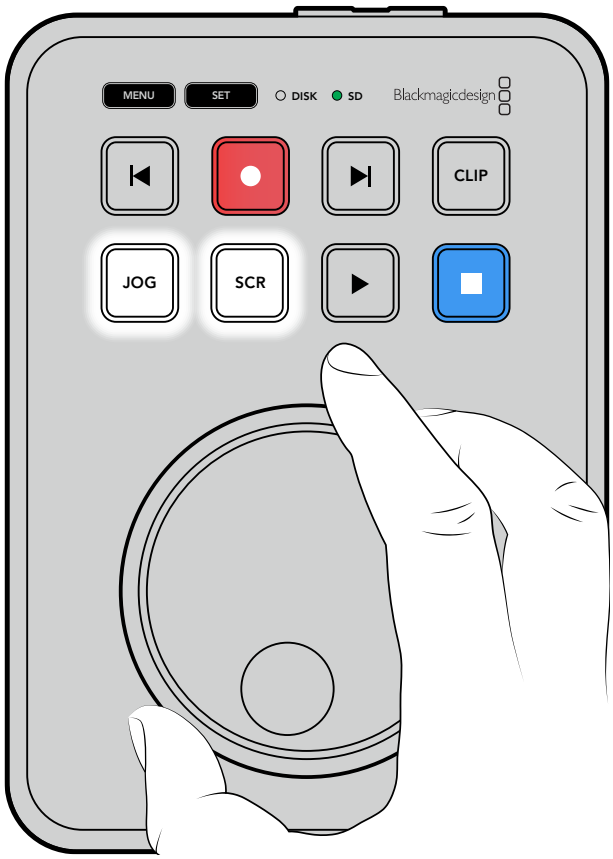
To use the teleprompter:

1. Connect HyperDeck Shuttle HD's HDMI out to the HDMI display you want to use.
2. Insert an SD card or connect an external USB flash disk containing your script.
3. From the record menu select the codec option. Navigate to 'teleprompter' setting and press set.

The script will appear on your display. From here you can start playback automatically using the play button, or for additional control use the dial.

Controlling Teleprompter Playback Speed

The large dial on HyperDeck Shuttle HD can be used to control playback when in teleprompter mode much in the same way as it does for media playback. With a script loaded, press the 'jog' and 'scr' buttons together to turn on variable speed playback. Once selected, turn the dial. The script will move at a speed relative to the movement of the dial. For example, the faster the dial is turned, the faster the script will scroll.



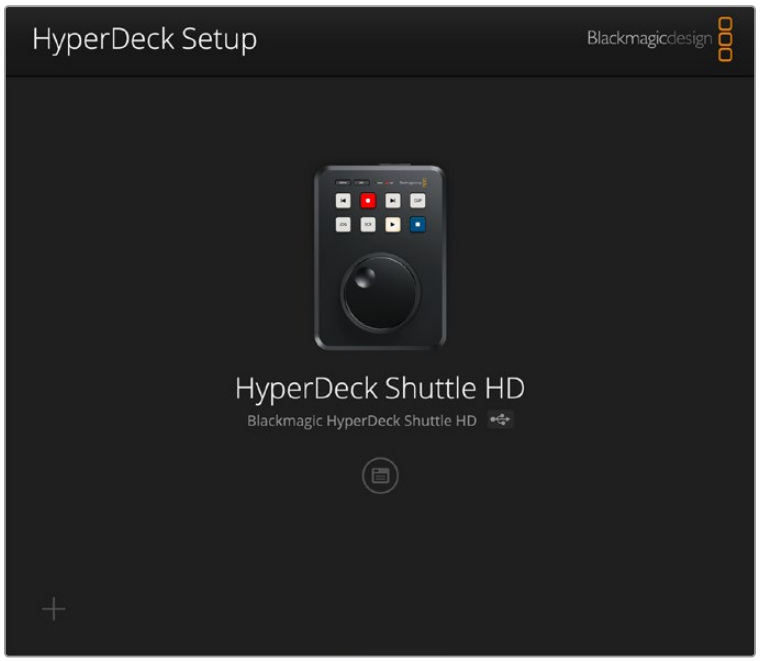
For constant speeds, you can use the jog and scroll buttons individually. Once selected, turning the dial will move the script at a constant low speed in jog mode, or a faster speed in scroll mode.

To navigate between files on your SD card or external disk, press the forward and back keys.

The teleprompter will acknowledge the font size, color and whether it is set to bold from the file. Additionally, you can adjust the font size, line spacing, margins or flip the display horizontally or vertically for when you are projecting the display to beam splitter glass using the monitor menu. For more information see ‘menu settings’ earlier in this manual.

Blackmagic HyperDeck Setup

Blackmagic HyperDeck Setup is a software utility you can use to change settings and update the internal software in your HyperDeck.

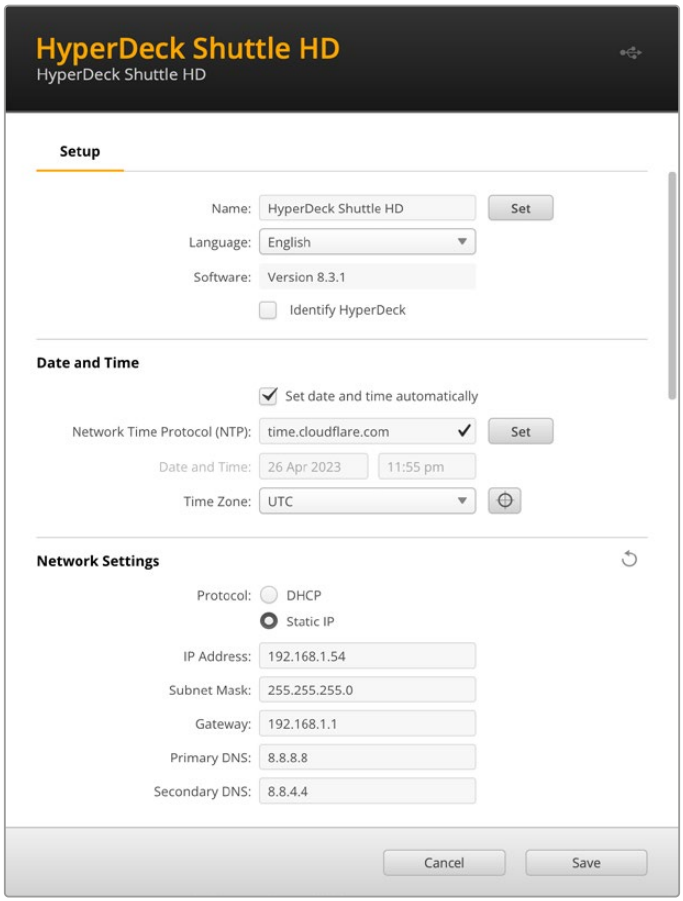


To install the software:

1. Download the newest Blackmagic HyperDeck Setup installer from www.blackmagicdesign.com/support.
2. Run the Blackmagic HyperDeck Setup installer on your computer and follow the onscreen instructions.
3. After installation is complete, connect your HyperDeck Shuttle HD to the computer via the USB or Ethernet connector on the rear panel.
4. Launch Blackmagic HyperDeck Setup and follow any onscreen prompt to update the internal software. If no prompt appears, the internal software is up to date and there is nothing further you need to do.

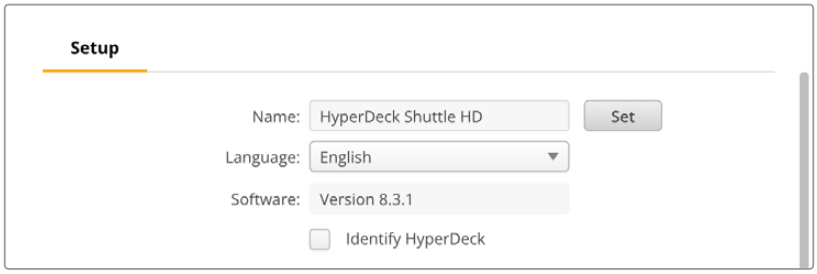
Click on the HyperDeck image or the settings icon to open the settings menu.

The home screen will show your HyperDeck Shuttle HD and the name of the unit. This name is helpful to identify the unit when more than one HyperDeck is connected to your computer and can be set using the utility’s settings menu.



Setup

If you have more than one HyperDeck disk recorder, you may wish to give each unit a discrete name to make them easy to identify. You can do this by entering a new name into the name field and clicking the ‘set’ button. It’s worth noting that changing the name of the HyperDeck will invalidate any digital certificates in use, so it’s worth changing the name before generating a certificate signing request or self signed certificate.



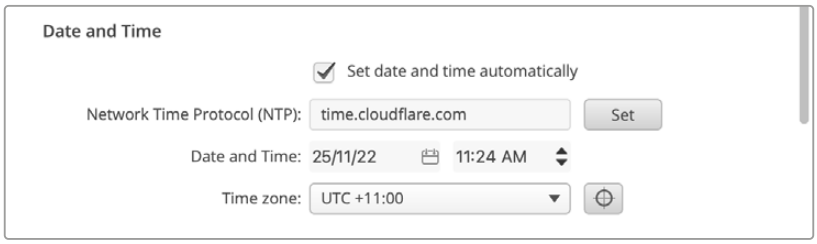
Identify HyperDeck

Clicking the checkbox will make the skip buttons on the top of your HyperDeck Shuttle flash. This can be useful when you have more than one HyperDeck Shuttle and you want to identify which one you are connected to via the HyperDeck Setup utility.

Date and Time

Set your date and time automatically by ticking the box. When setting the date and time automatically, your HyperDeck Shuttle HD will use the network time protocol server set in the NTP field. The default NTP server is time.cloudflare.com, but you can also manually enter an alternate NTP server and then click on ‘set’.

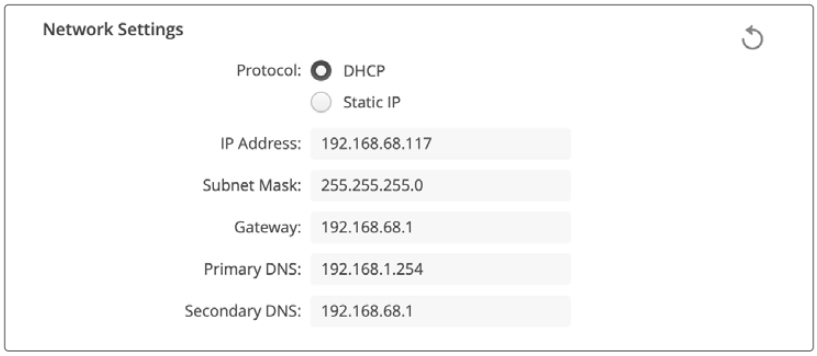
If you are entering your date and time manually, use the fields to enter your date, time and time zone. Setting the date and time correctly ensures your recordings have the same time and date information as your network and also prevents conflicts that can occur with some network storage systems.



Network Settings

Protocol

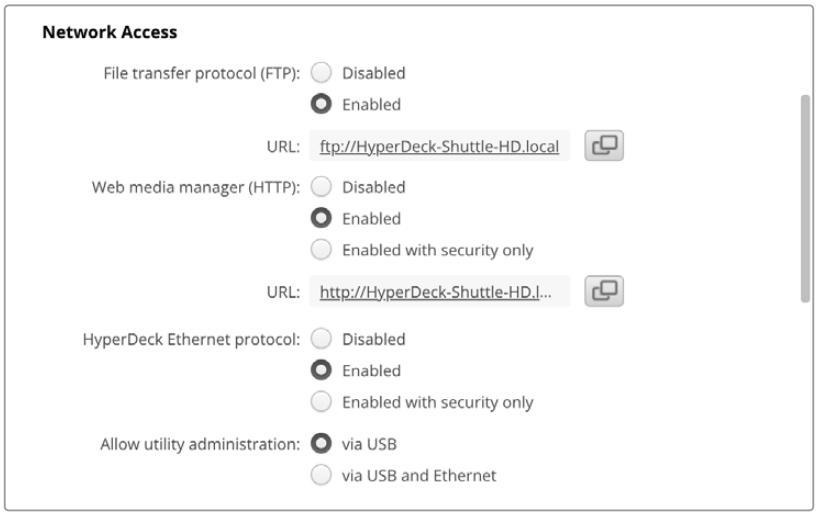
To control your HyperDeck Shuttle HD with ATEM switchers, or to control it remotely via HyperDeck Ethernet Protocol, the HyperDeck Shuttle HD needs be on the same network as your other equipment using DHCP or by manually adding a fixed IP address.



DHCP	HyperDeck Shuttle HD disk recorders arrive set to DHCP by default. The dynamic host configuration protocol, or DHCP, is a service on network servers that automatically finds your HyperDeck disk recorder and assigns an IP address. The DHCP is a great service that makes it easy to connect equipment via Ethernet and ensure their IP addresses do not conflict with each other. Most computers and network switchers support DHCP.
Static IP	When ‘static ip’ is selected, you can enter your network details manually. When setting IP addresses manually so all units can communicate, they must share the same subnet mask and gateway settings.

Network Access

HyperDeck Shuttle HD can be accessed via a network for file transfer and remote control via HyperDeck Ethernet Protocol. Access will be enabled by default, but you can choose to disable access individually or enable access via a username and password for added security when using the web media manager or HyperDeck Ethernet Protocol.



File Transfer Protocol

Enable or disable access via FTP using the check box. If you are supplying access via an FTP client such as CyberDuck, click the icon to copy the FTP address. For more information, refer to the section ‘transferring files over a network’.

Web Media Manager

Media recorded on SD cards or external disks can be accessed via a web browser using the web media manager. When you click on the link or copy and paste it into your web browser, a simple interface will open where you can upload or download files directly to the SD cards over your network.

Access is enabled via HTTP by default but you can disable access entirely or require a secure certificate using the ‘enabled with security only’ option. When using a digital certificate, connections to web media manager are encrypted via HTTPS. More information on digital certificates is available in the ‘secure certificate’ section.

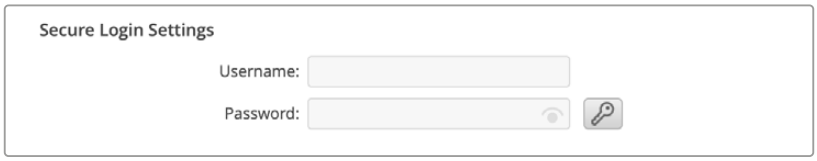
HyperDeck Ethernet Protocol

You can connect to your HyperDeck disk recorder using the HyperDeck Ethernet Protocol and a command line program on your computer, such as Terminal on a Mac and PuTTY on a Windows computer. Access can be enabled with or without a username and password, or disabled entirely. You can use an SSL program to encrypt your session when using a utility program such as netcat. For more information on the available commands, refer to the ‘developer information’ section in this manual.

Allow Utility Administration

Blackmagic HyperDeck Setup can be accessed when your disk recorder is connected via the network or via USB. To prevent users having access via the network, select USB only.

Secure Login Settings



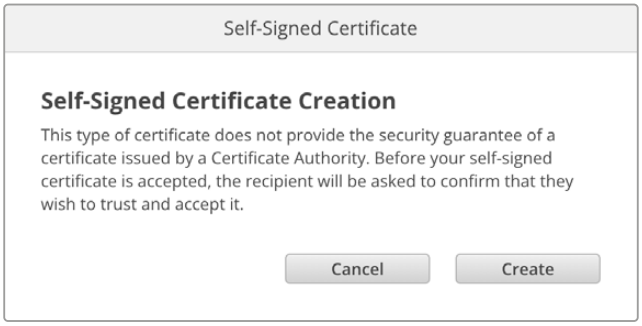
If you have selected ‘enabled with security’ for HyperDeck Ethernet Protocol access you will need to enter a username and password. Type a username and password and click ‘save’. The password field will appear empty once a password is entered. Once a username and password is set, you will need to enter it when accessing the web media manager if ‘enabled with security’ is selected.

Secure Certificate

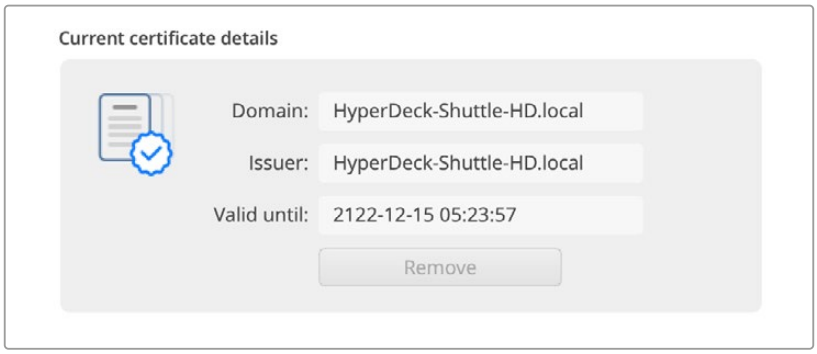
To enable web media manager access via HTTPS, or when HyperDeck Ethernet protocol has been configured to the security only option, you will require a secure certificate. This digital certificate acts as an identification card for your HyperDeck Shuttle HD so that any incoming connections can confirm they are connecting to the correct unit. Along with confirming the identity of the unit, using a secure certificate ensures data transmitted between HyperDeck Shuttle HD and a computer or server will be encrypted. When using the secure login settings the connection will not only be encrypted but require authentication for access.

There are two certificate types you can use with HyperDeck Shuttle, a secure certificate signed by a certificate authority, or a self signed certificate. A self signed certificate may be secure enough for some user workflows, for instance only accessing the HyperDeck Shuttle HD via a local network.

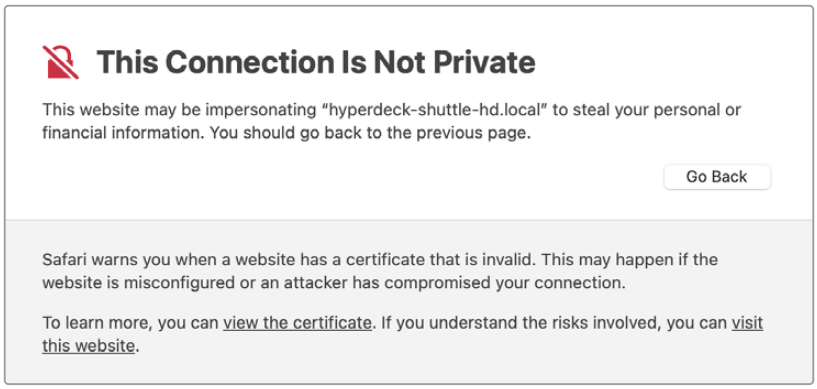
To generate a self signed certificate click on ‘create certificate’. You will be prompted to confirm you understand the risks with using a self signed certificate. Once you click on ‘create’, the certificate details will autofill the ‘domain’, ‘issuer’ and ‘valid until’ fields in the HyperDeck Setup utility.



Following a factory reset any current certificate will be deleted, but you can also remove it at any time by clicking on the ‘remove’ button and following the prompts.



When using a self signed certificate to access media files using HTTPS, your web browser will alert you to the risks of accessing the site. Some browsers will allow you to proceed once you confirm you understand the risks, however other web browsers may prevent you from proceeding at all.



To ensure access is granted to any web browser, you will need to use a signed certificate. To obtain a signed certificate, you first need to generate a certificate signing request, or CSR, using Blackmagic HyperDeck Setup utility. This signing request is then sent to a certificate authority, also known as a CA, or your IT department to be signed. Once completed, a signed certificate with a .cert, .crt or .pem file extension will be returned which you can import into your HyperDeck Shuttle HD.



To generate the certificate signing request CSR:

1 Click on the 'generate signing request' button.



2 A window will appear prompting you to enter a common name and subject alternative name for the HyperDeck. Adjust any other details as required using the table below.

Information	Description	Example
Common Name	The domain name you will use	hyperdeck.melbourne.com
Subject Alternative Name	An alternate domain name	hyperdeck.melbourne.net
Country	Country for your organization	AU
State	Province, region, county or state	Victoria
Location	Town, city, village etc. name	Port Melbourne
Organization Name	Name of your organization	Blackmagic Design

3 Once you have filled in the certificate details, press ‘generate’.

When you generate a .csr you will also be creating a public key and private key at the same time. The public key will be included with the signing request while the private key will remain with the unit. Once the CA or IT department have verified the information in the CSR with your organization, they will generate a signed certificate with the above details along with your public key.

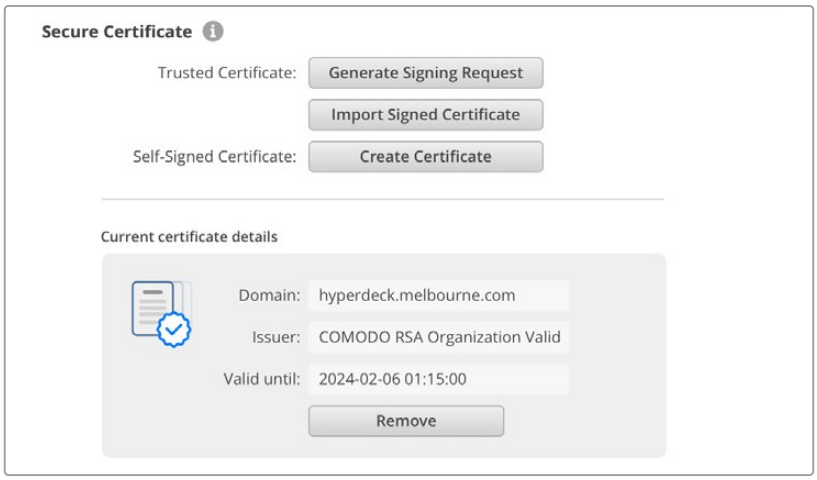
Once imported, the HyperDeck Shuttle HD will use the public and private key to confirm the identity of the HyperDeck and to encrypt and decrypt data share via HTTPS or via HyperDeck Ethernet Protocol when using an SSL program.

Importing a signed certificate:

1 Click on ‘import signed certificate’.

2 Navigate to the location of the signed certificate using the file browser and once the file is selected click on ‘open’.

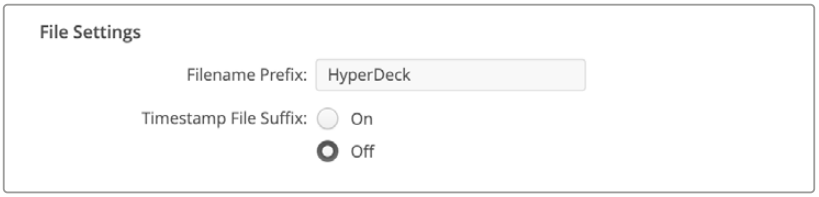
The domain, issuer and valid until fields will update with the information from your CA. Generally, a signed certificate will be valid for about a year so the process will need to be repeated as you reach the expiration date.



Since a domain name was selected, you will need to speak to your IT department about resolving the DNS entry for the HyperDeck Shuttle HD unit. This will point all traffic for the IP address of the HyperDeck Shuttle HD to the selected domain address in the signing request. This will also be the HTTPS address you use to access files via the web media manager, for example https://hyperdeck.melbourne.com

It's worth noting that the certificate will be invalidated following a factory reset and a new certificate will need to be generated and signed.

File Settings



When first set up, your HyperDeck Shuttle HD will record clips to your SD card or USB flash disk using 'HyperDeck' as the prefix. Type in a new filename to change the prefix.

The timestamp added to the filename is turned off by default. If you would like the date and time recorded in your filename, switch it to on. Filename prefix and timestamp settings are also available via onscreen menu on HyperDeck Shuttle HD.

Reset

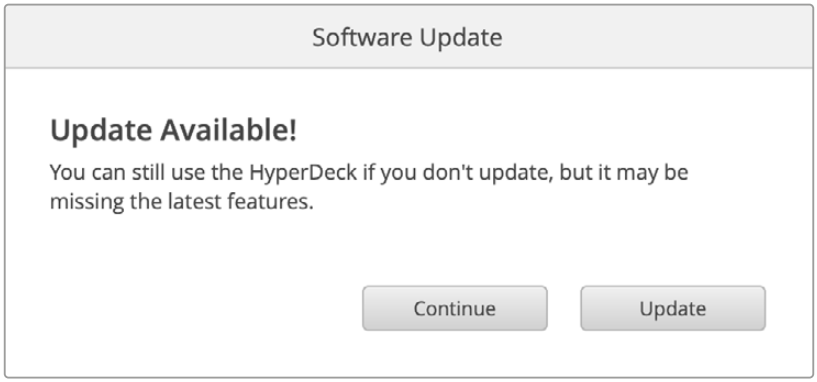
Select 'factory reset' to restore your HyperDeck to factory settings. A factory reset will invalidate the current certificate. If a secure certificate is being used you will need to generate a new certificate signing request to be signed by a certificate authority or IT department.

Updating the Internal Software

To update the internal software:

1. Download the newest Blackmagic HyperDeck Setup installer from www.blackmagicdesign.com/support.
2. Run the Blackmagic HyperDeck Setup installer on your computer and follow the onscreen instructions.
3. After installation is complete, connect your HyperDeck Shuttle HD to the computer via the USB or Ethernet connector on the rear panel.

4 Launch Blackmagic HyperDeck Setup and follow any onscreen prompt to update the internal software. If no prompt appears, the internal software is up to date and there is nothing further you need to do.



Transferring Files over a Network

HyperDeck Shuttle HD supports file transfer via both hypertext transfer protocol secure, known as HTTPS, and file transfer protocol known as FTP. This lets you copy files directly from your computer to your HyperDeck via a network with the fast speeds a local network can provide. For example, you could be copying new files to a HyperDeck unit being used for playing back video on monitor walls and digital signage.

You can transfer any file to and from your HyperDeck, but it's worth noting that any files you intend to play back from HyperDeck Shuttle HD will need to conform to your HyperDeck's supported codecs and resolutions.

TIP You can transfer files over a network while your HyperDeck is recording. HyperDeck will automatically adjust transfer speeds to make sure recording is not affected.

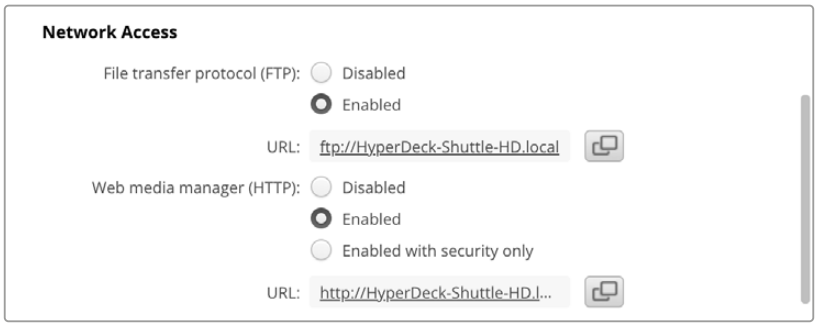
Access to HyperDeck Shuttle HD via either of these protocols can be enabled or disabled via the HyperDeck Setup utility. For example, you could disable FTP access and enable HTTPS access at the same time.

Connecting to HyperDeck Shuttle HD via HTTPS

To access HyperDeck Shuttle HD via the web media manager you will need the URL available via the network access settings. Network access settings appear in HyperDeck Setup utility when your computer is connected via USB or Ethernet but are disabled when only Ethernet is connected.

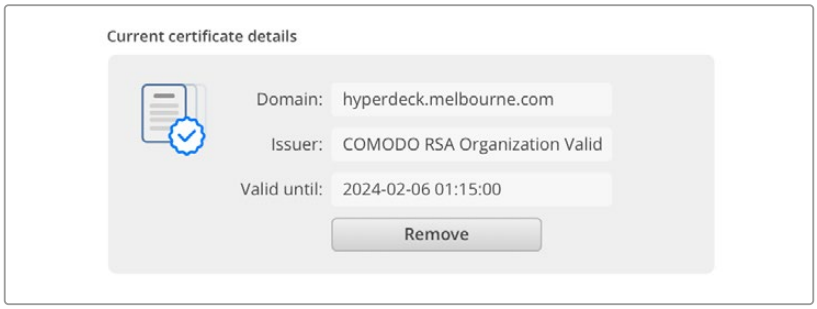
1 Using a USB-C cable, connect your computer to HyperDeck Shuttle HD via the USB port on the rear panel and open HyperDeck Setup. You should see a USB connection icon next to the unit name. Click on the circular icon or anywhere on the product image to open the settings.

2 When using a self signed certificate, navigate to the network access settings and click on the copy icon beside the URL. This URL is based on the name of your HyperDeck. To modify the URL, modify the name of the unit.



When using a self signed certificate click on the link

3 If you have imported a certificate signed by a CA or IT department, copy and paste the address in the domain field for the current certificate.



Copy the domain address and paste into a browser

4 Open your web browser and paste the address into a new window. If you have enabled access with security only you will be prompted to enter the username and password set in HyperDeck Setup utility.

When using a self signed certificate, a browser warning will appear regarding the privacy of the connection, this means a trusted signed certificate has not been imported via HyperDeck Setup utility.

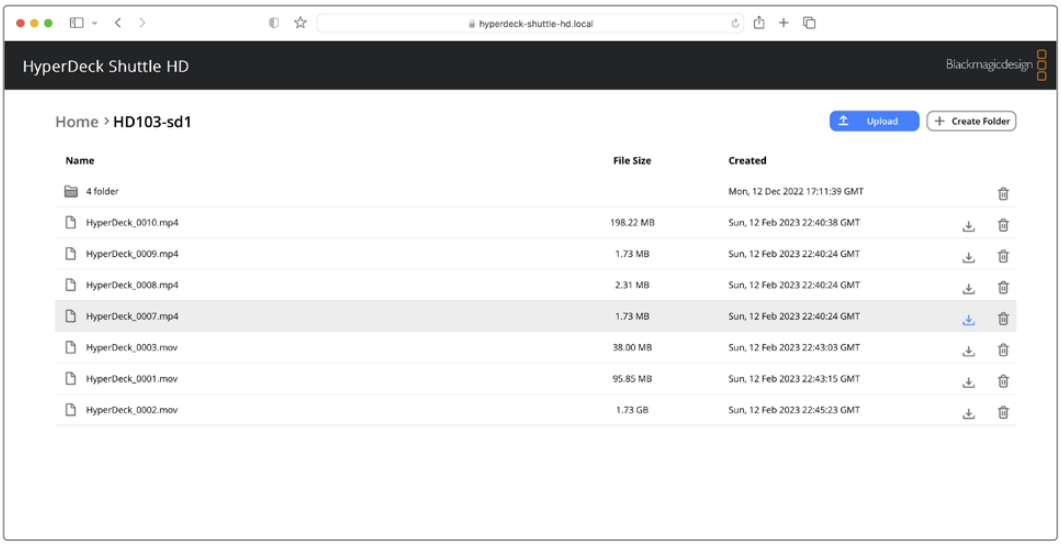
To continue without a valid and trusted certificate, follow your browser prompts to acknowledge the risks and proceed to the website.

Transferring Files Using Web Media Manager

When you first open the web media manager browser view you will see your files will be sorted via the relevant media slots.

sd1	Media on SD cards.
USB	Connected USB drives will be will be listed with the prefix USB/.

Double click the media to reveal the contents of the SD card or drive.



Click the upload button to add files

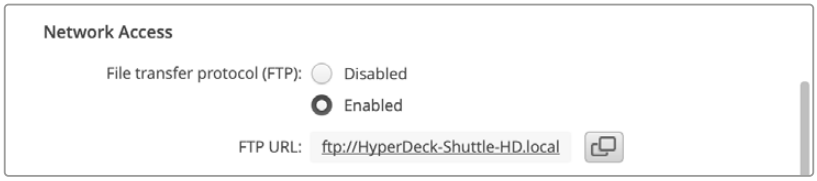
To add files remotely for playback, click on the ‘upload’ button. Using the file browser navigate to your file and click ‘upload’. A status window will appear during the upload. You can also add folders if needed using the ‘create folder’ button.

To download files, use the arrow icon on the far right. Your browser may prompt you to allow downloads from the site. Click on ‘allow’. To delete a file, click the trash can icon and a delete file window will appear. Click ‘delete’ to proceed.

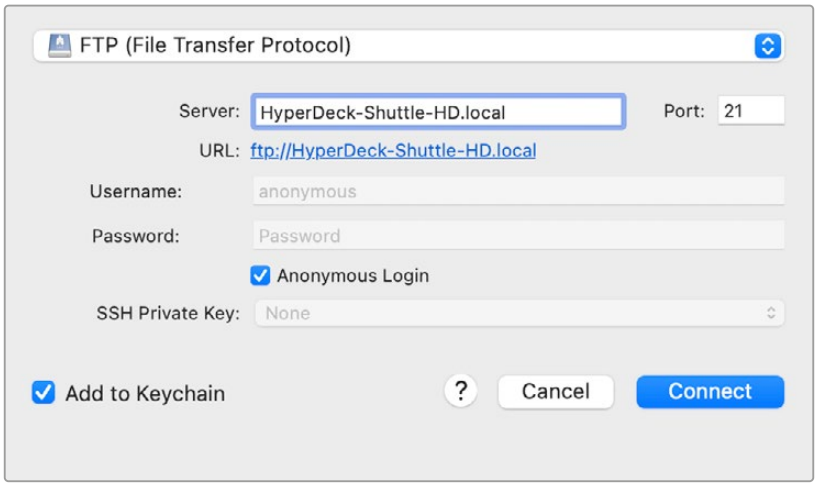
Transferring Files via FTP

With your computer and HyperDeck Shuttle HD on the same network, all you need is an ftp client and your HyperDeck Shuttle HD’s IP address or the FTP URL in the HyperDeck Setup utility.

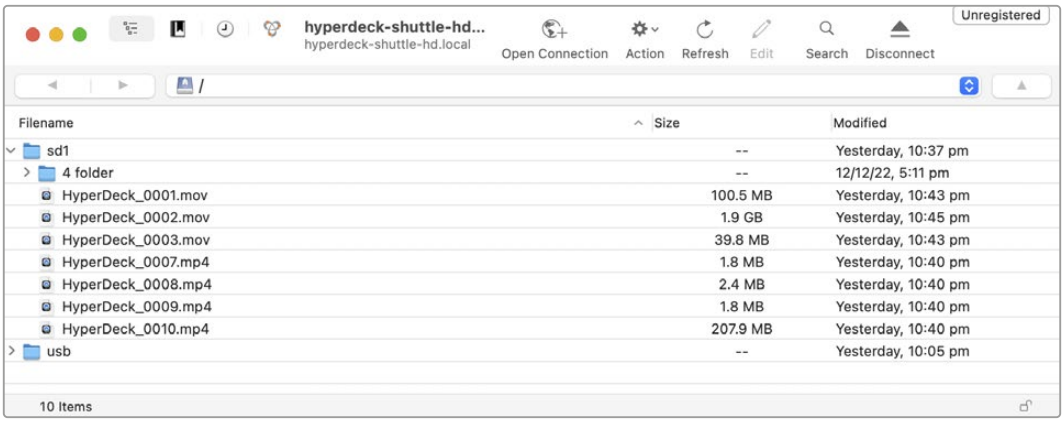
1. Download and install an FTP client on the computer you want to connect your HyperDeck Shuttle HD to. We recommend Cyberduck, FileZilla or Transmit but most FTP applications will work. Cyberduck and FileZilla are free downloads.
2. With HyperDeck Shuttle HD connected to your network, open HyperDeck Setup and click on the FTP URL or press the copy icon to paste it manually. You may need to click the link a second time if the FTP program doesn’t open a connection.



3. If you are manually opening an FTP connection, paste the URL into the server field. Check ‘anonymous login’ if available.



4 SD cards will be identified by sd1.



You can now drag and drop files using the FTP interface.

Developer Information

Blackmagic HyperDeck Ethernet Protocol

The Blackmagic HyperDeck Ethernet Protocol is a text based protocol accessed by connecting to TCP port 9993 on HyperDeck models that have a built in Ethernet connection. If you are a software developer, you can use the protocol to construct devices that integrate with our products. Here at Blackmagic Design our approach is to open up our protocols and we eagerly look forward to seeing what you come up with!

You can connect to your HyperDeck recorder using the HyperDeck Ethernet Protocol using a command line program on your computer, such as Terminal on a Mac and putty on a Windows computer.

The HyperDeck Ethernet Protocol lets you schedule playlists and recordings. The following is an example of how to play 7 clips from clip number 5 onwards via the HyperDeck Ethernet Protocol.

On a Mac

1. Open the Terminal application which is located with the applications > utilities folder.
2. Type in “nc” and a space followed by the IP address of your HyperDeck disk recorder, another space and “9993” which is the HyperDeck Ethernet Protocol port number. For example type: nc 192.168.1.154 9993. The Protocol preamble will appear.
3. Type “playrange set: clip id: 5 count: 7” and press ‘return’.

   On HyperDeck disk recorders with a timeline view, you will see in and out points marked around clips 5 through the end of clip 11.
4. Type “play”. Clips 5 through 11 will now play back.
5. To clear the playrange, type “playrange clear”
6. To exit from the protocol, type ‘quit’.

Protocol Commands

Command	Command Description
help or ?	Provides help text on all commands and parameters
commands	return commands in XML format
device info	return device information
disk list	query clip list on active disk
disk list: slot id: {n}	query clip list on disk in slot {n}
quit	disconnect ethernet control
ping	check device is responding
preview: enable: {true/false}	switch to preview or output
play	play from current timecode
play: speed: {-5000 to 5000}	play at specific speed
play: loop: {true/false}	play in loops or stop-at-end
play: single clip: {true/false}	play current clip or all clips

Command	Command Description
play: {clip id/clip/timecode/timeline/...}	play from the specified position see “goto” command for description of parameters parameters can be combined with {speed/loop/single clip}
playrange	query playrange setting
playrange set: clip id: {n}	set play range to play clip {n} only
playrange set: clip id: {n} count: {m}	set play range to {m} clips starting from clip {n}
playrange set: in: {inT} out: {outT}	set play range to play between: - timecode {inT} and timecode {outT}
playrange set: timeline in: {in} timeline out: {out}	set play range in units of frames between: - timeline position {in} and position {out}
playrange clear	clear/reset play range setting
play on startup	query unit play on startup state
play on startup: enable: {true/false}	enable or disable play on startup
play on startup: single clip: {true/false}	play single clip or all clips on startup
play option	query play options
play option: stop mode: {lastframe/nextframe/black}	set output frame when playback stops
record	record from current input
record: name: {name}	record named clip
record spill	spill current recording to next slot
record: spill: slot id: {n}	spill current recording to specified slot use current id to spill to same slot
spill order	query the device order used for record spill
stop	stop playback or recording
clips count	query number of clips on timeline
clips get	query all timeline clips
clips get: clip id: {n}	query a timeline clip info
clips get: clip id: {n} count: {m}	query m clips starting from n
clips get: version: {1/2/3}	query clip info using specified output version: version 1: id: name startT duration version 1: id: name startT duration startT depends on “configuration: timecode output: {clip/timeline}” version 2: id: clipInT clipDuration inT outT filename version 3: id: clipInT clipDuration inT outT folder/filename
clips add: name: {name}	append a clip to timeline, name can include subfolders e.g. folder1/HyperDeck_0001.mp4
clips add: clip id: {n} name: {name}	insert clip before existing clip {n}
clips add: in: {inT} out: {outT} name: {name}	append the clip portion between clip timecodes {inT} to {outT}
clips add: frame in: {in} frame out: {out} name: {name}	append the clip portion between clip frame numbers {in} to {out}

Command	Command Description
clips remove: clip id: {n}	remove clip {n} from the timeline (invalidates clip ids following clip {n})
clips clear	empty timeline clip list
clips rebuild	rebuild timeline with default rules
clip info	query clip info for the current playing/recording clip
clip info: clip id: {n}	query clip info for timeline clip id {n}
clip info: name: {name}	query clip info for the clip named {name} on active disk
transport info	query current activity
slot info	query active slot
slot info: slot id: {n}	query slot {n}
slot info: device: {device}	query slot containing device USB/network devices can be queried without being active “device” and “slot id” parameters are mutually exclusive in all commands
slot select: slot id: {n}	switch to specified slot
slot select: device: {device}	switch to slot containing device
slot select: video format: {format}	load clips of specified format
slot unblock	unblock active slot
slot unblock: slot id: {n}	unblock slot {n}
slot unblock: device: {device}	unblock disk device
external drive list	list all available USB/network drives for use in external slot
external drive select: device: {device}	switch external slot to specified external drive
external drive selected	query the currently selected external drive
cache info	query cache status
dynamic range	query dynamic range settings
dynamic range: playback override: {off/Rec709/Rec2020_SDR/HLG/ ST2084_300/ST2084_500/ ST2084_800/ST2084_1000/ ST2084_2000/ST2084_4000/ST2084	set playback dynamic range override
dynamic range: record override: {off/Rec709/Rec2020_SDR/HLG/ ST2084_300/ST2084_500/ ST2084_800/ST2084_1000/ ST2084_2000/ST2084_4000/ST2048}	set record dynamic range override
notify	query notification status
notify: remote: {true/false}	set remote notifications
notify: transport: {true/false}	set transport notifications
notify: slot: {true/false}	set slot notifications
notify: configuration: {true/false}	set configuration notifications

Command	Command Description
notify: dropped frames: {true/false}	set dropped frames notifications (reported dropped frame count is approximate)
notify: display timecode: {true/false}	set display timecode notifications
notify: timeline position: {true/false}	set playback timeline position notifications
notify: playrange: {true/false}	set playrange notifications
notify: cache: {true/false}	set cache notifications
notify: dynamic range: {true/false}	set dynamic range settings notifications
notify: slate: {true/false}	set digital slate notifications
notify: clips: {true/false}	set timeline clips notifications where two types of changes can occur: add: partial update with list of clips and insert positions snapshot: complete update of all clips on timeline
notify: disk: {true/false}	set disk clips notifications where two types of changes can occur: add: partial update with list of clips and insert positions snapshot: complete update of all clips on timeline
notify: device info: {true/false}	set device info notifications
notify: nas: {true/false}	set nas notifications triggered by commands such as “nas add” or “nas remove”
goto: clip id: {start/end}	goto first clip or last clip
goto: clip id: {n}	goto clip id {n}
goto: clip id: +{n}	go forward {n} clips
goto: clip id: -{n}	go backward {n} clips
goto: clip: {start/end}	goto start or end of clip
goto: clip: {n}	goto frame position {n} within current clip
goto: clip: +{n}	go forward {n} frames within current clip
goto: clip: -{n}	go backward {n} frames within current clip
goto: timeline: {start/end}	goto start or end of timeline
goto: timeline: {n}	goto frame position {n} within timeline
goto: timeline: +{n}	go forward {n} frames within timeline
goto: timeline: -{n}	go backward {n} frames within timeline
goto: timecode: {timecode}	goto absolute timecode position in timeline
goto: timecode: +{timecode}	go forward {timecode} duration
goto: timecode: -{timecode}	go backward {timecode} duration
goto: slot id: {n}	goto slot id {n}
goto: clip id: {n} clip: {m}	goto clip id {n} and offset to frame position {m} within that clip
goto: clip id: {n} timeline: {m}	goto clip id {n} and offset to frame position {m} within the timeline

Command	Command Description
goto: clip id: {n} timecode: {timecode}	goto clip id {n} and offset {timecode} duration {clip id/clip/timeline/timecode} support absolute and relative offsets use “play” instead of “goto” to play from seeked position
jog: timecode: {timecode}	jog to timecode
jog: timecode: +{timecode}	jog forward {timecode} duration
jog: timecode: -{timecode}	jog backward {timecode} duration
shuttle: speed: {-5000 to 5000}	shuttle with speed
remote	query unit remote control state
remote: enable: {true/false}	enable or disable remote control
remote: override: {true/false}	session override remote control
configuration	query configuration settings
configuration: video input: {SDI/HDMI/component/composite}	change the video input source
configuration: audio input: {embedded/XLR/RCA}	change the audio input source
configuration: file format: {format}	switch to one of the supported formats: H.265High_422, H.264High, H.264Medium, H.264Low, H.264High10_422, H.265High, H.265Medium, H.265Low, QuickTimeProResHQ, QuickTimeProRes, QuickTimeProResLT, QuickTimeProResProxy DNxHR_HQX, QuickTimeDNxHR_HQX, DNxHR_SQ, QuickTimeDNxHR_SQ, DNxHR_LB, QuickTimeDNxHR_LB, DNxHD220x, QuickTimeDNxHD220x, DNxHD145, QuickTimeDNxHD145, DNxHD45, QuickTimeDNxHD45
configuration: audio codec: {PCM/AAC}	switch to specific audio codec
configuration: timecode input: {external/embedded/internal/preset/clip}	change the timecode input
configuration: timecode output: {clip/timeline}	change the timecode output
configuration: timecode preference: {default/dropframe/nondropframe}	whether or not to use drop frame timecodes when not otherwise specified
configuration: timecode preset: {timecode}	set the timecode preset
configuration: audio input channels: {n}	set the number of audio channels recorded to {n}
configuration: record trigger: {none/recordbit/timecoderun}	change the record trigger
configuration: record prefix: {name}	set the record prefix name (supports UTF-8 name)
configuration: record cache: {true/false}	enable or disable record cache, has no effect if cache is not supported/installed/formatted
configuration: append timestamp: {true/false}	append timestamp to recorded filename
configuration: usb spill: {true/false}	enable or disable spilling between usb disks

Command	Command Description
configuration: reference source: {auto/input/external}	set source for the reference signal
configuration: genlock input resync: {true/false}	enable or disable genlock input resync when enabled set reference source to auto/external
configuration: xlr input id: {n} xlr type: {line/mic}	configure xlr input type multiple xlr inputs can be configured in a single command
uptime	return time since last boot
format: slot id: {n} prepare: {exFAT/HFS+} name: {name}	prepare formatting operation filesystem type with volume name {name} “slot id” can be omitted for the current mounted slot “name” defaults to current volume name if mounted (supports UTF-8)
format: device: {device} prepare: {exFAT/HFS+} name: {name}	prepare formatting operation for {device}
format: confirm: {token}	perform a pre-prepared formatting operation using token
identify: enable: {true/false}	identify the device
watchdog: period: {period in seconds}	client connection timeout
reboot	reboot device
slate clips	slate clips information
slate project	slate project information
slate lens	slate lens information
nas list	list all NAS share bookmarks
nas discovered	list all NAS servers that have been discovered via mDNS
nas selected	currently selected NAS share
nas deselect	unmount the currently selected NAS share
connection protocol: response version: {version}	changes which do not affect other client connections change the output of “clips get”, “disk list” and related responses version 1 205 clips get id: filename startT duration startT depends on “configuration: timecode output: {clip/timeline}” 519 clips info id: clipInT clipDuration inT outT filename 206 disk list id: filename codec format duration 520 disk list info id: filename codec format duration version 2 205 clips get id: clipInT clipDuration inT outT folder/filename 519 clips info id: clipInT clipDuration inT outT folder/filename 206 disk list id: codec format duration folder/filename 520 disk list info id: codec format duration folder/filename

Multiline commands:	Command Description
authenticate:↵	authenticate user for secure access
username: {username}	case sensitive username
password: {password}	case sensitive password
slate clips↵	set slate clips information:
reel: {n}	slate reel number, where {n} is in [1, 999]
scene id: {id}	slate scene id value, where {id} is a string
shot type: {WS/MS/CU/BCU/MCU/ECU/none}	slate shot type
take: {n}	slate take number, where {n} is in [1, 99]
take scenario: {PU/VFX/SER/none}	slate take scenario
take auto inc: {true/false}	slate take auto increment
good take: {true/false}	slate good take
environment: {interior/exterior}	slate environment
day night: {day/night}	slate day or night
slate project:↵	set slate project information:
project name: {name}	project name (can be empty, supports UTF-8)
camera: {index}	set camera index e.g. A
director: {name}	director (can be empty, supports UTF-8)
camera operator: {name}	camera operator (can be empty, supports UTF-8)
slate lens:↵	set lens information:
lens type: {type}	lens type (can be empty, supports UTF-8)
iris: {type}	camera iris (can be empty, supports UTF-8)
focal length: {length}	focal length (can be empty, supports UTF-8)
distance: {distance}	lens distance (can be empty, supports UTF-8)
filter: {filter}	lens filter (can be empty, supports UTF-8)
nas add:↵	add a NAS share to the list of bookmarks
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share
username: {username}	username to connect as (optional, defaults to guest)
password: {password}	password to connect with (optional)
nas remove:↵	remove NAS share bookmark, does not unmount share if mounted
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share
nas select:↵	mount NAS share asynchronously. Uses credentials provided in matching bookmark, otherwise uses guest credentials
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share Use “nas selected” or “notify: slot: true” to determine when share is mounted.

Command Combinations

You can combine the parameters into a single command, for example:

```
play: clip id: 3 speed: 200 loop: true single clip: true
```

Or for configuration:

```
configuration: video input: SDI audio input: XLR
```

Or to switch to the second disk, but only play NTSC clips:

```
slot select: slot id: 2 video format: NTSC
```

Using XML

While you can use the Terminal to talk to HyperDeck, if you are writing software, you can use XML to confirm the existence of a specific command based on the firmware of the HyperDeck you are communicating with. This helps your software user interface adjust to the capabilities of the specific HyperDeck model and software version.

Protocol Details

Connection

The HyperDeck Ethernet server listens on TCP port 9993.

Basic syntax

The HyperDeck protocol is a line oriented text protocol. Lines from the server will be separated by an ascii CR LF sequence. Messages from the client may be separated by LF or CR LF.

New lines are represented in this document as a "↵" symbol.

Single line command syntax

Command parameters are usually optional. A command with no parameters is terminated with a new line:

```
{Command name}↵
```

If parameters are specified, the command name is followed by a colon, then pairs of parameter names and values. Each parameter name is terminated with a colon character:

```
{Command name}: {Parameter}: {Value} {Parameter}: {Value} ...↵
```

Multiline command syntax

The HyperDeck protocol also supports an equivalent multiline syntax where each parameter-value pair is entered on a new line. E.g.

```
{Command name}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
↵
```

Response syntax

Simple responses from the server consist of a three digit response code and descriptive text terminated by a new line:

```
{Response code} {Response text}↵
```

If a response carries parameters, the response text is terminated with a colon, and parameter name and value pairs follow on subsequent lines until a blank line is returned:

```
{Response code} {Response text}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
...
↵
```

Successful response codes

A simple acknowledgement of a command is indicated with a response code of 200:

```
200 ok↵
```

Other successful responses carry parameters and are indicated with response codes in the range of 201 to 299.

Failure response codes

Failure responses to commands are indicated with response codes in the range of 100 to 199:

```
100 syntax error
101 unsupported parameter
102 invalid value
103 unsupported
104 disk full
105 no disk
106 disk error
107 timeline empty
108 internal error
109 out of range
110 no input
111 remote control disabled
112 clip not found
120 connection failed
121 authentication failed
122 authentication required
150 invalid state
151 invalid codec
160 invalid format
161 invalid token
162 format not prepared
163 parameterized single line command not supported
```

Asynchronous response codes

The server may return asynchronous messages at any time. These responses are indicated with response codes in the range of 500 to 599:

```
5xx {Response Text}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
↵
```

Connection response

On connection, an asynchronous message will be delivered:

```
500 connection info:↵
protocol version: {Version}↵
model: {Model Name}↵
↵
```

Connection rejection

A limited number of clients may connect at a time. If too many clients attempt to connect concurrently, they will receive an error and be disconnected:

```
120 connection failed↵
```

Timecode syntax

Timecodes are expressed as non-drop-frame timecode in the format:

```
HH:MM:SS:FF
```

Handling of deck "remote" state

The “remote” command may be used to enable or disable the remote control of the deck. Any attempt to change the deck state over ethernet while remote access is disabled will generate an error:

```
111 remote control disabled↵
```

To enable or disable remote control:

```
remote: enable: {“true”, “false”} ↵
```

The current remote control state may be overridden allowing remote access over ethernet irrespective of the current remote control state:

```
remote: override: {“true”, “false”} ↵
```

The override state is only valid for the currently connected ethernet client and only while the connection remains open.

The “remote” command may be used to query the remote control state of the deck by specifying no parameters:

```
remote↵
```

The deck will return the current remote control state:

```
210 remote info:↵
enabled: {“true”, “false”}↵
override: {“true”, “false”}↵
↵
```

Asynchronous remote control information change notification is disabled by default and may be configured with the “notify” command. When enabled, changes in remote state will generate a “510 remote info:”asynchronous message with the same parameters as the “210 remote info:” message.

Closing connection

The "quit" command instructs the server to cleanly shut down the connection:

```
quit↵
```

Checking connection status

The "ping" command has no function other than to determine if the server is responding:

```
ping↵
```

Getting help

The "help" or "?" commands return human readable help text describing all available commands and parameters:

```
help↵
```

Or:

```
?↵
```

The server will respond with a list of all supported commands:

```
201 help:↵
{Help Text}↵
{Help Text}↵
↵
```

Switching to preview mode

The "preview" command instructs the deck to switch between preview mode and output mode:

```
preview: enable: {"true", "false"}↵
```

Playback will be stopped when the deck is switched to preview mode. Switching to playback is not permitted during record. Use the stop command to stop recording before switching to playback.

Controlling device playback

The “play” command instructs the deck to start playing:

```
play↵
```

The play command accepts a number of parameters which may be used together in most combinations.

By default, the deck will play all remaining clips on the timeline then stop.
The “single clip” parameter may be used to override this behavior:

```
play: single clip: {“true”, “false”}↵
```

By default, the deck will play at normal (100%) speed. An alternate speed may be specified in percentage between -5000 to 5000:

```
play: speed: {% normal speed}↵
```

By default, the deck will stop playing when it reaches to the end of the timeline. The “loop” parameter may be used to override this behavior:

```
play: loop: {“true”, “false”}↵
```

To play from the start of a particular clip:

```
play: clip id: {Clip Id}↵
```

To play from a position offset from the start of particular clip:

```
play: clip id: {Clid Id} timecode: +{timecode}↵
```

The “playrange” command returns the current playrange setting if any:

```
playrange↵
```

To override this behaviour and select a particular clip:

```
playrange set: clip id: {Clip ID}↵
```

To only play a certain number of clips starting at a particular clip:

```
playrange set: clip id: {n} count: {m}↵
```

To only play a certain timecode range:

```
playrange set: in: {in timecode} out: {out timecode}↵
```

To play a certain timeline range:

```
playrange set: timeline in: {in} timeline out: {out}↵
```

To clear a set playrange and return to the default value:

```
playrange clear↵
```

The “play on startup command” instructs the deck on what action to take on startup. By default, the deck will not play. Use the “enable” command to start playback after each power up.

```
play on startup: enable {“true”, “false”}↵
```

By default, the unit will play back all clips on startup. Use the “single clip” command to override.

```
play on startup: single clip: {“true”, “false”}↵
```

The “play option” command queries the output frame for when playback stops:

```
play option↵
```

By default, the deck will display the last frame when playback stops. To override this behaviour, the “stop mode” parameter can be used:

```
play option: stop mode: {“lastframe”, “nextframe”, “black”}↵
```

Stopping deck operation

The "stop" command instructs the deck to stop the current playback or capture:

```
stop↵
```

Changing timeline position

The "goto" command instructs the deck to switch to playback mode and change its position within the timeline.

To go to the start of a specific clip:

```
goto: clip id: {Clip ID}↵
```

To move forward/back {count} clips from the current clip on the current timeline:

```
goto: clip id: +/-{count}↵
```

Note that if the resultant clip id goes beyond the first or last clip on timeline, it will be clamp at the first or last clip.

To go to the start or end of the current clip:

```
goto: clip: {“start”, “end”}↵
```

To go to the start of the first clip or the end of the last clip:

```
goto: timeline: {“start”, “end”}↵
```

To go to a specified timecode:

```
goto: timecode: {timecode}↵
```

To move forward or back a specified duration in timecode:

```
goto: timecode: {“+”, “-”}{duration in timecode}↵
```

To specify between slot 1 and slot 2:

```
goto: slot id: {Slot ID}↵
```

Note that only one parameter/value pair is allowed for each goto command.

Enumerating supported commands and parameters

The "commands" command returns the supported commands:

```
commands↵
```

The command list is returned in a computer readable XML format:

```
212 commands:
<commands>↵
     <command name="…"><parameter name="…"/>…</command>↵
     <command name="…"><parameter name="…"/>…</command>↵
     …
</commands>↵
↵
```

More XML tokens and parameters may be added in later releases.

Controlling asynchronous notifications

The “notify” command may be used to enable or disable asynchronous notifications from the server.
To enable or disable transport notifications:

```
notify: transport: {“true”, “false”}↵
```

To enable or disable slot notifications:

```
notify: slot: {“true”, “false”}↵
```

To enable or disable remote notifications:

```
notify: remote: {“true”, “false”}↵
```

To enable or disable configuration notifications:

```
notify: configuration: {“true”, “false”}↵
```

Multiple parameters may be specified. If no parameters are specified, the server returns the current state of all notifications:

```
209 notify:↵
transport: {“true”, “false”}↵
slot: {“true”, “false”}↵
remote: {“true”, “false”}↵
configuration: {“true”, “false”}↵
dropped frames: {“true”, “false”}↵
display timecode: {“true”, “false”}↵
timeline position: {“true”, “false”}↵
playrange: {“true”, “false”}↵
cache: {“true”, “false”}↵
dynamic range: {“true”, “false”}↵
slate: {“true”, “false”}↵
clips: {“true”, “false”}↵
disk: {“true”, “false”}↵
device info: {“true”, “false”}↵
nas: {“true”, “false”}↵
↵
```

Retrieving device information

The "device info" command returns information about the connected deck device:

```
device info↵
```

The server will respond with:

```
204 device info:↵
protocol version: {Version}↵
model: {Model Name}↵
unique id: {unique alphanumeric identifier}↵
slot count: {number of storage slots}↵
software version: {software version}↵
name: {device name}↵
↵
```

Retrieving slot information

The "slot info" command returns information about a slot. Without parameters, the command returns information for the currently selected slot:

```
slot info↵
```

If a slot id is specified, that slot will be queried:

```
slot info: slot id: {Slot ID}↵
```

The server will respond with slot specific information:

```
202 slot info:↵
slot id: {Slot ID}↵
slot name: {“slot name”}↵
device name: {identifying name for disk device}↵
status: {"empty", "mounting", "error", "mounted"}↵
volume name: {Volume name}↵
recording time: {recording time available in seconds}↵
video format: {disk's default video format}↵
blocked: {“true”, “false”}↵
remaining size: {remaining size in bytes}↵
total size: {total size in bytes}↵
↵
```

A slot can also be specificed by its device. This is particularly useful when there are multiple drives connected via USB. First list the available external drives:

```
external drive list↵
226 external drive info:↵
device: {device}↵
```

Then use slot info with device to query the drive:

```
slot info: device: {device}↵
```

Asynchronous slot information change notification is disabled by default and may be configured with the "notify" command. When enabled, changes in slot state will generate a "502 slot info:" asynchronous message with the same parameters as the "202 slot info:" message.

Retrieving clip information

The “disk list” command returns the information for each playable clip on a given disk. Without parameters, the command returns information for the current active disk:

```
disk list↵
```

If a slot id is specified, the disk in that slot will be queried:

```
disk list: slot id: {Slot ID}↵
```

The server responds with the list of all playable clips on the disk in the format of: Index, name, formats, and duration in timecode:

```
206 disk list:↵
slot id: {Slot ID}↵
{clip index}: {name} {file format} {video format} {Duration timecode}↵
{clip index}: {name} {file format} {video format} {Duration timecode}↵
…
↵
```

Note that the *clip index* starts from 1.

Retrieving clip count

The "clips count" command returns the number of clips on the current timeline:

```
clips count ↵
```

The server responds with the number of clips:

```
214 clips count: ↵
clip count: {Count}↵
```

Retrieving timeline information

The "clips get" command returns information for each available clip on the current timeline. Without parameters, the command returns information for all clips on timeline:

```
clips get↵
```

In version 1, the start timecode reported is either a clip timecode or a timeline timecode depending on the configured output timecode.

The server responds with a list of clip IDs, names and timecodes:

```
205 clips info:↵
clip count: {Count}↵
{Clip ID}: {Name} {Start timecode} {Duration timecode}↵
{Clip ID}: {Name} {Start timecode} {Duration timecode}↵
…
↵
```

The “clips get” command provides a more detailed response when using the “version: 2” parameter:

```
clips get: version: 2↵
```

The server responds with a list of clip IDs, timecodes, in points, out points and names. Clip name is the last field making it simpler to parse when names have embedded spaces.

```
{Clip ID}: {Clip start timecode} {Duration timecode} {inTimecode}
{outTimecode}
{name}↵
{Clip ID}: {Clip start timecode} {Duration timecode} {inTimecode}
{outTimecode}
{name}↵
…
↵
```

For models that support recursive timelines “clips get: version: 3” replaces the {name} field with {path to clip name} where the {path to clip name} can include directories and subdirectories.

Retrieving transport information

The “transport info” command returns the state of the transport:

```
transport info ↵
```

The server responds with transport specific information:

```
208 transport info:

status: {“preview”, “stopped”, “play”, “forward”, “rewind”,
“jog”, “shuttle”,”record”}↵

speed: {Play speed between -5000 and 5000 %}↵

slot id: {Slot ID or “none”}↵

slot name: {“slot name”}↵

device name: {identifying name for disk device}↵

clip id: {Clip ID or “none”}↵

single clip: {“true”, “false”}↵

display timecode: {timecode}↵

timecode: {timecode}↵

video format: {Video format}↵

loop: {“true”, “false”}↵

timeline: {n}↵

input video format: {Video format”}↵

dynamic range: {“off”, “Rec709”, “Rec2020_SDR”, “HLG”,
“ST2084_300”, “ST2084_500”, “ST2084_800”, “ST2084_1000”,
“ST2084_2000”, “ST2084_4000”, “ST2048” or “none”}↵

reference locked: {“false”, “true”}

↵
```

The "timecode" value is the timecode within the current timeline for playback or the clip for record. The "display timecode" is the timecode displayed on the front of the deck. The two timecodes will differ in some deck modes.

Asynchronous transport information change notification is disabled by default and may be configured with the "notify" command. When enabled, changes in transport state will generate a "508 transport info:" asynchronous message with the same parameters as the "208 transport info:" message.

Video Formats

The following video formats are currently supported on HyperDeck Extreme, HyperDeck Studio and HyperDeck Shuttle:

720p50, 720p5994, 720p60

1080p23976, 1080p24, 1080p25, 1080p2997, 1080p30, 1080p60

1080i50, 1080i5994, 1080i60

HyperDeck Extreme HDR models also support the following formats:

NTSC, PAL, NTSCp, PALp

2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p30, 2160p50, 2160p59.94, 2160p60

4Kp23976, 4Kp24, 4Kp25, 4Kp2997, 4Kp30

4Kp50, 4Kp5994, 4Kp60

HyperDeckExtreme 8K HDR adds support for the following 8K formats:

4320p23.98, 4320p24, 4320p25, 4320p29.97, 4320p30, 4320p50, 4320p59.94, 4320p60

8Kp23976, 8Kp24, 8Kp25

HyperDeck Studio Pro and Plus models support these 4k formats:

4Kp23976, 4Kp24, 4Kp25, 4Kp2997, 4Kp30

HyperDeck Studio 4K Pro adds support for the following 4k formats:

4Kp50, 4Kp5994, 4Kp60

Video format support may depend on the file format selected and may vary between models and software releases.

File Formats

All HyperDeck models currently support the following file formats:

H.264High_SDI

H.264High

H.264Medium

H.264Low

QuickTimeProResHQ

QuickTimeProRes

QuickTimeProResLT

QuickTimeProResProxy

QuickTimeDNxHD220x

DNxHD220x

QuickTimeDNxHD145

DNxHD145

QuickTimeDNxHD45

DNxHD45

HyperDeck Studio 4K Pro and HyperDeck Extrme HDR models also support the following file formats:

H.265High_SDI

H.265High

H.265Medium

H.265Low

QuickTimeDNxHR_HQX

DNxHR_HQX

QuickTimeDNxHR_SQ

DNxHR_SQ

QuickTimeDNxHR_LB

DNxHR_LB

Supported file formats may vary between models and software releases.

Querying and updating configuration information

The "configuration" command may be used to query the current configuration of the deck:

```
configuration↵
```

The server returns the configuration of the deck:

```
211 configuration:↵
audio input: {“embedded”, “XLR”, “RCA”}↵
audio mapping: {n}↵
video input: {“SDI”, “HDMI”, “component”, “composite”}↵
file format: {format}↵
audio codec: {“PCM”, “AAC”}↵
timecode input: {“external”, “embedded”, “preset”, “clip”}↵
timecode output: {“clip”, “timeline”}↵
timecode preference: {“default”, “dropframe”, “nondropframe”}↵
timecode preset: {timecode}↵
audio input channels: {n}↵
record trigger: {“none”, “recordbit”, “timecoderun”}↵
record prefix: {name}↵
record cache: {“true”, “false”}↵
append timestamp: {“true”, “false”}↵
genlock input resync: {“true”, “false”}↵
reference source: {“auto”, “input”, “external”}↵
xlr input id: {“n”}↵
xlr type: {”line”, ”mic”}↵
usb spill: {“true”, “false”}↵
↵
```

One or more configuration parameters may be specified to change the configuration of the deck.

To change the current video input:

```
configuration: video input: {“SDI”, “HDMI”, “component”}↵
```

Valid video inputs may vary between models. To configure the current audio input:

```
configuration: audio input: {“embedded”, “XLR”, “RCA”}↵
```

Valid audio inputs may vary between models.

To configure the current file format:

```
configuration: file format: {File format}↵
```

Note that changes to the file format may require the deck to reset, which will cause the client connection to be closed. In such case, response code 213 will be returned (instead of 200) before the client connection is closed:

```
“213 deck rebooting”
```

Asynchronous configuration information change notification is disabled by default and may be configured with the “notify” command. When enabled, changes in configuration will generate a “511 configuration:” asynchronous message with the same parameters as the “211 configuration:” message.

Selecting active slot and video format

The "slot select" command instructs the deck to switch to a specified slot, or/and to select a specified output video format.

To switch to a specified slot:

```
slot select: slot id: {slot ID}↵
```

To switch to a disk device, including USB drives that are not yet made active:

```
slot select: device: {identifying name for disk device}↵
```

To select the output video format:

```
slot select: video format: {video format}↵
```

Either or all slot select parameters may be specified. Note that selecting video format will result in a rescan of the disk to reconstruct the timeline with all clips of the specified video format.

Clearing the current timeline

The "clips clear" command instructs the deck to empty the current timeline:

```
clips clear↵
```

The server responds with

```
200 ok↵
```

Adding a clip to the current timeline

The "clips add:" command instructs the deck to add a clip to the current timeline:

```
clips add: name: {clip name}↵
```

The server responds with

```
200 ok↵
```

or in case of error

```
1xx {error description}↵
```

Configuring the watchdog

The “watchdog” command instructs the deck to monitor the connected client and terminate the connection if the client is inactive for at least a specified period of time.

To configure the watchdog:

```
watchdog: period: {period in seconds}↵
```

To avoid disconnection, the client must send a command to the server at least every {period} seconds. Note that if the period is set to 0 or less than 0, connection monitoring will be disabled.

Network Area Storage

On networks using multicast DNS the “nas discovered” command will list network servers the HyperDeck has discovered:

```
nas discovered↵
225 nas host info:
CloudStoreMini.local. CloudStoreMini
CloudStore80.local. CloudStore80
CloudStore320.local. CloudStore320
```

A network share can be added as a bookmark to the HyperDeck using ‘nas add’

```
nas add:
url: smb://CloudStore80.local/Studio1
```

For shares that require a username and password consider using the secure mode of the HyperDeck Ethernet protocol to avoid passwords being sent as plaintext.

```
nas add:
url: smb://192.168.1.1/Main
username: user1234
password: Password1234
```

A share can be made available for recording and playback using ‘nas select’. If a bookmark exists for that share, ‘nas select’ will use the credentials stored in the bookmark. Otherwise ‘nas select’ will connect using Guest credentials.

```
nas select:
url: smb://192.168.1.1/Main
```

Only one share can be mounted at a time using ‘nas select’.

You can query the currently selected nas share using the ‘nas selected’ command. If ‘notify: slot: true’ was used an asynchronous notification will be sent when the share is mounted.

HyperDeck Control REST API

If you are a software developer you can build custom applications or leverage ready to use tools such as REST client or Postman to seamlessly control and interact with HyperDeck disk recorders using HyperDeck Control REST API. This API enables you to perform a wide range of operations, such as starting or stopping recordings, managing playback, accessing disk information and much more. Whether you're developing a custom application tailored to your specific needs or utilizing existing tools, this API empowers you to unlock the full potential of HyperDeck disk recorders with ease. We look forward to seeing what you come up with!

Transport Control API

API for controlling Transport on Blackmagic Design products.

GET /transports/0

Get device's basic transport status.

Response

200 - Transport status.

The response is a JSON object.

Name	Type	Description
mode	string	Transport mode. Possible values are: InputPreview, InputRecord, Output.

PUT /transports/0

Set device's basic transport status.

Parameters

Name	Type	Description
mode	string	Transport mode. Possible values are: InputPreview, Output.

Response

204 - Transport mode was set.

GET /transports/0/stop

Determine if transport is stopped.

Response

200 - Transport stop response.

The response is a JSON object.

PUT /transports/0/stop

Stop transport. Deprecated, use POST /tranports/0/stop instead.

Response

204 - Transport stopped.

POST /transports/0/stop

Stop transport.

Response

204 - Transport stopped.

GET /transports/0/play

Determine if transport is playing.

Response

200 - Transport play response.
The response is a JSON object.

PUT /transports/0/play

Start playing on transport. Deprecated, use POST /tranports/0/play instead.

Response

204 - Transport playing.

POST /transports/0/play

Start playing on transport.

Response

204 - Transport playing.

GET /transports/0/playback

Get playback state.

Response

200 - OK
The response is a JSON object.

Name	Type	Description
type	string	Possible values are: Play, Jog, Shuttle, Var.
loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
speed	number	Playback Speed, 1.0 for normal forward playback
position	integer	Playback position on the timeline in units of video frames

PUT /transports/0/playback

Set playback state.

Parameters

Name	Type	Description
type	string	Possible values are: Play, Jog, Shuttle, Var.
loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
speed	number	Playback Speed, 1.0 for normal forward playback
position	integer	Playback position on the timeline in units of video frames

Response

204 - No Content

GET /transports/0/record

Get record state.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
recording	boolean	Is transport in Input Record mode

PUT /transports/0/record

Set record state. Deprecated, use POST /transports/0/record instead.

Parameters

Name	Type	Description
recording	boolean	Is transport in Input Record mode
clipName	string	Used to set the requested clipName to record to, when specifying “recording” attribute to True

Response

204 - Recording started.

POST /transports/0/record

Start recording.

Parameters

Name	Type	Description
clipName	string	Specific name of clip to record to.

Response

204 - Recording started.

GET /transports/0/clipIndex

Get the clip index of the currently playing clip on the timeline.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clipIndex	number	The 0-based index of the clip being played on the timeline. null when there is no timeline or an empty timeline.

GET /transports/0/timecode

Get device's timecode.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
display	string	The display timecode serialised as a string.
timeline	string	The timeline timecode serialised as a string.

GET /transports/0/timecode/source

Get timecode source selected on device

Response

200 - OK

The response is a JSON object.

Name	Type	Description
timecode	string	Possible values are: Timeline, Clip.

GET /transports/0/clip

Get clip information about the currently recording (or transferring) clip, if it exists

Response

200 - Information about the clip currently being recorded.

The response is a JSON object.

Name	Type	Description
clip	object	
clip.clipUniqueId	integer	Unique ID used to identify this clip
clip.filePath	string	Path to the file relative to the root of a mount
clip.fileSize	integer	Size of file on disk in bytes
clip.codecFormat	object	
clip.codecFormat.codec	string	Currently selected codec.
clip.codecFormat.container	string	Multimedia container format.
clip.videoFormat (required)	object	Video format configuration.
clip.videoFormat.name	string	Video format serialised as a string.
clip.videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
clip.videoFormat.height	number	Height dimension of video format.
clip.videoFormat.width	number	Width dimension of video format.
clip.videoFormat.interlaced	boolean	Is the display format interlaced?
clip.startTimecode	string	Start timecode of the clip serialised as string
clip.durationTimecode	string	Duration of the clip in timecode format serialised as string
clip.frameCount	integer	Number of frames in clip; duration of the clip in frames

System Control API

API for controlling the System Modes on Blackmagic Design products.

GET /system

Get device system information.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codecFormat	object	
codecFormat.codec	string	Currently selected codec.
codecFormat.container	string	Multimedia container format.
videoFormat (required)	object	Video format configuration.
videoFormat.name	string	Video format serialised as a string.
videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
videoFormat.height	number	Height dimension of video format.
videoFormat.width	number	Width dimension of video format.
videoFormat.interlaced	boolean	Is the display format interlaced?

GET /system/product

Get device product information.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
deviceName	string	Name of device as displayed in Setup
productName	string	Device's product name
softwareVersion	string	Software version running on device

GET /system/supportedCodecFormats

Get the list of supported codecs.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codecs	array	
codecs[i]	object	
codecs[i].codec	string	Currently selected codec.
codecs[i].container	string	Multimedia container format.

GET /system/codecFormat

Get the currently selected codec.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codec	string	Currently selected codec.
container	string	Multimedia container format.

PUT /system/codecFormat

Set the codec.

Parameters

Name	Type	Description
codec	string	Currently selected codec.
container	string	Multimedia container format.

Response

204 - The codec updated successfully.

GET /system/videoFormat

Get the currently selected video format.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
name	string	Video format serialised as a string.
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

PUT /system/videoFormat

Set the timeline video format. Deprecated, use PUT /timelines/0/videoFormat instead.

Parameters

This parameter can be one of the following types:

Name	Type	Description
name	string	Video format serialised as a string.

Name	Type	Description
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

Response

204 - The video format updated successfully.

400 - Invalid request.

409 - Operation unsupported in the current state.

Media Control API

API for controlling media devices in Blackmagic Design products.

GET /media/workingset

Get the list of media devices currently in the working set.

Response

200 - The list of media devices in the working set. Entries are null if there is no media device in that slot.

The response is a JSON object.

Name	Type	Description
size	integer	The fixed size of this device's working set
workingset (required)	array	
workingset[i]	object	
workingset[i].index	integer	Index of this media in the working set
workingset[i].activeDisk	boolean	Is this current item the active disk
workingset[i].volume	string	Volume name
workingset[i].deviceName	string	Internal device name of this media device
workingset[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
workingset[i].totalSpace	integer	Total space on media device in bytes
workingset[i].remainingSpace	integer	Remaining space on media device in bytes
workingset[i].clipCount	integer	Number of clips currently on the device

GET /media/active

Get the currently active media device.

Response

200 - The current active media device.

The response is a JSON object.

Name	Type	Description
workingsetIndex	integer	Working set index of the active media device
deviceName	string	Internal device name of this media device

204 - No media is currently active

PUT /media/active

Set the currently active media device.

Parameters

Name	Type	Description
workingsetIndex	integer	Working set index of the media to become active

Response

204 - The active media device was set successfully.

400 - Setting the currently active media device is not possible in the current state.

GET /media/devices/doformatSupportedFilesystems

Get the list of filesystems available to format the device.

Response

200 - The list of filesystems permitted for formatting.

The response is a JSON object.

GET /media/devices/{deviceName}

Get information about a requested device.

Parameters

Name	Type	Description
{deviceName}	string	

Response

200 - Information about the requested device.

The response is a JSON object.

Name	Type	Description
state	string	The current state of the media device. Possible values are: None, Scanning, Mounted, Uninitialised, Formatting, RaidComponent.

400 - Invalid device name

404 - Device not found

GET /media/devices/{deviceName}/doformat

Get a format key, used to format the device with a PUT request.

Parameters

Name	Type	Description
{deviceName}	string	

Response

200 - Format prepared

The response is a JSON object.

Name	Type	Description
deviceName	string	Internal device name of this media device
key	string	The key used to format this device, it must be fetched with the GET request and then provided back with a PUT request

400 - Cannot format the device

404 - Device not found

PUT /media/devices/{deviceName}/doformat

Perform a format of the media device.

Parameters

Name	Type	Description
{deviceName}	string	

Name	Type	Description
key	string	The key used to format this device, it must be fetched with the GET request and then provided back with a PUT request
filesystem	string	Filesystem to format to. GET doFormatSupportedFilesystems returns list of supported filesystems.
volume	string	Volume name to set for the disk after format

Response

204 - Format successful

400 - Cannot format the device, invalid filesystem or key

404 - Device not found

Timeline Control API

API for controlling playback timeline.

GET /timelines/0

Get the playback timeline.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clips	array	
clips[i]	object	
clips[i].clipUniqueId	integer	Unique identifier used to identify this media clip. If the same media clip is added to the timeline multiple times, each timeline clip has the same clipUniqueId
clips[i].frameCount	integer	Duration of timeline clip in frames, the number of frames in this clip on the timeline
clips[i].durationTimecode	string	Duration of the timeline clip in timecode format serialised as string. This will differ to durationTimecode reported in /clips for this clipUniqueId if clipIn or frameCount was specified when adding this clip to the timeline.
clips[i].clipIn	string	In frame offset for the clip on the timeline, where 0 is the first frame of the on-disk clip
clips[i].inTimecode	string	Clip timecode of the first frame of this timeline clip serialised as string (clip startTimecode + clipIn frames)
clips[i].timelineIn	string	Timeline position of the first frame of this clip, where 0 is the first frame of the timeline
clips[i].timelineInTimecode	string	Timeline timecode of the first frame of this timeline clip serialised as string

Response

404 - No timeline / disk available.

DELETE /timelines/0

Clear the current playback timeline. Deprecated, prefer to use POST /timelines/0/clear

Response

204 - The timeline was cleared.

POST /timelines/0

Add a clip to the timeline.

Parameters

Name	Type	Description
insertBefore	integer	Clip(s) will be inserted before this timeline clip index. If omitted, inserts to the end of the timeline. 0 inserts to the beginning of the timeline.
clips		

Response

204 - The clip was added to the timeline as specified.

POST /timelines/0/add

Add a clip to the end of the timeline. Deprecated, use POST /timelines/0 to add clips within the timeline.

Parameters

This parameter can be one of the following types:

Name	Type	Description
clips	integer	Unique ID (clipUniqueId) of the clip to add to the timeline

Name	Type	Description
clips	array	
clips[i]	integer	Unique ID (clipUniqueId) of the clip to add to the timeline

Response

204 - The clip was added to the end of the timeline.

DELETE /timelines/0/clear

Clear the playback timeline.

Response

204 - The timeline was cleared.

DELETE /timelines/0/clips/{timelineClipIndex}

Remove the specified clip from the timeline.

Parameters

Name	Type	Description
{timelineClipIndex}	integer	

Response

204 - The specified clip was removed from the timeline.

Event Control API

API For working with built-in websocket.

GET /event/list

Get the list of events that can be subscribed to using the websocket API.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
events	array	
events[i]	string	List of events that can be subscribed to using the websocket API

Clips Control API

API for listing clips on disk.

GET /clips

Get the list of clips on the active disk.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clips	array	
clips[i]	object	
clips[i].clipUniqueId	integer	Unique ID used to identify this clip
clips[i].filePath	string	Path to the file relative to the root of a mount
clips[i].fileSize	integer	Size of file on disk in bytes
clips[i].codecFormat	object	
clips[i].codecFormat.codec	string	Currently selected codec.
clips[i].codecFormat.container	string	Multimedia container format.
clips[i].videoFormat (required)	object	Video format configuration.
clips[i].videoFormat.name	string	Video format serialised as a string.
clips[i].videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
clips[i].videoFormat.height	number	Height dimension of video format.
clips[i].videoFormat.width	number	Width dimension of video format.
clips[i].videoFormat.interlaced	boolean	Is the display format interlaced?
clips[i].startTimecode	string	Start timecode of the clip serialised as string
clips[i].durationTimecode	string	Duration of the clip in timecode format serialised as string
clips[i].frameCount	integer	Number of frames in clip; duration of the clip in frames

Response

404 - There is no active disk

HyperDeck Control API

API for controlling HyperDecks.

POST /system/reboot

Reboots the device.

Response

204 - The device will reboot immediately.

409 - Rebooting is not possible in the current state.

GET /system/uptime

Gets the current system uptime.

Response

200 - The current system uptime

The response is a JSON object.

Name	Type	Description
uptimeSeconds	integer	The system uptime in seconds

PUT /system/identify

Sets the identify mode. If set to true, will exit identify mode after 10 seconds.

Parameters

Name	Type	Description
enabled	boolean	Is the device identifying itself?

Response

204 - Identify updated successfully.

GET /transports/0/recordCache

Gets information about the recording cache.

Response

200 - Current information about the recording cache

The response is a JSON object.

Name	Type	Description
status	string	The current status of the cache. “none” means no cache is detected by the device. Possible values are: undetected, unformatted, idle, transferring, queued, recording, disabled.
remainingRecordingTime	integer	The remaining recording time in seconds.
transferringDevice	string	The device name of the disk the cache is currently transferring to.

GET /transports/0/recordCache/enabled

Checks if the record cache is enabled.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
enabled	boolean	Is the record cache enabled?

PUT /transports/0/recordCache/enabled

Enables or disables the record cache. Has no effect if cache is not supported / installed / formatted.

Parameters

Name	Type	Description
enabled	boolean	Is the record cache enabled?

Response

204 - Record cache enabled / disabled was changed.

GET /transports/0/record/spillOrder

Gets media devices in order of which will next be spilled to.

Response

200 - The media device spill order

The response is a JSON object.

Name	Type	Description
devices	array	
devices[i]	object	
devices[i].deviceName	string	Internal device name of the drive.

POST /transports/0/record/spillToNewFile

Spills to a new file.

Response

204 - Spilled to a new file.

POST /transports/0/record/spillToNextDevice

Spills to the next media device

Response

204 - Spilled to the specified drive.

GET /transports/0/inputVideoFormat

Gets the video format of the input video signal.

Response

200 - The video format of the input video signal. “inputVideoFormat” is null when there is no timeline.

The response is a JSON object.

Name	Type	Description
inputVideoFormat (required)	object	Video format configuration.
inputVideoFormat.name	string	Video format serialised as a string.
inputVideoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
inputVideoFormat.height	number	Height dimension of video format.
inputVideoFormat.width	number	Width dimension of video format.
inputVideoFormat.interlaced	boolean	Is the display format interlaced?

GET /transports/0/supportedInputVideoSources

Gets the currently supported input video signal sources.

Response

200 - The supported input video signal sources.

The response is a JSON object.

Name	Type	Description
supportedInputVideoSources	array	
supportedInputVideoSources[i]	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

GET /transports/0/inputVideoSource

Gets the source of the input video signal.

Response

200 - The input video signal source. The source will be one in the list from GET /transports/0/supportedInputVideoSources.

The response is a JSON object.

Name	Type	Description
inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

PUT /transports/0/inputVideoSource

Sets the source of the input video signal.

Parameters

Name	Type	Description
inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

Response

204 - The source of the input video signal was set successfully.

400 - The source specified was invalid or unsupported.

GET /timelines/0/playRange

Gets the current timeline play range. playRange is null if playing the whole timeline, or there is no play range.

Response

200 - The current timeline play range.

The response is a JSON object.

Name	Type	Description
playRange		

PUT /timelines/0/playRange

Sets the timeline play range.

Parameters

Name	Type	Description
playRange		

Response

204 - The timeline play range was set successfully.

POST /timelines/0/playRange/clear

Clears the timeline play range, sets the play range to be the whole timeline.

Response

204 - The timeline play range was cleared successfully.

GET /timelines/0/videoFormat

Gets the video format of the timeline.

Response

200 - The video format of the timeline. “videoFormat” is null when there is no timeline.

The response is a JSON object.

Name	Type	Description
videoFormat (required)	object	Video format configuration.
videoFormat.name	string	Video format serialised as a string.
videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
videoFormat.height	number	Height dimension of video format.
videoFormat.width	number	Width dimension of video format.
videoFormat.interlaced	boolean	Is the display format interlaced?

PUT /timelines/0/videoFormat

Sets the video format of the timeline.

Parameters

This parameter can be one of the following types:

Name	Type	Description
name	string	Video format serialised as a string.

Name	Type	Description
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

Response

204 - The timeline video format was set successfully.

400 - The requested video format was invalid.

409 - The video format cannot be changed at this time.

POST /timelines/0/rebuild

Rebuilds the timeline with default rules in the current timeline format.

Response

204 - The timeline was rebuilt with default rules.

GET /media/external

Gets the list of present external media devices.

Response

200 - The list of present external media devices

The response is a JSON object.

Name	Type	Description
devices	array	
devices[i] (required)	object	
devices[i].volume	string	Volume name
devices[i].deviceName	string	Internal device name of this media device
devices[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
devices[i].totalSpace	integer	Total space on media device in bytes
devices[i].remainingSpace	integer	Remaining space on media device in bytes
devices[i].clipCount	integer	Number of clips currently on the device

GET /media/external/selected

Gets the current selected external media device.

Response

200 - The selected external media device

The response is a JSON object.

Name	Type	Description
selected	object	
selected.deviceName	string	Internal device name of the drive.

404 - No selected external media has been selected

PUT /media/external/selected

Sets the current selected external media device.

Parameters

Name	Type	Description
selected	object	
selected.deviceName	string	Internal device name of the drive.

Response

204 - The selected external media device was set successfully.

GET /media/nas/discovered

Gets the NAS hosts discoverable by the device.

Response

200 - The list of discovered NAS hosts

The response is a JSON object.

Name	Type	Description
hosts	array	
hosts[i]	object	
hosts[i].hostName	string	The hostname of the NAS host
hosts[i].friendlyName	string	The friendly name of the NAS host
hosts[i].ip	string	The IP address of the NAS host

GET /media/nas/bookmarks

Gets all NAS share bookmarks.

Response

200 - The list of NAS share bookmarks

The response is a JSON object.

Name	Type	Description
hosts	array	
hosts[i] (required)	object	
hosts[i].url	string	URL of the NAS share

POST /media/nas/bookmarks

Add a new NAS share bookmarks.

Parameters

Response

204 - The NAS bookmark was added successfully.

400 - The NAS bookmark could not be added.

GET /media/nas/bookmarks/{url}

Get information about a requested network share bookmark.

Parameters

Name	Type	Description
{url}	string	

Response

200 - Information about the requested network share bookmark.

The response is a JSON object.

Name	Type	Description
url	string	URL of the NAS share

404 - Network share bookmark not found

PUT /media/nas/bookmarks/{url}

Adds a bookmark with the requested URL.

Parameters

Name	Type	Description
{url}	string	

Name	Type	Description
username	string	Default value is: guest.
password	string	

Response

204 - The NAS bookmark has been created.

400 - The NAS bookmark could not be created.

DELETE /media/nas/bookmarks/{url}

Deletes a bookmark with the requested URL.

Parameters

Name	Type	Description
{url}	string	

Response

204 - The NAS bookmark has been deleted.

GET /media/nas/selected

Gets the currently selected share bookmark.

Response

200 - Information about the selected network share bookmark.

The response is a JSON object.

Name	Type	Description
selected	object	
selected.url	string	URL of the NAS share

404 - No NAS drive has been selected.

PUT /media/nas/selected

Sets the selected share bookmark to the requested bookmark, or clears the bookmark.

Parameters

Name	Type	Description
selected	object	
selected.url	string	URL of the NAS share

Response

204 - The selected NAS bookmark was set.

400 - The selected NAS bookmark could not be set.

Notification websocket - 1.0.0

Service that notifies subscribers of device state changes.

messages

Subscribe (The messages from the server/device)

Response Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: subscribe, unsubscribe, listSubscriptions, listProperties, websocketOpened .
.data.properties	array	
.data.properties[i]	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.values	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.data.success	boolean	
.type	string	Possible values are: response .
.id	number	Optional parameter that repeats the id in the output for tracking messages

Event Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: propertyValueChanged .
.data.property	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.value	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.type	string	Possible values are: event .

Publish (The messages that user can send to the server/device)

Response Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: subscribe, unsubscribe, listSubscriptions, listProperties, websocketOpened .
.data.properties	array	
.data.properties[i]	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.values	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.data.success	boolean	
.type	string	Possible values are: response .
.id	number	Optional parameter that repeats the id in the output for tracking messages

Device Properties

/media/workingset

The value JSON returned via the eventResponse when the /media/workingset property changes on the device:

Name	Type	Description
size	integer	The fixed size of this device's working set
workingset (required)	array	
workingset[i]	object	
workingset[i].index	integer	Index of this media in the working set
workingset[i].activeDisk	boolean	Is this current item the active disk
workingset[i].volume	string	Volume name
workingset[i].deviceName	string	Internal device name of this media device
workingset[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
workingset[i].totalSpace	integer	Total space on media device in bytes
workingset[i].remainingSpace	integer	Remaining space on media device in bytes
workingset[i].clipCount	integer	Number of clips currently on the device

/media/active

The value JSON returned via the eventResponse when the /media/active property changes on the device:

Name	Type	Description
.workingsetIndex	integer	Working set index of the active media device
.deviceName	string	Internal device name of this media device

/system

The value JSON returned via the eventResponse when the /system property changes on the device:

Name	Type	Description
.codecFormat	object	Currently selected codec
.codecFormat.codec	string	Currently selected codec
.codecFormat.container	string	Multimedia container format
.videoFormat	string	Name of the video format

/system/codecFormat

Currently selected codec

The value JSON returned via the eventResponse when the /system/codecFormat property changes on the device:

Name	Type	Description
.codec	string	Currently selected codec
.container	string	Multimedia container format

/system/videoFormat

Name of the video format

The value JSON returned via the eventResponse when the /system/videoFormat property changes on the device:

Name	Type	Description

/timelines/0

The value JSON returned via the eventResponse when the /timelines/0 property changes on the device:

Name	Type	Description
.clips	array	
.clips[i]	object	
.clips[i].clipUniqueId	integer	Unique identifier used to identify this media clip. If the same media clip is added to the timeline multiple times, each timeline clip has the same clipUniqueId
.clips[i].frameCount	integer	Duration of timeline clip in frames, the number of frames in this clip on the timeline
.clips[i].durationTimecode	string	Duration of the timeline clip in timecode format serialised as string. This will differ to durationTimecode reported in /clips for this clipUniqueId if clipIn or frameCount was specified when adding this clip to the timeline.
.clips[i].clipIn	string	In frame offset for the clip on the timeline, where 0 is the first frame of the on-disk clip
.clips[i].inTimecode	string	Clip timecode of the first frame of this timeline clip serialised as string (clip startTimecode + clipIn frames)
.clips[i].timelineIn	string	Timeline position of the first frame of this clip, where 0 is the first frame of the timeline
.clips[i].timelineInTimecode	string	Timeline timecode of the first frame of this timeline clip serialised as string

/transports/0

The value JSON returned via the eventResponse when the /transports/0 property changes on the device:

Name	Type	Description
.mode	string	Transport mode Possible values are: InputPreview, InputRecord, Output .

/transports/0/stop

true when transport mode is InputPreview or when in Output mode and speed is 0

The value JSON returned via the eventResponse when the /transports/0/stop property changes on the device:

Name	Type	Description

/transports/0/play

True when transport is in Output mode and speed is non-zero

The value JSON returned via the eventResponse when the /transports/0/play property changes on the device:

Name	Type	Description

/transports/0/playback

The value JSON returned via the eventResponse when the /transports/0/playback property changes on the device:

Name	Type	Description
.type	string	Possible values are: Play, Jog, Shuttle, Var .
.loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
.singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
.speed	number	Playback speed, 1.0 for normal forward playback
.position	integer	Playback position on the timeline in units of video frames

/transports/0/record

The value JSON returned via the eventResponse when the /transports/0/record property changes on the device:

Name	Type	Description
.recording	boolean	Is transport in Input Record mode

/transports/0/timecode

The value JSON returned via the eventResponse when the /transports/0/timecode property changes on the device:

Name	Type	Description
display	string	The display timecode serialised as a string.
timeline	string	The timeline timecode serialised as a string.

/transports/0/timecode/source

The value JSON returned via the eventResponse when the /transports/0/timecode/source property changes on the device:

Name	Type	Description
.timecode	string	Possible values are: Timeline, Clip .

/transports/0/clipIndex

The value JSON returned via the eventResponse when the /transports/0/clipIndex property changes on the device:

Name	Type	Description
.clipIndex	number	The 0-based index of the clip being played on the timeline. null when there is no timeline or an empty timeline.

/media/external

The value JSON returned via the eventResponse when the /media/external property changes on the device:

Name	Type	Description
.volume	string	Volume name
.deviceName	string	Name of media device
.remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
.totalSpace	integer	Total space on media device in bytes
.remainingSpace	integer	Remaining space on media device in bytes
.clipCount	integer	Number of clips currently on the device

/media/external/selected

The value JSON returned via the eventResponse when the /media/external/selected property changes on the device:

Name	Type	Description
.deviceName	string	Internal device name of this media device

/transports/0/inputVideoSource

The value JSON returned via the eventResponse when the /transports/0/inputVideoSource property changes on the device:

Name	Type	Description
.inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite .

/transports/0/inputVideoFormat

The value JSON returned via the eventResponse when the /transports/0/inputVideoFormat property changes on the device:

Name	Type	Description
.inputVideoFormat	string	Name of the video format

/timelines/0/videoFormat

The value JSON returned via the eventResponse when the /timelines/0/videoFormat property changes on the device:

Name	Type	Description
.videoFormat	string	Name of the video format

/media/nas/discovered

The value JSON returned via the eventResponse when the /media/nas/discovered property changes on the device:

Name	Type	Description
.hostName	string	Hostname of external network drive
.friendlyName	string	Name of external network drive
.ip	string	IP Address of external network drive

/media/nas/bookmarks

The value JSON returned via the eventResponse when the /media/nas/bookmarks property changes on the device:

Name	Type	Description
.hosts	array	
.hosts[i]	object	
.hosts[i].url	string	URL associated with bookmark

Help

Getting Help

The fastest way to obtain help is to go to the Blackmagic Design online support pages and check the latest support material available for your Blackmagic HyperDeck disk recorder.

Blackmagic Design Online Support Pages

The latest manual, software and support notes can be found at the Blackmagic Design support center at www.blackmagicdesign.com/support.

Blackmagic Design Forum

The Blackmagic Design forum on our website is a helpful resource you can visit for more information and creative ideas. This can also be a faster way of getting help as there may already be answers you can find from other experienced users and Blackmagic Design staff which will keep you moving forward. You can visit the forum at https://forum.blackmagicdesign.com

Contacting Blackmagic Design Support

If you can't find the help you need in our support material or on the forum, please use the "Send us an email" button on the support page to email a support request. Alternatively, click on the "Find your local support team" button on the support page and call your nearest Blackmagic Design support office.

Checking the Software Version Currently Installed

To check which version of Blackmagic HyperDeck software is installed on your computer, open the About Blackmagic HyperDeck Setup window.

- On Mac OS, open Blackmagic HyperDeck Setup from the Applications folder. Select About Blackmagic HyperDeck Setup from the application menu to reveal the version number.
- On Windows, open Blackmagic HyperDeck Setup utility from your Start menu or Start Screen. Click on the Help menu and select About Blackmagic HyperDeck Setup to reveal the version number.

How to Get the Latest Software Updates

After checking the version of Blackmagic HyperDeck Setup software installed on your computer, please visit the Blackmagic Design support center at www.blackmagicdesign.com/support to check for the latest updates. While it is usually a good idea to run the latest updates, it is wise to avoid updating any software if you are in the middle of an important project.

Regulatory Notices

Disposal of Waste of Electrical and Electronic Equipment Within the European Union.



The symbol on the product indicates that this equipment must not be disposed of with other waste materials. In order to dispose of your waste equipment, it must be handed over to a designated collection point for recycling. The separate collection and recycling of your waste equipment at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city recycling office or the dealer from whom you purchased the product.



This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this product in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at personal expense.

Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.



R-R-BMD-20211410001

ISED Canada Statement



This device complies with Canadian standards for Class A digital apparatus.

Any modifications or use of this product outside its intended use could void compliance to these standards.

Connection to HDMI interfaces must be made with high quality shielded HDMI cables.

This equipment has been tested for compliance with the intended use in a commercial environment. If the equipment is used in a domestic environment, it may cause radio interference.

Safety Information

Product is suitable for use in tropical locations with an ambient temperature of up to 40°C.

Ensure that adequate ventilation is provided around the product and that it is not restricted.

No operator serviceable parts inside product. Refer servicing to your local Blackmagic Design service center.



Use only at altitudes not more than 2000m above sea level.

State of California statement

This product can expose you to chemicals such as trace amounts of polybrominated biphenyls within plastic parts, which is known to the state of California to cause cancer and birth defects or other reproductive harm.

For more information go to www.P65Warnings.ca.gov.

European Office

Blackmagic Design B.V, Amsterdam
Sloterdijk Teleport Towers Office 2.17,
Kingsfordweg 151,
Amsterdam, 1043GR.

Warranty

12 Month Limited Warranty

Blackmagic Design warrants that this product will be free from defects in materials and workmanship for a period of 12 months from the date of purchase. If a product proves to be defective during this warranty period, Blackmagic Design, at its option, either will repair the defective product without charge for parts and labor, or will provide a replacement in exchange for the defective product.

In order to obtain service under this warranty, you the Customer, must notify Blackmagic Design of the defect before the expiration of the warranty period and make suitable arrangements for the performance of service. The Customer shall be responsible for packaging and shipping the defective product to a designated service center nominated by Blackmagic Design, with shipping charges pre paid. Customer shall be responsible for paying all shipping charges, insurance, duties, taxes, and any other charges for products returned to us for any reason.

This warranty shall not apply to any defect, failure or damage caused by improper use or improper or inadequate maintenance and care. Blackmagic Design shall not be obligated to furnish service under this warranty: a) to repair damage resulting from attempts by personnel other than Blackmagic Design representatives to install, repair or service the product, b) to repair damage resulting from improper use or connection to incompatible equipment, c) to repair any damage or malfunction caused by the use of non Blackmagic Design parts or supplies, or d) to service a product that has been modified or integrated with other products when the effect of such a modification or integration increases the time or difficulty of servicing the product. THIS WARRANTY IS GIVEN BY BLACKMAGIC DESIGN IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED. BLACKMAGIC DESIGN AND ITS VENDORS DISCLAIM ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. BLACKMAGIC DESIGN'S RESPONSIBILITY TO REPAIR OR REPLACE DEFECTIVE PRODUCTS IS THE WHOLE AND EXCLUSIVE REMEDY PROVIDED TO THE CUSTOMER FOR ANY INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES IRRESPECTIVE OF WHETHER BLACKMAGIC DESIGN OR THE VENDOR HAS ADVANCE NOTICE OF THE POSSIBILITY OF SUCH DAMAGES. BLACKMAGIC DESIGN IS NOT LIABLE FOR ANY ILLEGAL USE OF EQUIPMENT BY CUSTOMER. BLACKMAGIC IS NOT LIABLE FOR ANY DAMAGES RESULTING FROM USE OF THIS PRODUCT. USER OPERATES THIS PRODUCT AT OWN RISK.

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2024年7月

インストール/オペレーションマニュアル

Blackmagicdesign

HyperDeck Shuttle HD



HyperDeck Shuttle HD



ようこそ

Blackmagic HyperDeck Shuttle HDディスクレコーダーをお買い上げいただき誠にありがとうございます。

Blackmagic HyperDeckのオリジナルモデルを設計した際、高速のSSDストレージを使用したビデオの収録・再生が実行できるディスクレコーダーを作りたいと考えていました。今回、HyperDeck Shuttle HDをご紹介できることを大変喜ばしく思っています。

HyperDeck Shuttle HDは、小型で可搬性に優れたHDMIビデオレコーダーで、デスクでの使用を意図して設計されています。HyperDeck Shuttle HDは、大型のサーチダイヤルと、馴染み深い放送コントロールを搭載しているので、片手で操作できます。これにより、ライブプロダクションでATEM Miniと共に使用するのに最適なレコーダーとなっています。また、テレプロンプターとして使用することも可能です！

HyperDeck Shuttle HDは、SDカードまたは外付けフラッシュディスクに、ProRes、DNxHD、H.264で収録するため、極めて高速に収録・再生が実行できます。

弊社のウェブサイトwww.blackmagicdesign.com/jpのサポートページで、最新バージョンのマニュアルおよびHyperDeckソフトウェアのアップデートをご確認ください。ソフトウェアをアップデートすることで、常に最新の機能をお使いいただけます。ソフトウェアをダウンロードする際にユーザー登録していただければ、新しいソフトウェアのリリース時にお知らせいたします。常に新機能の開発および製品の改善に努めていますので、ユーザーの皆様からご意見をいただければ幸いです。



Blackmagic Design CEO
グラント・ペティ

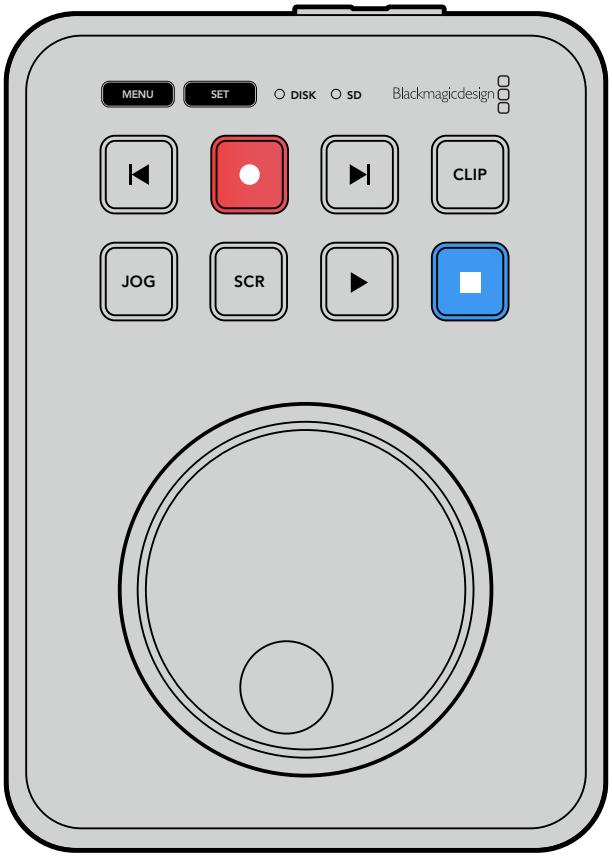
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はじめに

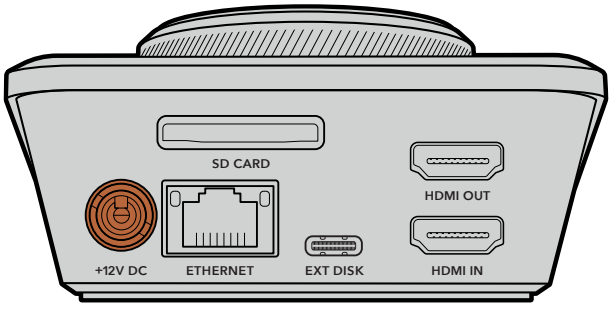
HyperDeck Shuttle HDは、電源に接続し、HDMIビデオソースをつなげ、SDカードまたは外付けメディアを挿入したら、収録ボタンを押すだけで使い始められます。

このセクションでは、HyperDeck Shuttle HDを使い始める手順を紹介します。



電源の接続

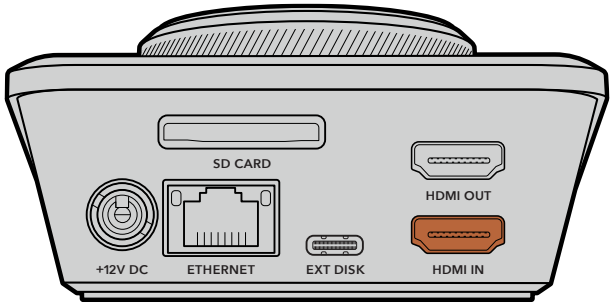
HyperDeck Shuttle HDに給電を行うには、同梱の電源アダプターをリアパネルの電源入力に接続します。ロックリングを締めることで、電源ケーブルが固定されるため、誤って外れることを防ぎます。



電源アダプターをHyperDeck Shuttle HDの電源入力に固定

ビデオとオーディオを接続

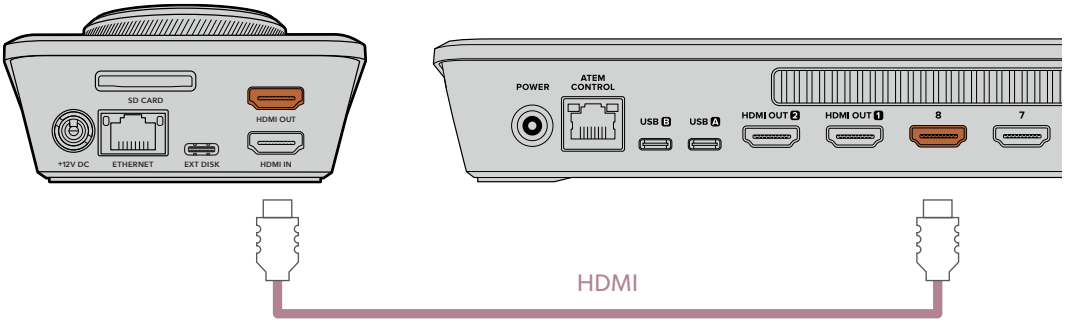
HyperDeck Shuttle HDにビデオを接続するには、HDMIビデオソースをリアパネルのHDMI入力に接続します。



送信先の機器をHDMI出力に接続します。例えば、ATEM Miniスイッチャーやテレビなどです。

HDMI出力は、HyperDeckの設定を変更する際に、設定メニューを表示する際にも使用します。その理由は、設定メニューがHDMI出力のビデオオーバーレイとして表示されるからです。メニュー設定に関する詳細は、「設定の変更」セクションを参照してください。

作業のこつ 接続したディスプレイに入力ビデオソースが表示されない場合、再生モードになっている可能性があります。収録ボタンを押すと、収録モードが有効になります。



HDMIテレビやATEM Miniスイッチャーなどの送信先の機器に、HDMI出力を接続

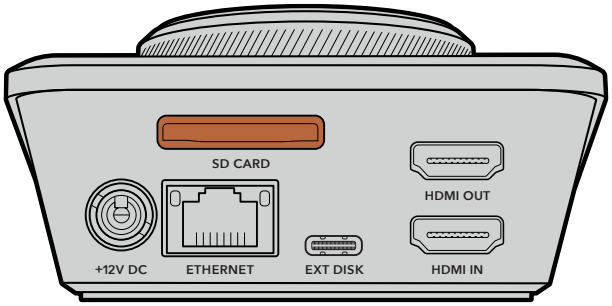
メディアの接続

HyperDeck Shuttle HDディスクレコーダーはすべて、すぐに収録できる状態で発送されており、設定を変更する必要はありません。必要な作業は、SDカードまたは外付けディスクのフォーマットだけです。

メディアのフォーマットは、メニュー設定を使用して簡単に実行できます。または、コンピューターでもフォーマットできます。詳細は「メディアをフォーマット」セクションを参照してください。ビデオの収録に適したメディアの種類、およびSDカードと外付けディスクのリストも同セクションに記載されています。

SDカードを挿入する：

1 金のコネクターが上を向くようにSDカードを持ち、メディアスロットと一直線になるようにします。カードをスロットに差し込み、固定されるまでゆっくりと押します。



2 HyperDeckがSDカードを検証します。検証中は、HyperDeck Shuttle HDの上部にあるSDカードのインジケーターが緑に点灯します。検証が終わったら、インジケーターのライトが消えます。



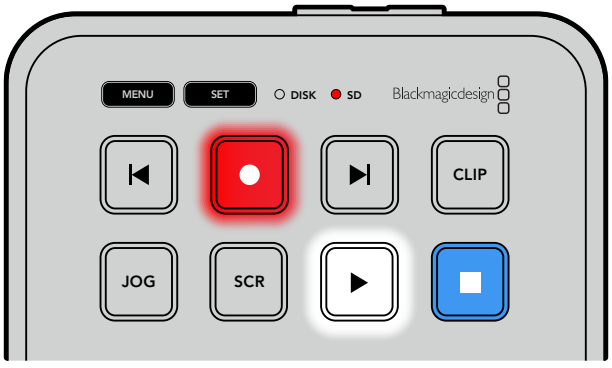
これで必要な準備が整い、HyperDeck Shuttle HDで収録・再生を行えるようになりました！

クリップの収録・再生、設定の変更などに関する詳細は、このマニュアルに後述されています。

ビデオの収録

ビデオソースが、送信先のHDMI機器に表示されたことを確認したら、収録を開始できます。

収録ボタンを押すと、収録が開始されます。SDカードに収録中は、SDカードのインジケーターが赤に点灯し、収録および再生ボタンも点灯します。外付けディスクへ収録する際は、ディスクインジケーターが赤に点灯します。



収録を停止するには、停止ボタンを押します。

再生

再生ボタンを押して、再生を開始します。再生中は、再生ボタンが点灯し、「DISK」または「SD」メディアスロット・インジケーターが緑に光ります。

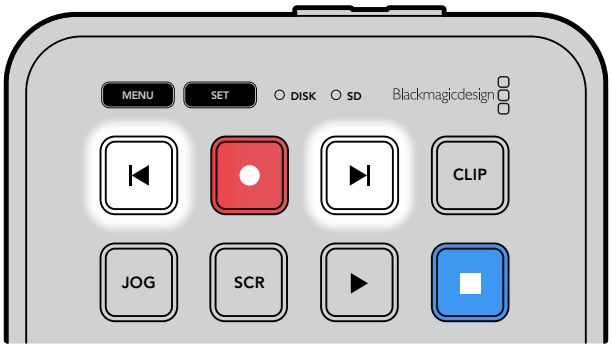
複数のクリップが収録されている場合、順方向/逆方向の頭出しボタンを押すと、すばやくクリップ間を移動できます。



頭出しボタンの使用

逆方向の頭出しボタンを押すと、クリップを頭出しできます。2回以上押すと、それより前のクリップを移動していきます。

順方向の頭出しボタンを押すと、後続のクリップを移動していきます。HyperDeck Setup Utilityで「Identify HyperDeck（HyperDeckの識別）」チェックボックスを選択している場合にも、頭出しボタンが点滅します。



順方向/逆方向の頭出しボタンを使用すると、各クリップの最初のフレームに頭出しが可能

作業のこつ HyperDeckでビデオファイルを再生するには、ファイルの収録に使用されたコーデックに設定する必要があります。これは、メニューで実行できます。詳細は、後述の「設定の変更」セクションを参照してください。

複数のクリップをループ

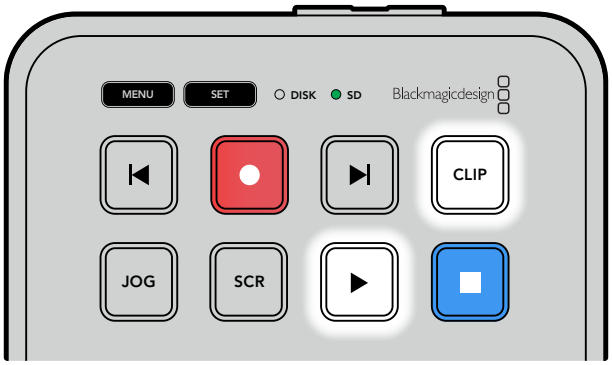
再生中に、再生ボタンを再び押すと、HyperDeck Shuttle HDはすべてのクリップをループします。停止ボタンを押すと、ループが停止します。

単一のクリップをループしたい場合は、HyperDeckをクリップモードにして、再生ボタンを一度押すと再生し、再度押すとループします。

すべてをループ	再生中に再生ボタンをもう一度押すと、収録されたクリップすべてがループで再生されます。
現在のクリップをループ	クリップモードで、再生ボタンを再び押すと、現在のクリップがループで再生されます。

クリップモード

クリップモードでは、再生を単一のクリップに制限できます。例えば、クリップモードが有効な状態では、クリップをシャトルやスキップでき、その後、再生ボタンを押すと、そのクリップの最後で再生が停止します。



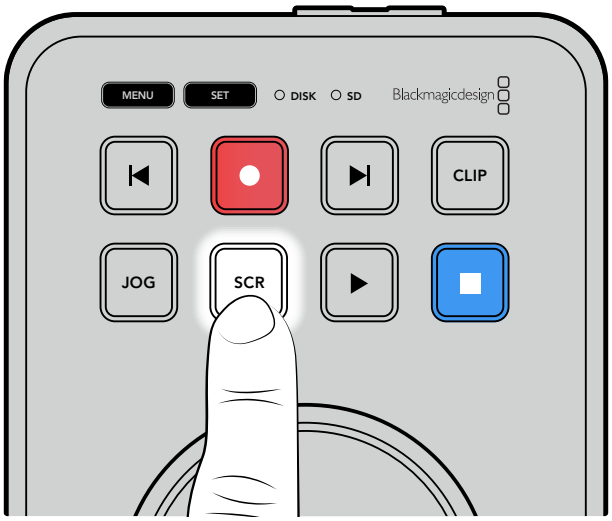
クリップモードが選択されている場合、再生ボタンを2回押すと現在のクリップがループ

サーチダイヤルの使用

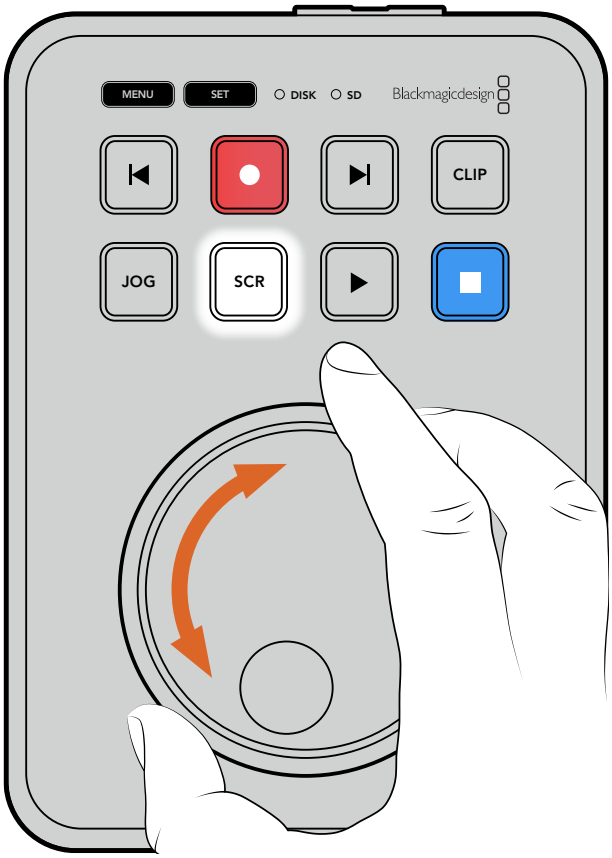
サーチダイヤルでは、クリップ間をすばやく移動して、特定の箇所を再生するために選択したり、フレームごとにクリップをチェックできます。特定の箇所を見つける必要がある場合に、この機能は重要です。ダイヤルを回転させて、視覚的にクリップをモニタリングして検索できます。特定の位置に再生ヘッドを配置し、生放送で該当のクリップを再生できるように準備しておくと便利です。

サーチダイヤルのモードには、ジョグ（JOG）、スクロール（SCR）、シャトル（STL）があります。

JOG	**ジョグ**	クリップをフレームごとに再生できるため、精度の高いコントロールが可能です。
SCR	**スクロール**	スクロールモードでは、収録された全メディア内で順方向/逆方向にすばやく移動できます。サーチダイヤルを回転させると、スクロールがその動きにロックされるので、再生を開始する場所を完全にコントロールできます。 また、「SCR（スクロール）」ボタンでボリュームナビゲーション・ウィンドウを呼び出すと、現在再生しているビデオのファイルパスを表示できます。ボリュームナビゲーション機能に関する詳細は、このマニュアルの「ボリュームナビゲーション」セクションを参照してください。
JOG SCR	**シャトル**	「JOG」と「SCR」ボタンを同時に押すと、シャトルモードになります。シャトルモードでは、ダイヤルを左右に回すことで、メディアを巻き戻し/早送りできます。ダイヤルを回転させると、メディアのシャトル速度が上がります。最高速度は50倍速です。停止するためにシャトル速度を下げるには、ダイヤルを元の位置まで回します。シャトル中に特定の位置で停止するには、停止ボタンを押すか、再生ボタンを押して、現在の位置から再生を再開します。シャトル最高速度は「セットアップ」メニューから変更できます。詳細は、後述の「設定」セクションを参照してください。



「JOG（ジョグ）」または「SCR（スクロール）」ボタンを押すと、検索モードをジョグまたはスクロールに設定可能

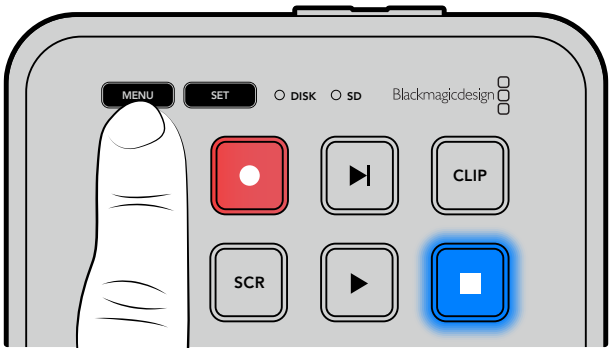


検索モードを選択したら、サーチダイヤルを回転させます

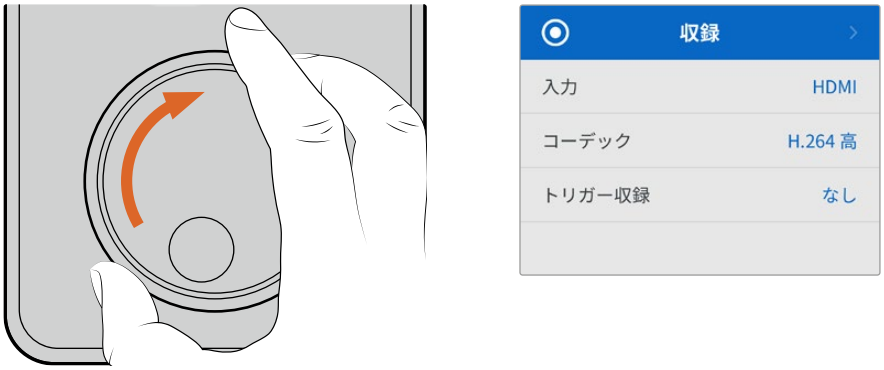
作業のこつ 通常の再生に戻るには、再生または停止ボタンを押します。

設定の変更

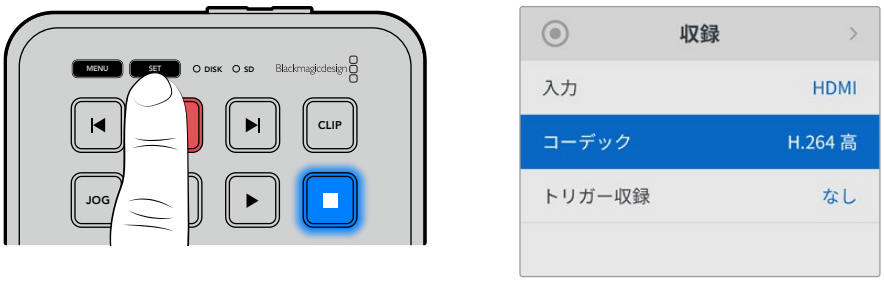
「MENU」ボタンを押すと、設定メニューが開きます。このメニューでは、接続したHDMIディスプレイの左下にビデオオーバーレイとして表示されます。



「MENU」ボタンを押して、設定メニューを開きます



サーチダイヤルを使用して、サブメニューや設定をナビゲートします



「SET」ボタンを押して、サブメニューや設定を選択します

サーチダイヤルや順方向/逆方向の頭出しボタンを使用して、設定を調整します。「SET」ボタンを押して、設定を確定します。

メニューを出るには「MENU」ボタンを押して、オプションを遡ってホームスクリーンに戻ります。

作業のこつ　「セットアップ」メニューを使用すると、メニューの表示位置は、ディスプレイの四隅のいずれにも変更可能です。設定の変更が完了したら、メニューをオフにすることをお勧めします。これにより、ATEM Mini ExtremeなどのHDMIスイッチャーにHDMI出力を接続している場合に、出力がクリーンフィードとなります。

設定

設定メニューは、収録、モニタリング、オーディオ、ストレージ、セットアップの5つのカテゴリーに分かれています。これらのカテゴリーのサブメニューには関連の設定が含まれており、ほとんどの設定がHyperDeck Shuttle HDのコントロールパネルで調整できます。一部の設定（例えば、ファイル名プレフィックス）は、メニューにはグレーで表示のみされます。このような場合、そういった設定はHyperDeck Setupユーティリティで調整できます。

収録メニュー



入力

HyperDeck Shuttle HDのHDMI入力を表示します。

コーデック

HyperDeck Shuttle HDは、H.264、Apple ProRes、DNxHDコーデックで圧縮ビデオを収録します。テレプロンプター機能を使用するには、「テレプロンプター」を選択します。

トリガー収録

「ビデオ開始/停止」と「タイムコードトリガー」の2種類のトリガー収録から選択できます。

Blackmagic Pocket Cinema Camera 4Kなどの一部のカメラは、外部レコーダーの収録開始/停止をコントロールする信号をHDMI経由で送信します。「ビデオ開始/停止」を選択すると、カメラの録画ボタンが押された際に、HyperDeckで収録を開始/停止します。

「タイムコードトリガー」では、HDMI入力を介して有効なタイムコード信号を受信すると、HyperDeckで収録を開始します。信号が止まると、収録も停止します。トリガー収録を無効にするには「なし」を選択します。

メモ HDMIカメラから収録する場合、オーバーレイ機能がオフになっており、出力がクリーンなことを確認してください。カメラのビデオ出力にオーバーレイが付いていると、イメージと共にオーバーレイが収録されます。

モニタリングメニュー



テレプロンプター・レイアウト

「モニタリング」メニューには、HyperDeck Shuttle HDをテレプロンプターとして使用する際に必要なすべての設定が含まれています。

フォントサイズ

フォントサイズのオプションを選択して、文字のサイズを調整し、「SET」を押して確定します。ダイヤル時計回りに回すと数値が上がり、反時計回りに回すと下がります。

行間隔

ダイヤルを回転させると、行の間のスペースを広げたり、縮めたりできます。

サイド余白

テレプロンプター・ディスプレイの両側の余白の幅を調整できます。

反転

テレプロンプターのモニターが、カメラの前や演壇で使用するために、ガラスに投射するようにセットアップされている場合、反転のオプションを使用することで、話者が読めるようになります。反転には2つのモードがあります。

左右反転 - テレプロンプターモニターの底部が、ガラスのベース部分に最も近づけた状態でマウントされている場合に使用します。

上下反転 - テレプロンプターモニターの底部が、ガラスのベース部分から離れた状態でマウントされている場合に使用します。

オーディオメニュー



オーディオチャンネル

HyperDeck Shuttle HDは同時に最大8チャンネルのPCMオーディオを収録できます。収録するオーディオチャンネル数を設定するには「オーディオチャンネル」に進み、2ch、4ch、8chから選択します。

コーデックがH.264に設定されている場合、2チャンネルのAACオーディオを選択できるため、直接YouTubeにアップロードできます。

ストレージメニュー



接続されているメディアが「ストレージ」の設定に表示されます。「メディア 1」には、接続されたSDカードの名前が表示され、「メディア 2」には、「EXT DISK（外付けディスク）」コネクターに接続されたUSBフラッシュディスクの名前が表示されます。Blackmagic MultiDock 10GなどのUSBハブを使用している場合は、アクティブなディスクが表示されます。

アクティブなメディア

HyperDeck Shuttleは、同時に1枚のSDカード、複数の外付けドライブ、ネットワークストレージを接続できます。つまり、1台のHyperDeck Shuttleディスクレコーダーで数テラバイトの収録が行えます。

1つのSDカードまたはドライブを接続している場合、そのドライブやカードが、すべての再生および収録のアクティブメディアとなります。複数のカードやドライブを使用している場合、どのメディアに収録・再生を行うか選択できます。

アクティブなメディアを選択する：

1. サーチダイヤルで、「ストレージ」メニューで「アクティブなメディア」をハイライトし、点滅している「SET」ボタンを押します。
2. 接続されているメディアがリストに表示されます。サーチダイヤルで収録に使用したいメディアを選択します。



ネットワークの場所を設定する

HyperDeck Shuttleは、イーサネット経由で、Blackmagic Cloudやその他のネットワークアクセス・ストレージのHDメディアを再生できます。

ネットワークストレージのフォルダーに接続する：

1. サーチダイヤルと「SET」ボタンを使用して「ネットワークの場所を設定」を選択します。ローカルネットワークの検索に関するダイアログが表示されます。
2. ローカルネットワーク上で見つかったサーバーがリスト表示されます。サーチダイヤルを使用してサーバー名をハイライトし、「SET」を押して選択します。サーバー上で使用可能な共有フォルダーのリストが表示されます。サーチダイヤルを用いて選択したい共有フォルダーをハイライトし、「SET」を押します。使用したいフォルダーが画面の一番上に来るまで、この作業を繰り返します。
3. LCDスクリーン上部にフォルダー名が表示されます。収録と再生用にこのフォルダーを選択するには、サーチダイヤルを使用して、「この場所に設定」を選択して「SET」ボタンを押します。右側にチェックマークが表示されます。



4. 接続されると、「ネットワークの場所」の「メディア 2」ストレージリストに該当の場所が表示されます。

HyperDeck Shuttleの2つ目のメディアスロットは、USBと接続されたネットワークフォルダーの両方に割り当てられています。接続されたUSBドライブとネットワークストレージを切り替えるには、「ストレージメディア」メニューから「メディア 2」を選択し、点滅している「SET」ボタンを押します。「メディア 2」リストから、使用したいストレージを選択し、「SET」ボタンを押します。「ストレージ」メニューに戻ります。ネットワークストレージを削除するには、「メディア 2」を使用して、メニューの一番下にある「ネットワークの場所の削除」を選択します。



メモ ネットワークボリュームからの再生では、HyperDeck Shuttle HDはサーバー上でのゲストログインを前提としています。パスワードを必要とするログインでのサーバーへのアクセスは、メニューと「SET」ボタンでは現在サポートされていませんが、HyperDeck Ethernet Protocolを使用すると認証情報を入力できます。

USBスピル

複数のドライブを接続するために、Blackmagic MultiDock 10Gまたは同様の機器を「EXT DISK」とラベルが付いたUSB接続を介して使用している場合、「USBスピル」をオンにすることで、収録が次の外付けディスクに継続されます。

メディアをフォーマット

SDカードや、リアパネルのEXT DISK（外付けディスク）コネクターに接続したメディアは、直接ユニットで、あるいはMacまたはWindowsコンピューターでフォーマットを実行できます。

HyperDeck Shuttle HDでメディアを準備する：

1. サーチダイヤルと「SET」ボタンを使用して「メディアをフォーマット」を選択します。
2. リストから初期化するメディアを選択して「SET」ボタンを押します。
3. フォーマットを選択して「SET」ボタンを押します。
4. 初期化されるカードと、選択したフォーマットを確認するメッセージが表示されます。「初期化」を選択して確定します。
5. フォーマット中であることを示すメッセージが表示され、完了のメッセージが表示されたら「OK」を選択します。

HFS+は「Mac OS X Extended」としても知られており、ジャーナリングをサポートしているため推奨されるフォーマットです。万が一、ストレージメディアが破損した場合、ジャーナリングされたメディアのデータは回復できる可能性があります。HFS+はMacでネイティブサポートされています。exFATはMacおよびWindowsによりネイティブサポートされており、他のソフトウェアは必要ありませんが、ジャーナリングには対応していません。MacまたはWindowsでのメディアのフォーマット方法は、「メディアをフォーマット」セクションを参照してください。

セットアップメニュー

「セットアップ」メニューには、言語の選択、デフォルトフォーマットに加え、メニュー表示、ネットワーク設定、タイムコードオプションに関するセクションが含まれています。



名前

ネットワークで複数のHyperDeck Shuttle HDを使用している場合、個別の名前を付けると、ユニットをそれぞれ識別しやすくなります。これは、Blackmagic HyperDeck Setup、またはターミナルアプリを使用してBlackmagic HyperDeck Ethernet Protocolで実行できます。この名前は「セットアップ」メニューに表示されます。

言語

HyperDeck Shuttle HDは13ヶ国語をサポートしています。対応言語は、日本語、英語、中国語、韓国語、スペイン語、ドイツ語、フランス語、ロシア語、イタリア語、ポルトガル語、トルコ語、ウクライナ語、ポーランド語です。

言語を選択する：

1. 「セットアップ」メニューがハイライトされたら「SET」を押します。
2. サーチダイヤルを回して、「言語」を選択したら「SET」を押します。
3. サーチダイヤルを使用して、使用する言語を選択したら「SET」を押します。言語が選択されると、自動的に「セットアップ」メニューに戻ります。

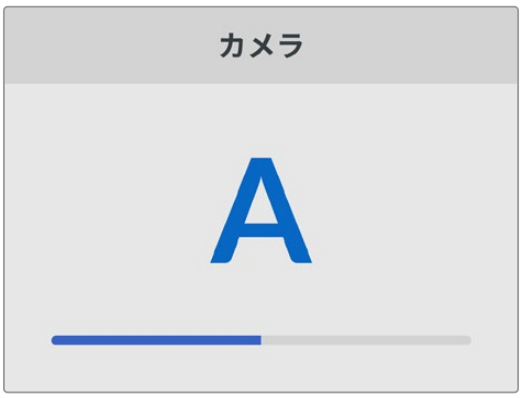
ソフトウェア

現在のソフトウェアバージョンを表示します。

カメラ

この設定は、HyperDeckで複数のカメラから個別収録ファイルを収録し、DaVinci Resolveのマルチカムタイムラインで編集する際に便利です。

各カメラの識別文字がファイルのメタデータに記録されるため、同期ビン機能を使用する際にDaVinci Resolveが各アングルを簡単に識別できます。



カメラの識別文字にはA～Zまたは1～9が使用できます。

デフォルトフォーマット

HyperDeck Shuttle HDが、使用するビデオフォーマットを検出できない場合に、この設定を用いて、メインで使用するビデオフォーマットを設定します。

例えば、ビデオ入力を接続していない状態でHyperDeck Shuttle HDをオンにし、2つの異なるビデオフォーマットのファイルが存在するディスクを挿入した場合、再生に使用するビデオフォーマットをHyperDeckで指定する必要があります。「デフォルトフォーマット」では、HyperDeckで使用するビデオフォーマットを設定でき、そのフォーマットに切り替えて、これらのファイルを再生します。

この機能は、HyperDeck Shuttle HDにビデオ入力やメディアディスクが接続されていない状態で、初めてオンにする際にも便利です。この場合、HyperDeckはモニタリング出力に使用するビデオフォーマットを検出できないので、「デフォルトフォーマット」の情報を使用します。

しかし、この機能はガイドとして使用されるだけで、オーバーライドする訳ではありません。例えば、一種類のビデオファイルが収録されたメディアディスクを再生する場合、HyperDeckディスクレコーダーはそのビデオフォーマットに切り替えて再生を実行します。「デフォルトフォーマット」の情報は使用されません。

これは収録でも同様です。収録ボタンを押すと、HyperDeckはビデオ入力に接続されたビデオフォーマットを使用します。収録の終了後、HyperDeck Shuttle HDは収録に使用したのと同一のビデオフォーマットで、そのファイルを再生します。これは、「デフォルトフォーマット」と一致するビデオフォーマットのファイルがディスクに存在する場合でも同様です。デッキは、収録に使用したのと同じビデオフォーマットを再生します。メディアディスクの接続を外し、接続し直した場合のみ、「デフォルトフォーマット」の設定に基づき、再生に使用するファイルの種類が選択されます。

この機能は、HyperDeck Shuttle HDが使用するフォーマットを自動的に決めることができない場合にガイドとして使用されるだけであり、デッキを特定の方法で動作させるようにオーバーライドする機能ではありません。

シャトル最高速度

HyperDeck Shuttle HDのシャトル最高速度は50倍速です。この速度を下げたい場合は、他の速度プリセットを選択します。

日付と時刻

日時を正確に設定することで、HyperDeck Shuttleがネットワークと同じ日時情報を使用できます。また、これにより一部のネットワークスシステムで生じることのある競合を防ぎます。



日付と時刻の自動設定

日時を自動的に設定するには、この設定をオンにします。日時の自動設定には、HyperDeckはNTPのフィールドで設定されているネットワーク・タイム・プロトコルサーバーを使用します。日時をマニュアルで設定するにはオフを選択します。

NTP

デフォルトのNTPサーバーはtime.cloudflare.comですが、HyperDeck Setupを使用して、別のNTPサーバーをマニュアルで入力することもできます。NTPサーバーの設定に関する詳細は、このマニュアルの「Blackmagic HyperDeck Setup」セクションを参照してください。

日付

日付をマニュアルで入力するには、「日付」設定を選択して「SET」ボタンを押します。サーチダイヤルを使用して、年、月、日を選択します。

時刻

時刻を設定するには、「時刻」設定を選択して「SET」ボタンを押します。サーチダイヤルを使用して、時間と分を調整します。内部クロックは24時間時計です。

メニュー設定

「メニュー」設定を使用することで、接続したHDMIディスプレイにメニューが表示される場所と表示モードを調整できます。



画面表示モード

HyperDeckのオンスクリーンメニューをダークまたはライトモードに設定できます。ライトモードでは、メディアが暗い映像の場合や、テレプロンプターとして使用している場合に、はっきりとしたコントラストでメニューが表示されます。





不透明度

接続されたディスプレイに表示されるメニューオーバーレイの不透明度を下げることができます。調整可能な範囲は、デフォルトの100%から20%までです。

位置

メニューオーバーレイは画面の左下に表示されます。メニューを異なる場所に表示したい場合は、「位置」を選択し、「SET」ボタンを押します。表示場所は「左上」、「右上」、「左下」、「右下」から選択できます。

ネットワーク設定



プロトコル

Blackmagic HyperDeckはデフォルトでDHCPに設定されて出荷されます。そのため、ネットワークに接続するとネットワークサーバーが自動的にIPアドレスを割り当てるので、その他のネットワーク設定を調整する必要はありません。マニュアルでアドレスを設定する必要がある場合、静的IPアドレス経由で接続できます。

「プロトコル」を選択した状態で、「SET」ボタンを押してメニューに進み、「静的IPアドレス」を選択し「SET」ボタンを押します。

IPアドレス、サブネット、ゲートウェイ、プライマリDNS、セカンダリDNS

「静的IPアドレス」を選択すると、ネットワークの詳細をマニュアルで入力できます。

IPアドレスを変更する：

1. サーチダイヤルを使用して「IPアドレス」をハイライトし、HyperDeckのコントロールパネルで「SET」ボタンを押します。
2. サーチダイヤルを回転させてIPアドレスを調整し、「SET」ボタンを押して確定し、次の数値に進みます。
3. 「SET」ボタンを押して変更を確定し、次の数値に進みます。

IPアドレスの入力が終わったら、上記の手順を繰り返し、「サブネットマスク」と「ゲートウェイ」も調整できます。終了したら、「MENU」ボタンを押してメニューを出て、ホームスクリーンに戻ります。

タイムコード設定

タイムコード入出力のオプションを設定できます。収録に使用するタイムコードをソースタイムコードや時刻タイムコードから選択するか、マニュアルで設定するかなどを選択できます。



入力

収録中、4つのタイムコード入力オプションを使用できます。

ビデオ入力	「ビデオ入力」を選択すると、SMPTE RP 188メタデータの付いたHDMIソースのエンベデッドタイムコードを使用します。これにより、HDMIソースと、HyperDeck Shuttle HDで収録されるファイルの同期が維持されます。
内部	内蔵のタイムコードジェネレーターを介して、時刻タイムコードを収録する場合に、このオプションを選択します。
前のクリップから生成	タイムコード入力に「前のクリップから生成」を選択すると、各ファイルは、前のクリップの最終フレームの1つ後のフレームから開始されます。例えば、最初のクリップが10:28:30:10で終わる場合、次のクリップのタイムコードは10:28:30:11から開始します。
プリセット	タイムコードをマニュアルで設定したい場合は「プリセット」オプションを選択します。収録されたクリップは、「プリセット」で設定されたタイムコードで開始します。詳細は、このセクションに後述されています。

ドロップフレーム
29.97および59.94fpsのNTSCソースでは「ドロップフレーム」または「ノンドロップフレーム」を選択できます。ソースが不明な場合は「デフォルト」を選択します。これにより、入力の規格が維持されます。有効なタイムコードがない場合はデフォルトのドロップフレームになります。

プリセット
タイムコードをマニュアルで設定できます。「SET」ボタンを押し、サーチダイヤルと「SET」ボタンで開始タイムコードを入力します。「入力」メニューで「プリセット」が選択されている必要があります。

出力
出力に使用するタイムコードのオプションを選択します。

タイムライン	カードまたはドライブに収録された全クリップを通して、継続したタイムコードを出力するには「タイムライン」を選択します。
クリップ	「クリップ」を選択すると、個別のクリップごとにタイムコードを出力します。

ファイル設定



ファイル名プレフィックス
HyperDeck Shuttle HDを最初にセットアップすると、以下のファイル命名規則を用いて、クリップがSDカードまたはUSBフラッシュディスクに保存されます。

HyperDeck_0001	
HyperDeck_0001	**プレフィックス**
HyperDeck_**0001**	**クリップ番号**

ファイル名のプレフィックスは、HyperDeck Setupユーティリティで変更できます。詳細は、このマニュアルの「Blackmagic HyperDeck Setup」セクションを参照してください。

タイムスタンプ・サフィックス

ファイル名に追加されるタイムスタンプは、デフォルトではオフに設定されています。ファイル名に日付と時刻を記録したい場合は、「タイムスタンプ・サフィックス」のオプションをオンにします。

HyperDeck_2201061438_0001	
HyperDeck_2201061438_0001	**ファイル名プレフィックス**
HyperDeck_**22**01061438_0001	**年**
HyperDeck_22**01**061438_0001	**月**
HyperDeck_2201**06**1438_0001	**日**
HyperDeck_220106**14**38_0001	**時**
HyperDeck_22010614**38**_0001	**分**
HyperDeck_2201061438_**0001**	**クリップ番号**

リモート設定

「リモート」では、ATEM Mini Extremeなどの他のビデオ機器でHyperDeckをコントロールできるように設定できます。



リモート

イーサネットを介したリモートコントロールを有効にするには、「リモート」を選択します。オフにすると、ローカルでユニットを操作できます。

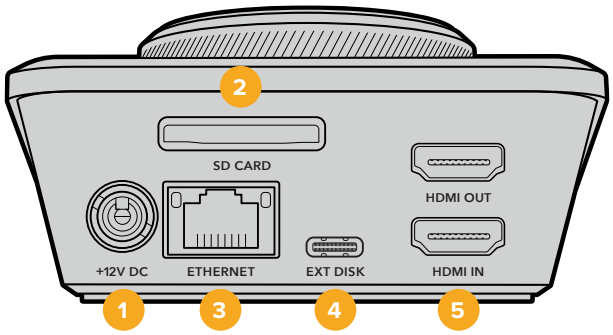
リセット設定



出荷時設定にリセット

「セットアップ」メニューで「出荷時設定にリセット」をハイライトすると、HyperDeckを出荷時の設定に戻せます。「SET」ボタンを押すと、操作を実行するか確認する画面が表示されます。

リアパネル



1 電源

HyperDeck Shuttle HDは、ACプラグパックを介して給電されます。同梱の電源ケーブルには、接続が外れることを防ぐためにロック式コネクターが採用されていますが、36Wの12V電源ケーブルであれば種類を問わず、HyperDeck Shuttle HDの給電に使用できます。

2 SD CARD（SDカード）

SDカードをスロットに挿入して収録・再生します。

3 ETHERNET（イーサネット）

イーサネットポートでは、ネットワークに接続して、ネットワークストレージへの収録、FTPを使用した転送、Web Media Manager経由のhttpを使用した転送を行えます。さらに、REST APIまたはHyperDeck Ethernet Protocolでユニットをリモートコントロールできます。Web Media Manager経由またはFTPクライアントを使用したファイルの転送に関しては、後述の「ネットワークでファイルを転送」セクションを参照してください。

ATEMスイッチャーを同じネットワークに接続している場合、ATEMスイッチャーまたはATEMハードウェアパネルからHyperDeckを操作できます。

4 EXT DISK（外付けディスク）

フラッシュディスクをUSB-Cコネクターに接続すると、最大5Gb/sで外付けディスクに収録します。また、マルチポートのUSB-CハブやBlackmagic MultiDock 10Gを接続すると、1枚または複数のSSDを使用できます。

5 HDMI

HDMI出力をHDMIテレビ、モニター、さらにはATEM Mini Extremeなどのスイッチャーに接続できます。HDMI出力は、メニューオーバーレイの表示にも使用されます。

ストレージメディア

SDカード

高品質のHD収録には、高速のUHS-I SDカードを推奨します。Ultra HD 2160p60までの収録には、220MB/s以上の書き込み速度に対応しているカードを使用する必要があります。

低ビットレートで高い圧縮率を用いて収録する場合、低速のカードも使用可能ですが、一般的には、高速であるほど良い品質が得られます。

定期的にこのマニュアルの最新バージョンを確認し、常に新しい情報を入手することをお勧めします。マニュアルはBlackmagic Designウェブサイト（www.blackmagicdesign.com/jp/support）でダウンロードできます。

HyperDeck Shuttle HDで使用が推奨されるSDカードは？

1080p（60fpsまで）には、以下のSDカードを推奨します。

メーカー	モデル	容量
Angelbird	AV PRO SD UHS-II 300MB/s V90 SDXC	256GB
Angelbird	AV PRO SD UHS-II 260MB/s V60 SDXC	128GB
Angelbird	AV PRO SD UHS-II 260MB/s V60 SDXC	64GB
SanDisk	Extreme Pro UHS-I 95MB/s SDXC	64GB
Wise	SD2-64U3 UHS-II 285MB/s SDXC	64GB
Lexar	Professional 1000x UHS-II 150MB/s SDXC	128GB
SONY	Tough SF-G128T	128GB
Kingston	CANVAS GO! Plus 170MB/s V30	64GB
Kingston	CANVAS GO! Plus 170MB/s V30	128GB
Kingston	CANVAS GO! Plus 170MB/s V30	512GB
ProGrade Digital	SDXC UHS-II V90 300R	64GB
ProGrade Digital	SDXC UHS-II V90 300R	128GB
SONY	Tough SF-G64T UHS-II SDXC	64GB
Delkin Devices	Black UHS-II V90 SDXC	256GB
Delkin Devices	Power UHS-II V90 SDXC	128GB
Delkin Devices	Power UHS-II V90 SDXC	256GB
Delkin Devices	Black UHS-II V90 SDXC	128GB
Exascend	Essential SDXC UHS-II V90 R 300MB/s	64GB
Exascend	Essential SDXC UHS-II V90 R 300MB/s	128GB
Exascend	Catalyst SDXC UHS-II V90 R 300MB/s	64GB

外付けディスク

HyperDeckの全モデルは、直接USB-Cフラッシュディスクに収録できます。これらのドライブは高速で大容量なため、ビデオを長時間収録できます。収録に使用したフラッシュディスクは、コンピューターに接続して直接編集を行えます。

さらに大きな容量が必要な場合は、USB-Cドックや外付けハードドライブを接続できます。Blackmagic MultiDock 10GまたはUSB-Cフラッシュディスクを接続するには、機材のUSB-Cポートに接続したケーブルをHyperDeckのリアパネルの「EXT DISK（外付けディスク）」ポートに接続します。

HyperDeck Shuttle HDで使用が推奨されるUSB-Cドライブは？

1080p ProRes HQ（60fpsまで）には、以下のUSB-Cドライブを推奨します。

メーカー	モデル	容量
Wise	PTS-256 Portable SSD 4K	256GB
OWC	Envoy Pro Ex	240GB
BUFFALO	SSD-PHE500U3-BA	500GB

1080p DNxHD 220x（60fpsまで）には、以下のUSB-Cドライブを推奨します。

メーカー	モデル	容量
OWC	Envoy Pro Ex	240GB

1080p H.264（60fpsまで）には、以下のUSB-Cドライブを推奨します。

メーカー	モデル	容量
OWC	Envoy Pro Ex	240GB

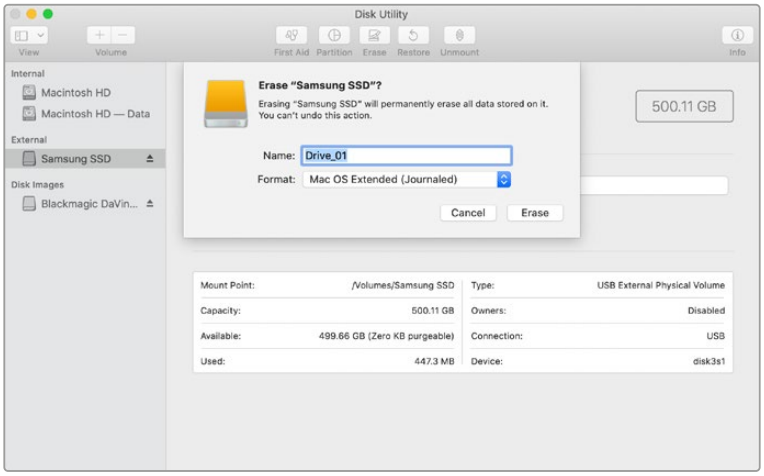
メディアをフォーマット

Macコンピューターでメディアをフォーマット

MacのDisk Utilityアプリケーションで、ドライブをHFS+またはexFATでフォーマットできます。

ディスクをフォーマットするとすべての情報が消去されるため、重要な情報は必ずバックアップしてください。

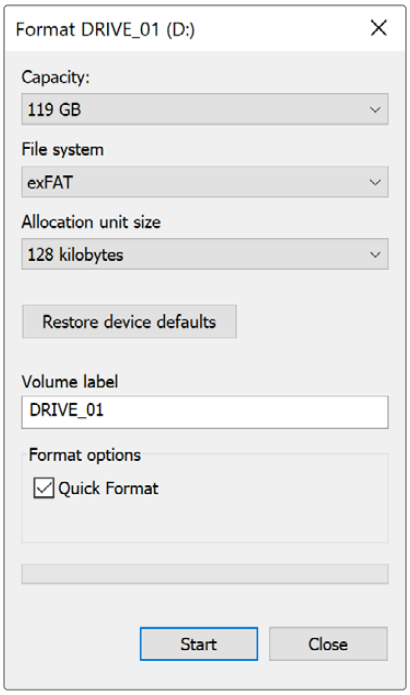
1. 外付けドックまたはケーブルアダプターで、USBフラッシュディスクをコンピューターに接続します。SSDをTime Machineバックアップに使用するというメッセージは拒否します。SDカードは、外付けカードリーダーを介してコンピューターに接続します。
2. Applications/Utilityへ行き、Disk Utilityを起動します。
3. 使用するSDカードまたはUSBフラッシュディスクのディスクアイコンをクリックし、「Erase」タブをクリックします。
4. 「Format」を「Mac OS Extended (Journaled)」または「exFAT」に設定します。
5. ボリューム名を入力し、「Erase」をクリックします。メディアがフォーマットされ、HyperDeckで使用できる状態になります。



Windowsコンピューターでメディアをフォーマット

Windowsでは、Formatダイアログボックスでドライブをexfatでフォーマットできます。SSDやSDカードをフォーマットするとすべての情報が消去されるため、重要な情報は必ずバックアップしてください。

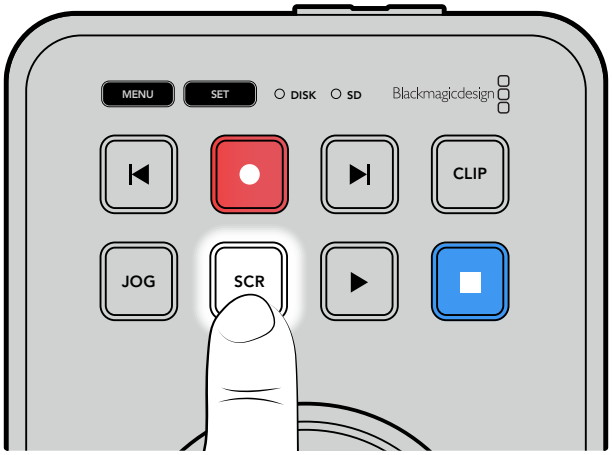
1. 外付けドックやケーブルアダプターを使用して、USBフラッシュディスクとコンピューターを接続します。SDカードは、外付けカードリーダーを介してコンピューターに接続します。
2. 「Start」メニューまたは「Start」画面を開き、コンピューターを選択します。使用するUSBフラッシュディスクまたはSDカードを右クリックします。
3. コンテクストメニューから「Format」を選択します。
4. ファイルシステムを「exFAT」に設定し、ユニットサイズ配分を128キロバイトに設定します。
5. ボリュームラベルを入力して、「Quick Format」を選択し、「Start」をクリックします。
6. メディアがフォーマットされ、HyperDeckで使用できる状態になります。



ボリュームナビゲーション

ボリュームナビゲーションは、ファイルパスのオーバーレイを開きます。これにより、メディアカード、ディスク、ネットワークドライブのクリップを見つけられます。オーバーレイが有効になっているとHDMI出力に表示されるので、「SCR（スクロール）」ボタン、「CLIP（クリップ）」ボタン、サーチダイヤルを使ってディレクトリをナビゲートできます。

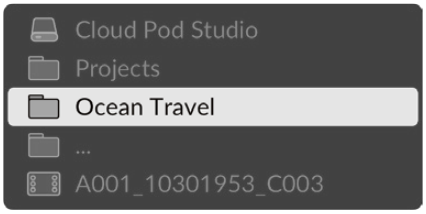
1 「SCR」ボタンを押して、ボリュームナビゲーション・ウィンドウを開きます。





「SCR」ボタンを押すと、HDMI出力でボリュームナビゲーション・ウィンドウが開きます。

2 ディスプレイ上でフッテージをスクラブやスキップして、使用したいクリップをフォルダーから探します。



3 「SCR」ボタンを押すとボリュームを下に移動し、「CLIP」ボタンでは上に移動します。

停止ボタンを押してボリュームナビゲーション・ウィンドウを閉じます。再生ボタンを押すと、ウィンドウが閉じて即座に再生が開始されます。

メモ 異なるコーデック、解像度、フレームレートで収録されたクリップを確認するには、HyperDeckのコーデックとデフォルトのフォーマットを一致させます。

テレプロンプター機能の使用

標準のRTFファイルまたはTXTファイルを使用すると、Blackmagic HyperDeck Shuttle HDはテレプロンプターとして使用できます。テキストエディットまたはワードパッドを使用して、サポートされている13言語のいずれかでファイルを作成し、リッチテキストまたはプレーンテキスト形式のファイルとして保存します。HyperDeck Shuttle HDで開くと、台本や原稿のフォントサイズや行間隔を調整できます。

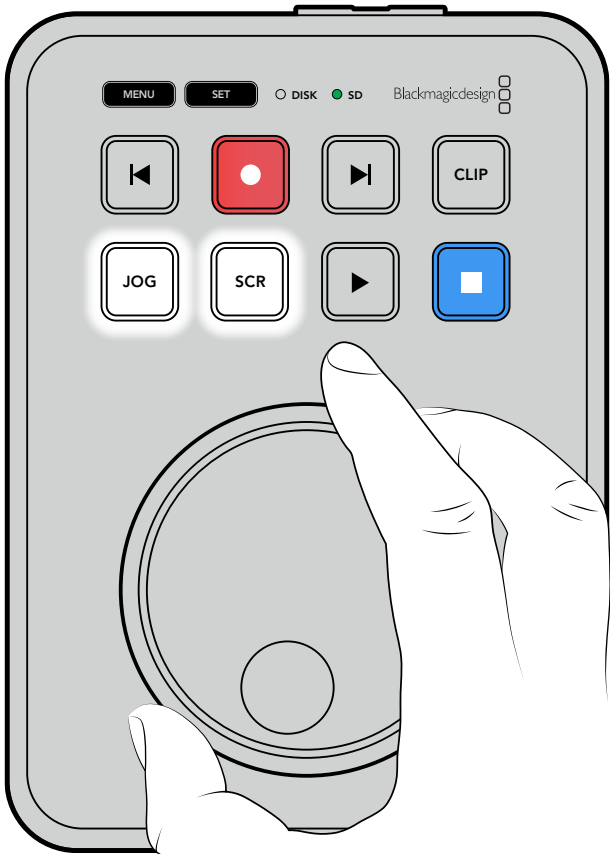
テレプロンプターとして使用する：

1. HyperDeck Shuttle HDのHDMI出力をHDMIディスプレイに接続します。
2. 台本や原稿が保存されているSDカードを挿入するか、外付けUSBフラッシュディスクを接続します。
3. 「収録」メニューの「コーデック」で、「テレプロンプター」を選択し、「SET」ボタンを押します。

ディスプレイに台本や原稿が表示されます。これにより、再生ボタンで自動的に再生を開始できます。あるいは、ダイヤルを使用することも可能です。

テレプロンプターの再生速度の調整

HyperDeck Shuttle HDのダイヤルは、テレプロンプターモードでの再生においても、メディアの再生時の操作とほぼ同じ方法で使用できます。台本や原稿をロードしたら、「JOG」と「SCR」ボタンを同時に押して、可変再生速度をオンにします。選択したら、ダイヤルを回します。ダイヤルの動きに応じて、台本や原稿が動く速度が変わります。例えば、ダイヤルを早く動かすと、台本や原稿がスクロールされる速度が上がります。



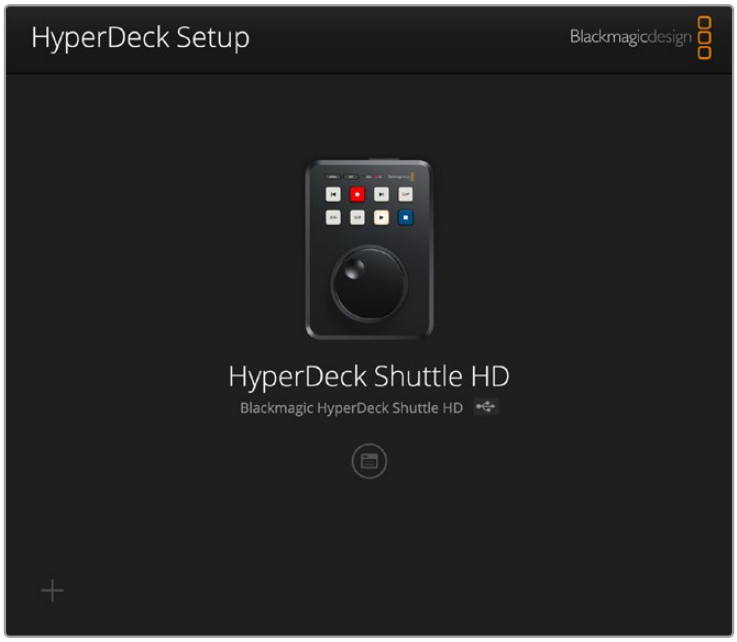
一定の速度でスクロールするには、「JOG」または「SCR」ボタンのみを使用します。いずれかを選択したら、ジョグモードでは、台本や原稿は遅い一定速度で、スクロールモードでは早い速度で動きます。

SDカードまたは外付けディスクのファイル間をナビゲートするには、順方向/逆方向の頭出しボタンを使用します。

テレプロンプターは、ファイルの情報に基づき、フォントサイズ、色、ボールド体の使用を認識します。また、「モニタリング」メニューでフォントサイズ、行間隔、余白が調整でき、ビームスプリッターに映し出す際の上下左右の反転も実行できます。詳細は、前述の「メニュー設定」セクションを参照してください。

Blackmagic HyperDeck Setup

Blackmagic HyperDeck Setupソフトウェアでは、HyperDeckの設定変更やソフトウェアのアップデートが行えます。

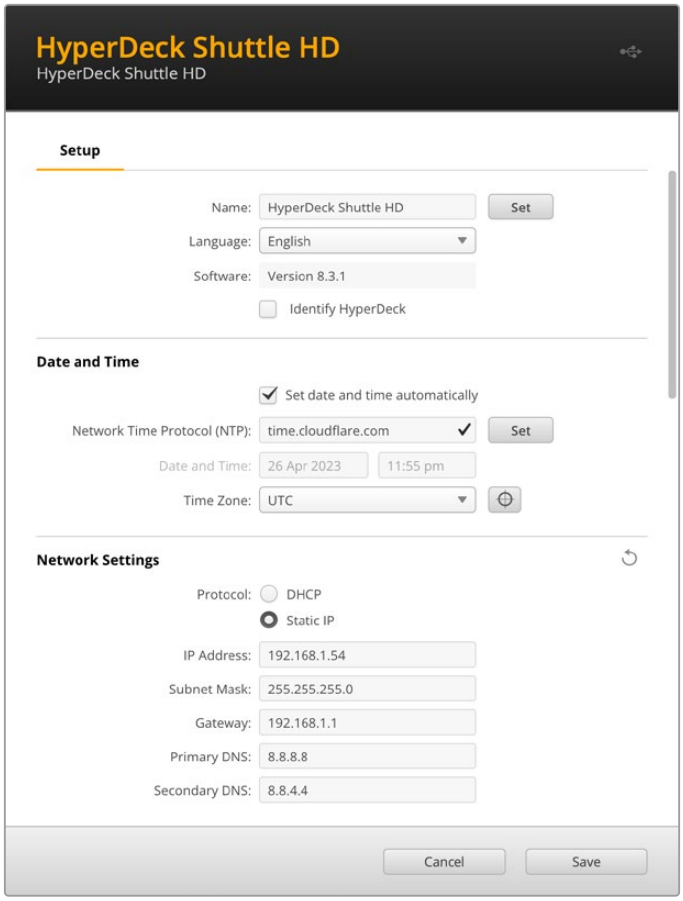


ソフトウェアのインストール：

1. 最新のBlackmagic HyperDeck Setupインストーラーを www.blackmagicdesign.com/jp/supportからダウンロードします。
2. Blackmagic HyperDeck Setupインストーラーをコンピューターで起動し、画面に表示される指示に従います。
3. インストールが完了したら、HyperDeck Shuttle HDをリアパネルのUSB経由またはイーサネットコネクター経由でコンピューターに接続します。
4. Blackmagic HyperDeck Setupを起動し、スクリーンの指示に従って内部ソフトウェアをアップデートします。内部ソフトウェアが最新で何もする必要がない場合、指示は表示されません。

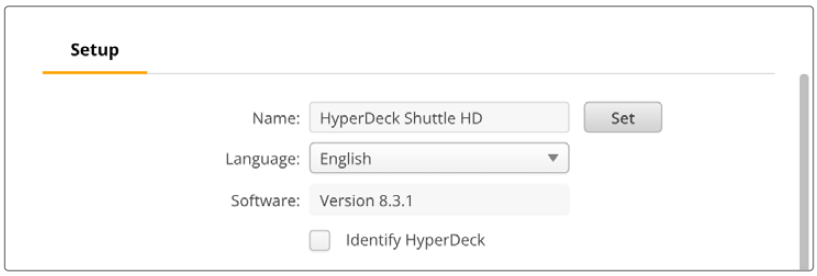
HyperDeckのイメージまたは設定アイコンをクリックして、設定メニューを開きます。

ホームスクリーンに、HyperDeck Shuttle HDとユニット名が表示されます。この名前は、複数のHyperDeckがコンピューターに接続されている場合に、特定のユニットを識別する際に役立ちます。ユニット名は、ユーティリティーの「Setup」メニューで設定できます。



Setup (設定)

複数のHyperDeckディスクレコーダーを使用している場合、各ユニットに個別の名前を付けることで簡単に識別できます。これは、「Name (名前)」のフィールドに新しい名前を入力して、「Set (設定)」ボタンをクリックすることで実行できます。HyperDeckの名前を変更すると、使用しているデジタル証明書が無効になるので、証明書の署名要求や自己署名証明書を生成する前に名前を変更することをお勧めします。



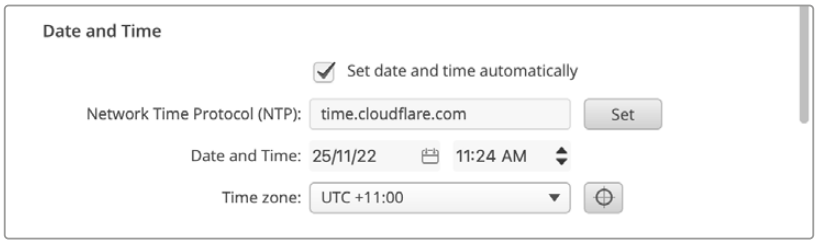
Identify HyperDeck (HyperDeckの識別)

このチェックボックスをクリックすると、HyperDeck Shuttleの上部にある2つの頭出しボタンが点滅します。これは、2台以上のHyperDeck Shuttleを使用しており、HyperDeck Setup Utility介して、接続されているユニットを把握したい場合に便利です。

Date and Time（日付と時刻）

「Set date and time automatically（日時を自動で設定）」を選択して、日時を自動で設定します。日時の自動設定には、HyperDeck Shuttle HDは、NTPのフィールドで設定されているネットワーク・タイム・プロトコルサーバーを使用します。デフォルトのNTPサーバーはtime.cloudflare.comですが、別のNTPサーバーをマニュアルで入力することもできます。入力したら、「Set（設定）」をクリックします。

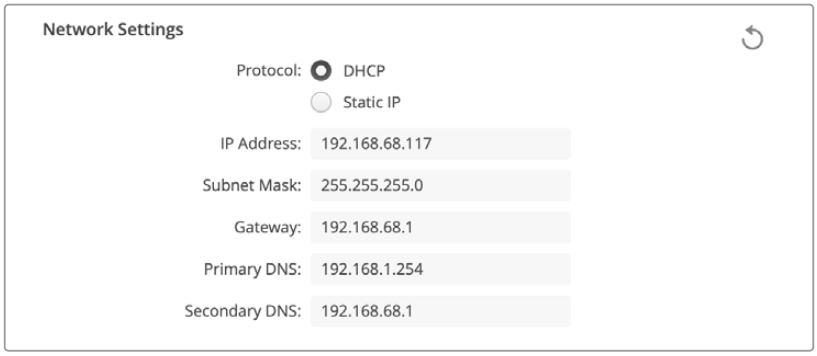
日時を手動で入力する場合は、日時のフィールドとタイムゾーンのフィールドを更新します。日時を正確に設定することで、ネットワークと同じ日時の情報が収録ファイルに記録されます。また、これにより一部のネットワークストレージ・システムで生じることのある競合を防ぎます。



Network Settings（ネットワーク設定）

Protocol（プロトコル）

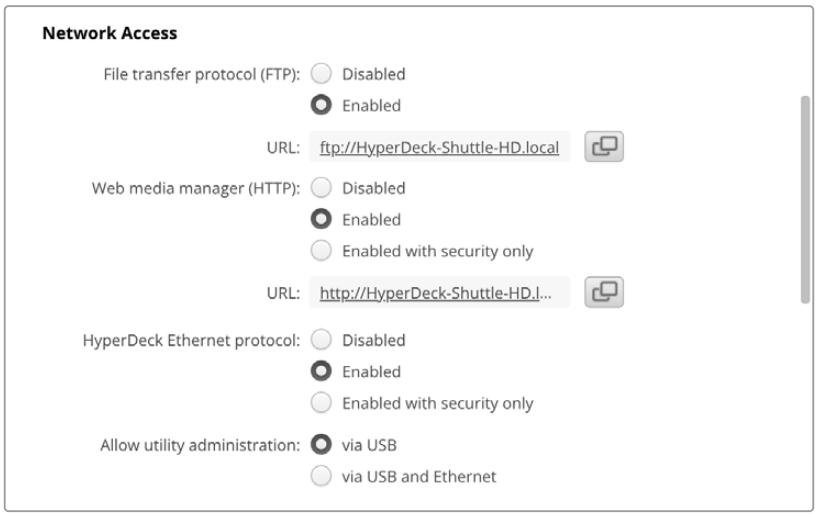
HyperDeck Shuttle HDをATEMスイッチャーから操作したり、HyperDeck Ethernet Protocolを介してリモートコントロールする場合は、HyperDeck Shuttle HDを他の機器と同じネットワークに接続する必要があります。これは、DHCPを使用するか、固定IPアドレスをマニュアルで追加して実行できます。



DHCP	HyperDeck Shuttle HDの出荷時のデフォルト設定はDHCPです。DHCP（ダイナミック・ホスト・コンフィギュレーション・プロトコル）は、ネットワークサーバー上のサービスで、HyperDeckディスクレコーダーを自動的に検出してIPアドレスを割り当てます。 DHCPは、イーサネット経由で機材を簡単に接続でき、IPアドレスの競合が生じないようにできる非常に優れたサービスです。ほとんどのコンピューターやネットワークスイッチャーは、DHCPに対応しています。
Static IP（静的IPアドレス）	ネットワークの詳細をマニュアルで入力する場合は「Static IP（静的IPアドレス）」を選択します。すべてのユニットの通信を可能にするためにIPアドレスを設定する際、全ユニットが同一のサブネットマスクとゲートウェイ設定を共有している必要があります。

Network Access（ネットワークアクセス）

HyperDeck Shuttle HDは、ネットワークを介してアクセスしてファイル転送を行ったり、HyperDeck Ethernet Protocolを介してリモートコントロールすることができます。デフォルトでは、アクセス可能な状態になっていますが、Web Media ManagerやHyperDeck Ethernet Protocolを使用している際に、個別のネットワークアクセスをできないようにしたり、ユーザー名とパスワードを入力してアクセスするようにして、セキュリティを高めることも可能です。



FTP（ファイル転送プロトコル）

チェックボックスを使用して、FTPを介したアクセスの有効と無効を切り替えます。CyberDuckなどのFTPクライアントを介したアクセスを行う場合は、アイコンをクリックしてFTPアドレスをコピーします。詳細は、「ネットワークでファイルを転送」セクションを参照してください。

Web Media Manager（ウェブメディアマネージャー）

SDカードまたは外付けディスクのメディアには、Web Media Managerを使用して、ウェブブラウザ経由でアクセスすることが可能です。リンクをクリックするか、ウェブブラウザにコピー＆ペーストすると、シンプルなインターフェースが開き、ネットワークを介して、直接SDカードにファイルをアップロードやダウンロードできます。

デフォルトではアクセスはHTTP経由で有効になっていますが、アクセスを完全に無効にすることもできます。また「Enabled with security only（セキュリティがある場合のみ有効）」オプションを使用して、アクセスにあたって安全証明書が必要になるように設定することも可能です。デジタル証明書を使用する場合は、Web Media Managerへの接続はHTTPSで暗号化されます。デジタル証明書に関しては、「Secure Certificate（安全証明書）」セクションを参照してください。

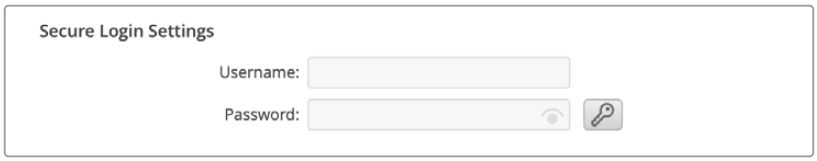
HyperDeck Ethernet Protocol

HyperDeckディスクレコーダーは、HyperDeck Ethernet Protocolとコンピューターのコマンドライン・プログラム（MacのTerminalやWindowsのPuTTY）などを使用して接続できます。アクセスにユーザー名とパスワードを設定することも可能ですし、完全にアクセスできないように設定することもできます。netcatなどのユーティリティ・プログラムを使用している場合、SSLプログラムを使用してセッションを暗号化できます。使用できるコマンドの詳細は、「Developer Information」セクションを参照してください。

Allow utility administration（ユーティリティ管理を可能にする）

Blackmagic HyperDeck Setupには、ディスクレコーダーをUSBまたはネットワークを介して接続するとアクセスできます。ネットワークを介してユーザーがアクセスすることを防ぐには、「via USB（USBを介して）」を選択します。

Secure Login Settings (安全なログイン設定)



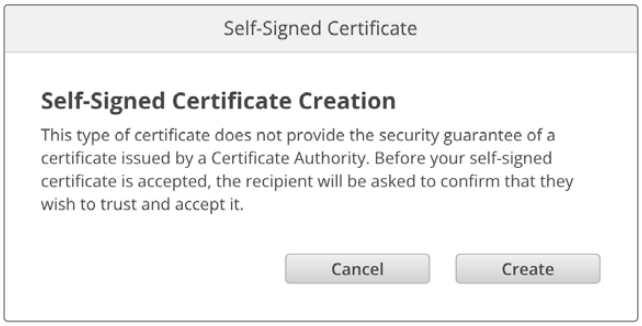
HyperDeck Ethernet Protocolのアクセスに「Enabled with security only (セキュリティがある場合のみ有効)」を選択している場合、ユーザー名とパスワードを入力する必要があります。ユーザー名とパスワードを入力し、「Save (保存)」をクリックします。パスワードを入力すると、パスワードのフィールドが空欄に見えます。Web Media Managerのアクセスに「Enabled with security only」を選択している場合、ユーザー名とパスワードを入力する必要があります。

Secure Certificate (安全証明書)

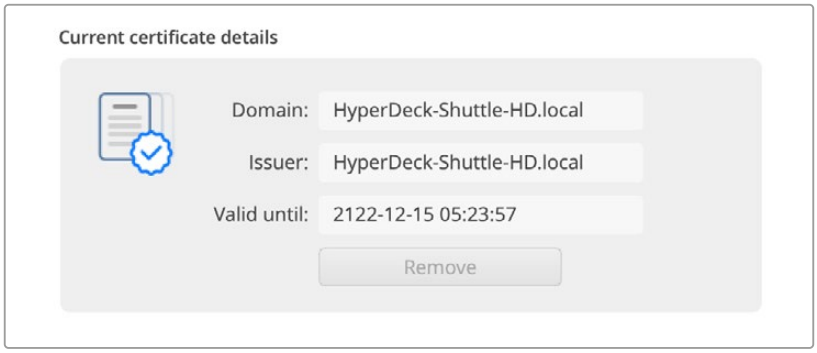
HTTPS経由、または「Enabled with security only」にHyperDeck Ethernet Protocolを設定している場合、Web Media Managerへのアクセスには安全証明書が必要になります。このデジタル証明書はHyperDeck Shuttle HDを識別する役割を果たし、接続を行う際に、適切なユニットに接続しようとしていることを確認できます。安全証明書はユニットの識別に使用される他、HyperDeck Shuttle HDとコンピューターやサーバー間でのデータ通信を暗号化します。「Secure Login Settings (安全なログイン設定)」を使用している場合、接続が暗号化されるだけではなく、アクセスに認証が必要になります。

HyperDeck Shuttleで使用できる証明書は、認証局が署名した安全証明書と自己署名証明書の2種類があります。自己署名証明書は、ローカルネットワークのみを介してHyperDeck Shuttle HDにアクセスする場合など、一部のワークフローでは十分な安全性があります。

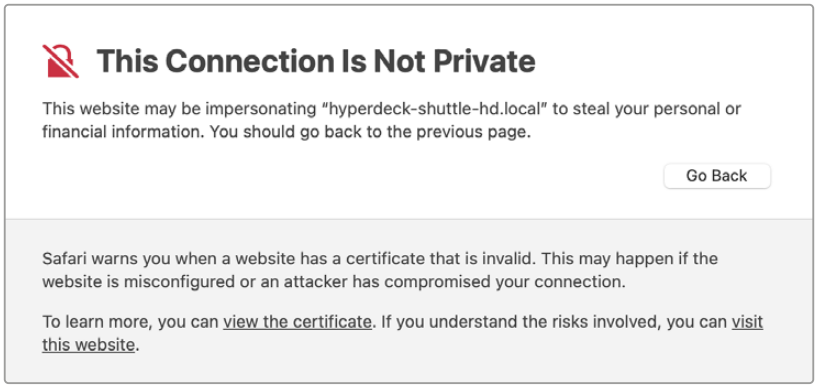
自己署名証明書を生成するには「Create Certificate (証明書を作成)」をクリックします。自己署名証明書を使用するリスクを理解したか確認するメッセージが表示されます。「Create (作成)」をクリックしたら、「Domain (ドメイン)」、「Issuer (発行者)」、「Valid until (有効期間)」などの証明書の詳細が、HyperDeck Setup Utilityで自動的に入力されます。



工場出荷時設定にリセットすると現在の証明書はすべて削除されます。証明書の削除はいつでも実行でき、「Remove (削除)」ボタンをクリックし、その後の表示に従います。



HTTPSを使用して自己署名証明書でメディアファイルにアクセスする場合、ウェブブラウザはサイトにアクセスするリスクを警告します。ブラウザの一部は、リスクを理解したことを確認すると作業を継続できますが、アクセスを許可しないブラウザもあります。



ブラウザの種類を問わずにアクセスを許可するには、署名付きの証明書が必要です。

署名付きの証明書を得るには、Blackmagic HyperDeck Setup Utilityを使用して、証明書の署名要求（CSR）を生成する必要があります。この署名要求は、認証局（CA）またはIT部門に送信されます。署名されると、.cert、.crt、.pemのいずれかの拡張子がついた署名済みの証明書が戻ってくるので、それをHyperDeck Shuttle HDに読み込みます。



証明書の署名要求（CSR）を生成する：

1 「Generate Signing Request（署名要求を生成）」ボタンをクリックします。



2 ウィンドウにHyperDeckのコモンネームとサブジェクトの別名を入力する指示が表示されます。以下の表を参考にして、必要に応じて他の情報を入力します。

情報	概要	例
コモンネーム	使用するドメイン名	hyperdeck.melbourne.com
サブジェクトの別名 (SAN)	別のドメイン名	hyperdeck.melbourne.net
国名	申請組織の国名	AU
行政区画	都道府県	Victoria
所在地	市町村名	Port Melbourne
組織名	組織の名称	Blackmagic Design

3 証明書の詳細を入力したら、「Generate（生成）」をクリックします。

.csrを生成する際、公開鍵と秘密鍵も同時に作成されます。公開鍵は署名要求に含まれ、秘密鍵はユニット内に残ります。認証局またはIT部門によりCSRの情報が組織と照合されると、上記の内容を含む署名付きの証明書が、公開鍵と共に生成されます。

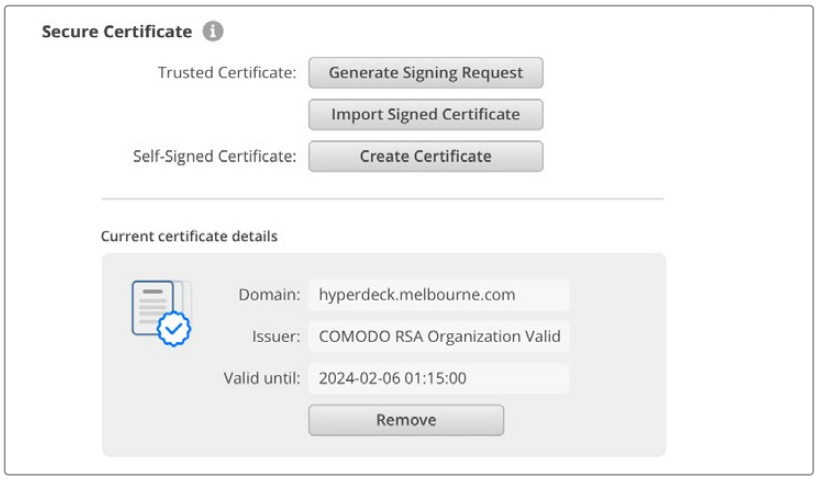
読み込むと、HyperDeck Shuttle HDは公開鍵と秘密鍵を使用して、HyperDeckを認証し、HTTPSまたはSSLプログラムを使用している場合はHyperDeck Ethernet Protocolを介してデータの暗号化・解読を行います。

署名付きの証明書を読み込む：

1 「Import Signed Certificate（署名付きの証明書の読み込み）」をクリックします。

2 ファイルブラウザで署名付きの証明書が保存されている場所まで進み、ファイルを選択したら「Open（開く）」をクリックします。

「Domain（ドメイン）」、「Issuer（発行者）」、「Valid until（有効期間）」のフィールドは、認証局からの情報を基にアップデートされます。一般的に、署名付きの証明書の有効期間は約1年なので、有効期間が過ぎたら、このプロセスを繰り返す必要があります。

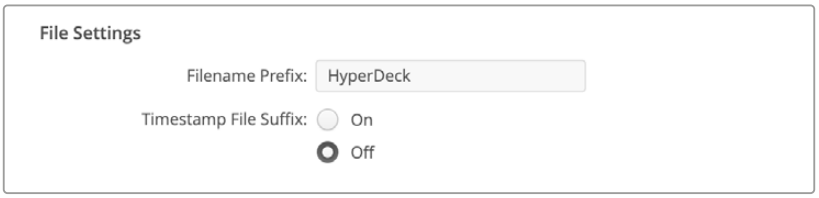


ドメイン名は選択されていたので、HyperDeck Shuttle HDのDNSエントリーを解決するためにIT部門に連絡する必要があります。これにより、HyperDeck Shuttle HDのIPアドレスへのトラフィックが、署名要求で選択されたドメインアドレスに向けられます。

また、これはWeb Media Managerを介してファイルにアクセスするために使用するHTTPSアドレスにもなります。例えば、https://hyperdeck.melbourne.comです。

工場出荷時設定にリセットすると証明書は無効になるので、新しい証明書を生成し、署名される必要があります。

File Settings（ファイル設定）



HyperDeck Shuttle HDを最初にセットアップすると、プレフィックスとして「HyperDeck」がファイル名に付加されて、クリップがSDカードまたはUSBフラッシュディスクに保存されます。プレフィックスを変更するには、新しいファイル名を入力します。

ファイル名に追加されるタイムスタンプは、デフォルトではオフに設定されています。ファイル名に日付と時間を追加したい場合は、オンに変更します。ファイル名のプレフィックスおよびタイムスタンプの設定は、HyperDeck Shuttle HDのオンスクリーンメニューからも変更できます。

Reset（リセット）

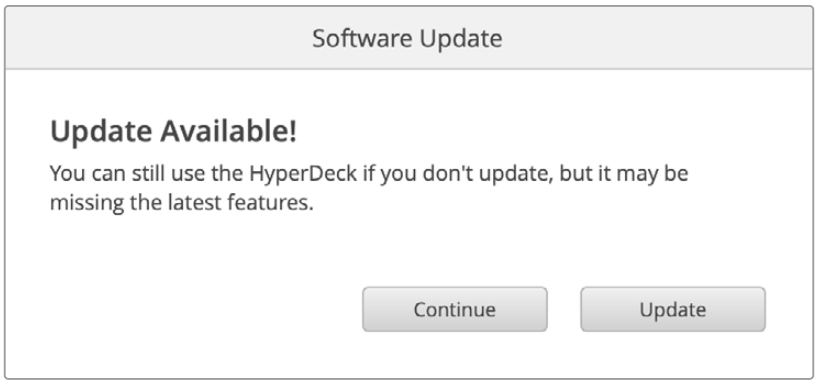
「Factory Reset（工場出荷時設定にリセット）」をタップすると、HyperDeckが出荷時の設定に戻ります。工場出荷時設定にリセットすると現在の証明書は無効になります。「Secure Certificate」の設定を使用している場合、新しい証明書の署名要求を生成し、認証局またはIT部門により署名される必要があります。

内部ソフトウェアのアップデート

内部ソフトウェアをアップデートする：

1. 最新のBlackmagic HyperDeck Setupインストーラーをwww.blackmagicdesign.com/jp/supportからダウンロードします。
2. Blackmagic HyperDeck Setupインストーラーをコンピューターで起動し、画面に表示される指示に従います。
3. インストールが完了したら、HyperDeck Shuttle HDをリアパネルのUSB経由またはイーサネットコネクター経由でコンピューターに接続します。

4 Blackmagic HyperDeck Setupを起動し、スクリーンの指示に従って内部ソフトウェアをアップデートします。内部ソフトウェアが最新で何もする必要がない場合、指示は表示されません。



ネットワークでファイルを転送

HyperDeck Shuttle HDは、HTTPS（ハイパーテキスト転送セキュア）とFTP（ファイル転送プロトコル）両方のファイル転送方式をサポートしています。これにより、ネットワークを介してコンピューターから直接ファイルをHyperDeckにコピーできます。これは、ローカルネットワークの速度であるため、高速で実行できます。例えば、モニターウォールやデジタルサイネージでビデオの再生に使用しているHyperDeckに、新しいファイルをコピーできます。

HyperDeckでは、あらゆるファイルの送受信が可能ですが、HyperDeck Shuttle HDでファイルを再生するには、HyperDeckが対応しているコーデックと解像度である必要があります。

作業のこつ HyperDeckで収録中でもネットワークでファイルの転送が可能です。収録に影響を与えないように、HyperDeckは自動的に転送速度を調整します。

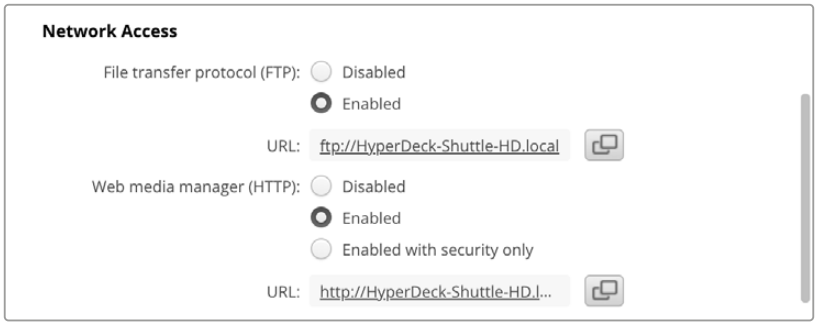
これらのプロトコルのいずれかを介したHyperDeck Shuttle HDへのアクセスは、HyperDeck Setup Utilityで有効/無効を切り替えられます。例えば、FTPのアクセスを無効にし、同時にHTTPSアクセスを有効にできます。

HTTPSを介したHyperDeck Shuttle HDの接続

Web Media Managerを介してHyperDeck Shuttle HDにアクセスするには、「Network Access（ネットワークアクセス）」設定のURLが必要となります。USBおよびイーサネットでコンピューターに接続されている場合、HyperDeck Setup Utilityに「Network Access」設定が表示されます。イーサネットだけで接続されている場合は、この設定はグレーアウトされます。

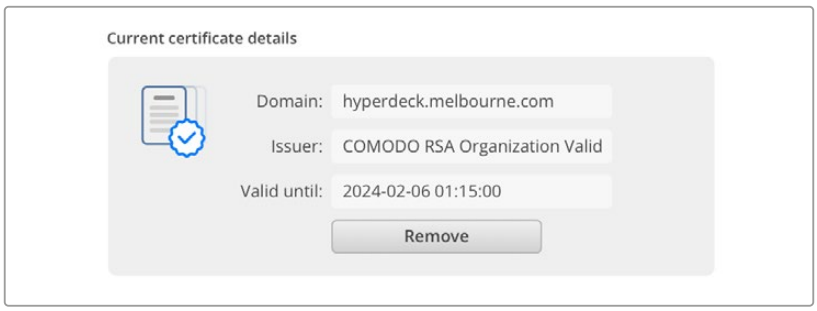
1 USB-Cケーブルでコンピューターを HyperDeck Shuttle HDのリアパネルにあるUSBポートで接続し、HyperDeck Setupを開きます。ユニット名の隣に、USB接続のアイコンが表示されます。丸いアイコンまたは製品の画像をクリックして、設定ページを開きます。

2 自己署名証明書を使用する場合は「Network Access」設定に進み、URLの横のコピーアイコンをクリックして、リンクをコピーします。このURLはHyperDeckの名前に基づいています。URLを変更するには、ユニット名を変更します。



自己署名証明書を使用する場合はリンクをクリックします。

3 認証局またはIT部門により署名された証明書を読み込んだ場合は、現在の証明書の「Domain（ドメイン）」のフィールドのアドレスをコピー＆ペーストします。



ドメインアドレスをコピーし、ブラウザにペースト

4 ウェブブラウザを開き、新しいウィンドウにアドレスをペーストします。「Enabled with security only（セキュリティがある場合のみ有効）」を選択している場合、HyperDeck Setup Utilityで設定したユーザー名とパスワードを入力する必要があります。

自己署名証明書を使用する場合は、接続のプライバシーに関する警告がブラウザに表示されます。これは、HyperDeck Setup Utilityで信頼できる署名付きの証明書が読み込まれていないことを意味します。

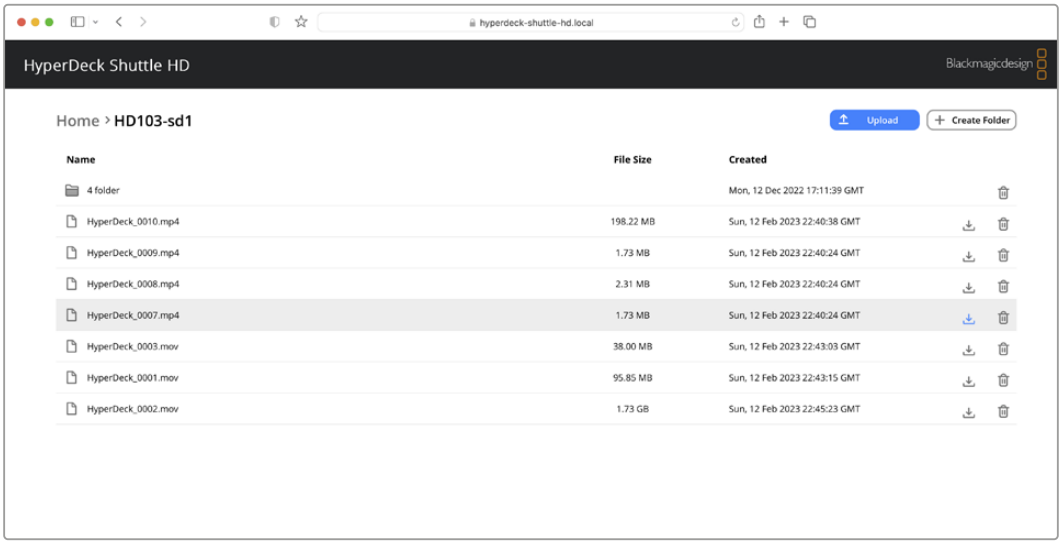
有効かつ信頼できる証明書なしで継続するには、ブラウザのメッセージを読み、リスクを確認し、ウェブサイトに進みます。

Web Media Managerでファイルを転送する

Web Media Managerブラウザを初めて開くと、メディアスロットごとにファイルが分類されているのが分かります。

SD1	SDカードのメディア。
USB	接続されているUSBドライブはプレフィックスとして「USB/」が付いてリスト表示されます。

メディアをダブルクリックして、SDカードまたはドライブの内容を表示します。



「Upload（アップロード）」ボタンをクリックしてファイルを追加

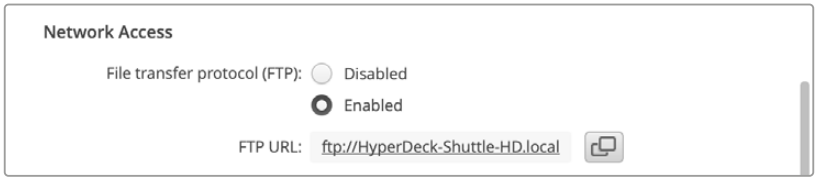
再生用のファイルをリモートで追加するには「Upload（アップロード）」ボタンをクリックします。ファイルブラウザで任意のファイルまで進み、「Upload」をクリックします。アップロードが始まるとステータスウィンドウが表示されます。「Create Folder（フォルダーの作成）」ボタンを使用すると、必要に応じてフォルダーを追加することも可能です。

ファイルをダウンロードするには、右端の矢印アイコンを使用します。このサイトからのダウンロードを許可するようにブラウザがメッセージを表示することがあります。「Allow（許可する）」をクリックします。ファイルを削除するには、ゴミ箱アイコンをクリックすると、ファイル削除のウィンドウが表示されます。「Delete（削除）」をクリックします。

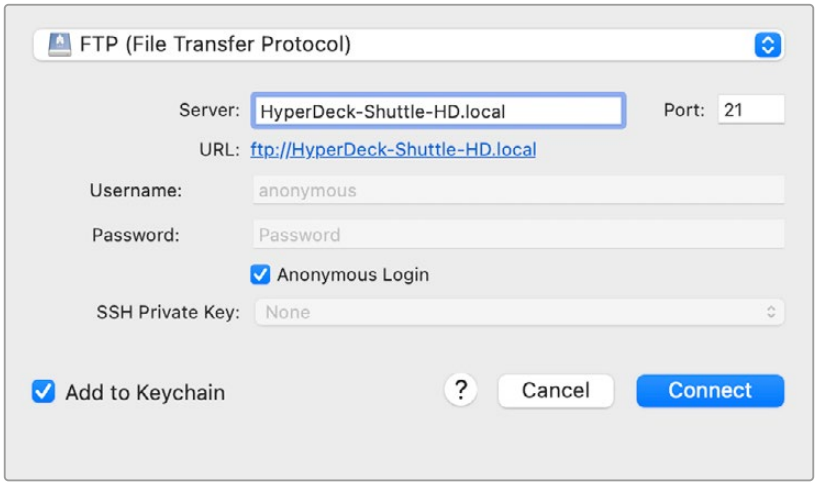
FTPを介したファイルの転送

コンピューターとHyperDeck Shuttle HDを同じネットワークに接続した状態で転送を行うために必要なのは、FTPクライアントとHyperDeck Shuttle HDのIPアドレスまたはHyperDeck Setup UtilityのFTP URLだけです。

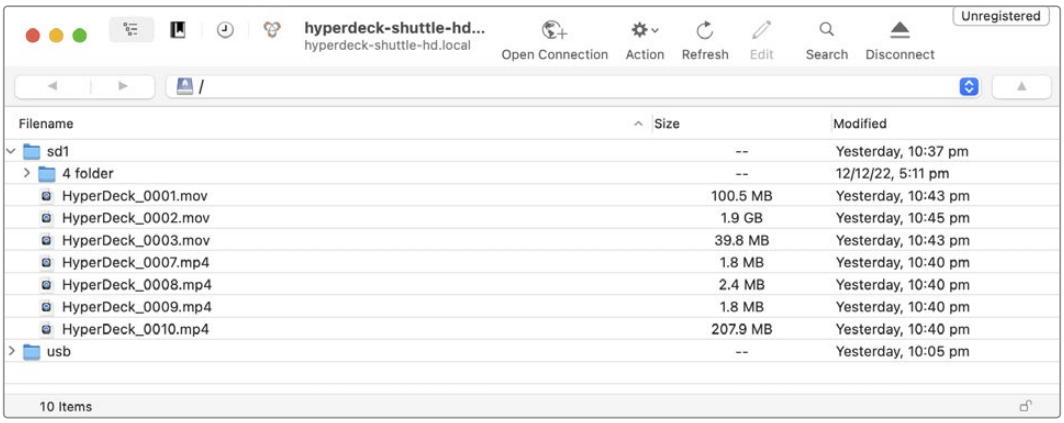
1. HyperDeck Shuttle HDに接続するコンピューターに、FTPクライアントをダウンロードし、インストールします。推奨アプリケーションは、Cyberduck、FileZilla、Transmitですが、ほとんどのFTPクライアントが使用できます。CyberduckとFileZillaは無償です。
2. HyperDeck Shuttle HDをネットワークに接続した状態でHyperDeck Setupを開き、FTP URLをクリックするか、コピーアイコンをクリックしてマニュアルでペーストします。FTPプログラムが接続を開かない場合は、リンクを再びクリックする必要があります。



3. マニュアルでFTP接続を開いている場合は、サーバーのフィールドにURLをペーストします。使用できる場合、「Anonymous Login（匿名ログイン）」にチェックを入れます。



4 SDカードは、sd1と表示されます。「usb」フォルダーを展開すると、接続されているUSBドライブすべてがリスト上に表示されます。



FTPインターフェース上でファイルのドラッグ&ドロップが可能

Developer Information

Blackmagic HyperDeck Ethernet Protocol

The Blackmagic HyperDeck Ethernet Protocol is a text based protocol accessed by connecting to TCP port 9993 on HyperDeck models that have a built in Ethernet connection. If you are a software developer, you can use the protocol to construct devices that integrate with our products. Here at Blackmagic Design our approach is to open up our protocols and we eagerly look forward to seeing what you come up with!

You can connect to your HyperDeck recorder using the HyperDeck Ethernet Protocol using a command line program on your computer, such as Terminal on a Mac and putty on a Windows computer.

The HyperDeck Ethernet Protocol lets you schedule playlists and recordings. The following is an example of how to play 7 clips from clip number 5 onwards via the HyperDeck Ethernet Protocol.

On a Mac

1. Open the Terminal application which is located with the applications > utilities folder.
2. Type in “nc” and a space followed by the IP address of your HyperDeck disk recorder, another space and “9993” which is the HyperDeck Ethernet Protocol port number. For example type: nc 192.168.1.154 9993. The Protocol preamble will appear.
3. Type “playrange set: clip id: 5 count: 7” and press ‘return’.

   On HyperDeck disk recorders with a timeline view, you will see in and out points marked around clips 5 through the end of clip 11.
4. Type “play”. Clips 5 through 11 will now play back.
5. To clear the playrange, type “playrange clear”
6. To exit from the protocol, type ‘quit’.

Protocol Commands

Command	Command Description
help or ?	Provides help text on all commands and parameters
commands	return commands in XML format
device info	return device information
disk list	query clip list on active disk
disk list: slot id: {n}	query clip list on disk in slot {n}
quit	disconnect ethernet control
ping	check device is responding
preview: enable: {true/false}	switch to preview or output
play	play from current timecode
play: speed: {-5000 to 5000}	play at specific speed
play: loop: {true/false}	play in loops or stop-at-end
play: single clip: {true/false}	play current clip or all clips

Command	Command Description
play: {clip id/clip/timecode/timeline/...}	play from the specified position see “goto” command for description of parameters parameters can be combined with {speed/loop/single clip}
playrange	query playrange setting
playrange set: clip id: {n}	set play range to play clip {n} only
playrange set: clip id: {n} count: {m}	set play range to {m} clips starting from clip {n}
playrange set: in: {inT} out: {outT}	set play range to play between: - timecode {inT} and timecode {outT}
playrange set: timeline in: {in} timeline out: {out}	set play range in units of frames between: - timeline position {in} and position {out}
playrange clear	clear/reset play range setting
play on startup	query unit play on startup state
play on startup: enable: {true/false}	enable or disable play on startup
play on startup: single clip: {true/false}	play single clip or all clips on startup
play option	query play options
play option: stop mode: {lastframe/nextframe/black}	set output frame when playback stops
record	record from current input
record: name: {name}	record named clip
record spill	spill current recording to next slot
record: spill: slot id: {n}	spill current recording to specified slot use current id to spill to same slot
spill order	query the device order used for record spill
stop	stop playback or recording
clips count	query number of clips on timeline
clips get	query all timeline clips
clips get: clip id: {n}	query a timeline clip info
clips get: clip id: {n} count: {m}	query m clips starting from n
clips get: version: {1/2/3}	query clip info using specified output version: version 1: id: name startT duration version 1: id: name startT duration startT depends on “configuration: timecode output: {clip/timeline}” version 2: id: clipInT clipDuration inT outT filename version 3: id: clipInT clipDuration inT outT folder/filename
clips add: name: {name}	append a clip to timeline, name can include subfolders e.g. folder1/HyperDeck_0001.mp4
clips add: clip id: {n} name: {name}	insert clip before existing clip {n}
clips add: in: {inT} out: {outT} name: {name}	append the clip portion between clip timecodes {inT} to {outT}
clips add: frame in: {in} frame out: {out} name: {name}	append the clip portion between clip frame numbers {in} to {out}

Command	Command Description
clips remove: clip id: {n}	remove clip {n} from the timeline (invalidates clip ids following clip {n})
clips clear	empty timeline clip list
clips rebuild	rebuild timeline with default rules
clip info	query clip info for the current playing/recording clip
clip info: clip id: {n}	query clip info for timeline clip id {n}
clip info: name: {name}	query clip info for the clip named {name} on active disk
transport info	query current activity
slot info	query active slot
slot info: slot id: {n}	query slot {n}
slot info: device: {device}	query slot containing device USB/network devices can be queried without being active “device” and “slot id” parameters are mutually exclusive in all commands
slot select: slot id: {n}	switch to specified slot
slot select: device: {device}	switch to slot containing device
slot select: video format: {format}	load clips of specified format
slot unblock	unblock active slot
slot unblock: slot id: {n}	unblock slot {n}
slot unblock: device: {device}	unblock disk device
external drive list	list all available USB/network drives for use in external slot
external drive select: device: {device}	switch external slot to specified external drive
external drive selected	query the currently selected external drive
cache info	query cache status
dynamic range	query dynamic range settings
dynamic range: playback override: {off/Rec709/Rec2020_SDR/HLG/ ST2084_300/ST2084_500/ ST2084_800/ST2084_1000/ ST2084_2000/ST2084_4000/ST2084	set playback dynamic range override
dynamic range: record override: {off/Rec709/Rec2020_SDR/HLG/ ST2084_300/ST2084_500/ ST2084_800/ST2084_1000/ ST2084_2000/ST2084_4000/ST2048}	set record dynamic range override
notify	query notification status
notify: remote: {true/false}	set remote notifications
notify: transport: {true/false}	set transport notifications
notify: slot: {true/false}	set slot notifications
notify: configuration: {true/false}	set configuration notifications

Command	Command Description
notify: dropped frames: {true/false}	set dropped frames notifications (reported dropped frame count is approximate)
notify: display timecode: {true/false}	set display timecode notifications
notify: timeline position: {true/false}	set playback timeline position notifications
notify: playrange: {true/false}	set playrange notifications
notify: cache: {true/false}	set cache notifications
notify: dynamic range: {true/false}	set dynamic range settings notifications
notify: slate: {true/false}	set digital slate notifications
notify: clips: {true/false}	set timeline clips notifications where two types of changes can occur: add: partial update with list of clips and insert positions snapshot: complete update of all clips on timeline
notify: disk: {true/false}	set disk clips notifications where two types of changes can occur: add: partial update with list of clips and insert positions snapshot: complete update of all clips on timeline
notify: device info: {true/false}	set device info notifications
notify: nas: {true/false}	set nas notifications triggered by commands such as “nas add” or “nas remove”
goto: clip id: {start/end}	goto first clip or last clip
goto: clip id: {n}	goto clip id {n}
goto: clip id: +{n}	go forward {n} clips
goto: clip id: -{n}	go backward {n} clips
goto: clip: {start/end}	goto start or end of clip
goto: clip: {n}	goto frame position {n} within current clip
goto: clip: +{n}	go forward {n} frames within current clip
goto: clip: -{n}	go backward {n} frames within current clip
goto: timeline: {start/end}	goto start or end of timeline
goto: timeline: {n}	goto frame position {n} within timeline
goto: timeline: +{n}	go forward {n} frames within timeline
goto: timeline: -{n}	go backward {n} frames within timeline
goto: timecode: {timecode}	goto absolute timecode position in timeline
goto: timecode: +{timecode}	go forward {timecode} duration
goto: timecode: -{timecode}	go backward {timecode} duration
goto: slot id: {n}	goto slot id {n}
goto: clip id: {n} clip: {m}	goto clip id {n} and offset to frame position {m} within that clip
goto: clip id: {n} timeline: {m}	goto clip id {n} and offset to frame position {m} within the timeline

Command	Command Description
goto: clip id: {n} timecode: {timecode}	goto clip id {n} and offset {timecode} duration {clip id/clip/timeline/timecode} support absolute and relative offsets use “play” instead of “goto” to play from seeked position
jog: timecode: {timecode}	jog to timecode
jog: timecode: +{timecode}	jog forward {timecode} duration
jog: timecode: -{timecode}	jog backward {timecode} duration
shuttle: speed: {-5000 to 5000}	shuttle with speed
remote	query unit remote control state
remote: enable: {true/false}	enable or disable remote control
remote: override: {true/false}	session override remote control
configuration	query configuration settings
configuration: video input: {SDI/HDMI/component/composite}	change the video input source
configuration: audio input: {embedded/XLR/RCA}	change the audio input source
configuration: file format: {format}	switch to one of the supported formats: H.265High_422, H.264High, H.264Medium, H.264Low, H.264High10_422, H.265High, H.265Medium, H.265Low, QuickTimeProResHQ, QuickTimeProRes, QuickTimeProResLT, QuickTimeProResProxy DNxHR_HQX, QuickTimeDNxHR_HQX, DNxHR_SQ, QuickTimeDNxHR_SQ, DNxHR_LB, QuickTimeDNxHR_LB, DNxHD220x, QuickTimeDNxHD220x, DNxHD145, QuickTimeDNxHD145, DNxHD45, QuickTimeDNxHD45
configuration: audio codec: {PCM/AAC}	switch to specific audio codec
configuration: timecode input: {external/embedded/internal/preset/clip}	change the timecode input
configuration: timecode output: {clip/timeline}	change the timecode output
configuration: timecode preference: {default/dropframe/nondropframe}	whether or not to use drop frame timecodes when not otherwise specified
configuration: timecode preset: {timecode}	set the timecode preset
configuration: audio input channels: {n}	set the number of audio channels recorded to {n}
configuration: record trigger: {none/recordbit/timecoderun}	change the record trigger
configuration: record prefix: {name}	set the record prefix name (supports UTF-8 name)
configuration: record cache: {true/false}	enable or disable record cache, has no effect if cache is not supported/installed/formatted
configuration: append timestamp: {true/false}	append timestamp to recorded filename
configuration: usb spill: {true/false}	enable or disable spilling between usb disks

Command	Command Description
configuration: reference source: {auto/input/external}	set source for the reference signal
configuration: genlock input resync: {true/false}	enable or disable genlock input resync when enabled set reference source to auto/external
configuration: xlr input id: {n} xlr type: {line/mic}	configure xlr input type multiple xlr inputs can be configured in a single command
uptime	return time since last boot
format: slot id: {n} prepare: {exFAT/HFS+} name: {name}	prepare formatting operation filesystem type with volume name {name} “slot id” can be omitted for the current mounted slot “name” defaults to current volume name if mounted (supports UTF-8)
format: device: {device} prepare: {exFAT/HFS+} name: {name}	prepare formatting operation for {device}
format: confirm: {token}	perform a pre-prepared formatting operation using token
identify: enable: {true/false}	identify the device
watchdog: period: {period in seconds}	client connection timeout
reboot	reboot device
slate clips	slate clips information
slate project	slate project information
slate lens	slate lens information
nas list	list all NAS share bookmarks
nas discovered	list all NAS servers that have been discovered via mDNS
nas selected	currently selected NAS share
nas deselect	unmount the currently selected NAS share
connection protocol: response version: {version}	changes which do not affect other client connections change the output of “clips get”, “disk list” and related responses version 1 205 clips get id: filename startT duration startT depends on “configuration: timecode output: {clip/timeline}” 519 clips info id: clipInT clipDuration inT outT filename 206 disk list id: filename codec format duration 520 disk list info id: filename codec format duration version 2 205 clips get id: clipInT clipDuration inT outT folder/filename 519 clips info id: clipInT clipDuration inT outT folder/filename 206 disk list id: codec format duration folder/filename 520 disk list info id: codec format duration folder/filename

Multiline commands:	Command Description
authenticate:↵	authenticate user for secure access
username: {username}	case sensitive username
password: {password}	case sensitive password
slate clips↵	set slate clips information:
reel: {n}	slate reel number, where {n} is in [1, 999]
scene id: {id}	slate scene id value, where {id} is a string
shot type: {WS/MS/CU/BCU/MCU/ECU/none}	slate shot type
take: {n}	slate take number, where {n} is in [1, 99]
take scenario: {PU/VFX/SER/none}	slate take scenario
take auto inc: {true/false}	slate take auto increment
good take: {true/false}	slate good take
environment: {interior/exterior}	slate environment
day night: {day/night}	slate day or night
slate project:↵	set slate project information:
project name: {name}	project name (can be empty, supports UTF-8)
camera: {index}	set camera index e.g. A
director: {name}	director (can be empty, supports UTF-8)
camera operator: {name}	camera operator (can be empty, supports UTF-8)
slate lens:↵	set lens information:
lens type: {type}	lens type (can be empty, supports UTF-8)
iris: {type}	camera iris (can be empty, supports UTF-8)
focal length: {length}	focal length (can be empty, supports UTF-8)
distance: {distance}	lens distance (can be empty, supports UTF-8)
filter: {filter}	lens filter (can be empty, supports UTF-8)
nas add:↵	add a NAS share to the list of bookmarks
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share
username: {username}	username to connect as (optional, defaults to guest)
password: {password}	password to connect with (optional)
nas remove:↵	remove NAS share bookmark, does not unmount share if mounted
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share
nas select:↵	mount NAS share asynchronously. Uses credentials provided in matching bookmark, otherwise uses guest credentials
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share Use “nas selected” or “notify: slot: true” to determine when share is mounted.

Command Combinations

You can combine the parameters into a single command, for example:

```
play: clip id: 3 speed: 200 loop: true single clip: true
```

Or for configuration:

```
configuration: video input: SDI audio input: XLR
```

Or to switch to the second disk, but only play NTSC clips:

```
slot select: slot id: 2 video format: NTSC
```

Using XML

While you can use the Terminal to talk to HyperDeck, if you are writing software, you can use XML to confirm the existence of a specific command based on the firmware of the HyperDeck you are communicating with. This helps your software user interface adjust to the capabilities of the specific HyperDeck model and software version.

Protocol Details

Connection

The HyperDeck Ethernet server listens on TCP port 9993.

Basic syntax

The HyperDeck protocol is a line oriented text protocol. Lines from the server will be separated by an ascii CR LF sequence. Messages from the client may be separated by LF or CR LF.

New lines are represented in this document as a "↵" symbol.

Single line command syntax

Command parameters are usually optional. A command with no parameters is terminated with a new line:

```
{Command name}↵
```

If parameters are specified, the command name is followed by a colon, then pairs of parameter names and values. Each parameter name is terminated with a colon character:

```
{Command name}: {Parameter}: {Value} {Parameter}: {Value} ...↵
```

Multiline command syntax

The HyperDeck protocol also supports an equivalent multiline syntax where each parameter-value pair is entered on a new line. E.g.

```
{Command name}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
↵
```

Response syntax

Simple responses from the server consist of a three digit response code and descriptive text terminated by a new line:

```
{Response code} {Response text}↵
```

If a response carries parameters, the response text is terminated with a colon, and parameter name and value pairs follow on subsequent lines until a blank line is returned:

```
{Response code} {Response text}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
...
↵
```

Successful response codes

A simple acknowledgement of a command is indicated with a response code of 200:

```
200 ok↵
```

Other successful responses carry parameters and are indicated with response codes in the range of 201 to 299.

Failure response codes

Failure responses to commands are indicated with response codes in the range of 100 to 199:

```
100 syntax error
101 unsupported parameter
102 invalid value
103 unsupported
104 disk full
105 no disk
106 disk error
107 timeline empty
108 internal error
109 out of range
110 no input
111 remote control disabled
112 clip not found
120 connection failed
121 authentication failed
122 authentication required
150 invalid state
151 invalid codec
160 invalid format
161 invalid token
162 format not prepared
163 parameterized single line command not supported
```

Asynchronous response codes

The server may return asynchronous messages at any time. These responses are indicated with response codes in the range of 500 to 599:

```
5xx {Response Text}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
↵
```

Connection response

On connection, an asynchronous message will be delivered:

```
500 connection info:↵
protocol version: {Version}↵
model: {Model Name}↵
↵
```

Connection rejection

A limited number of clients may connect at a time. If too many clients attempt to connect concurrently, they will receive an error and be disconnected:

```
120 connection failed↵
```

Timecode syntax

Timecodes are expressed as non-drop-frame timecode in the format:

```
HH:MM:SS:FF
```

Handling of deck "remote" state

The “remote” command may be used to enable or disable the remote control of the deck. Any attempt to change the deck state over ethernet while remote access is disabled will generate an error:

```
111 remote control disabled↵
```

To enable or disable remote control:

```
remote: enable: {“true”, “false”} ↵
```

The current remote control state may be overridden allowing remote access over ethernet irrespective of the current remote control state:

```
remote: override: {“true”, “false”} ↵
```

The override state is only valid for the currently connected ethernet client and only while the connection remains open.

The “remote” command may be used to query the remote control state of the deck by specifying no parameters:

```
remote↵
```

The deck will return the current remote control state:

```
210 remote info:↵
enabled: {“true”, “false”}↵
override: {“true”, “false”}↵
↵
```

Asynchronous remote control information change notification is disabled by default and may be configured with the “notify” command. When enabled, changes in remote state will generate a “510 remote info:”asynchronous message with the same parameters as the “210 remote info:” message.

Closing connection

The "quit" command instructs the server to cleanly shut down the connection:

```
quit↵
```

Checking connection status

The "ping" command has no function other than to determine if the server is responding:

```
ping↵
```

Getting help

The "help" or "?" commands return human readable help text describing all available commands and parameters:

```
help↵
```

Or:

```
?↵
```

The server will respond with a list of all supported commands:

```
201 help:↵
{Help Text}↵
{Help Text}↵
↵
```

Switching to preview mode

The "preview" command instructs the deck to switch between preview mode and output mode:

```
preview: enable: {"true", "false"}↵
```

Playback will be stopped when the deck is switched to preview mode. Switching to playback is not permitted during record. Use the stop command to stop recording before switching to playback.

Controlling device playback

The “play” command instructs the deck to start playing:

```
play↵
```

The play command accepts a number of parameters which may be used together in most combinations.

By default, the deck will play all remaining clips on the timeline then stop.
The “single clip” parameter may be used to override this behavior:

```
play: single clip: {“true”, “false”}↵
```

By default, the deck will play at normal (100%) speed. An alternate speed may be specified in percentage between -5000 to 5000:

```
play: speed: {% normal speed}↵
```

By default, the deck will stop playing when it reaches to the end of the timeline. The “loop” parameter may be used to override this behavior:

```
play: loop: {“true”, “false”}↵
```

To play from the start of a particular clip:

```
play: clip id: {Clip Id}↵
```

To play from a position offset from the start of particular clip:

```
play: clip id: {Clid Id} timecode: +{timecode}↵
```

The “playrange” command returns the current playrange setting if any:

```
playrange↵
```

To override this behaviour and select a particular clip:

```
playrange set: clip id: {Clip ID}↵
```

To only play a certain number of clips starting at a particular clip:

```
playrange set: clip id: {n} count: {m}↵
```

To only play a certain timecode range:

```
playrange set: in: {in timecode} out: {out timecode}↵
```

To play a certain timeline range:

```
playrange set: timeline in: {in} timeline out: {out}↵
```

To clear a set playrange and return to the default value:

```
playrange clear↵
```

The “play on startup command” instructs the deck on what action to take on startup. By default, the deck will not play. Use the “enable” command to start playback after each power up.

```
play on startup: enable {“true”, “false”}↵
```

By default, the unit will play back all clips on startup. Use the “single clip” command to override.

```
play on startup: single clip: {“true”, “false”}↵
```

The “play option” command queries the output frame for when playback stops:

```
play option↵
```

By default, the deck will display the last frame when playback stops. To override this behaviour, the “stop mode” parameter can be used:

```
play option: stop mode: {“lastframe”, “nextframe”, “black”}↵
```

Stopping deck operation

The "stop" command instructs the deck to stop the current playback or capture:

```
stop↵
```

Changing timeline position

The "goto" command instructs the deck to switch to playback mode and change its position within the timeline.

To go to the start of a specific clip:

```
goto: clip id: {Clip ID}↵
```

To move forward/back {count} clips from the current clip on the current timeline:

```
goto: clip id: +/-{count}↵
```

Note that if the resultant clip id goes beyond the first or last clip on timeline, it will be clamp at the first or last clip.

To go to the start or end of the current clip:

```
goto: clip: {“start”, “end”}↵
```

To go to the start of the first clip or the end of the last clip:

```
goto: timeline: {“start”, “end”}↵
```

To go to a specified timecode:

```
goto: timecode: {timecode}↵
```

To move forward or back a specified duration in timecode:

```
goto: timecode: {“+”, “-”}{duration in timecode}↵
```

To specify between slot 1 and slot 2:

```
goto: slot id: {Slot ID}↵
```

Note that only one parameter/value pair is allowed for each goto command.

Enumerating supported commands and parameters

The "commands" command returns the supported commands:

```
commands↵
```

The command list is returned in a computer readable XML format:

```
212 commands:
<commands>↵
     <command name="…"><parameter name="…"/>…</command>↵
     <command name="…"><parameter name="…"/>…</command>↵
     …
</commands>↵
↵
```

More XML tokens and parameters may be added in later releases.

Controlling asynchronous notifications

The “notify” command may be used to enable or disable asynchronous notifications from the server.
To enable or disable transport notifications:

```
notify: transport: {“true”, “false”}↵
```

To enable or disable slot notifications:

```
notify: slot: {“true”, “false”}↵
```

To enable or disable remote notifications:

```
notify: remote: {“true”, “false”}↵
```

To enable or disable configuration notifications:

```
notify: configuration: {“true”, “false”}↵
```

Multiple parameters may be specified. If no parameters are specified, the server returns the current state of all notifications:

```
209 notify:↵
transport: {“true”, “false”}↵
slot: {“true”, “false”}↵
remote: {“true”, “false”}↵
configuration: {“true”, “false”}↵
dropped frames: {“true”, “false”}↵
display timecode: {“true”, “false”}↵
timeline position: {“true”, “false”}↵
playrange: {“true”, “false”}↵
cache: {“true”, “false”}↵
dynamic range: {“true”, “false”}↵
slate: {“true”, “false”}↵
clips: {“true”, “false”}↵
disk: {“true”, “false”}↵
device info: {“true”, “false”}↵
nas: {“true”, “false”}↵
↵
```

Retrieving device information

The "device info" command returns information about the connected deck device:

```
device info↵
```

The server will respond with:

```
204 device info:↵
protocol version: {Version}↵
model: {Model Name}↵
unique id: {unique alphanumeric identifier}↵
slot count: {number of storage slots}↵
software version: {software version}↵
name: {device name}↵
↵
```

Retrieving slot information

The "slot info" command returns information about a slot. Without parameters, the command returns information for the currently selected slot:

```
slot info↵
```

If a slot id is specified, that slot will be queried:

```
slot info: slot id: {Slot ID}↵
```

The server will respond with slot specific information:

```
202 slot info:↵
slot id: {Slot ID}↵
slot name: {“slot name”}↵
device name: {identifying name for disk device}↵
status: {"empty", "mounting", "error", "mounted"}↵
volume name: {Volume name}↵
recording time: {recording time available in seconds}↵
video format: {disk's default video format}↵
blocked: {“true”, “false”}↵
remaining size: {remaining size in bytes}↵
total size: {total size in bytes}↵
↵
```

A slot can also be specificed by its device. This is particularly useful when there are multiple drives connected via USB. First list the available external drives:

```
external drive list↵
226 external drive info:↵
device: {device}↵
```

Then use slot info with device to query the drive:

```
slot info: device: {device}↵
```

Asynchronous slot information change notification is disabled by default and may be configured with the "notify" command. When enabled, changes in slot state will generate a "502 slot info:" asynchronous message with the same parameters as the "202 slot info:" message.

Retrieving clip information

The “disk list” command returns the information for each playable clip on a given disk. Without parameters, the command returns information for the current active disk:

```
disk list↵
```

If a slot id is specified, the disk in that slot will be queried:

```
disk list: slot id: {Slot ID}↵
```

The server responds with the list of all playable clips on the disk in the format of: Index, name, formats, and duration in timecode:

```
206 disk list:↵
slot id: {Slot ID}↵
{clip index}: {name} {file format} {video format} {Duration timecode}↵
{clip index}: {name} {file format} {video format} {Duration timecode}↵
…
↵
```

Note that the *clip index* starts from 1.

Retrieving clip count

The "clips count" command returns the number of clips on the current timeline:

```
clips count ↵
```

The server responds with the number of clips:

```
214 clips count: ↵
clip count: {Count}↵
```

Retrieving timeline information

The "clips get" command returns information for each available clip on the current timeline. Without parameters, the command returns information for all clips on timeline:

```
clips get↵
```

In version 1, the start timecode reported is either a clip timecode or a timeline timecode depending on the configured output timecode.

The server responds with a list of clip IDs, names and timecodes:

```
205 clips info:↵
clip count: {Count}↵
{Clip ID}: {Name} {Start timecode} {Duration timecode}↵
{Clip ID}: {Name} {Start timecode} {Duration timecode}↵
…
↵
```

The “clips get” command provides a more detailed response when using the “version: 2” parameter:

```
clips get: version: 2↵
```

The server responds with a list of clip IDs, timecodes, in points, out points and names. Clip name is the last field making it simpler to parse when names have embedded spaces.

```
{Clip ID}: {Clip start timecode} {Duration timecode} {inTimecode}
{outTimecode}
{name}↵
{Clip ID}: {Clip start timecode} {Duration timecode} {inTimecode}
{outTimecode}
{name}↵
…
↵
```

For models that support recursive timelines “clips get: version: 3” replaces the {name} field with {path to clip name} where the {path to clip name} can include directories and subdirectories.

Retrieving transport information

The “transport info” command returns the state of the transport:

```
transport info ↵
```

The server responds with transport specific information:

```
208 transport info:

status: {“preview”, “stopped”, “play”, “forward”, “rewind”,
“jog”, “shuttle”,”record”}↵

speed: {Play speed between -5000 and 5000 %}↵

slot id: {Slot ID or “none”}↵

slot name: {“slot name”}↵

device name: {identifying name for disk device}↵

clip id: {Clip ID or “none”}↵

single clip: {“true”, “false”}↵

display timecode: {timecode}↵

timecode: {timecode}↵

video format: {Video format}↵

loop: {“true”, “false”}↵

timeline: {n}↵

input video format: {Video format”}↵

dynamic range: {“off”, “Rec709”, “Rec2020_SDR”, “HLG”,
“ST2084_300”, “ST2084_500”, “ST2084_800”, “ST2084_1000”,
“ST2084_2000”, “ST2084_4000”, “ST2048” or “none”}↵

reference locked: {“false”, “true”}

↵
```

The "timecode" value is the timecode within the current timeline for playback or the clip for record. The "display timecode" is the timecode displayed on the front of the deck. The two timecodes will differ in some deck modes.

Asynchronous transport information change notification is disabled by default and may be configured with the "notify" command. When enabled, changes in transport state will generate a "508 transport info:" asynchronous message with the same parameters as the "208 transport info:" message.

Video Formats

The following video formats are currently supported on HyperDeck Extreme, HyperDeck Studio and HyperDeck Shuttle:

720p50, 720p5994, 720p60

1080p23976, 1080p24, 1080p25, 1080p2997, 1080p30, 1080p60

1080i50, 1080i5994, 1080i60

HyperDeck Extreme HDR models also support the following formats:

NTSC, PAL, NTSCp, PALp

2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p30, 2160p50, 2160p59.94, 2160p60

4Kp23976, 4Kp24, 4Kp25, 4Kp2997, 4Kp30

4Kp50, 4Kp5994, 4Kp60

HyperDeckExtreme 8K HDR adds support for the following 8K formats:

4320p23.98, 4320p24, 4320p25, 4320p29.97, 4320p30, 4320p50, 4320p59.94, 4320p60

8Kp23976, 8Kp24, 8Kp25

HyperDeck Studio Pro and Plus models support these 4k formats:

4Kp23976, 4Kp24, 4Kp25, 4Kp2997, 4Kp30

HyperDeck Studio 4K Pro adds support for the following 4k formats:

4Kp50, 4Kp5994, 4Kp60

Video format support may depend on the file format selected and may vary between models and software releases.

File Formats

All HyperDeck models currently support the following file formats:

H.264High_SDI

H.264High

H.264Medium

H.264Low

QuickTimeProResHQ

QuickTimeProRes

QuickTimeProResLT

QuickTimeProResProxy

QuickTimeDNxHD220x

DNxHD220x

QuickTimeDNxHD145

DNxHD145

QuickTimeDNxHD45

DNxHD45

HyperDeck Studio 4K Pro and HyperDeck Extrme HDR models also support the following file formats:

H.265High_SDI

H.265High

H.265Medium

H.265Low

QuickTimeDNxHR_HQX

DNxHR_HQX

QuickTimeDNxHR_SQ

DNxHR_SQ

QuickTimeDNxHR_LB

DNxHR_LB

Supported file formats may vary between models and software releases.

Querying and updating configuration information

The "configuration" command may be used to query the current configuration of the deck:

```
configuration↵
```

The server returns the configuration of the deck:

```
211 configuration:↵
audio input: {“embedded”, “XLR”, “RCA”}↵
audio mapping: {n}↵
video input: {“SDI”, “HDMI”, “component”, “composite”}↵
file format: {format}↵
audio codec: {“PCM”, “AAC”}↵
timecode input: {“external”, “embedded”, “preset”, “clip”}↵
timecode output: {“clip”, “timeline”}↵
timecode preference: {“default”, “dropframe”, “nondropframe”}↵
timecode preset: {timecode}↵
audio input channels: {n}↵
record trigger: {“none”, “recordbit”, “timecoderun”}↵
record prefix: {name}↵
record cache: {“true”, “false”}↵
append timestamp: {“true”, “false”}↵
genlock input resync: {“true”, “false”}↵
reference source: {“auto”, “input”, “external”}↵
xlr input id: {“n”}↵
xlr type: {”line”, ”mic”}↵
usb spill: {“true”, “false”}↵
↵
```

One or more configuration parameters may be specified to change the configuration of the deck.

To change the current video input:

```
configuration: video input: {“SDI”, “HDMI”, “component”}↵
```

Valid video inputs may vary between models. To configure the current audio input:

```
configuration: audio input: {“embedded”, “XLR”, “RCA”}↵
```

Valid audio inputs may vary between models.

To configure the current file format:

```
configuration: file format: {File format}↵
```

Note that changes to the file format may require the deck to reset, which will cause the client connection to be closed. In such case, response code 213 will be returned (instead of 200) before the client connection is closed:

```
“213 deck rebooting”
```

Asynchronous configuration information change notification is disabled by default and may be configured with the “notify” command. When enabled, changes in configuration will generate a “511 configuration:” asynchronous message with the same parameters as the “211 configuration:” message.

Selecting active slot and video format

The "slot select" command instructs the deck to switch to a specified slot, or/and to select a specified output video format.

To switch to a specified slot:

```
slot select: slot id: {slot ID}↵
```

To switch to a disk device, including USB drives that are not yet made active:

```
slot select: device: {identifying name for disk device}↵
```

To select the output video format:

```
slot select: video format: {video format}↵
```

Either or all slot select parameters may be specified. Note that selecting video format will result in a rescan of the disk to reconstruct the timeline with all clips of the specified video format.

Clearing the current timeline

The "clips clear" command instructs the deck to empty the current timeline:

```
clips clear↵
```

The server responds with

```
200 ok↵
```

Adding a clip to the current timeline

The "clips add:" command instructs the deck to add a clip to the current timeline:

```
clips add: name: {clip name}↵
```

The server responds with

```
200 ok↵
```

or in case of error

```
1xx {error description}↵
```

Configuring the watchdog

The “watchdog” command instructs the deck to monitor the connected client and terminate the connection if the client is inactive for at least a specified period of time.

To configure the watchdog:

```
watchdog: period: {period in seconds}↵
```

To avoid disconnection, the client must send a command to the server at least every {period} seconds. Note that if the period is set to 0 or less than 0, connection monitoring will be disabled.

Network Area Storage

On networks using multicast DNS the “nas discovered” command will list network servers the HyperDeck has discovered:

```
nas discovered↵
225 nas host info:
CloudStoreMini.local. CloudStoreMini
CloudStore80.local. CloudStore80
CloudStore320.local. CloudStore320
```

A network share can be added as a bookmark to the HyperDeck using ‘nas add’

```
nas add:
url: smb://CloudStore80.local/Studio1
```

For shares that require a username and password consider using the secure mode of the HyperDeck Ethernet protocol to avoid passwords being sent as plaintext.

```
nas add:
url: smb://192.168.1.1/Main
username: user1234
password: Password1234
```

A share can be made available for recording and playback using ‘nas select’. If a bookmark exists for that share, ‘nas select’ will use the credentials stored in the bookmark. Otherwise ‘nas select’ will connect using Guest credentials.

```
nas select:
url: smb://192.168.1.1/Main
```

Only one share can be mounted at a time using ‘nas select’.

You can query the currently selected nas share using the ‘nas selected’ command. If ‘notify: slot: true’ was used an asynchronous notification will be sent when the share is mounted.

HyperDeck Control REST API

ソフトウェアデベロッパーは、カスタムアプリケーションを構築したり、RESTクライアントやPostmanなどのすぐに使用できるツールを活用して、HyperDeck Control REST APIを用いて、HyperDeckディスクレコーダーをシームレスに制御できます。このAPIは、収録の開始・停止、再生管理、ディスク情報へのアクセスなどの様々な操作を実行できます。特定のニーズに合わせたカスタムアプリケーションを開発している場合でも、既存のツールを使用する場合でも、このAPIではHyperDeckディスクレコーダーの可能性を最大限に引き出せます。開発されたソリューションを拝見するのを楽しみにしています！

Transport Control API

API for controlling Transport on Blackmagic Design products.

GET /transports/0

Get device's basic transport status.

Response

200 - Transport status.

The response is a JSON object.

Name	Type	Description
mode	string	Transport mode. Possible values are: InputPreview, InputRecord, Output.

PUT /transports/0

Set device's basic transport status.

Parameters

Name	Type	Description
mode	string	Transport mode. Possible values are: InputPreview, Output.

Response

204 - Transport mode was set.

GET /transports/0/stop

Determine if transport is stopped.

Response

200 - Transport stop response.

The response is a JSON object.

PUT /transports/0/stop

Stop transport. Deprecated, use POST /tranports/0/stop instead.

Response

204 - Transport stopped.

POST /transports/0/stop

Stop transport.

Response

204 - Transport stopped.

GET /transports/0/play

Determine if transport is playing.

Response

200 - Transport play response.
The response is a JSON object.

PUT /transports/0/play

Start playing on transport. Deprecated, use POST /tranports/0/play instead.

Response

204 - Transport playing.

POST /transports/0/play

Start playing on transport.

Response

204 - Transport playing.

GET /transports/0/playback

Get playback state.

Response

200 - OK
The response is a JSON object.

Name	Type	Description
type	string	Possible values are: Play, Jog, Shuttle, Var.
loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
speed	number	Playback Speed, 1.0 for normal forward playback
position	integer	Playback position on the timeline in units of video frames

PUT /transports/0/playback

Set playback state.

Parameters

Name	Type	Description
type	string	Possible values are: Play, Jog, Shuttle, Var.
loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
speed	number	Playback Speed, 1.0 for normal forward playback
position	integer	Playback position on the timeline in units of video frames

Response

204 - No Content

GET /transports/0/record

Get record state.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
recording	boolean	Is transport in Input Record mode

PUT /transports/0/record

Set record state. Deprecated, use POST /transports/0/record instead.

Parameters

Name	Type	Description
recording	boolean	Is transport in Input Record mode
clipName	string	Used to set the requested clipName to record to, when specifying “recording” attribute to True

Response

204 - Recording started.

POST /transports/0/record

Start recording.

Parameters

Name	Type	Description
clipName	string	Specific name of clip to record to.

Response

204 - Recording started.

GET /transports/0/clipIndex

Get the clip index of the currently playing clip on the timeline.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clipIndex	number	The 0-based index of the clip being played on the timeline. null when there is no timeline or an empty timeline.

GET /transports/0/timecode

Get device's timecode.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
display	string	The display timecode serialised as a string.
timeline	string	The timeline timecode serialised as a string.

GET /transports/0/timecode/source

Get timecode source selected on device

Response

200 - OK

The response is a JSON object.

Name	Type	Description
timecode	string	Possible values are: Timeline, Clip.

GET /transports/0/clip

Get clip information about the currently recording (or transferring) clip, if it exists

Response

200 - Information about the clip currently being recorded.

The response is a JSON object.

Name	Type	Description
clip	object	
clip.clipUniqueId	integer	Unique ID used to identify this clip
clip.filePath	string	Path to the file relative to the root of a mount
clip.fileSize	integer	Size of file on disk in bytes
clip.codecFormat	object	
clip.codecFormat.codec	string	Currently selected codec.
clip.codecFormat.container	string	Multimedia container format.
clip.videoFormat (required)	object	Video format configuration.
clip.videoFormat.name	string	Video format serialised as a string.
clip.videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
clip.videoFormat.height	number	Height dimension of video format.
clip.videoFormat.width	number	Width dimension of video format.
clip.videoFormat.interlaced	boolean	Is the display format interlaced?
clip.startTimecode	string	Start timecode of the clip serialised as string
clip.durationTimecode	string	Duration of the clip in timecode format serialised as string
clip.frameCount	integer	Number of frames in clip; duration of the clip in frames

System Control API

API for controlling the System Modes on Blackmagic Design products.

GET /system

Get device system information.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codecFormat	object	
codecFormat.codec	string	Currently selected codec.
codecFormat.container	string	Multimedia container format.
videoFormat (required)	object	Video format configuration.
videoFormat.name	string	Video format serialised as a string.
videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
videoFormat.height	number	Height dimension of video format.
videoFormat.width	number	Width dimension of video format.
videoFormat.interlaced	boolean	Is the display format interlaced?

GET /system/product

Get device product information.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
deviceName	string	Name of device as displayed in Setup
productName	string	Device's product name
softwareVersion	string	Software version running on device

GET /system/supportedCodecFormats

Get the list of supported codecs.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codecs	array	
codecs[i]	object	
codecs[i].codec	string	Currently selected codec.
codecs[i].container	string	Multimedia container format.

GET /system/codecFormat

Get the currently selected codec.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codec	string	Currently selected codec.
container	string	Multimedia container format.

PUT /system/codecFormat

Set the codec.

Parameters

Name	Type	Description
codec	string	Currently selected codec.
container	string	Multimedia container format.

Response

204 - The codec updated successfully.

GET /system/videoFormat

Get the currently selected video format.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
name	string	Video format serialised as a string.
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

PUT /system/videoFormat

Set the timeline video format. Deprecated, use PUT /timelines/0/videoFormat instead.

Parameters

This parameter can be one of the following types:

Name	Type	Description
name	string	Video format serialised as a string.

Name	Type	Description
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

Response

204 - The video format updated successfully.

400 - Invalid request.

409 - Operation unsupported in the current state.

Media Control API

API for controlling media devices in Blackmagic Design products.

GET /media/workingset

Get the list of media devices currently in the working set.

Response

200 - The list of media devices in the working set. Entries are null if there is no media device in that slot.

The response is a JSON object.

Name	Type	Description
size	integer	The fixed size of this device's working set
workingset (required)	array	
workingset[i]	object	
workingset[i].index	integer	Index of this media in the working set
workingset[i].activeDisk	boolean	Is this current item the active disk
workingset[i].volume	string	Volume name
workingset[i].deviceName	string	Internal device name of this media device
workingset[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
workingset[i].totalSpace	integer	Total space on media device in bytes
workingset[i].remainingSpace	integer	Remaining space on media device in bytes
workingset[i].clipCount	integer	Number of clips currently on the device

GET /media/active

Get the currently active media device.

Response

200 - The current active media device.

The response is a JSON object.

Name	Type	Description
workingsetIndex	integer	Working set index of the active media device
deviceName	string	Internal device name of this media device

204 - No media is currently active

PUT /media/active

Set the currently active media device.

Parameters

Name	Type	Description
workingsetIndex	integer	Working set index of the media to become active

Response

204 - The active media device was set successfully.

400 - Setting the currently active media device is not possible in the current state.

GET /media/devices/doformatSupportedFilesystems

Get the list of filesystems available to format the device.

Response

200 - The list of filesystems permitted for formatting.

The response is a JSON object.

GET /media/devices/{deviceName}

Get information about a requested device.

Parameters

Name	Type	Description
{deviceName}	string	

Response

200 - Information about the requested device.

The response is a JSON object.

Name	Type	Description
state	string	The current state of the media device. Possible values are: None, Scanning, Mounted, Uninitialised, Formatting, RaidComponent.

400 - Invalid device name

404 - Device not found

GET /media/devices/{deviceName}/doformat

Get a format key, used to format the device with a PUT request.

Parameters

Name	Type	Description
{deviceName}	string	

Response

200 - Format prepared

The response is a JSON object.

Name	Type	Description
deviceName	string	Internal device name of this media device
key	string	The key used to format this device, it must be fetched with the GET request and then provided back with a PUT request

400 - Cannot format the device

404 - Device not found

PUT /media/devices/{deviceName}/doformat

Perform a format of the media device.

Parameters

Name	Type	Description
{deviceName}	string	

Name	Type	Description
key	string	The key used to format this device, it must be fetched with the GET request and then provided back with a PUT request
filesystem	string	Filesystem to format to. GET doFormatSupportedFilesystems returns list of supported filesystems.
volume	string	Volume name to set for the disk after format

Response

204 - Format successful

400 - Cannot format the device, invalid filesystem or key

404 - Device not found

Timeline Control API

API for controlling playback timeline.

GET /timelines/0

Get the playback timeline.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clips	array	
clips[i]	object	
clips[i].clipUniqueId	integer	Unique identifier used to identify this media clip. If the same media clip is added to the timeline multiple times, each timeline clip has the same clipUniqueId
clips[i].frameCount	integer	Duration of timeline clip in frames, the number of frames in this clip on the timeline
clips[i].durationTimecode	string	Duration of the timeline clip in timecode format serialised as string. This will differ to durationTimecode reported in /clips for this clipUniqueId if clipIn or frameCount was specified when adding this clip to the timeline.
clips[i].clipIn	string	In frame offset for the clip on the timeline, where 0 is the first frame of the on-disk clip
clips[i].inTimecode	string	Clip timecode of the first frame of this timeline clip serialised as string (clip startTimecode + clipIn frames)
clips[i].timelineIn	string	Timeline position of the first frame of this clip, where 0 is the first frame of the timeline
clips[i].timelineInTimecode	string	Timeline timecode of the first frame of this timeline clip serialised as string

Response

404 - No timeline / disk available.

DELETE /timelines/0

Clear the current playback timeline. Deprecated, prefer to use POST /timelines/0/clear

Response

204 - The timeline was cleared.

POST /timelines/0

Add a clip to the timeline.

Parameters

Name	Type	Description
insertBefore	integer	Clip(s) will be inserted before this timeline clip index. If omitted, inserts to the end of the timeline. 0 inserts to the beginning of the timeline.
clips		

Response

204 - The clip was added to the timeline as specified.

POST /timelines/0/add

Add a clip to the end of the timeline. Deprecated, use POST /timelines/0 to add clips within the timeline.

Parameters

This parameter can be one of the following types:

Name	Type	Description
clips	integer	Unique ID (clipUniqueId) of the clip to add to the timeline

Name	Type	Description
clips	array	
clips[i]	integer	Unique ID (clipUniqueId) of the clip to add to the timeline

Response

204 - The clip was added to the end of the timeline.

DELETE /timelines/0/clear

Clear the playback timeline.

Response

204 - The timeline was cleared.

DELETE /timelines/0/clips/{timelineClipIndex}

Remove the specified clip from the timeline.

Parameters

Name	Type	Description
{timelineClipIndex}	integer	

Response

204 - The specified clip was removed from the timeline.

Event Control API

API For working with built-in websocket.

GET /event/list

Get the list of events that can be subscribed to using the websocket API.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
events	array	
events[i]	string	List of events that can be subscribed to using the websocket API

Clips Control API

API for listing clips on disk.

GET /clips

Get the list of clips on the active disk.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clips	array	
clips[i]	object	
clips[i].clipUniqueId	integer	Unique ID used to identify this clip
clips[i].filePath	string	Path to the file relative to the root of a mount
clips[i].fileSize	integer	Size of file on disk in bytes
clips[i].codecFormat	object	
clips[i].codecFormat.codec	string	Currently selected codec.
clips[i].codecFormat.container	string	Multimedia container format.
clips[i].videoFormat (required)	object	Video format configuration.
clips[i].videoFormat.name	string	Video format serialised as a string.
clips[i].videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
clips[i].videoFormat.height	number	Height dimension of video format.
clips[i].videoFormat.width	number	Width dimension of video format.
clips[i].videoFormat.interlaced	boolean	Is the display format interlaced?
clips[i].startTimecode	string	Start timecode of the clip serialised as string
clips[i].durationTimecode	string	Duration of the clip in timecode format serialised as string
clips[i].frameCount	integer	Number of frames in clip; duration of the clip in frames

Response

404 - There is no active disk

HyperDeck Control API

API for controlling HyperDecks.

POST /system/reboot

Reboots the device.

Response

204 - The device will reboot immediately.

409 - Rebooting is not possible in the current state.

GET /system/uptime

Gets the current system uptime.

Response

200 - The current system uptime

The response is a JSON object.

Name	Type	Description
uptimeSeconds	integer	The system uptime in seconds

PUT /system/identify

Sets the identify mode. If set to true, will exit identify mode after 10 seconds.

Parameters

Name	Type	Description
enabled	boolean	Is the device identifying itself?

Response

204 - Identify updated successfully.

GET /transports/0/recordCache

Gets information about the recording cache.

Response

200 - Current information about the recording cache

The response is a JSON object.

Name	Type	Description
status	string	The current status of the cache. “none” means no cache is detected by the device. Possible values are: undetected, unformatted, idle, transferring, queued, recording, disabled.
remainingRecordingTime	integer	The remaining recording time in seconds.
transferringDevice	string	The device name of the disk the cache is currently transferring to.

GET /transports/0/recordCache/enabled

Checks if the record cache is enabled.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
enabled	boolean	Is the record cache enabled?

PUT /transports/0/recordCache/enabled

Enables or disables the record cache. Has no effect if cache is not supported / installed / formatted.

Parameters

Name	Type	Description
enabled	boolean	Is the record cache enabled?

Response

204 - Record cache enabled / disabled was changed.

GET /transports/0/record/spillOrder

Gets media devices in order of which will next be spilled to.

Response

200 - The media device spill order

The response is a JSON object.

Name	Type	Description
devices	array	
devices[i]	object	
devices[i].deviceName	string	Internal device name of the drive.

POST /transports/0/record/spillToNewFile

Spills to a new file.

Response

204 - Spilled to a new file.

POST /transports/0/record/spillToNextDevice

Spills to the next media device

Response

204 - Spilled to the specified drive.

GET /transports/0/inputVideoFormat

Gets the video format of the input video signal.

Response

200 - The video format of the input video signal. “inputVideoFormat” is null when there is no timeline.

The response is a JSON object.

Name	Type	Description
inputVideoFormat (required)	object	Video format configuration.
inputVideoFormat.name	string	Video format serialised as a string.
inputVideoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
inputVideoFormat.height	number	Height dimension of video format.
inputVideoFormat.width	number	Width dimension of video format.
inputVideoFormat.interlaced	boolean	Is the display format interlaced?

GET /transports/0/supportedInputVideoSources

Gets the currently supported input video signal sources.

Response

200 - The supported input video signal sources.

The response is a JSON object.

Name	Type	Description
supportedInputVideoSources	array	
supportedInputVideoSources[i]	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

GET /transports/0/inputVideoSource

Gets the source of the input video signal.

Response

200 - The input video signal source. The source will be one in the list from GET /transports/0/supportedInputVideoSources.

The response is a JSON object.

Name	Type	Description
inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

PUT /transports/0/inputVideoSource

Sets the source of the input video signal.

Parameters

Name	Type	Description
inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

Response

204 - The source of the input video signal was set successfully.

400 - The source specified was invalid or unsupported.

GET /timelines/0/playRange

Gets the current timeline play range. playRange is null if playing the whole timeline, or there is no play range.

Response

200 - The current timeline play range.

The response is a JSON object.

Name	Type	Description
playRange		

PUT /timelines/0/playRange

Sets the timeline play range.

Parameters

Name	Type	Description
playRange		

Response

204 - The timeline play range was set successfully.

POST /timelines/0/playRange/clear

Clears the timeline play range, sets the play range to be the whole timeline.

Response

204 - The timeline play range was cleared successfully.

GET /timelines/0/videoFormat

Gets the video format of the timeline.

Response

200 - The video format of the timeline. “videoFormat” is null when there is no timeline.

The response is a JSON object.

Name	Type	Description
videoFormat (required)	object	Video format configuration.
videoFormat.name	string	Video format serialised as a string.
videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
videoFormat.height	number	Height dimension of video format.
videoFormat.width	number	Width dimension of video format.
videoFormat.interlaced	boolean	Is the display format interlaced?

PUT /timelines/0/videoFormat

Sets the video format of the timeline.

Parameters

This parameter can be one of the following types:

Name	Type	Description
name	string	Video format serialised as a string.

Name	Type	Description
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

Response

204 - The timeline video format was set successfully.

400 - The requested video format was invalid.

409 - The video format cannot be changed at this time.

POST /timelines/0/rebuild

Rebuilds the timeline with default rules in the current timeline format.

Response

204 - The timeline was rebuilt with default rules.

GET /media/external

Gets the list of present external media devices.

Response

200 - The list of present external media devices

The response is a JSON object.

Name	Type	Description
devices	array	
devices[i] (required)	object	
devices[i].volume	string	Volume name
devices[i].deviceName	string	Internal device name of this media device
devices[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
devices[i].totalSpace	integer	Total space on media device in bytes
devices[i].remainingSpace	integer	Remaining space on media device in bytes
devices[i].clipCount	integer	Number of clips currently on the device

GET /media/external/selected

Gets the current selected external media device.

Response

200 - The selected external media device

The response is a JSON object.

Name	Type	Description
selected	object	
selected.deviceName	string	Internal device name of the drive.

404 - No selected external media has been selected

PUT /media/external/selected

Sets the current selected external media device.

Parameters

Name	Type	Description
selected	object	
selected.deviceName	string	Internal device name of the drive.

Response

204 - The selected external media device was set successfully.

GET /media/nas/discovered

Gets the NAS hosts discoverable by the device.

Response

200 - The list of discovered NAS hosts

The response is a JSON object.

Name	Type	Description
hosts	array	
hosts[i]	object	
hosts[i].hostName	string	The hostname of the NAS host
hosts[i].friendlyName	string	The friendly name of the NAS host
hosts[i].ip	string	The IP address of the NAS host

GET /media/nas/bookmarks

Gets all NAS share bookmarks.

Response

200 - The list of NAS share bookmarks

The response is a JSON object.

Name	Type	Description
hosts	array	
hosts[i] (required)	object	
hosts[i].url	string	URL of the NAS share

POST /media/nas/bookmarks

Add a new NAS share bookmarks.

Parameters

Response

204 - The NAS bookmark was added successfully.

400 - The NAS bookmark could not be added.

GET /media/nas/bookmarks/{url}

Get information about a requested network share bookmark.

Parameters

Name	Type	Description
{url}	string	

Response

200 - Information about the requested network share bookmark.

The response is a JSON object.

Name	Type	Description
url	string	URL of the NAS share

404 - Network share bookmark not found

PUT /media/nas/bookmarks/{url}

Adds a bookmark with the requested URL.

Parameters

Name	Type	Description
{url}	string	

Name	Type	Description
username	string	Default value is: guest.
password	string	

Response

204 - The NAS bookmark has been created.

400 - The NAS bookmark could not be created.

DELETE /media/nas/bookmarks/{url}

Deletes a bookmark with the requested URL.

Parameters

Name	Type	Description
{url}	string	

Response

204 - The NAS bookmark has been deleted.

GET /media/nas/selected

Gets the currently selected share bookmark.

Response

200 - Information about the selected network share bookmark.

The response is a JSON object.

Name	Type	Description
selected	object	
selected.url	string	URL of the NAS share

404 - No NAS drive has been selected.

PUT /media/nas/selected

Sets the selected share bookmark to the requested bookmark, or clears the bookmark.

Parameters

Name	Type	Description
selected	object	
selected.url	string	URL of the NAS share

Response

204 - The selected NAS bookmark was set.

400 - The selected NAS bookmark could not be set.

Notification websocket - 1.0.0

Service that notifies subscribers of device state changes.

messages

Subscribe (The messages from the server/device)

Response Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: subscribe, unsubscribe, listSubscriptions, listProperties, websocketOpened .
.data.properties	array	
.data.properties[i]	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.values	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.data.success	boolean	
.type	string	Possible values are: response .
.id	number	Optional parameter that repeats the id in the output for tracking messages

Event Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: propertyValueChanged .
.data.property	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.value	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.type	string	Possible values are: event .

Publish (The messages that user can send to the server/device)

Response Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: subscribe, unsubscribe, listSubscriptions, listProperties, websocketOpened .
.data.properties	array	
.data.properties[i]	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.values	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.data.success	boolean	
.type	string	Possible values are: response .
.id	number	Optional parameter that repeats the id in the output for tracking messages

Device Properties

/media/workingset

The value JSON returned via the eventResponse when the /media/workingset property changes on the device:

Name	Type	Description
size	integer	The fixed size of this device's working set
workingset (required)	array	
workingset[i]	object	
workingset[i].index	integer	Index of this media in the working set
workingset[i].activeDisk	boolean	Is this current item the active disk
workingset[i].volume	string	Volume name
workingset[i].deviceName	string	Internal device name of this media device
workingset[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
workingset[i].totalSpace	integer	Total space on media device in bytes
workingset[i].remainingSpace	integer	Remaining space on media device in bytes
workingset[i].clipCount	integer	Number of clips currently on the device

/media/active

The value JSON returned via the eventResponse when the /media/active property changes on the device:

Name	Type	Description
.workingsetIndex	integer	Working set index of the active media device
.deviceName	string	Internal device name of this media device

/system

The value JSON returned via the eventResponse when the /system property changes on the device:

Name	Type	Description
.codecFormat	object	Currently selected codec
.codecFormat.codec	string	Currently selected codec
.codecFormat.container	string	Multimedia container format
.videoFormat	string	Name of the video format

/system/codecFormat

Currently selected codec

The value JSON returned via the eventResponse when the /system/codecFormat property changes on the device:

Name	Type	Description
.codec	string	Currently selected codec
.container	string	Multimedia container format

/system/videoFormat

Name of the video format

The value JSON returned via the eventResponse when the /system/videoFormat property changes on the device:

Name	Type	Description

/timelines/0

The value JSON returned via the eventResponse when the /timelines/0 property changes on the device:

Name	Type	Description
.clips	array	
.clips[i]	object	
.clips[i].clipUniqueId	integer	Unique identifier used to identify this media clip. If the same media clip is added to the timeline multiple times, each timeline clip has the same clipUniqueId
.clips[i].frameCount	integer	Duration of timeline clip in frames, the number of frames in this clip on the timeline
.clips[i].durationTimecode	string	Duration of the timeline clip in timecode format serialised as string. This will differ to durationTimecode reported in /clips for this clipUniqueId if clipIn or frameCount was specified when adding this clip to the timeline.
.clips[i].clipIn	string	In frame offset for the clip on the timeline, where 0 is the first frame of the on-disk clip
.clips[i].inTimecode	string	Clip timecode of the first frame of this timeline clip serialised as string (clip startTimecode + clipIn frames)
.clips[i].timelineIn	string	Timeline position of the first frame of this clip, where 0 is the first frame of the timeline
.clips[i].timelineInTimecode	string	Timeline timecode of the first frame of this timeline clip serialised as string

/transports/0

The value JSON returned via the eventResponse when the /transports/0 property changes on the device:

Name	Type	Description
.mode	string	Transport mode Possible values are: InputPreview, InputRecord, Output .

/transports/0/stop

true when transport mode is InputPreview or when in Output mode and speed is 0

The value JSON returned via the eventResponse when the /transports/0/stop property changes on the device:

Name	Type	Description

/transports/0/play

True when transport is in Output mode and speed is non-zero

The value JSON returned via the eventResponse when the /transports/0/play property changes on the device:

Name	Type	Description

/transports/0/playback

The value JSON returned via the eventResponse when the /transports/0/playback property changes on the device:

Name	Type	Description
.type	string	Possible values are: Play, Jog, Shuttle, Var .
.loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
.singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
.speed	number	Playback speed, 1.0 for normal forward playback
.position	integer	Playback position on the timeline in units of video frames

/transports/0/record

The value JSON returned via the eventResponse when the /transports/0/record property changes on the device:

Name	Type	Description
.recording	boolean	Is transport in Input Record mode

/transports/0/timecode

The value JSON returned via the eventResponse when the /transports/0/timecode property changes on the device:

Name	Type	Description
display	string	The display timecode serialised as a string.
timeline	string	The timeline timecode serialised as a string.

/transports/0/timecode/source

The value JSON returned via the eventResponse when the /transports/0/timecode/source property changes on the device:

Name	Type	Description
.timecode	string	Possible values are: Timeline, Clip .

/transports/0/clipIndex

The value JSON returned via the eventResponse when the /transports/0/clipIndex property changes on the device:

Name	Type	Description
.clipIndex	number	The 0-based index of the clip being played on the timeline. null when there is no timeline or an empty timeline.

/media/external

The value JSON returned via the eventResponse when the /media/external property changes on the device:

Name	Type	Description
.volume	string	Volume name
.deviceName	string	Name of media device
.remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
.totalSpace	integer	Total space on media device in bytes
.remainingSpace	integer	Remaining space on media device in bytes
.clipCount	integer	Number of clips currently on the device

/media/external/selected

The value JSON returned via the eventResponse when the /media/external/selected property changes on the device:

Name	Type	Description
.deviceName	string	Internal device name of this media device

/transports/0/inputVideoSource

The value JSON returned via the eventResponse when the /transports/0/inputVideoSource property changes on the device:

Name	Type	Description
.inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite .

/transports/0/inputVideoFormat

The value JSON returned via the eventResponse when the /transports/0/inputVideoFormat property changes on the device:

Name	Type	Description
.inputVideoFormat	string	Name of the video format

/timelines/0/videoFormat

The value JSON returned via the eventResponse when the /timelines/0/videoFormat property changes on the device:

Name	Type	Description
.videoFormat	string	Name of the video format

/media/nas/discovered

The value JSON returned via the eventResponse when the /media/nas/discovered property changes on the device:

Name	Type	Description
.hostName	string	Hostname of external network drive
.friendlyName	string	Name of external network drive
.ip	string	IP Address of external network drive

/media/nas/bookmarks

The value JSON returned via the eventResponse when the /media/nas/bookmarks property changes on the device:

Name	Type	Description
.hosts	array	
.hosts[i]	object	
.hosts[i].url	string	URL associated with bookmark

ヘルプ

ヘルプライン

すぐに情報が必要な方は、Blackmagic Designオンラインサポートページで、Blackmagic HyperDeckディスクレコーダーの最新サポート情報を確認できます。

Blackmagic Designオンラインサポートページ

最新のマニュアル、ソフトウェア、サポートノートは、www.blackmagicdesign.com/jp/supportのBlackmagic Designサポートセンターで確認できます。

Blackmagic Designフォーラム

弊社ウェブサイトのBlackmagic Designフォーラムは、様々な情報やクリエイティブなアイデアを共有できる有益なリソースです。経験豊富なユーザーやBlackmagic Designスタッフによって、すでに多くの問題の解決策が公開されているので、このフォーラムを参考にすることで、現在の問題をすばやく解決できることがあります。ぜひご利用ください。Blackmagicフォーラムには、http://forum.blackmagicdesign.comからアクセスできます。

Blackmagic Designサポートへの連絡

サポートページやフォーラムで必要な情報を得られなかった場合は、サポートページの「メールを送信」ボタンを使用して、サポートのリクエストをメール送信してください。あるいは、サポートページの「お住まいの地域のサポートオフィス」をクリックして、お住まいの地域のBlackmagic Designサポートオフィスに電話でお問い合わせください。

現在インストールされているソフトウェアのバージョンを確認

コンピューターにインストールされているBlackmagic HyperDeck Utilityソフトウェアのバージョンを確認するには、「About Blackmagic HyperDeck Setup」ウィンドウを開きます。

- Mac OSでは、アプリケーションフォルダーから「Blackmagic HyperDeck Setup」を開きます。アプリケーションメニューから「About Blackmagic HyperDeck Setup」を選択し、バージョンを確認します。
- Windowsでは、スタートメニューまたはスタート画面から「Blackmagic HyperDeck Setup」ユーティリティを開きます。ヘルプメニューをクリックして「About Blackmagic HyperDeck Setup」を選択し、バージョンを確認します。

最新のソフトウェアアップデートを入手する

コンピューターにインストールされているBlackmagic HyperDeck Setupのバージョンを確認した後、Blackmagicサポートセンター（www.blackmagicdesign.com/jp/support）で最新のソフトウェアアップデートを確認してください。常に最新のソフトウェアを使用することを推奨しますが、重要なプロジェクトの実行中は、ソフトウェアのアップデートは行わない方がよいでしょう。

規制に関する警告

欧州連合内での電気機器および電子機器の廃棄処分



製品に記載されている記号は、当該の機器を他の廃棄物と共に処分してはならないことを示しています。機器を廃棄するには、必ずリサイクルのために指定の回収場所に引き渡してください。機器の廃棄において個別回収とリサイクルが行われることで、天然資源の保護につながり、健康と環境を守る方法でリサイクルが確実に行われるようになります。廃棄する機器のリサイクルのための回収場所に関しては、お住まいの地方自治体のリサイクル部門、または製品を購入した販売業者にご連絡ください。



この機器は、FCC規定の第15部に準拠し、クラスAデジタル機器の制限に適合していることが確認されています。これらの制限は、商用環境で機器を使用している場合に有害な干渉に対する妥当な保護を提供するためのものです。この機器は無線周波エネルギーを生成、使用、放出する可能性があります。また、指示に従ってインストールおよび使用しない場合、無線通信に有害な干渉を引き起こす恐れがあります。住宅地域で当製品を使用すると有害な干渉を引き起こす可能性があり、その場合はユーザーが自己責任で干渉に対処する必要があります。

動作は次の2つを条件とします：

1. 本機は、有害な干渉を起こさない。
2. 本機は希望しない動作を発生しかねない干渉を含む、いかなる受信干渉も受け入れる必要がある。



R-R-BMD-20211410001

ISED Canadaステートメント



本機は、カナダのクラスAデジタル機器の規格に準拠しています。

本機のいかなる改造、あるいは目的の用途以外での使用は、これらの規格への順守を無効にすることがあります。

HDMIインターフェースへの接続は、必ず高品質のシールドHDMIケーブルを使用する必要があります。

本機は、商用環境で目的の用途に順守した使用においてテストを行なっています。非商用環境で使用された場合、無線妨害を引き起こす可能性があります。

安全情報

この製品は、周囲温度が最高40°Cまでの熱帯地区での使用に対応しています。

通気が妨げられないように、この製品の周囲は通気に十分なスペースを開けるようにしてください。

この製品の内部には、ユーザーが保守できる部品はありません。メンテナンスに関しては、お近くのBlackmagic Designのサービスセンターにお問い合わせください。



海抜2000m以上では使用しないでください。

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詳細は、以下のウェブサイトをご確認ください。www.P65Warnings.ca.gov

European Office

Blackmagic Design B.V, Amsterdam
Sloterdijk Teleport Towers Office 2.17,
Kingsfordweg 151,
Amsterdam, 1043GR.

保証

12ヶ月限定保証

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Juillet 2024

Manuel d'installation et d'utilisation

Blackmagicdesign

HyperDeck
Shuttle HD



HyperDeck Shuttle HD



Bienvenue

Nous vous remercions d'avoir fait l'acquisition d'un enregistreur à disque Blackmagic HyperDeck Shuttle HD.

Lorsque nous avons conçu les premiers enregistreurs à disque originaux, nous souhaitions faciliter l'enregistrement et la lecture vidéo via des SSD rapides. Aujourd'hui, nous sommes fiers de vous présenter l'HyperDeck Shuttle HD !

L'HyperDeck Shuttle HD est un enregistreur vidéo HDMI petit et portatif, conçu pour votre bureau. Sa grande molette et ses commandes de transport familières vous permettent de l'opérer d'une seule main. L'HyperDeck Shuttle HD est le compagnon idéal des productions live avec un mélangeur ATEM Mini. Vous pouvez même l'utiliser en tant que prompteur !

L'HyperDeck Shuttle HD enregistre sur des cartes SD ou des disques flash externes en ProRes, DNxHD ou H.264 pour un enregistrement et une lecture ultra rapides.

N'oubliez pas de consulter notre page d'assistance sur www.blackmagicdesign.com/fr pour obtenir la dernière version de ce manuel et les mises à jour du logiciel de l'HyperDeck. Nous vous recommandons de mettre le logiciel à jour régulièrement afin de travailler avec les fonctions les plus récentes. Veuillez entrer vos coordonnées lorsque vous téléchargerez le logiciel afin d'être informé des mises à jour. Nous travaillons constamment sur de nouvelles fonctionnalités et nous efforçons d'améliorer nos services en permanence : c'est pourquoi nous aimerions avoir votre avis !



Grant PettyPDG de Blackmagic Design

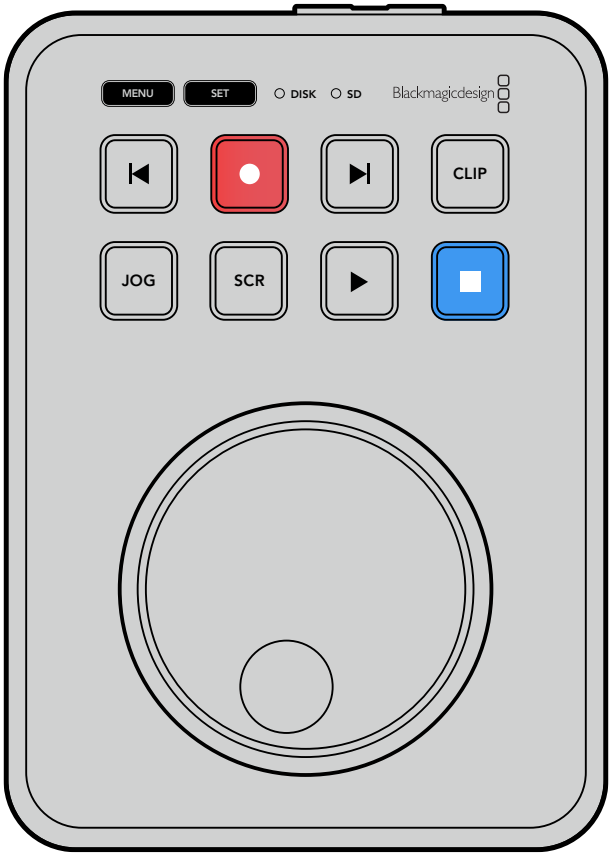
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Mise en route

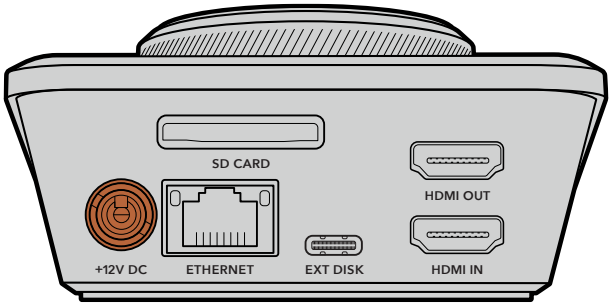
Pour utiliser votre HyperDeck Shuttle HD, il suffit de connecter l'alimentation, de brancher une source vidéo HDMI, d'insérer une carte SD ou un support externe, puis d'appuyer sur le bouton d'enregistrement !

Cette section du manuel est dédiée à la mise en route de l'HyperDeck Shuttle HD.



Brancher l'alimentation

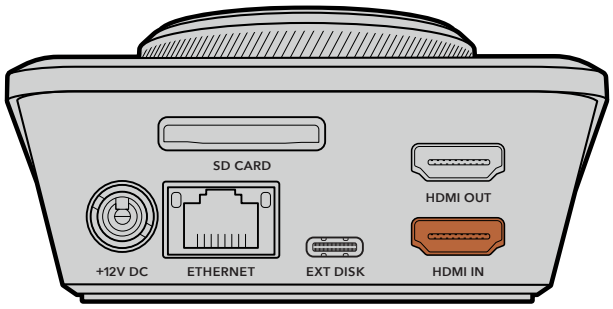
Pour alimenter votre HyperDeck Shuttle HD, branchez l'adaptateur fourni à l'entrée d'alimentation située à l'arrière de l'appareil. Serrer la bague de blocage permet d'éviter les déconnexions accidentelles du câble d'alimentation.



Branchez l'adaptateur à l'entrée d'alimentation de l'HyperDeck Shuttle HD

Connecter une source vidéo et audio

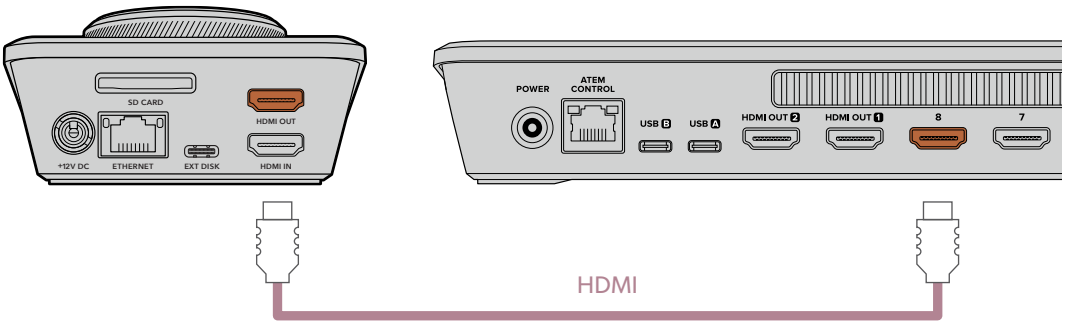
Pour connecter une vidéo à votre HyperDeck Shuttle HD, branchez une source vidéo HDMI à l'entrée HDMI située à l'arrière de l'appareil.



Connectez votre équipement de destination à la sortie HDMI. Par exemple, un mélangeur ATEM Mini ou un téléviseur HDMI.

La sortie HDMI permet également de visualiser le menu de paramétrage lorsque vous modifiez des réglages pour votre HyperDeck. En effet, le menu de paramétrage est visualisable en superposition vidéo sur la sortie HDMI. Pour plus d'informations concernant le menu de paramétrage, consultez la section « Modifier les paramètres » de ce manuel.

CONSEIL Si vous n'arrivez pas à voir votre source vidéo sur l'écran connecté, c'est peut-être car vous êtes en mode de lecture. Appuyez sur le bouton d'enregistrement pour lancer le mode d'enregistrement.



Branchez la sortie HDMI à votre équipement de destination, tel qu'un téléviseur HDMI ou un mélangeur ATEM Mini.

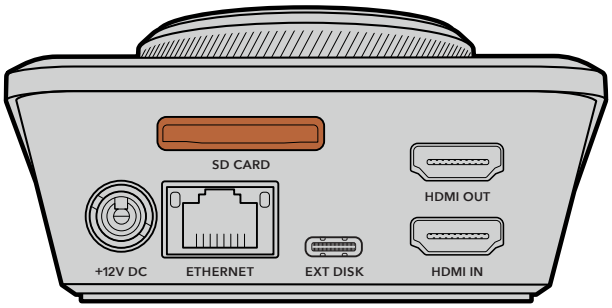
Brancher un support

Tous les enregistreurs à disque HyperDeck Shuttle HD peuvent être utilisés sans devoir configurer les paramètres. Vous avez simplement besoin d'une carte SD ou d'un disque externe formatés.

Il est facile de formater un support via les paramètres du menu. Vous pouvez également le formater sur un ordinateur. Pour plus d'informations, consultez la section « Formater les supports » de ce manuel. Vous y trouverez également des informations sur les types de supports les plus adaptés à l'enregistrement vidéo et une liste de cartes SD et de disques externes recommandés.

Brancher une carte SD :

1 Orientez les contacts dorés de la carte SD vers le haut et alignez-la avec le logement pour carte SD. Poussez délicatement la carte dans le logement jusqu'à ce qu'elle soit en place.



2 L'HyperDeck vérifie la carte SD. Le voyant SD en haut de l'HyperDeck Shuttle HD s'allume en vert. Une fois vérifiée, le voyant s'éteint.



Votre HyperDeck Shuttle HD est désormais prêt pour l'enregistrement et la lecture !

Continuez à lire ce manuel pour des informations plus détaillées concernant l'enregistrement et la lecture des clips, la modification des paramètres, et bien plus.

Enregistrer de la vidéo

Une fois que votre source vidéo s'affiche sur l'équipement de destination HDMI, vous pouvez commencer à enregistrer.

Appuyez sur le bouton d'enregistrement pour démarrer l'enregistrement. Lorsque vous enregistrez sur une carte SD, le voyant SD s'allume en vert. Les boutons d'enregistrement et de lecture s'allument aussi. Lorsque vous enregistrez sur un disque externe, le voyant du disque s'allume en rouge.

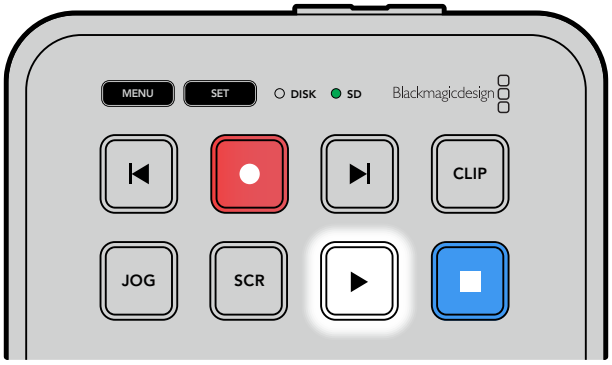


Pour arrêter l'enregistrement, appuyez sur le bouton d'arrêt.

Lire

Appuyez sur le bouton de lecture pour lire les clips. Pendant la lecture, le bouton de lecture s'allume et les voyants **Disk** et **SD** s'allument en vert.

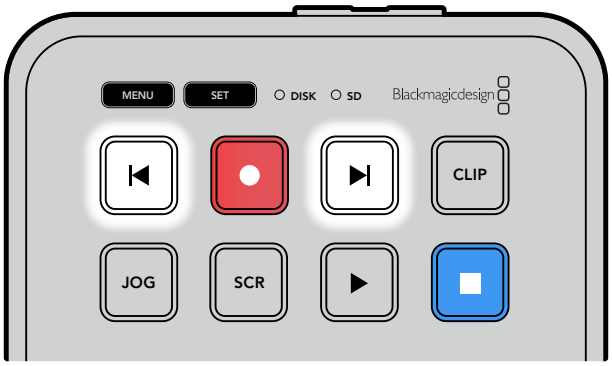
Si plusieurs clips ont été enregistrés, vous pouvez les passer rapidement en revue en appuyant sur les boutons d'avance ou de retour.



Boutons d'avance et de retour

Appuyez sur le bouton de retour pour revenir au début du clip. En appuyant plusieurs fois sur ce bouton, vous reviendrez au précédent clip enregistré.

Appuyez sur le bouton d'avance pour avancer dans vos clips. Les boutons d'avance et de retour clignoteront également lorsque la case **Identify HyperDeck** est sélectionnée dans l'utilitaire HyperDeck Setup.



Utilisez les boutons d'avance et de retour pour repérer le début de chaque clip

CONSEIL Pour lire des fichiers vidéo sur votre HyperDeck, vous devrez réglez le codec pour qu'il corresponde au codec utilisé pour enregistrer les fichiers. Vous pouvez le faire depuis le menu. Pour plus d'informations, consultez la section « Modifier les paramètres » de ce manuel.

Lire des clips en boucle

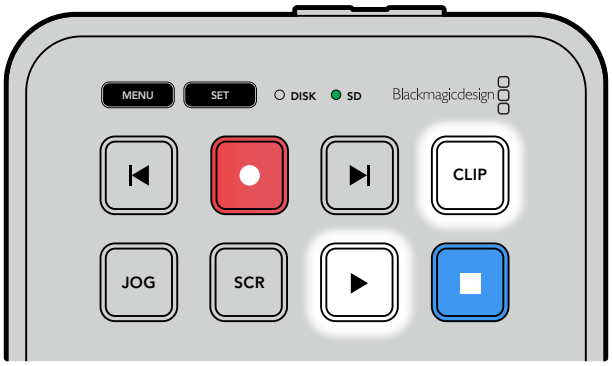
Si vous appuyez une seconde fois sur le bouton de lecture pendant la lecture, votre HyperDeck Shuttle HD lira tous les clips en boucle jusqu'à ce que vous appuyiez sur le bouton d'arrêt.

Si vous souhaitez lire un seul clip en boucle, réglez votre HyperDeck sur le mode **Clip**, puis appuyez une fois sur le bouton de lecture pour le lire, et une seconde fois pour le lire en boucle.

Lire tous les clips en boucle	Pendant la lecture, appuyez sur le bouton de lecture une seconde fois pour lire en boucle tous les clips enregistrés
Lire le clip en boucle	Lorsque vous êtes en mode Clip, appuyez une seconde fois sur le bouton de lecture pour lire en boucle le clip en cours

Mode Clip

Le mode Clip vous permet de limiter la lecture à un seul clip. Par exemple, lorsque le mode Clip est activé, vous pouvez aller sur un clip et appuyer sur lecture tout en sachant que cette dernière s'arrêtera à la fin du clip.



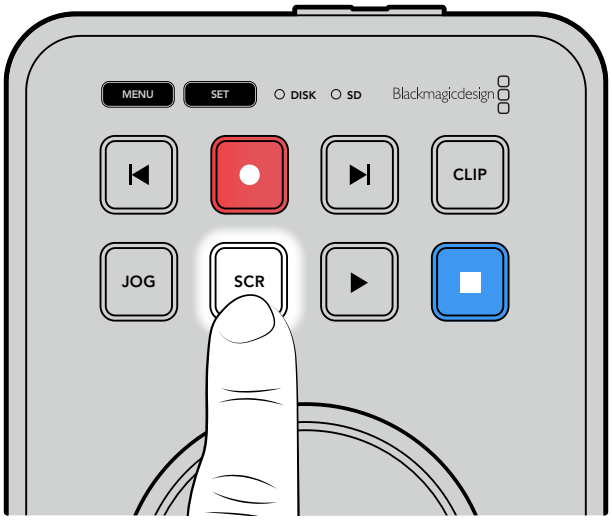
Lorsque le mode Clip est sélectionné, appuyer une seconde fois sur le bouton de lecture permet de lire en boucle le clip en cours

Utiliser la molette

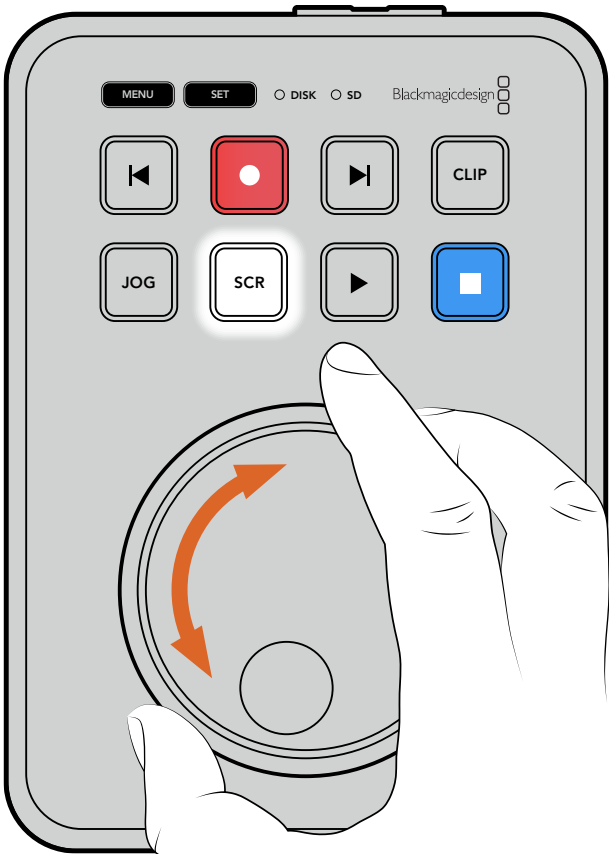
La molette vous permet de parcourir rapidement vos clips et de sélectionner des moments spécifiques à lire, ou de les revoir image par image. C'est pratique si vous devez localiser un moment précis en contrôlant visuellement le clip lorsque vous tournez la molette. C'est aussi utile pour positionner la tête de lecture sur un repère précis pour que le clip puisse être diffusé pendant un événement en direct, par exemple.

Les modes de recherche incluent Jog, Scroll et Shuttle.

JOG	**Jog**	Lit le clip image par image pour un contrôle précis.
SCR	**Scroll**	Le mode Scroll vous permet d'avancer et de reculer à travers tous les médias enregistrés. Lorsque vous tournez la molette, le scroll est verrouillé sur votre mouvement. Ainsi, vous avez un contrôle complet de l'emplacement de la lecture. Le bouton Scroll fera également apparaître la fenêtre de navigation du volume qui indique le chemin du fichier de la vidéo que vous lisez actuellement. Vous trouverez plus d'informations sur la fonction de navigation dans les volumes dans la section « Navigation dans les volumes » de ce manuel.
JOG SCR	**Shuttle**	Appuyez sur les boutons Jog et Scr simultanément pour activer le mode Shuttle. Une fois que vous êtes en mode Shuttle, vous pouvez reculer ou avancer rapidement à travers vos médias en tournant la molette vers la gauche ou vers la droite. Au fur et à mesure que vous tournez la molette, le défilement sera de plus en plus rapide jusqu'à ce que vous atteigniez la vitesse maximale de x50. Pour arrêter le défilement, tournez la molette jusqu'à ce que vous atteigniez votre position de départ. Pour vous arrêter à un emplacement précis, appuyez sur le bouton stop, ou appuyez sur lecture pour reprendre la lecture à l'emplacement actuel. Il est important de noter que la vitesse de défilement maximale peut être réduite à l'aide du menu Réglages. Pour plus d'informations, consultez la section « Paramètres » de ce manuel.



Appuyez sur les boutons **Jog** ou **Scr** pour sélectionner les modes Jog ou Shuttle

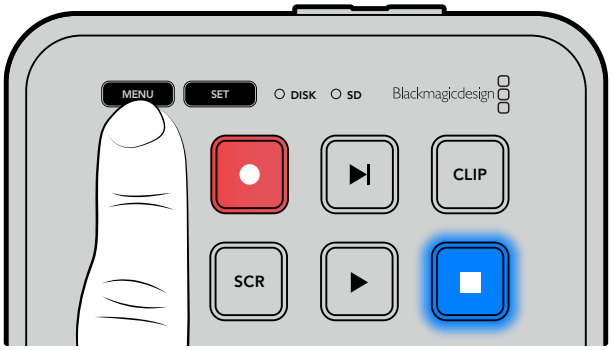


Une fois qu'un mode de recherche est sélectionné, tournez la molette

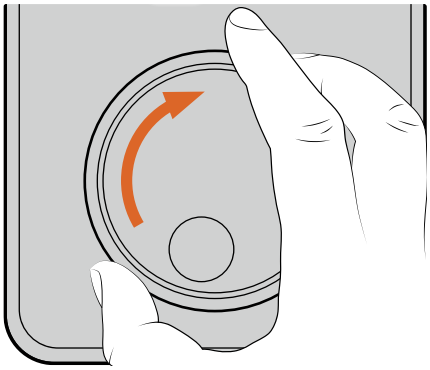
CONSEIL Pour revenir à une lecture normale, appuyez sur le bouton de lecture ou d'arrêt.

Modifier les paramètres

Appuyer sur le bouton **Menu** permet d'ouvrir les paramètres du menu, qui apparaîtront en superposition de la vidéo dans le coin gauche de votre écran HDMI connecté.

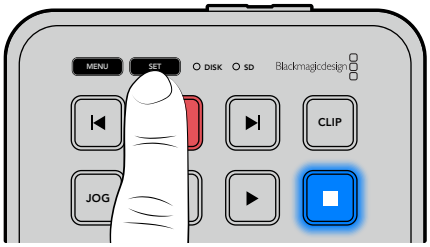


Appuyez sur le bouton **Menu** pour afficher l'écran de paramétrage





Utilisez la molette pour naviguer vers un sous-menu ou un paramètre





Appuyez sur le bouton **Set** pour sélectionner le sous-menu ou le paramètre

Ajustez les paramètres à l'aide de la molette ou des boutons d'avance et de retour. Confirmez la sélection en appuyant sur le bouton **Set**.

Pour sortir du menu, appuyez sur le bouton **Menu** afin de revenir en arrière et d'accéder à l'écran d'accueil.

CONSEIL Vous pouvez positionner le menu dans n'importe quel des quatre coins de votre écran via le menu de paramétrage. Nous vous recommandons de désactiver le menu une fois vos paramètres modifiés, pour vous assurer que la sortie HDMI est un clean feed lorsqu'elle est connectée à un mélangeur HDMI, tel qu'un ATEM Mini Extreme.

Paramètres

Le menu de paramétrage est classé en 5 catégories distinctes : Enregistrement, Moniteur, Audio, Stockage et Réglages. Chaque sous-menu contient des paramètres dédiés qui sont pour la plupart ajustables via le panneau de contrôle HyperDeck Shuttle HD. Certains paramètres sont en affichage seul et apparaîtront grisés, comme le préfixe du fichier par exemple. Dans ce cas, le paramètre peut être ajusté via l'utilitaire HyperDeck Setup.

Menu Enregistrement



Entrée

Affiche l'entrée HDMI de l'HyperDeck Shuttle HD.

Codec

L'HyperDeck Shuttle HD peut enregistrer de la vidéo compressée à l'aide des codecs H.264, Apple ProRes et DNxHD. Pour utiliser la fonction du prompteur, sélectionnez **Prompteur**.

Lancer Rec.

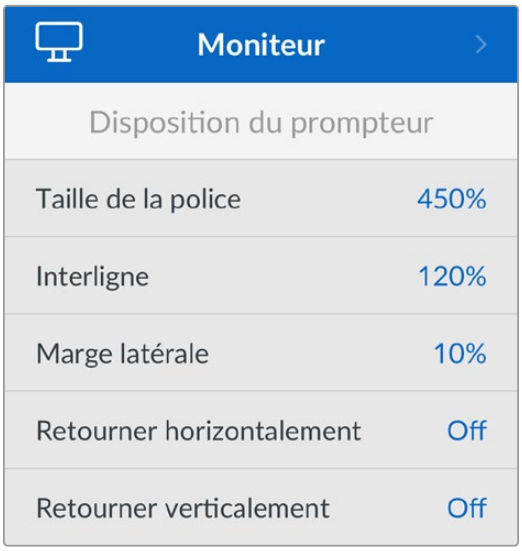
Il existe deux modes de déclenchement de l'enregistrement : Vidéo marche/arrêt, et Timecode Run.

Certaines caméras, comme la Blackmagic Pocket Cinema Camera 4K, envoient un signal via HDMI pour démarrer ou arrêter l'enregistrement sur les enregistreurs externes. Lorsque vous sélectionnez **Vidéo marche/arrêt**, l'HyperDeck démarrera ou arrêtera l'enregistrement lorsque le bouton d'enregistrement sera pressé sur la caméra.

Utilisez l'option **T/C Run** pour que l'appareil déclenche l'enregistrement lorsqu'il reçoit un signal de timecode valide via les entrées. L'enregistrement s'interrompt lorsque le signal s'arrête. Désactivez le déclenchement de l'enregistrement en sélectionnant l'option **Aucun**.

REMARQUE Lorsque vous enregistrez avec une caméra HDMI, veillez à ce que les informations à l'écran soient désactivées sur le signal de sortie, car les informations présentes sur la vidéo provenant de la caméra sont enregistrées avec l'image.

Menu Moniteur



Disposition du prompteur

Le menu Moniteur contient tous les paramètres pour l'utilisation de l'HyperDeck Shuttle HD en prompteur.

Taille de la police

Ajustez la taille du texte en sélectionnant la taille de la police, puis en appuyant sur **Set**. Tournez la molette dans le sens des aiguilles d'une montre pour augmenter la taille, ou dans le sens inverse pour la diminuer.

Interligne

Tournez la molette pour augmenter ou diminuer l'interligne.

Marge latérale

Ajustez la largeur des marges latérales de chaque côté de l'affichage du prompteur.

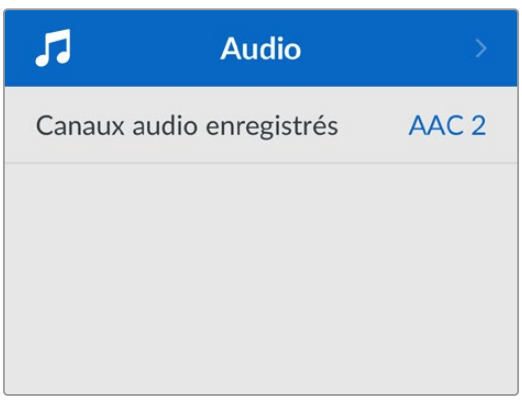
Retourner

Si le moniteur de votre prompteur est réglé pour être réfléchi sur un miroir, par exemple lorsque le présentateur est devant une caméra ou sur un podium, il faudra utiliser les paramètres Retourner pour qu'il puisse lire le texte. Deux modes de retournement sont disponibles :

Retourner horizontalement - Utilisez ce paramètre lorsque le bas du moniteur de votre prompteur est monté près de la base du miroir.

Retourner verticalement - Utilisez ce paramètre lorsque le bas du moniteur de votre prompteur est monté loin de la base du miroir.

Menu Audio



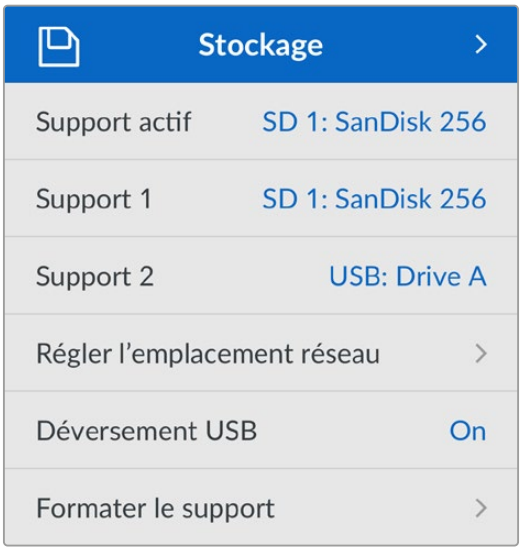
Canaux audio enregistrés

L'HyperDeck Shuttle HD peut enregistrer simultanément jusqu'à 8 canaux audio PCM. Pour sélectionner le nombre de canaux à enregistrer, agrandissez la liste des canaux audio enregistrés et sélectionnez 2, 4 ou 8 canaux.

Si le codec est réglé sur H.264, vous pouvez sélectionner 2 canaux d'audio AAC afin de mettre vos enregistrements directement sur YouTube.

Menu Stockage

Les supports connectés apparaîtront dans les paramètres de stockage. **Support 1** affiche le nom de la carte SD connectée et **Support 2** affiche n'importe quel disque flash USB branché au connecteur **Ext disk**. Lorsque vous utilisez un hub USB, tel qu'un Blackmagic MultiDock 10G, le disque actif est affiché.



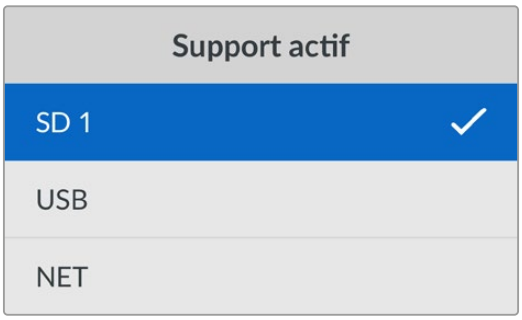
Support actif

Avec l'HyperDeck Shuttle, vous pouvez connecter une carte SD, plusieurs disques durs externes et un stockage en réseau simultanément. Vous avez donc accès à des téraoctets d'espace d'enregistrement depuis un seul enregistreur HyperDeck Shuttle.

Si vous n'avez qu'un seul disque ou carte SD connecté(e), cela sera votre support actif pour la lecture et l'enregistrement. En revanche, si vous utilisez plus d'un support, vous pouvez sélectionner le support sur lequel vous souhaitez enregistrer et lire.

Sélectionner le support actif :

1. À l'aide de la molette, mettez en surbrillance **Support actif** dans le menu de stockage, puis appuyez sur le bouton Set clignotant.
2. Les supports apparaîtront dans la liste. Avec la molette, sélectionnez le support sur lequel vous souhaitez enregistrer.

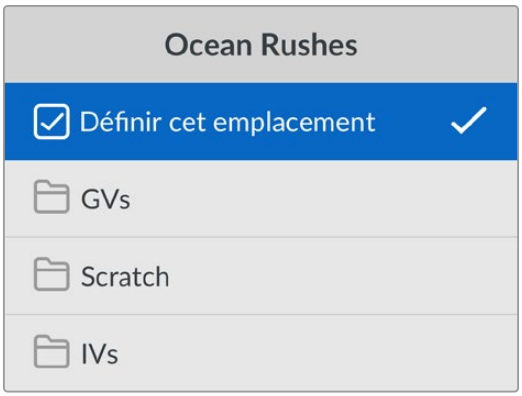


Régler l’emplacement réseau

L’HyperDeck Shuttle peut lire des médias HD depuis le Blackmagic Cloud et d’autres stockages en réseau via Ethernet.

Pour connecter un dossier de stockage en réseau :

1. À l’aide de la molette et du bouton Set, sélectionnez **Régler l’emplacement réseau**. Une barre de recherche du réseau local va apparaître.
2. Tous les serveurs de votre réseau local apparaîtront dans la liste. Mettez le nom du serveur en surbrillance avec la molette et appuyez sur **Set** pour le sélectionner. Une liste de partages disponibles sur le serveur va apparaître. À l’aide de la molette, mettez en surbrillance celui de votre choix, appuyez sur **Set** et continuez jusqu’à ce que le dossier que vous souhaitez utiliser s’affiche en haut de l’écran.
3. Le nom du dossier apparaîtra désormais en haut de l’écran LCD. Si vous souhaitez sélectionner ce dossier pour l’enregistrement et la lecture, utilisez la molette pour choisir **Définir cet emplacement** et appuyez sur **Set**. Une coche apparaîtra sur la droite.



4. Une fois connecté, l’emplacement apparaîtra dans la liste de stockage du support 2 sous les emplacements réseau.

Le deuxième logement pour supports sur les enregistreurs HyperDeck Shuttle est assigné aux dossiers USB et des réseaux connectés. Pour choisir parmi les disques USB et l’espace de stockage, sélectionnez **Support 2** depuis le menu de stockage, puis appuyez sur le bouton clignotant **Set**. Depuis la liste du Support 2, sélectionnez le stockage que vous souhaitez utiliser, puis appuyez sur Set. Vous allez revenir au menu de stockage. Vous pouvez également supprimer le stockage en réseau via le menu du Support 2 et sélectionner **Supprimer l’emplacement réseau** en bas du menu.



REMARQUE Lors de la lecture d’un volume réseau, l’HyperDeck Shuttle HD suppose que le serveur accepte une connexion invité. L’accès au serveur nécessitant un nom d’utilisateur et un mot de passe n’est pas encore pris en charge via le menu et les boutons de réglages, mais vous pouvez saisir vos identifiants en utilisant l’HyperDeck Ethernet Protocol.

Déversement USB

Si vous utilisez un Blackmagic MultiDock 10G ou un appareil similaire pour connecter plus d'un disque via la connexion USB **Ext disk**, vous pouvez activer cette option pour que l'enregistrement d'un disque externe se déverse sur le prochain.

Connecter le disque réseau

L'HyperDeck Shuttle peut lire des médias HD depuis le Blackmagic Cloud et d'autres stockages en réseau via Ethernet.

Préparer les supports sur l'HyperDeck Shuttle HD :

1. À l'aide de la molette et du bouton **Set**, sélectionnez **Formater le support**.
2. Dans la liste, sélectionnez le support à formater et appuyez sur **Set**.
3. Choisissez le format et appuyez sur **Set**.
4. Un message de confirmation apparaîtra indiquant la carte qui sera formatée et le format sélectionné.
5. Une fenêtre de formatage apparaîtra une fois le processus terminé. Sélectionnez Ok.

Nous conseillons d'utiliser le format HFS+, également connu sous le nom de Mac OS X Extended, car il prend en charge la journalisation. Les données stockées sur un support journalisé ont plus de chance d'être récupérées si le support est endommagé. Le format HFS+ est pris en charge nativement par Mac. Le format exFAT est pris en charge nativement par Mac et Windows. Il n'est donc pas nécessaire d'utiliser de logiciel tiers, mais la journalisation n'est pas prise en charge. Pour formater un support sur un ordinateur Mac ou Windows, consultez la section « Formater un support ».

Menu Réglages

Ce menu contient les réglages pour la sélection de la langue, des normes par défaut, ainsi que des options pour l'affichage du menu, les paramètres réseau et le timecode.



Nom

Lorsqu'il y a plusieurs HyperDeck Shuttle HD sur le réseau, il peut être utile de leur donner chacun un nom pour mieux les identifier. Pour ce faire, utilisez le Blackmagic HyperDeck Setup ou le Blackmagic HyperDeck Ethernet Protocol et un émulateur de terminal. Le nom apparaîtra dans le menu Réglages.

Langue

L'HyperDeck Shuttle HD prend en charge 13 langues dont l'anglais, le chinois, le japonais, le coréen, l'espagnol, l'allemand, le français, le russe, l'italien, le portugais, le turc, l'ukrainien et le polonais.

Pour sélectionner la langue :

1. Une fois le menu **Réglages** sélectionné, appuyez sur **Set**.
2. À l'aide de la molette, faites défiler pour sélectionner la langue et appuyez sur **Set**.
3. Utilisez la molette pour sélectionner la langue et appuyez sur **Set**. Une fois la langue sélectionnée, vous retournerez automatiquement au menu **Réglages**.

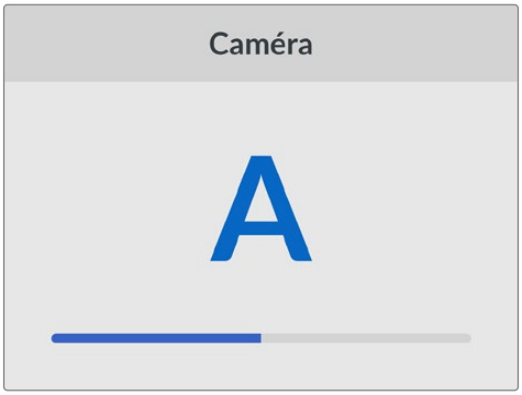
Logiciel

Affiche la version actuelle du logiciel.

Caméra

Ce paramètre est utile lorsque vous utilisez l'HyperDeck pour enregistrer des fichiers ISO depuis plusieurs caméras et les montez sur une timeline multicaméra dans DaVinci Resolve.

La lettre d'identification de chaque caméra apparaîtra dans les métadonnées du fichier, permettant ainsi à DaVinci Resolve d'identifier facilement chaque angle avec la fonctionnalité Sync bin.



Assignez les caractères A-Z ou 1-9 à votre caméra

Norme par défaut

Parfois, l'HyperDeck Shuttle HD ne sait pas quelle norme vidéo vous voulez utiliser. Ce paramètre indiquera à l'HyperDeck la norme vidéo que vous souhaitez utiliser majoritairement.

Par exemple, si un HyperDeck Shuttle HD est allumé, qu'aucune entrée vidéo n'est connectée et que vous insérez un disque contenant des fichiers avec 2 normes vidéo, quelle norme l'HyperDeck doit-il lire ? La norme vidéo par défaut indique la norme vidéo que vous préférez. L'appareil sélectionne ainsi ce format et lit ces fichiers.

La norme vidéo par défaut est aussi utile quand vous allumez un HyperDeck Shuttle HD pour la première fois et qu'il n'a aucune entrée vidéo et qu'aucun disque n'a été inséré. Dans ce cas, l'HyperDeck ne sait pas quelle norme vidéo utiliser pour la sortie de monitoring. La norme vidéo par défaut lui servira de guide.

En revanche, elle n'est qu'un simple guide. Elle n'écrasera rien. Ainsi, si vous avez un disque avec un seul type de fichier vidéo et que vous lancez la lecture, l'enregistreur à disque HyperDeck basculera sur cette norme vidéo et la lira. Il ignorera la norme vidéo par défaut, car il est évident que vous souhaitez uniquement lire les fichiers sur le disque.

L'enregistrement fonctionne de façon similaire. Si vous lancez l'enregistrement, l'HyperDeck enregistrera la norme vidéo connectée à l'entrée vidéo. Une fois l'enregistrement terminé, l'HyperDeck Shuttle HD lira les fichiers avec cette norme vidéo, même si le disque contient d'autres fichiers qui correspondent à la norme vidéo par défaut. Il est entendu qu'on veut généralement lire la norme vidéo qu'on vient d'enregistrer. Si vous débranchez et rebranchez le disque, alors la norme vidéo par défaut sera utilisée pour choisir le type de fichier à lire.

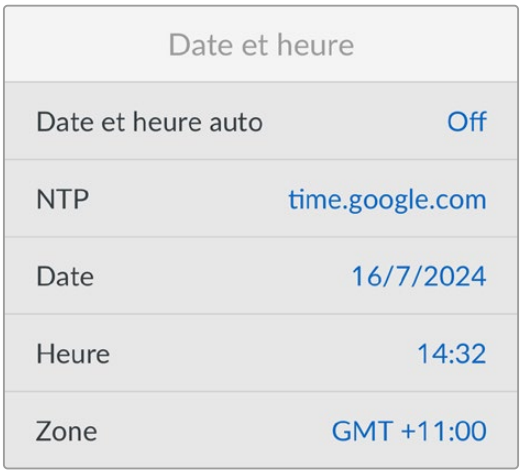
La norme vidéo par défaut n'est qu'un guide pour aider l'HyperDeck Shuttle HD à prendre des décisions en cas de doute. Elle ne force pas l'enregistreur à réagir de façon particulière.

Vitesse max. Shuttle

La vitesse de défilement maximale sur l'HyperDeck Shuttle HD est de x50. Pour réduire cette vitesse, vous pouvez choisir parmi la liste des vitesses préréglées.

Date et heure

Le réglage correct de la date et de l'heure garantit que votre HyperDeck Shuttle a la même heure et la même date que le réseau et empêche également les conflits qui peuvent survenir avec certains systèmes réseau.



Date et heure automatique

Pour régler la date et l'heure automatiquement, activez **Date et heure auto**. Lorsque vous réglez la date et l'heure automatiquement, l'appareil utilisera le serveur du Network Time Protocol réglé dans le champ NTP. Désactivez l'option **Date et heure automatique** en sélectionnant **Off**.

NTP

Le serveur NTP par défaut est time.cloudflare.com. Toutefois, vous pouvez également saisir manuellement un autre serveur NTP à l'aide du Blackmagic HyperDeck Setup. Pour plus d'informations, consultez la section « HyperDeck Setup » de ce manuel.

Date

Pour saisir la date manuellement, sélectionnez le champ de date et appuyez sur **Set**. Vous pouvez sélectionner le jour, le mois et l'année à l'aide de la molette.

Heure

Pour ajuster l'heure, sélectionnez ce paramètre et appuyez sur **Set**. Utilisez la molette pour régler les heures et les minutes. L'horloge interne est configurée au format 24 heures.

Menu

Via ce menu des réglages, vous pouvez ajuster la position, ainsi que le mode d'apparence du menu sur l'écran HDMI connecté.



Mode

Réglez l'écran de l'HyperDeck en mode sombre ou clair. Le mode clair offrira davantage de contraste lorsque les médias sont sombres, ou lorsque vous êtes en mode prompteur.





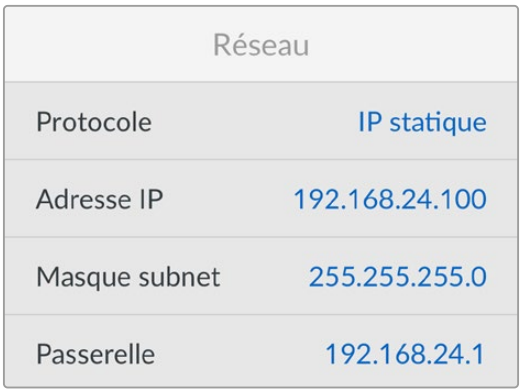
Opacité

Ajustez les niveaux pour réduire l'opacité de l'affichage du menu sur l'écran connecté de 100% (par défaut) à 20%.

Position

Par défaut, le menu apparaîtra superposé en bas à gauche de l'écran. Pour déplacer ce menu, sélectionnez ce paramètre et appuyez sur le bouton **Set**. Ensuite, vous pouvez choisir de positionner le menu en haut à gauche, en haut à droite, en bas à gauche ou en bas à droite de l'écran.

Réseau



Protocole

Le Blackmagic HyperDeck est réglé sur DHCP. Une fois connecté, le serveur de votre réseau assignera automatiquement une adresse IP et aucun autre paramètre réseau n'aura besoin d'être ajusté. Si vous avez besoin d'une adresse manuelle, vous pouvez vous connecter via une IP statique.

Une fois **Protocole** sélectionné, appuyez sur le bouton **Set** pour accéder au menu. Puis, faites défiler jusqu'à **IP statique** et appuyez sur **Set**.

Adresse IP, Masque de sous-réseau, Passerelle, DNS primaire et DNS secondaire

Une fois l'IP statique sélectionnée, vous pouvez saisir les informations du réseau manuellement.

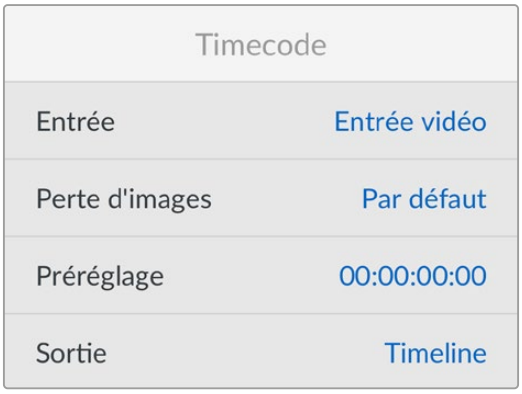
Pour changer l'adresse IP :

1. Utilisez la molette pour mettre **Adresse IP** en surbrillance et appuyez sur le bouton **Set** sur le panneau de contrôle de votre HyperDeck.
2. À l'aide de la molette, ajustez l'adresse IP et appuyez sur **Set** pour confirmer avant d'ajuster la série de valeurs suivante.
3. Appuyez sur **Set** pour confirmer le changement et passer à la valeur suivante.

Quand vous avez fini de saisir l'adresse IP, vous pouvez répéter ces étapes pour ajuster le masque de sous-réseau et la passerelle. Une fois terminé, appuyez sur le bouton **Menu** pour retourner à l'écran d'accueil.

Paramètres du timecode

Réglez les options d'entrée et de sortie du timecode. Vous pouvez par exemple choisir d'enregistrer le timecode source, le timecode sous forme de code horaire ou encore régler le timecode manuellement.



Entrée

Lors de l'enregistrement, vous disposez de quatre options pour l'entrée du timecode.

Entrée vidéo	Sélectionne le timecode intégré aux sources HDMI comportant des métadonnées SMPTE RP 188. Grâce à cette opération, la source HDMI et le fichier enregistré sur l'HyperDeck Shuttle HD restent sychronisés.
Interne	Utilisez cette option pour enregistrer le timecode sous forme de code horaire via le générateur de timecode intégré.
Regen dernier clip	Lorsque vous sélectionnez **Regen dernier clip** pour l'entrée du timecode, chaque fichier démarre juste après la dernière image du clip précédent. Par exemple, si le premier clip se termine à 10:28:30:10, le timecode du clip suivant commencera à 10:28:30:11.
Préréglage	Pour régler un timecode manuellement, sélectionnez l'option **Préréglage**. Les clips enregistrés commenceront au timecode réglé via le paramètre **Préréglage** comme indiqué plus loin dans cette section.

Perte d'images

Pour les sources NTSC ayant une fréquence d'images de 29.97 ou de 59.94, vous pouvez choisir entre un timecode avec ou sans perte d'images. Si la source est inconnue, sélectionnez **Par défaut**. La norme de l'entrée sera conservée, ou s'il n'y pas de timecode valide, elle se réglera par défaut sur Perte d'images.

Préréglage

Vous pouvez régler votre timecode manuellement en appuyant sur **Set** et en saisissant le timecode à l'aide de la molette et du bouton **Set**. Vérifiez que l'option **Préréglage** est correctement sélectionnée dans le menu **Entrée**.

Sortie

Choisissez les options du timecode pour les sorties.

Timeline	Pour acheminer un timecode continu pour tous les clips enregistrés sur une carte ou sur un disque, sélectionnez Timeline.
Clip	Sélectionnez Clip pour acheminer le timecode de chaque clip.

Paramètres du fichier



Préfixe du fichier

Par défaut, l'HyperDeck Shuttle HD enregistre les clips sur votre carte SD ou disque flash USB à l'aide de la convention de dénomination des fichiers suivante :

HyperDeck_0001	
HyperDeck_0001	**Préfixe**
HyperDeck_**0001**	**Numéro de clip**

Vous pouvez modifier le préfixe du fichier via l'utilitaire HyperDeck Setup. Pour plus d'informations, consultez la section « Blackmagic HyperDeck Setup » de ce manuel.

Suffixe horodaté

Par défaut, ce paramètre est désactivé. Si vous souhaitez utiliser la date et l'heure enregistrées dans votre nom de fichier, activez cette option.

HyperDeck_2201061438_0001	
HyperDeck_2201061438_0001	**Préfixe du fichier**
HyperDeck_**22**01061438_0001	**Année**
HyperDeck_22**01**061438_0001	**Mois**
HyperDeck_2201**06**1438_0001	**Jour**
HyperDeck_220106**14**38_0001	**Heure**
HyperDeck_2201061**38**_0001	**Minute**
HyperDeck_2201061438_**0001**	**Numéro de clip**

Paramètres du réglage à distance

Le paramètre **Réglage à distance** permet de contrôler l'HyperDeck à distance depuis d'autres équipements vidéo comme le mélangeur ATEM Mini Extreme.



Réglage à distance

Sélectionnez **Réglage à distance** pour contrôler l'appareil à distance via Ethernet. Désélectionnez ce paramètre pour contrôler l'appareil localement.

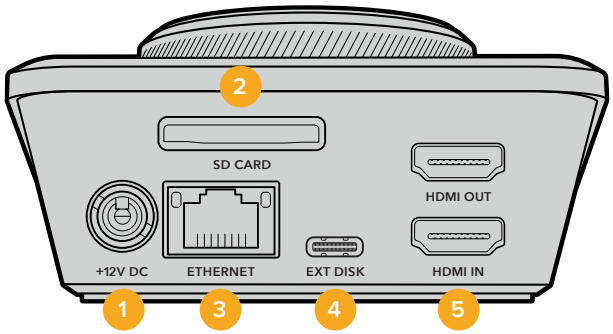
Paramètres de réinitialisation



Réinitialisation d'usine

Mettez **Réinitialisation d'usine** en surbrillance dans le menu **Réglages** pour restaurer l'HyperDeck sur les paramètres par défaut. Une fois que vous aurez appuyé sur **Set**, on vous demandera de confirmer votre sélection.

Face arrière



1 **Alimentation**

L'HyperDeck Shuttle HD est alimenté via un adaptateur AC. Le câble d'alimentation fourni comprend un connecteur sécurisé afin d'éviter toute déconnexion. Vous pouvez toutefois utiliser n'importe quel câble d'alimentation 12V 36W pour alimenter l'HyperDeck Shuttle HD.

2 **Carte SD**

Insérez des cartes SD dans le logement pour l'enregistrement et la lecture.

3 **Ethernet**

Le port Ethernet vous permet de vous connecter à votre réseau pour enregistrer sur le stockage réseau, et pour des transferts FTP rapides et des transferts http via le gestionnaire de médias web. De plus, vous pouvez contrôler l'appareil à distance à l'aide de l'API REST ou de l'HyperDeck Ethernet Protocol. Pour plus d'informations concernant le transfert des fichiers via le gestionnaire de médias web, consultez la section « Transférer des fichiers sur un réseau » de ce manuel.

Lorsqu'il est connecté au même réseau qu'un mélangeur ATEM, votre HyperDeck peut également être contrôlé à l'aide de ce dernier ou d'un panneau matériel ATEM.

4 **Ext Disk**

Connectez un disque flash au connecteur USB-C pour enregistrer sur des disques externes jusqu'à 5Gb/s. Vous pouvez également connecter l'appareil à des hubs USB-C multiports, ou à un Blackmagic MultiDock 10G pour utiliser un ou plusieurs SSD.

5 **HDMI**

Connectez la sortie HDMI à des télévisions ou à des moniteurs HDMI, mais aussi à des mélangeurs, tels que l'ATEM Mini Extreme. La sortie HDMI permet également d'afficher le menu en surimpression.

Supports de stockage

Carte SD

Pour un enregistrement HD, nous vous recommandons d'utiliser des cartes SD haut débit UHS-I. Pour enregistrer de l'Ultra HD 2160p60, ces cartes doivent avoir un débit d'écriture minimum de 220 Mb/s.

Toutefois, si vous enregistrez à des débits plus bas et une compression plus élevée, il est également possible d'utiliser des cartes moins rapides. Les cartes les plus rapides sont en général plus performantes.

N'hésitez pas à vérifier les dernières versions du manuel pour obtenir les informations les plus récentes. Il peut être téléchargé sur le site Internet de Blackmagic Design www.blackmagicdesign.com/fr/support.

Quelles cartes SD dois-je utiliser avec l'HyperDeck Shuttle HD ?

Les cartes SD suivantes sont recommandées pour le 1080p jusqu'à 60 im/s:

Brand	Model	Capacity
Angelbird	AV PRO SD UHS-II 300MB/s V90 SDXC	256GB
Angelbird	AV PRO SD UHS-II 260MB/s V60 SDXC	128GB
Angelbird	AV PRO SD UHS-II 260MB/s V60 SDXC	64GB
SanDisk	Extreme Pro UHS-I 95MB/s SDXC	64GB
Wise	SD2-64U3 UHS-II 285MB/s SDXC	64GB
Lexar	Professional 1000x UHS-II 150MB/s SDXC	128GB
SONY	Tough SF-G128T	128GB
Kingston	CANVAS GO! Plus 170MB/s V30	64GB
Kingston	CANVAS GO! Plus 170MB/s V30	128GB
Kingston	CANVAS GO! Plus 170MB/s V30	512GB
ProGrade Digital	SDXC UHS-II V90 300R	64GB
ProGrade Digital	SDXC UHS-II V90 300R	128GB
SONY	Tough SF-G64T UHS-II SDXC	64GB
Delkin Devices	Black UHS-II V90 SDXC	256GB
Delkin Devices	Power UHS-II V90 SDXC	128GB
Delkin Devices	Power UHS-II V90 SDXC	256GB
Delkin Devices	Black UHS-II V90 SDXC	128GB
Exascend	Essential SDXC UHS-II V90 R 300MB/s	64GB
Exascend	Essential SDXC UHS-II V90 R 300MB/s	128GB
Exascend	Catalyst SDXC UHS-II V90 R 300MB/s	64GB

Disque externe

Tous les modèles HyperDeck peuvent enregistrer directement sur des disques flash USB-C. Grâce à ces disques rapides et à leur capacité de stockage élevée, vous pouvez enregistrer sur de longues périodes. Il suffit de connecter le disque flash à votre ordinateur et de monter directement sur celui-ci !

Pour des capacités de stockage encore plus élevées, vous pouvez également connecter une station d'accueil USB-C ou un disque dur externe. Pour connecter le Blackmagic MultiDock 10G ou un disque flash USB-C, reliez un câble de l'appareil USB-C connecté au port **Ext disk** situé à l'arrière de l'HyperDeck.

Quels disques USB-C dois-je utiliser avec l'HyperDeck Shuttle HD ?

Les disques USB-C suivants sont recommandés pour le format ProRes HQ en 1080p jusqu'à 60 im/s:

Marque	Modèle	Capacité
Wise	PTS-256 Portable SSD 4K	256GB
OWC	Envoy Pro Ex	240GB
BUFFALO	SSD-PHE500U3-BA	500GB

Les disques USB-C suivants sont recommandés pour enregistrer en 1080p DNxHD 220x jusqu'à 60 im/s:

Marque	Modèle	Capacité
OWC	Envoy Pro Ex	240GB

Les disques USB-C suivants sont recommandés pour le format H.264 en 1080p jusqu'à 60 im/s:

Marque	Modèle	Capacité
OWC	Envoy Pro Ex	240GB

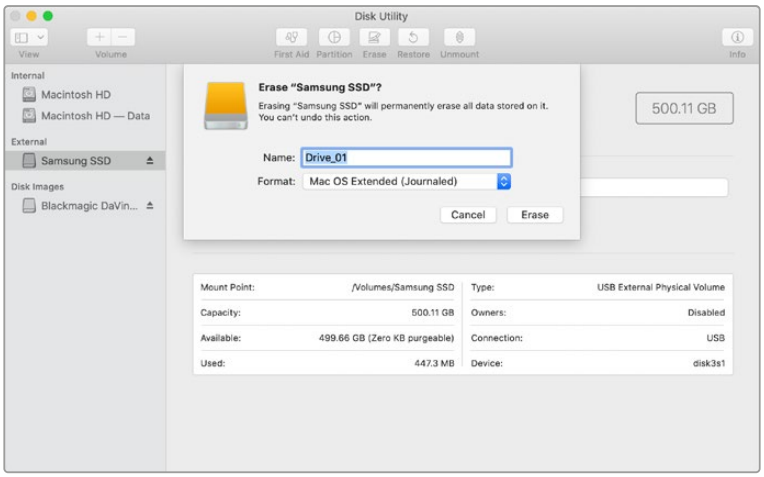
Formater les supports

Formater un support sur un ordinateur Mac

Utilisez l'utilitaire de disque de Mac pour formater un support au format HFS+ ou exFAT.

N'oubliez pas de sauvegarder les informations importantes contenues sur votre support car toutes les données seront perdues lors du formatage.

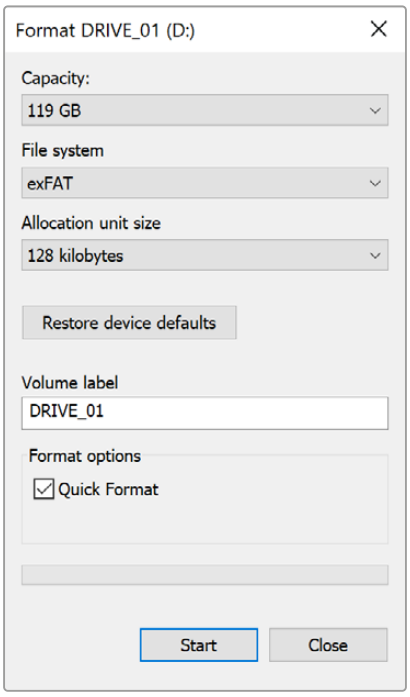
1. Connectez un disque flash USB à votre ordinateur à l'aide d'un dock externe ou d'un câble. Ignorez les messages proposant d'utiliser le SSD pour sauvegarder vos données à l'aide de Time Machine. Connectez les cartes SD à votre ordinateur via un lecteur de cartes externe.
2. Allez dans le menu Applications/Utilitaires et lancez l'utilitaire de disque.
3. Cliquez sur l'icône représentant votre carte SD ou disque flash USB, puis cliquez sur l'onglet Effacer.
4. Choisissez le format Mac OS étendu (journalisé) ou exFAT.
5. Saisissez le nom du nouveau volume, puis cliquez sur **Effacer**. Le support est alors rapidement formaté et prêt à être utilisé avec l'HyperDeck.



Formater un support sur un ordinateur Windows

La boîte de dialogue **Formater** permet de formater un support en exFAT sur un ordinateur Windows. N'oubliez pas de sauvegarder les informations importantes contenues sur votre support, car toutes les données seront perdues lors du formatage.

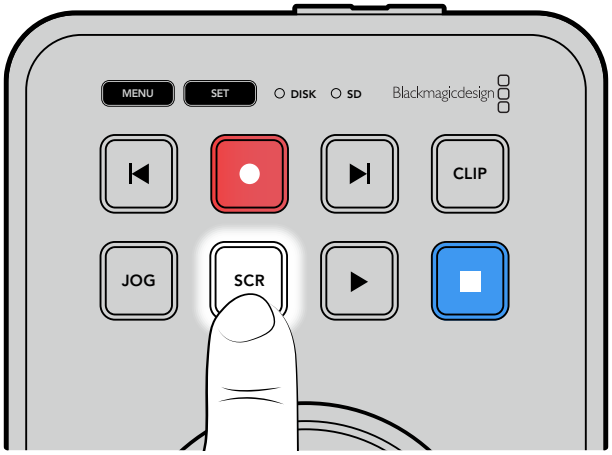
1. Connectez un disque flash USB à votre ordinateur à l'aide d'une baie d'accueil externe ou d'un adaptateur de câble. Connectez les cartes SD à votre ordinateur via un lecteur de cartes externe.
2. Ouvrez le menu Démarrer ou l'écran d'accueil et choisissez l'option Ordinateur. Faites un clic droit sur votre disque flash USB ou carte SD.
3. Cliquez sur **Formater** à partir du menu contextuel.
4. Configurez le système de gestion des fichiers sur exFAT et la taille d'unité d'allocation sur 128 Kb.
5. Saisissez un nom de volume, sélectionnez l'option **Formatage rapide** puis cliquez sur **Démarrer**.
6. Le support est alors rapidement formaté et prêt à être utilisé avec l'HyperDeck.



Navigation dans les volumes

La navigation dans les volumes vous permet d'ouvrir un chemin de fichier superposé afin que vous puissiez localiser les clips sur les cartes, disques et disques réseau. Lorsqu'elle est activée, la superposition apparaît sur la sortie HDMI et vous pouvez parcourir les répertoires à l'aide du bouton Scroll, Clip et de la molette.

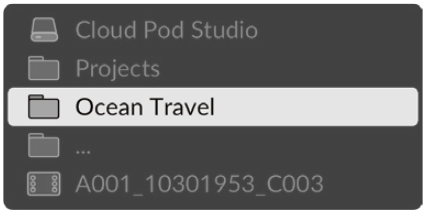
1 Ouvrez la fenêtre de navigation dans les volumes en appuyant sur le bouton Scroll (SCR).





Appuyez sur le bouton pour ouvrir la fenêtre de navigation dans les volumes sur la sortie HDMI.

2 Faites défiler ou parcourez les images jusqu'à ce que vous trouviez un clip dans le dossier souhaité.



3 Appuyez sur le bouton Scroll pour faire défiler les volumes vers le bas, et sur le bouton Clip pour les faire défiler vers le haut.

Pour fermer la fenêtre de navigation dans les volumes, appuyez sur le bouton Stop, ou sur le bouton de lecture pour fermer la fenêtre et lancer la lecture immédiatement.

REMARQUE Pour visualiser des clips enregistrés avec un codec, une résolution ou une fréquence d'images différent, réglez le codec de votre HyperDeck et la norme par défaut pour qu'ils correspondent.

Utiliser la fonction Prompteur

À l'aide d'un fichier RTF standard ou TXT, vous pouvez utiliser le Blackmagic HyperDeck Shuttle HD comme prompteur. Créez votre fichier dans TextEdit ou WordPad et sauvegardez-le en fichier RTF ou TXT dans l'une des 13 langues supportées. Une fois le fichier ouvert avec l'HyperDeck Shuttle HD, vous pourrez ajuster la taille de la police et l'interligne de votre script.

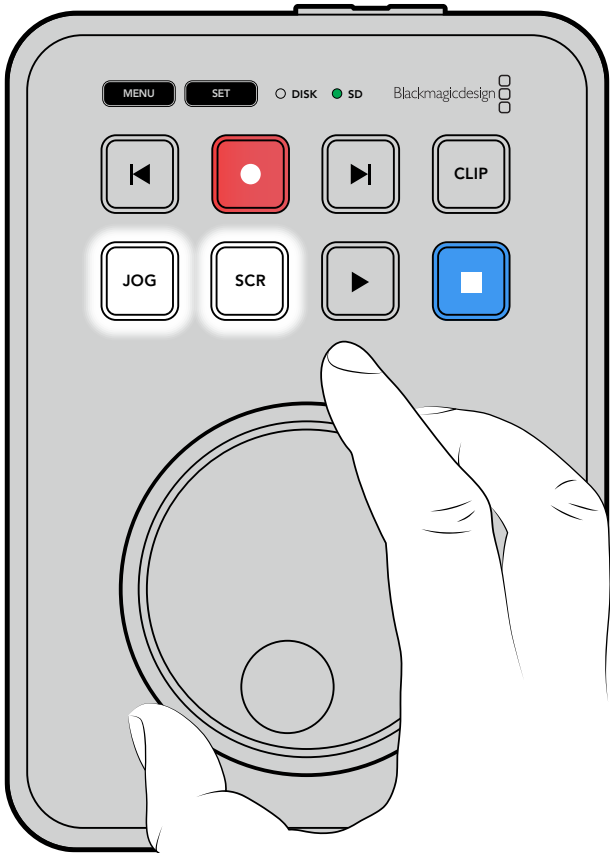
Pour utiliser le prompteur :

1. Connectez la sortie HDMI de l'HyperDeck Shuttle HD à l'écran HDMI que vous souhaitez utiliser.
2. Insérez une carte SD ou connectez un disque flash USB externe contenant votre script.
3. Sélectionnez le codec dans le menu Enregistrement. Allez sur le paramètre **Prompteur** et appuyez sur **Set**.

Le script apparaîtra sur votre écran. Vous pouvez maintenant commencer la lecture automatiquement à l'aide du bouton de lecture, ou pour un contrôle plus poussé, utilisez la molette.

Contrôler la vitesse de lecture du prompteur

La grande molette de l'HyperDeck Shuttle HD peut être utilisée pour contrôler la lecture en mode prompteur de la même façon que pour la lecture des médias. Une fois le script chargé, appuyez simultanément sur les boutons **Jog** et **Scr** pour activer la lecture à vitesse variable. Une fois sélectionnée, tournez la molette. Le script se déplacera selon la vitesse à laquelle vous tournerez la molette. Ainsi, plus vous la tournerez rapidement, plus la vitesse de défilement du script augmentera.



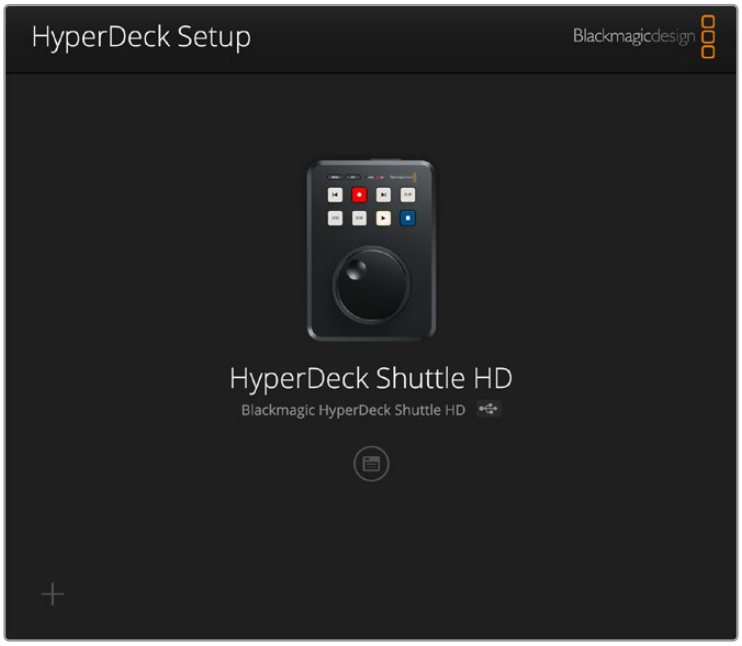
Pour une vitesse constante, utilisez les boutons Jog et Scr individuellement. Une fois le bouton sélectionné, tourner la molette fera défiler le script à une vitesse lente constante en mode Jog, ou à une vitesse plus rapide en mode Scroll.

Pour naviguer entre les fichiers sur votre carte SD ou disque externe, appuyez sur les touches avance ou retour.

Le prompteur reconnaîtra la taille et la couleur de la police, mais aussi si cette dernière est réglée sur gras à partir du fichier. De plus, vous pouvez ajuster la taille de la police, l'interligne, et les marges, ou encore retourner l'écran horizontalement ou verticalement lorsque vous projetez l'écran sur un miroir semi-transparent à l'aide du menu Moniteur. Pour plus d'informations, consultez la section « Paramètres » de ce manuel.

Blackmagic HyperDeck Setup

L'utilitaire Blackmagic HyperDeck Setup vous permet de modifier les paramètres et de mettre à jour le logiciel interne de votre HyperDeck.

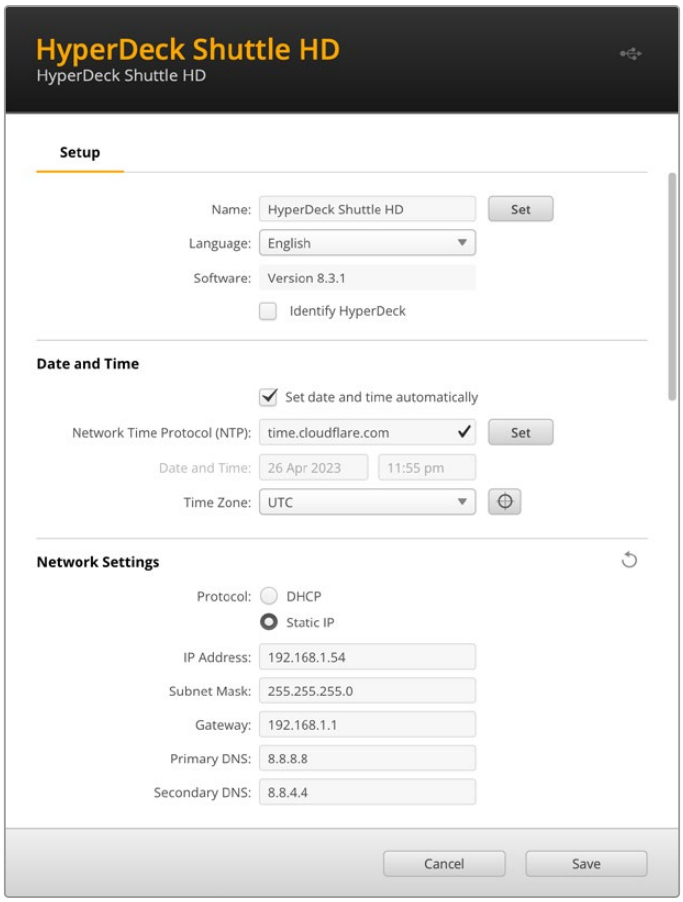


Pour installer le logiciel :

1. Téléchargez le nouveau programme d'installation Blackmagic HyperDeck Setup sur www.blackmagicdesign.com/fr/support.
2. Ouvrez le Blackmagic HyperDeck Setup sur votre ordinateur et suivez les instructions à l'écran.
3. Une fois l'installation terminée, connectez votre HyperDeck Shuttle HD à l'ordinateur via le port USB ou Ethernet situé sur le panneau arrière.
4. Lancez le Blackmagic HyperDeck Setup et suivez les instructions affichées à l'écran pour mettre à jour le logiciel interne. Si aucune information n'apparaît, le logiciel interne est à jour.

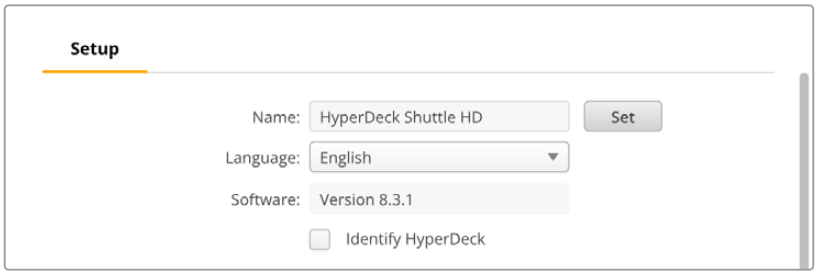
Cliquez sur l'image de l'HyperDeck ou sur l'icône de paramétrage pour ouvrir le menu de configuration.

L'écran d'accueil affichera votre HyperDeck Shuttle HD et le nom de l'appareil. Ce nom est utile pour identifier l'appareil lorsque plus d'un HyperDeck est connecté à votre ordinateur. Il peut être réglé à l'aide du menu de configuration de l'utilitaire.



Setup (Réglages)

Si vous possédez plus d'un enregistreur à disque HyperDeck, vous pouvez donner un nom à chaque appareil pour faciliter leur identification. Pour cela, saisissez un nouveau nom dans le champ dédié et cliquez sur le bouton **Set**. Veuillez noter que si vous changez le nom de l'HyperDeck, cela invalidera les certificats numériques en cours. Il est donc conseillé de modifier le nom avant de générer une demande de signature de certificat ou un certificat auto-signé.



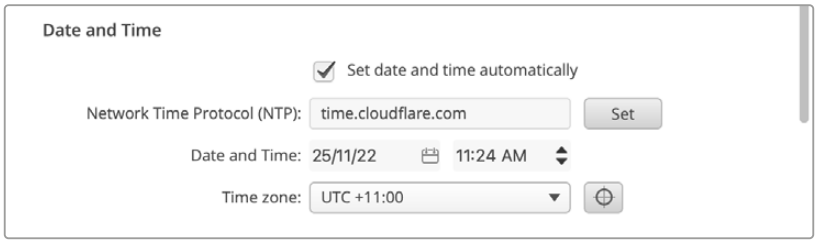
Identify HyperDeck

Cliquer sur la case fera clignoter les boutons d'avance et de retour situés en haut de votre HyperDeck Shuttle. Cela peut être utile si vous avez plus d'un HyperDeck Shuttle et que vous souhaitez identifier celui auquel vous êtes connecté via l'utilitaire HyperDeck Setup.

Date et heure

Sélectionnez automatiquement la date et l'heure en cochant la case **Set date and time automatically**. Lorsque vous réglez la date et l'heure automatiquement, votre HyperDeck Shuttle HD utilisera le serveur du Network Time Protocol réglé dans le champ NTP. Le serveur NTP par défaut est time.cloudflare.com. Toutefois, vous pouvez également saisir manuellement un autre serveur NTP, puis cliquer sur **Set**.

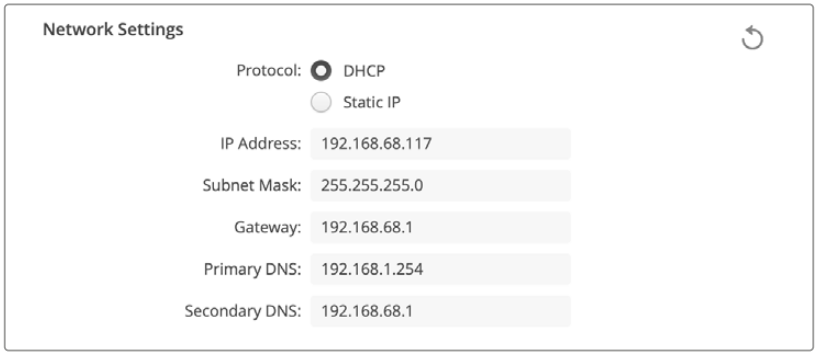
Si vous saisissez la date et l'heure manuellement, utilisez les champs pour saisir la date, l'heure et le fuseau horaire. Régler la date et l'heure correctement garantit que vos enregistrements disposent des mêmes informations d'horodatage que votre réseau et évite également les conflits pouvant survenir avec certains systèmes de stockage en réseau.



Network Settings (Paramètres du réseau)

Protocole

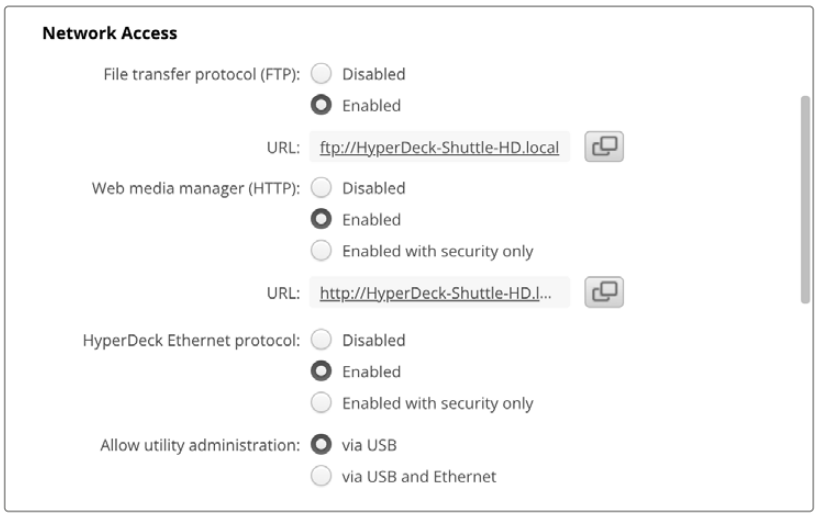
Pour contrôler votre HyperDeck Shuttle HD avec les mélangeurs ATEM ou pour le contrôler à distance via l'HyperDeck Ethernet Protocol, l'HyperDeck Shuttle HD doit être configuré sur le même réseau que les autres équipements à l'aide du DHCP ou en ajoutant manuellement une adresse IP fixe.



DHCP	Les enregistreurs à disque HyperDeck Shuttle HD sont réglés sur DHCP par défaut. Le Dynamic Host Configuration Protocol, ou DHCP, est un service de serveurs réseau qui attribue automatiquement une adresse IP à l'HyperDeck. Ce service facilite la connexion des équipements via Ethernet et veille à ce que leur adresse IP ne soit pas en conflit l'une avec l'autre. La plupart des ordinateurs et des commutateurs réseau supportent le DHCP.
Static IP (IP statique)	Lorsque Static IP est sélectionné, vous pouvez saisir manuellement les informations du réseau. Lorsque vous réglez des adresses IP manuellement pour que tous les appareils puissent communiquer, ils doivent partager les mêmes paramètres de masque de sous-réseau et de passerelle.

Network access (Accès au réseau)

Vous pouvez accéder à l'HyperDeck Shuttle HD via un réseau pour le transfert des fichiers et le contrôle à distance via l'HyperDeck Ethernet Protocol. L'accès sera autorisé par défaut. Toutefois, vous pouvez choisir de désactiver l'accès individuellement ou d'autoriser l'accès via un nom d'utilisateur et un mot de passe pour plus de sécurité lors de l'utilisation du gestionnaire de médias web ou de l'HyperDeck Ethernet Protocol.



File Transfer Protocol (Protocole FTP)

Activez ou désactivez l'accès via FTP à l'aide de la case de sélection. Si vous autorisez l'accès via un FTP comme CyberDuck, cliquez sur l'icône pour copier l'adresse FTP. Pour plus d'informations, consultez la section « Transférer des fichiers sur un réseau ».

Web Media Manager (Gestionnaire de médias web)

Vous pouvez accéder aux médias enregistrés sur les cartes SD ou les disques externes via un navigateur web à l'aide du gestionnaire de médias web. Lorsque vous cliquez sur le lien ou que vous faites un copier-coller dans votre navigateur web, une interface simple s'ouvrira, où vous pourrez charger des fichiers directement sur des cartes SD via le réseau.

L'accès est activé par défaut via HTTP, mais vous pouvez le désactiver totalement ou exiger un certificat de sécurité en utilisant l'option **Enabled with security only**. Quand vous utilisez un certificat numérique, les connexions au gestionnaire de médias web sont cryptées via HTTPS. Davantage d'informations sur les certificats numériques sont disponibles dans la section « Secure Certificate (Certificat de sécurité) ».

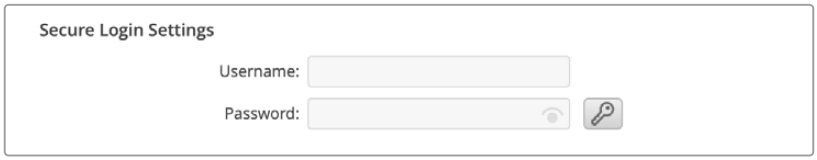
HyperDeck Ethernet Protocol

Vous pouvez vous connecter à votre enregistreur à disque HyperDeck à l'aide de l'HyperDeck Ethernet Protocol et d'un programme en ligne de commande sur votre ordinateur, tel que Terminal sur Mac ou PuTTY sur Windows. L'accès peut être autorisé avec ou sans nom d'utilisateur et mot de passe, ou complètement désactivé. Vous pouvez crypter votre session avec un programme SSL lorsque vous utilisez un programme tel que netcat. Pour plus d'informations sur les commandes disponibles, consultez la section « Informations pour développeurs » de ce manuel.

Allow Utility Administration (Autoriser l'administration de l'utilitaire)

Vous pouvez accéder au Blackmagic HyperDeck Setup lorsque votre enregistreur à disque est connecté via le réseau ou USB. Pour éviter que des utilisateurs y aient accès via le réseau, sélectionnez uniquement USB.

Secure Login Settings (Paramètres de connexion sécurisés)



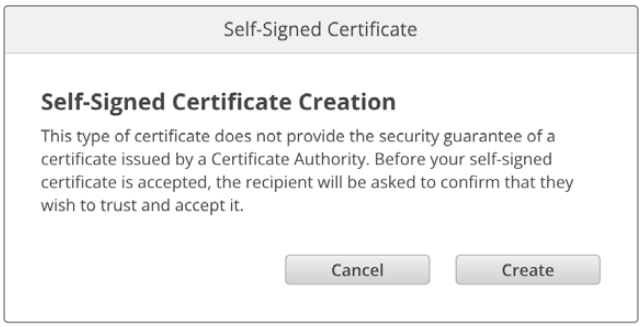
Si vous avez sélectionné l'option **Enable with security** pour l'HyperDeck Ethernet Protocol, il vous faudra saisir un nom d'utilisateur et un mot de passe. Entrez un nom d'utilisateur et un mot de passe, puis cliquez sur **Save**. Le champ du mot de passe apparaîtra vide après l'avoir saisi. Une fois le nom d'utilisateur et le mot de passe réglés, vous devrez les saisir lorsque vous accéderez au gestionnaire de médias web si l'option **Enable with security** est sélectionnée.

Secure Certificate (Certificat de sécurité)

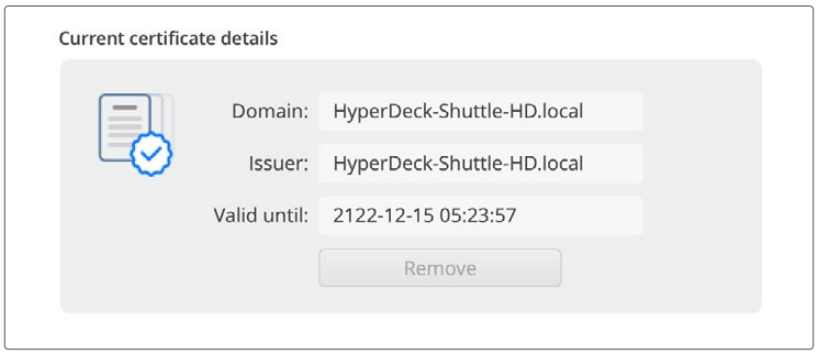
Pour activer l'accès au gestionnaire de médias web via HTTPS, ou si l'HyperDeck Ethernet Protocol a été configuré sur l'option de sécurité uniquement, vous aurez besoin d'un certificat de sécurité. Le certificat numérique fait office de carte d'identité pour votre HyperDeck Shuttle HD. Ainsi, toute connexion entrante peut confirmer qu'elle se connecte au bon appareil. En plus de confirmer l'identité de l'appareil, l'utilisation d'un certificat de sécurité garantit que la transmission des données entre l'HyperDeck Shuttle HD et un ordinateur ou un serveur sera cryptée. Lorsque vous utilisez les paramètres de connexion sécurisée, la connexion sera non seulement cryptée, mais elle exigera également une authentification d'accès.

Il existe deux types de certificats que vous pouvez utiliser avec l'HyperDeck Shuttle, un certificat de sécurité signé par une autorité de certification, ou un certificat auto-signé. Un certificat auto-signé peut être assez sécurisé pour certains workflows, comme pour accéder à l'HyperDeck Shuttle HD uniquement via un réseau local.

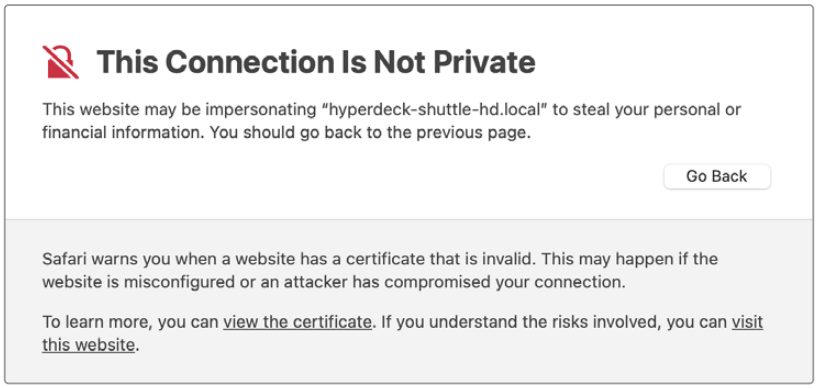
Pour générer un certificat auto-signé, cliquez sur **Create certificate**. Il vous sera demandé de confirmer que vous comprenez les risques en utilisant un certificat auto-signé. Après avoir cliqué sur **Create**, les détails du certificat se rempliront automatiquement dans les champs **Domain** (domaine), **Issuer** (émetteur) et **Valid until** (valide jusqu'au) de l'utilitaire HyperDeck Setup.



Après une réinitialisation, tous les certificats auto-signés en cours seront supprimés. Mais vous pouvez également les supprimer à tout moment en cliquant sur le bouton **Remove**, puis en suivant les instructions.



Lorsque vous utilisez un certificat auto-signé pour accéder à des fichiers de médias via HTTPS, votre navigateur web vous avertira des risques encourus en accédant au site. Certains navigateurs vous autoriseront à procéder une fois que vous aurez confirmé avoir compris les risques, mais d'autres navigateurs web peuvent vous empêcher de continuer.



Pour garantir que l'accès soit accordé depuis n'importe quel navigateur web, vous aurez besoin d'un certificat auto-signé.

Pour l'obtenir, vous devez d'abord générer une demande de signature de certificat, ou CSR (Certificate Signing Request), à l'aide de l'utilitaire Blackmagic HyperDeck Setup. Cette demande de signature est ensuite envoyée à une autorité de certification ou à votre département informatique, afin d'être signée. Une fois finalisé, un certificat signé avec une extension de fichier .cert, .crt ou . pem vous sera renvoyé. Vous pourrez l'importer dans votre HyperDeck Shuttle HD.



Pour générer une demande de signature de certificat CSR :

1 Cliquez sur le bouton **Generate signing request**.



2 Une fenêtre apparaîtra, vous demandant de saisir un nom ainsi qu'un nom alternatif pour l'HyperDeck. Remplissez les autres champs requis à l'aide du tableau suivant.

Information	Description	Example
Common Name	Le nom de domaine que vous utiliserez	hyperdeck.melbourne.com
Subject Alternative Name	Un nom de domaine alternatif	hyperdeck.melbourne.net
Country	Pays de votre organisation ou entreprise	AU
State	Province, région, comté ou état	Victoria
Location	Nom de la ville, du village, etc.	Port Melbourne
Organization Name	Nom de votre organisation ou entreprise	Blackmagic Design

3 Une fois les détails remplis, appuyez sur **Generate**.

Lorsque vous générez un .csr, vous aurez également besoin de créer une clé publique et une clé privée au même moment. La clé publique sera incluse avec la demande de signature, tandis que la clé privée restera avec l'appareil. Une fois que votre autorité de certification ou votre département informatique a vérifié les informations dans le CSR avec votre organisation, ils génèreront un certificat signé comprenant les détails ci-dessus ainsi que votre clé publique.

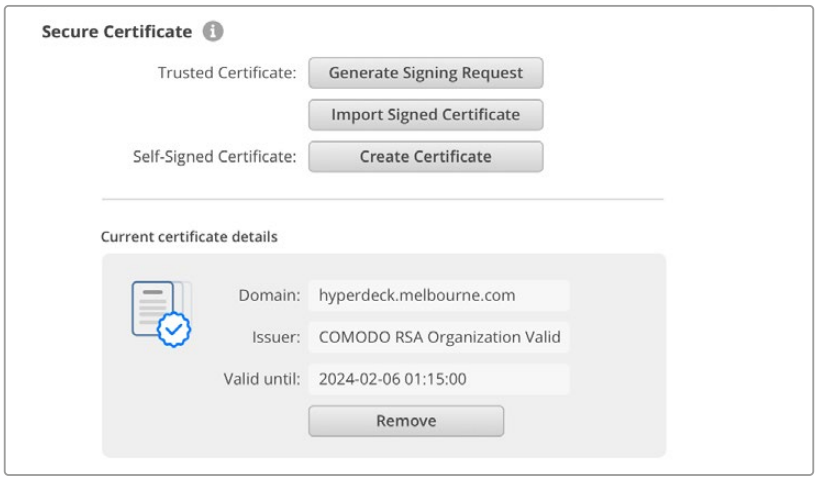
Une fois l'importation finalisée, l'HyperDeck Shuttle HD utilisera la clé publique et privée pour confirmer l'identité de l'HyperDeck afin de crypter les données partagées via HTTPS ou via l'HyperDeck Ethernet Protocol lorsque vous utilisez un programme SSL.

Importer un certificat signé :

1 Cliquez sur **Import signed certificate**.

2 Naviguez vers l'emplacement du certificat signé et une fois le fichier sélectionné, cliquez sur **Open**.

Les champs Domain, Issuer et Valid until seront mis à jour avec les informations de votre autorité de certification. En général, un certificat signé est valide pendant environ un an. Vous devrez donc répéter ce processus à la date d'expiration.

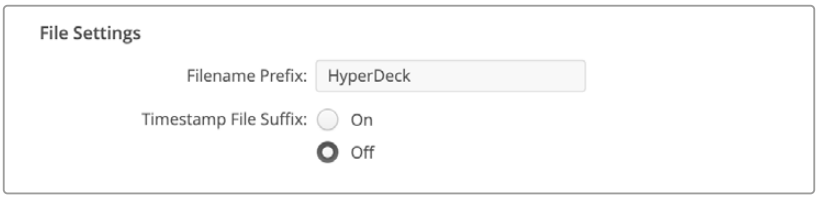


Comme un nom de domaine a été sélectionné, vous devrez parler avec votre service informatique de la résolution de l'entrée DNS pour l'appareil HyperDeck Shuttle HD. Cela pointera tout le trafic pour l'adresse IP de l'HyperDeck Shuttle HD vers l'adresse du domaine sélectionné dans la demande de signature.

Ce sera également l'adresse HTTPS que vous utiliserez pour accéder aux fichiers via le gestionnaire de médias web. Par exemple : https://hyperdeck.melbourne.com.

Il est important de noter que le certificat sera invalidé après une réinitialisation d'usine. Un nouveau certificat devra donc être généré et signé.

File Settings (Paramètres du fichier)



Par défaut, l'HyperDeck Shuttle HD enregistre les clips sur votre carte SD ou disque flash USB avec le préfixe **HyperDeck**. Saisissez un nouveau nom de fichier pour modifier le préfixe.

Par défaut, l'horodateur ajouté au nom de fichier est désactivé. Si vous souhaitez enregistrer la date et l'heure sur votre fichier, activez-le. Les paramètres concernant le préfixe du fichier et l'horodateur sont également disponibles sur le menu à l'écran de l'HyperDeck Shuttle HD.

Reset (Réinitialiser)

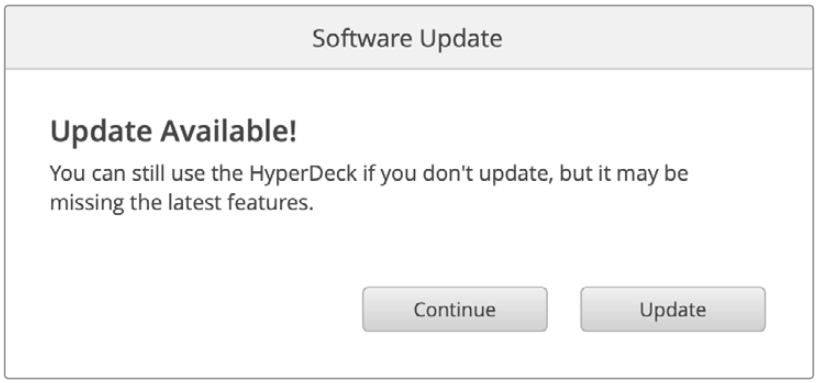
Appuyez sur **Factory Reset** pour restaurer l'HyperDeck sur les paramètres d'usine. Une réinitialisation invalidera le certificat actuel. Si un certificat de sécurité est utilisé, vous devrez générer une nouvelle demande de signature de certificat et la transmettre à une autorité de certification ou à votre département informatique.

Mise à jour du logiciel interne

Pour mettre à jour le logiciel interne :

1. Téléchargez le nouveau programme d'installation Blackmagic HyperDeck Setup sur www.blackmagicdesign.com/fr/support.
2. Ouvrez le Blackmagic HyperDeck Setup sur votre ordinateur et suivez les instructions à l'écran.
3. Une fois l'installation terminée, connectez votre HyperDeck Shuttle HD à l'ordinateur via le port USB ou Ethernet situé sur le panneau arrière.

4 Lancez le Blackmagic HyperDeck Setup et suivez les instructions affichées à l'écran pour mettre à jour le logiciel interne. Si aucune mise à jour n'apparaît, cela signifie que le logiciel interne est à jour.



Transférer des fichiers sur un réseau

L'HyperDeck Shuttle HD supporte le transfert des fichiers via l'Hypertext Transfer Protocol Secure, connu sous le nom de HTTPS, et le File Transfer Protocol, connu sous le nom de FTP. Cela permet de copier des fichiers directement de votre ordinateur à votre HyperDeck via un réseau, à la vitesse fournie par le réseau local. Vous pouvez par exemple copier des nouveaux fichiers sur un HyperDeck utilisé pour lire de la vidéo sur des murs d'images et des affichages dynamiques.

Vous pouvez transférer n'importe quel fichier depuis et vers l'HyperDeck. Toutefois, notez que les fichiers que vous souhaitez lire avec l'HyperDeck Shuttle HD doivent être conformes aux codecs et aux résolutions pris en charge par l'HyperDeck.

CONSEIL Vous pouvez transférer des fichiers sur le réseau durant l'enregistrement avec l'HyperDeck. L'HyperDeck ajuste automatiquement la vitesse de transfert afin de ne pas affecter l'enregistrement.

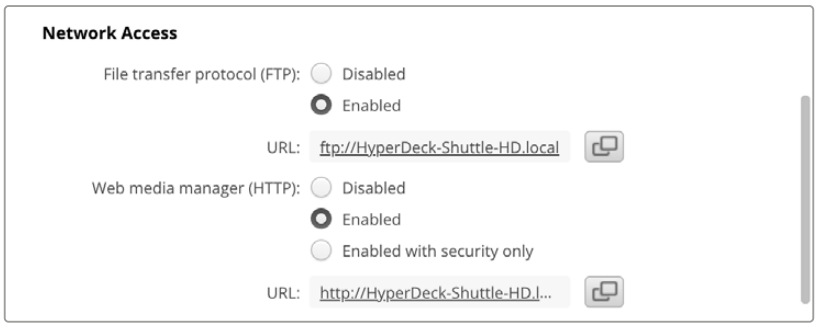
L'accès à l'HyperDeck Shuttle HD via l'un de ces deux protocoles peut être activé ou désactivé à l'aide de l'utilitaire HyperDeck Setup. Par exemple, vous pouvez désactiver l'accès FTP et activer l'accès HTTPS simultanément.

Connecter un HyperDeck Shuttle HD via HTTPS

Pour accéder à l'HyperDeck Shuttle HD via le gestionnaire de médias web, il vous faudra une URL disponible via les paramètres d'accès au réseau. Les paramètres d'accès au réseau (network access) sont affichés dans l'utilitaire HyperDeck Setup lorsque votre ordinateur est connecté via USB ou Ethernet. Toutefois, ils sont désactivés lorsque seul Ethernet est connecté.

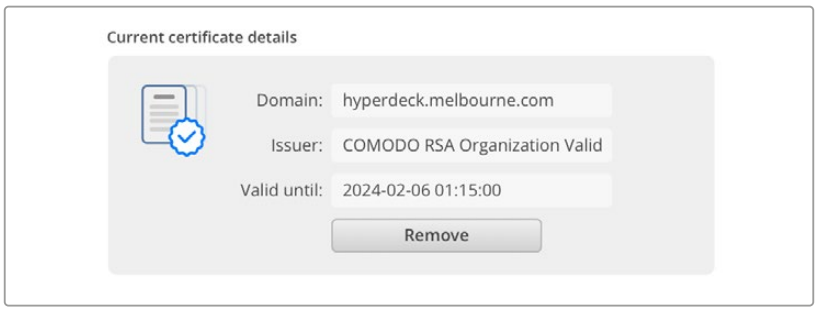
1 À l'aide d'un câble USB-C, connectez votre ordinateur à l'HyperDeck Shuttle HD via le port USB situé sur la face arrière, puis ouvrez l'HyperDeck Setup. Une icône de connexion USB devrait s'afficher à côté du nom de l'appareil. Cliquez sur l'icône circulaire ou n'importe où sur l'image du produit pour ouvrir les paramètres.

2 Si vous utilisez un certificat auto-signé, allez sur les paramètres d'accès au réseau et cliquez sur l'icône de copie à côté de l'URL. Cette URL est basée sur le nom de votre HyperDeck. Pour modifier l'URL, modifiez le nom de l'appareil.



Si vous utilisez un certificat auto-signé, cliquez sur le lien

3 Si vous avez importé un certificat signé par une autorité de certification ou votre département informatique, copiez et collez l'adresse dans le champ du domaine pour le certificat actuel.



Copiez l'adresse du domaine et collez-la dans un navigateur

4 Ouvrez votre navigateur web et collez l'adresse dans la nouvelle fenêtre. Si vous n'autorisez qu'un accès sécurisé, on vous demandera de saisir le nom d'utilisateur et le mot de passe réglés dans l'utilitaire HyperDeck Setup.

Si vous utilisez un certificat auto-signé, un avertissement concernant la confidentialité de la connexion s'affiche. Cela signifie qu'aucun certificat signé fiable n'a été importé via l'utilitaire HyperDeck Setup.

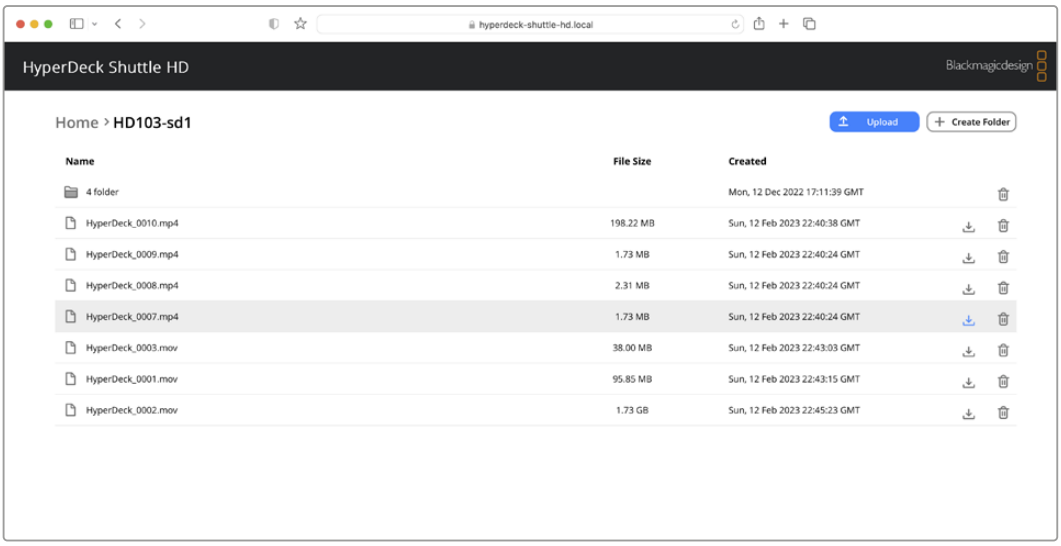
Pour continuer sans certificat valide et fiable, suivez les messages de votre navigateur reconnaissant les risques encourus et allez sur le site web.

Transférer les fichiers avec le gestionnaire de médias web

La première fois que vous ouvrez le navigateur du gestionnaire de médias web, vous verrez que les fichiers sont triés selon les emplacements des médias correspondants.

SD1	Médias sur les cartes SD.
USB	Les disques USB connectés seront listés avec le préfixe USB/.

Double-cliquez sur le support pour révéler le contenu de la carte SD ou du disque.



Cliquez sur le bouton de téléchargement pour ajouter des fichiers.

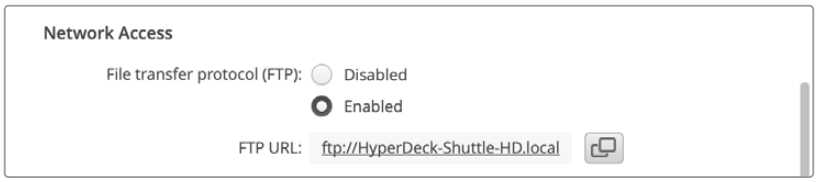
Pour ajouter des fichiers à distance pour la lecture, cliquez sur le bouton **Upload**. À l'aide du navigateur, allez sur votre fichier et cliquez sur **Upload**. Une fenêtre d'état apparaîtra durant le chargement. Vous pouvez également ajouter des dossiers à l'aide du bouton **Create folder**.

Pour télécharger les fichiers, utilisez la flèche de téléchargement tout à droite. Il est possible que votre navigateur vous demande d'autoriser les téléchargements depuis le site. Cliquez sur **Allow**. Pour supprimer un fichier, cliquez sur la poubelle. La fenêtre de suppression des fichiers apparaîtra. Cliquez sur **Delete** pour continuer.

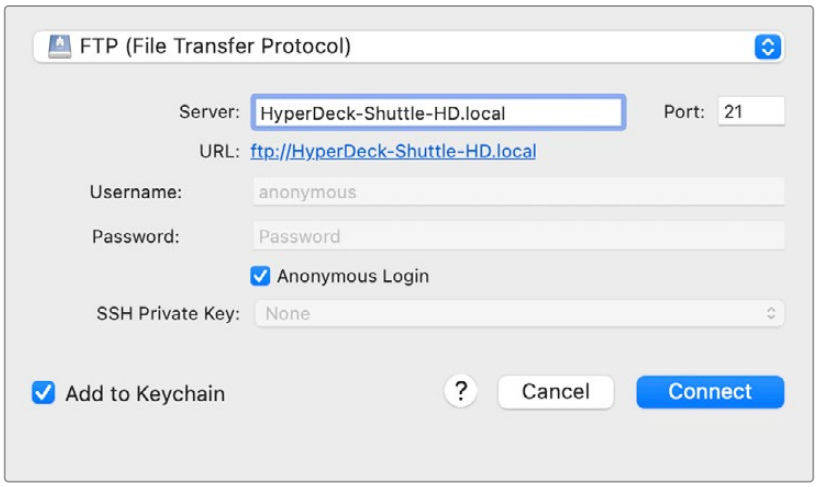
Transférer des fichiers via FTP

Lorsque l'ordinateur et l'HyperDeck Shuttle HD sont sur le même réseau, vous avez besoin d'un client FTP et de l'adresse IP de l'HyperDeck Shuttle HD, ou de l'URL du FTP dans l'utilitaire HyperDeck Setup.

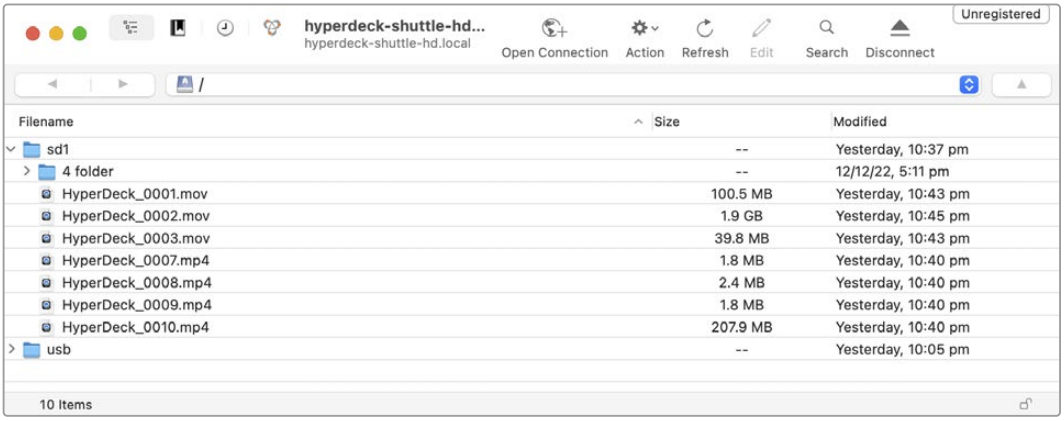
1. Téléchargez et installez un client FTP sur l'ordinateur auquel vous souhaitez connecter l'HyperDeck Shuttle HD. Nous recommandons Cyberduck, FileZilla ou Transmit, mais la plupart des logiciels FTP fonctionneront également. Vous pouvez télécharger Cyberduck et FileZilla gratuitement.
2. Une fois l'HyperDeck Shuttle HD connecté à votre réseau, ouvrez l'HyperDeck Setup et cliquez sur l'URL du FTP ou appuyez sur l'icône de copie pour la copier manuellement. Vous aurez peut-être besoin de cliquer sur le lien une deuxième fois si le programme FTP n'ouvre pas de connexion.



3. Si vous ouvrez une connexion FTP manuellement, collez l'URL dans le champ du serveur. Cochez **Anonymous login** si l'option est disponible.



4 Les cartes SD seront identifiées par sd1.



Vous pouvez désormais glisser et déposer des fichiers via l'interface du FTP.

Information pour les développeurs

Blackmagic HyperDeck Ethernet Protocol

The Blackmagic HyperDeck Ethernet Protocol is a text based protocol accessed by connecting to TCP port 9993 on HyperDeck models that have a built in Ethernet connection. If you are a software developer, you can use the protocol to construct devices that integrate with our products. Here at Blackmagic Design our approach is to open up our protocols and we eagerly look forward to seeing what you come up with!

You can connect to your HyperDeck recorder using the HyperDeck Ethernet Protocol using a command line program on your computer, such as Terminal on a Mac and putty on a Windows computer.

The HyperDeck Ethernet Protocol lets you schedule playlists and recordings. The following is an example of how to play 7 clips from clip number 5 onwards via the HyperDeck Ethernet Protocol.

On a Mac

1. Open the Terminal application which is located with the applications > utilities folder.
2. Type in “nc” and a space followed by the IP address of your HyperDeck disk recorder, another space and “9993” which is the HyperDeck Ethernet Protocol port number. For example type: nc 192.168.1.154 9993. The Protocol preamble will appear.
3. Type “playrange set: clip id: 5 count: 7” and press ‘return’.

   On HyperDeck disk recorders with a timeline view, you will see in and out points marked around clips 5 through the end of clip 11.
4. Type “play”. Clips 5 through 11 will now play back.
5. To clear the playrange, type “playrange clear”
6. To exit from the protocol, type ‘quit’.

Protocol Commands

Command	Command Description
help or ?	Provides help text on all commands and parameters
commands	return commands in XML format
device info	return device information
disk list	query clip list on active disk
disk list: slot id: {n}	query clip list on disk in slot {n}
quit	disconnect ethernet control
ping	check device is responding
preview: enable: {true/false}	switch to preview or output
play	play from current timecode
play: speed: {-5000 to 5000}	play at specific speed
play: loop: {true/false}	play in loops or stop-at-end
play: single clip: {true/false}	play current clip or all clips

Command	Command Description
play: {clip id/clip/timecode/timeline/...}	play from the specified position see “goto” command for description of parameters parameters can be combined with {speed/loop/single clip}
playrange	query playrange setting
playrange set: clip id: {n}	set play range to play clip {n} only
playrange set: clip id: {n} count: {m}	set play range to {m} clips starting from clip {n}
playrange set: in: {inT} out: {outT}	set play range to play between: - timecode {inT} and timecode {outT}
playrange set: timeline in: {in} timeline out: {out}	set play range in units of frames between: - timeline position {in} and position {out}
playrange clear	clear/reset play range setting
play on startup	query unit play on startup state
play on startup: enable: {true/false}	enable or disable play on startup
play on startup: single clip: {true/false}	play single clip or all clips on startup
play option	query play options
play option: stop mode: {lastframe/nextframe/black}	set output frame when playback stops
record	record from current input
record: name: {name}	record named clip
record spill	spill current recording to next slot
record: spill: slot id: {n}	spill current recording to specified slot use current id to spill to same slot
spill order	query the device order used for record spill
stop	stop playback or recording
clips count	query number of clips on timeline
clips get	query all timeline clips
clips get: clip id: {n}	query a timeline clip info
clips get: clip id: {n} count: {m}	query m clips starting from n
clips get: version: {1/2/3}	query clip info using specified output version: version 1: id: name startT duration version 1: id: name startT duration startT depends on “configuration: timecode output: {clip/timeline}” version 2: id: clipInT clipDuration inT outT filename version 3: id: clipInT clipDuration inT outT folder/filename
clips add: name: {name}	append a clip to timeline, name can include subfolders e.g. folder1/HyperDeck_0001.mp4
clips add: clip id: {n} name: {name}	insert clip before existing clip {n}
clips add: in: {inT} out: {outT} name: {name}	append the clip portion between clip timecodes {inT} to {outT}
clips add: frame in: {in} frame out: {out} name: {name}	append the clip portion between clip frame numbers {in} to {out}

Command	Command Description
clips remove: clip id: {n}	remove clip {n} from the timeline (invalidates clip ids following clip {n})
clips clear	empty timeline clip list
clips rebuild	rebuild timeline with default rules
clip info	query clip info for the current playing/recording clip
clip info: clip id: {n}	query clip info for timeline clip id {n}
clip info: name: {name}	query clip info for the clip named {name} on active disk
transport info	query current activity
slot info	query active slot
slot info: slot id: {n}	query slot {n}
slot info: device: {device}	query slot containing device USB/network devices can be queried without being active “device” and “slot id” parameters are mutually exclusive in all commands
slot select: slot id: {n}	switch to specified slot
slot select: device: {device}	switch to slot containing device
slot select: video format: {format}	load clips of specified format
slot unblock	unblock active slot
slot unblock: slot id: {n}	unblock slot {n}
slot unblock: device: {device}	unblock disk device
external drive list	list all available USB/network drives for use in external slot
external drive select: device: {device}	switch external slot to specified external drive
external drive selected	query the currently selected external drive
cache info	query cache status
dynamic range	query dynamic range settings
dynamic range: playback override: {off/Rec709/Rec2020_SDR/HLG/ ST2084_300/ST2084_500/ ST2084_800/ST2084_1000/ ST2084_2000/ST2084_4000/ST2084	set playback dynamic range override
dynamic range: record override: {off/Rec709/Rec2020_SDR/HLG/ ST2084_300/ST2084_500/ ST2084_800/ST2084_1000/ ST2084_2000/ST2084_4000/ST2048}	set record dynamic range override
notify	query notification status
notify: remote: {true/false}	set remote notifications
notify: transport: {true/false}	set transport notifications
notify: slot: {true/false}	set slot notifications
notify: configuration: {true/false}	set configuration notifications

Command	Command Description
notify: dropped frames: {true/false}	set dropped frames notifications (reported dropped frame count is approximate)
notify: display timecode: {true/false}	set display timecode notifications
notify: timeline position: {true/false}	set playback timeline position notifications
notify: playrange: {true/false}	set playrange notifications
notify: cache: {true/false}	set cache notifications
notify: dynamic range: {true/false}	set dynamic range settings notifications
notify: slate: {true/false}	set digital slate notifications
notify: clips: {true/false}	set timeline clips notifications where two types of changes can occur: add: partial update with list of clips and insert positions snapshot: complete update of all clips on timeline
notify: disk: {true/false}	set disk clips notifications where two types of changes can occur: add: partial update with list of clips and insert positions snapshot: complete update of all clips on timeline
notify: device info: {true/false}	set device info notifications
notify: nas: {true/false}	set nas notifications triggered by commands such as “nas add” or “nas remove”
goto: clip id: {start/end}	goto first clip or last clip
goto: clip id: {n}	goto clip id {n}
goto: clip id: +{n}	go forward {n} clips
goto: clip id: -{n}	go backward {n} clips
goto: clip: {start/end}	goto start or end of clip
goto: clip: {n}	goto frame position {n} within current clip
goto: clip: +{n}	go forward {n} frames within current clip
goto: clip: -{n}	go backward {n} frames within current clip
goto: timeline: {start/end}	goto start or end of timeline
goto: timeline: {n}	goto frame position {n} within timeline
goto: timeline: +{n}	go forward {n} frames within timeline
goto: timeline: -{n}	go backward {n} frames within timeline
goto: timecode: {timecode}	goto absolute timecode position in timeline
goto: timecode: +{timecode}	go forward {timecode} duration
goto: timecode: -{timecode}	go backward {timecode} duration
goto: slot id: {n}	goto slot id {n}
goto: clip id: {n} clip: {m}	goto clip id {n} and offset to frame position {m} within that clip
goto: clip id: {n} timeline: {m}	goto clip id {n} and offset to frame position {m} within the timeline

Command	Command Description
goto: clip id: {n} timecode: {timecode}	goto clip id {n} and offset {timecode} duration {clip id/clip/timeline/timecode} support absolute and relative offsets use “play” instead of “goto” to play from seeked position
jog: timecode: {timecode}	jog to timecode
jog: timecode: +{timecode}	jog forward {timecode} duration
jog: timecode: -{timecode}	jog backward {timecode} duration
shuttle: speed: {-5000 to 5000}	shuttle with speed
remote	query unit remote control state
remote: enable: {true/false}	enable or disable remote control
remote: override: {true/false}	session override remote control
configuration	query configuration settings
configuration: video input: {SDI/HDMI/component/composite}	change the video input source
configuration: audio input: {embedded/XLR/RCA}	change the audio input source
configuration: file format: {format}	switch to one of the supported formats: H.265High_422, H.264High, H.264Medium, H.264Low, H.264High10_422, H.265High, H.265Medium, H.265Low, QuickTimeProResHQ, QuickTimeProRes, QuickTimeProResLT, QuickTimeProResProxy DNxHR_HQX, QuickTimeDNxHR_HQX, DNxHR_SQ, QuickTimeDNxHR_SQ, DNxHR_LB, QuickTimeDNxHR_LB, DNxHD220x, QuickTimeDNxHD220x, DNxHD145, QuickTimeDNxHD145, DNxHD45, QuickTimeDNxHD45
configuration: audio codec: {PCM/AAC}	switch to specific audio codec
configuration: timecode input: {external/embedded/internal/preset/clip}	change the timecode input
configuration: timecode output: {clip/timeline}	change the timecode output
configuration: timecode preference: {default/dropframe/nondropframe}	whether or not to use drop frame timecodes when not otherwise specified
configuration: timecode preset: {timecode}	set the timecode preset
configuration: audio input channels: {n}	set the number of audio channels recorded to {n}
configuration: record trigger: {none/recordbit/timecoderun}	change the record trigger
configuration: record prefix: {name}	set the record prefix name (supports UTF-8 name)
configuration: record cache: {true/false}	enable or disable record cache, has no effect if cache is not supported/installed/formatted
configuration: append timestamp: {true/false}	append timestamp to recorded filename
configuration: usb spill: {true/false}	enable or disable spilling between usb disks

Command	Command Description
configuration: reference source: {auto/input/external}	set source for the reference signal
configuration: genlock input resync: {true/false}	enable or disable genlock input resync when enabled set reference source to auto/external
configuration: xlr input id: {n} xlr type: {line/mic}	configure xlr input type multiple xlr inputs can be configured in a single command
uptime	return time since last boot
format: slot id: {n} prepare: {exFAT/HFS+} name: {name}	prepare formatting operation filesystem type with volume name {name} “slot id” can be omitted for the current mounted slot “name” defaults to current volume name if mounted (supports UTF-8)
format: device: {device} prepare: {exFAT/HFS+} name: {name}	prepare formatting operation for {device}
format: confirm: {token}	perform a pre-prepared formatting operation using token
identify: enable: {true/false}	identify the device
watchdog: period: {period in seconds}	client connection timeout
reboot	reboot device
slate clips	slate clips information
slate project	slate project information
slate lens	slate lens information
nas list	list all NAS share bookmarks
nas discovered	list all NAS servers that have been discovered via mDNS
nas selected	currently selected NAS share
nas deselect	unmount the currently selected NAS share
connection protocol: response version: {version}	changes which do not affect other client connections change the output of “clips get”, “disk list” and related responses version 1 205 clips get id: filename startT duration startT depends on “configuration: timecode output: {clip/timeline}” 519 clips info id: clipInT clipDuration inT outT filename 206 disk list id: filename codec format duration 520 disk list info id: filename codec format duration version 2 205 clips get id: clipInT clipDuration inT outT folder/filename 519 clips info id: clipInT clipDuration inT outT folder/filename 206 disk list id: codec format duration folder/filename 520 disk list info id: codec format duration folder/filename

Multiline commands:	Command Description
authenticate:↵	authenticate user for secure access
username: {username}	case sensitive username
password: {password}	case sensitive password
slate clips↵	set slate clips information:
reel: {n}	slate reel number, where {n} is in [1, 999]
scene id: {id}	slate scene id value, where {id} is a string
shot type: {WS/MS/CU/BCU/MCU/ECU/none}	slate shot type
take: {n}	slate take number, where {n} is in [1, 99]
take scenario: {PU/VFX/SER/none}	slate take scenario
take auto inc: {true/false}	slate take auto increment
good take: {true/false}	slate good take
environment: {interior/exterior}	slate environment
day night: {day/night}	slate day or night
slate project:↵	set slate project information:
project name: {name}	project name (can be empty, supports UTF-8)
camera: {index}	set camera index e.g. A
director: {name}	director (can be empty, supports UTF-8)
camera operator: {name}	camera operator (can be empty, supports UTF-8)
slate lens:↵	set lens information:
lens type: {type}	lens type (can be empty, supports UTF-8)
iris: {type}	camera iris (can be empty, supports UTF-8)
focal length: {length}	focal length (can be empty, supports UTF-8)
distance: {distance}	lens distance (can be empty, supports UTF-8)
filter: {filter}	lens filter (can be empty, supports UTF-8)
nas add:↵	add a NAS share to the list of bookmarks
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share
username: {username}	username to connect as (optional, defaults to guest)
password: {password}	password to connect with (optional)
nas remove:↵	remove NAS share bookmark, does not unmount share if mounted
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share
nas select:↵	mount NAS share asynchronously. Uses credentials provided in matching bookmark, otherwise uses guest credentials
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share Use “nas selected” or “notify: slot: true” to determine when share is mounted.

Command Combinations

You can combine the parameters into a single command, for example:

```
play: clip id: 3 speed: 200 loop: true single clip: true
```

Or for configuration:

```
configuration: video input: SDI audio input: XLR
```

Or to switch to the second disk, but only play NTSC clips:

```
slot select: slot id: 2 video format: NTSC
```

Using XML

While you can use the Terminal to talk to HyperDeck, if you are writing software, you can use XML to confirm the existence of a specific command based on the firmware of the HyperDeck you are communicating with. This helps your software user interface adjust to the capabilities of the specific HyperDeck model and software version.

Protocol Details

Connection

The HyperDeck Ethernet server listens on TCP port 9993.

Basic syntax

The HyperDeck protocol is a line oriented text protocol. Lines from the server will be separated by an ascii CR LF sequence. Messages from the client may be separated by LF or CR LF.

New lines are represented in this document as a "↵" symbol.

Single line command syntax

Command parameters are usually optional. A command with no parameters is terminated with a new line:

```
{Command name}↵
```

If parameters are specified, the command name is followed by a colon, then pairs of parameter names and values. Each parameter name is terminated with a colon character:

```
{Command name}: {Parameter}: {Value} {Parameter}: {Value} ...↵
```

Multiline command syntax

The HyperDeck protocol also supports an equivalent multiline syntax where each parameter-value pair is entered on a new line. E.g.

```
{Command name}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
↵
```

Response syntax

Simple responses from the server consist of a three digit response code and descriptive text terminated by a new line:

```
{Response code} {Response text}↵
```

If a response carries parameters, the response text is terminated with a colon, and parameter name and value pairs follow on subsequent lines until a blank line is returned:

```
{Response code} {Response text}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
...
↵
```

Successful response codes

A simple acknowledgement of a command is indicated with a response code of 200:

```
200 ok↵
```

Other successful responses carry parameters and are indicated with response codes in the range of 201 to 299.

Failure response codes

Failure responses to commands are indicated with response codes in the range of 100 to 199:

```
100 syntax error
101 unsupported parameter
102 invalid value
103 unsupported
104 disk full
105 no disk
106 disk error
107 timeline empty
108 internal error
109 out of range
110 no input
111 remote control disabled
112 clip not found
120 connection failed
121 authentication failed
122 authentication required
150 invalid state
151 invalid codec
160 invalid format
161 invalid token
162 format not prepared
163 parameterized single line command not supported
```

Asynchronous response codes

The server may return asynchronous messages at any time. These responses are indicated with response codes in the range of 500 to 599:

```
5xx {Response Text}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
↵
```

Connection response

On connection, an asynchronous message will be delivered:

```
500 connection info:↵
protocol version: {Version}↵
model: {Model Name}↵
↵
```

Connection rejection

A limited number of clients may connect at a time. If too many clients attempt to connect concurrently, they will receive an error and be disconnected:

```
120 connection failed↵
```

Timecode syntax

Timecodes are expressed as non-drop-frame timecode in the format:

```
HH:MM:SS:FF
```

Handling of deck "remote" state

The “remote” command may be used to enable or disable the remote control of the deck. Any attempt to change the deck state over ethernet while remote access is disabled will generate an error:

```
111 remote control disabled↵
```

To enable or disable remote control:

```
remote: enable: {“true”, “false”} ↵
```

The current remote control state may be overridden allowing remote access over ethernet irrespective of the current remote control state:

```
remote: override: {“true”, “false”} ↵
```

The override state is only valid for the currently connected ethernet client and only while the connection remains open.

The “remote” command may be used to query the remote control state of the deck by specifying no parameters:

```
remote↵
```

The deck will return the current remote control state:

```
210 remote info:↵
enabled: {“true”, “false”}↵
override: {“true”, “false”}↵
↵
```

Asynchronous remote control information change notification is disabled by default and may be configured with the “notify” command. When enabled, changes in remote state will generate a “510 remote info:”asynchronous message with the same parameters as the “210 remote info:” message.

Closing connection

The "quit" command instructs the server to cleanly shut down the connection:

```
quit↵
```

Checking connection status

The "ping" command has no function other than to determine if the server is responding:

```
ping↵
```

Getting help

The "help" or "?" commands return human readable help text describing all available commands and parameters:

```
help↵
```

Or:

```
?↵
```

The server will respond with a list of all supported commands:

```
201 help:↵
{Help Text}↵
{Help Text}↵
↵
```

Switching to preview mode

The "preview" command instructs the deck to switch between preview mode and output mode:

```
preview: enable: {"true", "false"}↵
```

Playback will be stopped when the deck is switched to preview mode. Switching to playback is not permitted during record. Use the stop command to stop recording before switching to playback.

Controlling device playback

The “play” command instructs the deck to start playing:

```
play↵
```

The play command accepts a number of parameters which may be used together in most combinations.

By default, the deck will play all remaining clips on the timeline then stop.
The “single clip” parameter may be used to override this behavior:

```
play: single clip: {“true”, “false”}↵
```

By default, the deck will play at normal (100%) speed. An alternate speed may be specified in percentage between -5000 to 5000:

```
play: speed: {% normal speed}↵
```

By default, the deck will stop playing when it reaches to the end of the timeline. The “loop” parameter may be used to override this behavior:

```
play: loop: {“true”, “false”}↵
```

To play from the start of a particular clip:

```
play: clip id: {Clip Id}↵
```

To play from a position offset from the start of particular clip:

```
play: clip id: {Clid Id} timecode: +{timecode}↵
```

The “playrange” command returns the current playrange setting if any:

```
playrange↵
```

To override this behaviour and select a particular clip:

```
playrange set: clip id: {Clip ID}↵
```

To only play a certain number of clips starting at a particular clip:

```
playrange set: clip id: {n} count: {m}↵
```

To only play a certain timecode range:

```
playrange set: in: {in timecode} out: {out timecode}↵
```

To play a certain timeline range:

```
playrange set: timeline in: {in} timeline out: {out}↵
```

To clear a set playrange and return to the default value:

```
playrange clear↵
```

The “play on startup command” instructs the deck on what action to take on startup. By default, the deck will not play. Use the “enable” command to start playback after each power up.

```
play on startup: enable {“true”, “false”}↵
```

By default, the unit will play back all clips on startup. Use the “single clip” command to override.

```
play on startup: single clip: {“true”, “false”}↵
```

The “play option” command queries the output frame for when playback stops:

```
play option↵
```

By default, the deck will display the last frame when playback stops. To override this behaviour, the “stop mode” parameter can be used:

```
play option: stop mode: {“lastframe”, “nextframe”, “black”}↵
```

Stopping deck operation

The "stop" command instructs the deck to stop the current playback or capture:

```
stop↵
```

Changing timeline position

The "goto" command instructs the deck to switch to playback mode and change its position within the timeline.

To go to the start of a specific clip:

```
goto: clip id: {Clip ID}↵
```

To move forward/back {count} clips from the current clip on the current timeline:

```
goto: clip id: +/-{count}↵
```

Note that if the resultant clip id goes beyond the first or last clip on timeline, it will be clamp at the first or last clip.

To go to the start or end of the current clip:

```
goto: clip: {“start”, “end”}↵
```

To go to the start of the first clip or the end of the last clip:

```
goto: timeline: {“start”, “end”}↵
```

To go to a specified timecode:

```
goto: timecode: {timecode}↵
```

To move forward or back a specified duration in timecode:

```
goto: timecode: {“+”, “-”}{duration in timecode}↵
```

To specify between slot 1 and slot 2:

```
goto: slot id: {Slot ID}↵
```

Note that only one parameter/value pair is allowed for each goto command.

Enumerating supported commands and parameters

The "commands" command returns the supported commands:

```
commands↵
```

The command list is returned in a computer readable XML format:

```
212 commands:
<commands>↵
     <command name="…"><parameter name="…"/>…</command>↵
     <command name="…"><parameter name="…"/>…</command>↵
     …
</commands>↵
↵
```

More XML tokens and parameters may be added in later releases.

Controlling asynchronous notifications

The “notify” command may be used to enable or disable asynchronous notifications from the server.
To enable or disable transport notifications:

```
notify: transport: {“true”, “false”}↵
```

To enable or disable slot notifications:

```
notify: slot: {“true”, “false”}↵
```

To enable or disable remote notifications:

```
notify: remote: {“true”, “false”}↵
```

To enable or disable configuration notifications:

```
notify: configuration: {“true”, “false”}↵
```

Multiple parameters may be specified. If no parameters are specified, the server returns the current state of all notifications:

```
209 notify:↵
transport: {“true”, “false”}↵
slot: {“true”, “false”}↵
remote: {“true”, “false”}↵
configuration: {“true”, “false”}↵
dropped frames: {“true”, “false”}↵
display timecode: {“true”, “false”}↵
timeline position: {“true”, “false”}↵
playrange: {“true”, “false”}↵
cache: {“true”, “false”}↵
dynamic range: {“true”, “false”}↵
slate: {“true”, “false”}↵
clips: {“true”, “false”}↵
disk: {“true”, “false”}↵
device info: {“true”, “false”}↵
nas: {“true”, “false”}↵
↵
```

Retrieving device information

The "device info" command returns information about the connected deck device:

```
device info↵
```

The server will respond with:

```
204 device info:↵
protocol version: {Version}↵
model: {Model Name}↵
unique id: {unique alphanumeric identifier}↵
slot count: {number of storage slots}↵
software version: {software version}↵
name: {device name}↵
↵
```

Retrieving slot information

The "slot info" command returns information about a slot. Without parameters, the command returns information for the currently selected slot:

```
slot info↵
```

If a slot id is specified, that slot will be queried:

```
slot info: slot id: {Slot ID}↵
```

The server will respond with slot specific information:

```
202 slot info:↵
slot id: {Slot ID}↵
slot name: {“slot name”}↵
device name: {identifying name for disk device}↵
status: {"empty", "mounting", "error", "mounted"}↵
volume name: {Volume name}↵
recording time: {recording time available in seconds}↵
video format: {disk's default video format}↵
blocked: {“true”, “false”}↵
remaining size: {remaining size in bytes}↵
total size: {total size in bytes}↵
↵
```

A slot can also be specificed by its device. This is particularly useful when there are multiple drives connected via USB. First list the available external drives:

```
external drive list↵
226 external drive info:↵
device: {device}↵
```

Then use slot info with device to query the drive:

```
slot info: device: {device}↵
```

Asynchronous slot information change notification is disabled by default and may be configured with the "notify" command. When enabled, changes in slot state will generate a "502 slot info:" asynchronous message with the same parameters as the "202 slot info:" message.

Retrieving clip information

The “disk list” command returns the information for each playable clip on a given disk. Without parameters, the command returns information for the current active disk:

```
disk list↵
```

If a slot id is specified, the disk in that slot will be queried:

```
disk list: slot id: {Slot ID}↵
```

The server responds with the list of all playable clips on the disk in the format of: Index, name, formats, and duration in timecode:

```
206 disk list:↵
slot id: {Slot ID}↵
{clip index}: {name} {file format} {video format} {Duration timecode}↵
{clip index}: {name} {file format} {video format} {Duration timecode}↵
…
↵
```

Note that the *clip index* starts from 1.

Retrieving clip count

The "clips count" command returns the number of clips on the current timeline:

```
clips count ↵
```

The server responds with the number of clips:

```
214 clips count: ↵
clip count: {Count}↵
```

Retrieving timeline information

The "clips get" command returns information for each available clip on the current timeline. Without parameters, the command returns information for all clips on timeline:

```
clips get↵
```

In version 1, the start timecode reported is either a clip timecode or a timeline timecode depending on the configured output timecode.

The server responds with a list of clip IDs, names and timecodes:

```
205 clips info:↵
clip count: {Count}↵
{Clip ID}: {Name} {Start timecode} {Duration timecode}↵
{Clip ID}: {Name} {Start timecode} {Duration timecode}↵
…
↵
```

The “clips get” command provides a more detailed response when using the “version: 2” parameter:

```
clips get: version: 2↵
```

The server responds with a list of clip IDs, timecodes, in points, out points and names. Clip name is the last field making it simpler to parse when names have embedded spaces.

```
{Clip ID}: {Clip start timecode} {Duration timecode} {inTimecode}
{outTimecode}
{name}↵
{Clip ID}: {Clip start timecode} {Duration timecode} {inTimecode}
{outTimecode}
{name}↵
…
↵
```

For models that support recursive timelines “clips get: version: 3” replaces the {name} field with {path to clip name} where the {path to clip name} can include directories and subdirectories.

Retrieving transport information

The “transport info” command returns the state of the transport:

```
transport info ↵
```

The server responds with transport specific information:

```
208 transport info:

status: {“preview”, “stopped”, “play”, “forward”, “rewind”,
“jog”, “shuttle”,”record”}↵

speed: {Play speed between -5000 and 5000 %}↵

slot id: {Slot ID or “none”}↵

slot name: {“slot name”}↵

device name: {identifying name for disk device}↵

clip id: {Clip ID or “none”}↵

single clip: {“true”, “false”}↵

display timecode: {timecode}↵

timecode: {timecode}↵

video format: {Video format}↵

loop: {“true”, “false”}↵

timeline: {n}↵

input video format: {Video format”}↵

dynamic range: {“off”, “Rec709”, “Rec2020_SDR”, “HLG”,
“ST2084_300”, “ST2084_500”, “ST2084_800”, “ST2084_1000”,
“ST2084_2000”, “ST2084_4000”, “ST2048” or “none”}↵

reference locked: {“false”, “true”}

↵
```

The "timecode" value is the timecode within the current timeline for playback or the clip for record. The "display timecode" is the timecode displayed on the front of the deck. The two timecodes will differ in some deck modes.

Asynchronous transport information change notification is disabled by default and may be configured with the "notify" command. When enabled, changes in transport state will generate a "508 transport info:" asynchronous message with the same parameters as the "208 transport info:" message.

Video Formats

The following video formats are currently supported on HyperDeck Extreme, HyperDeck Studio and HyperDeck Shuttle:

720p50, 720p5994, 720p60

1080p23976, 1080p24, 1080p25, 1080p2997, 1080p30, 1080p60

1080i50, 1080i5994, 1080i60

HyperDeck Extreme HDR models also support the following formats:

NTSC, PAL, NTSCp, PALp

2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p30, 2160p50, 2160p59.94, 2160p60

4Kp23976, 4Kp24, 4Kp25, 4Kp2997, 4Kp30

4Kp50, 4Kp5994, 4Kp60

HyperDeckExtreme 8K HDR adds support for the following 8K formats:

4320p23.98, 4320p24, 4320p25, 4320p29.97, 4320p30, 4320p50, 4320p59.94, 4320p60

8Kp23976, 8Kp24, 8Kp25

HyperDeck Studio Pro and Plus models support these 4k formats:

4Kp23976, 4Kp24, 4Kp25, 4Kp2997, 4Kp30

HyperDeck Studio 4K Pro adds support for the following 4k formats:

4Kp50, 4Kp5994, 4Kp60

Video format support may depend on the file format selected and may vary between models and software releases.

File Formats

All HyperDeck models currently support the following file formats:

H.264High_SDI

H.264High

H.264Medium

H.264Low

QuickTimeProResHQ

QuickTimeProRes

QuickTimeProResLT

QuickTimeProResProxy

QuickTimeDNxHD220x

DNxHD220x

QuickTimeDNxHD145

DNxHD145

QuickTimeDNxHD45

DNxHD45

HyperDeck Studio 4K Pro and HyperDeck Extrme HDR models also support the following file formats:

H.265High_SDI

H.265High

H.265Medium

H.265Low

QuickTimeDNxHR_HQX

DNxHR_HQX

QuickTimeDNxHR_SQ

DNxHR_SQ

QuickTimeDNxHR_LB

DNxHR_LB

Supported file formats may vary between models and software releases.

Querying and updating configuration information

The "configuration" command may be used to query the current configuration of the deck:

```
configuration↵
```

The server returns the configuration of the deck:

```
211 configuration:↵
audio input: {“embedded”, “XLR”, “RCA”}↵
audio mapping: {n}↵
video input: {“SDI”, “HDMI”, “component”, “composite”}↵
file format: {format}↵
audio codec: {“PCM”, “AAC”}↵
timecode input: {“external”, “embedded”, “preset”, “clip”}↵
timecode output: {“clip”, “timeline”}↵
timecode preference: {“default”, “dropframe”, “nondropframe”}↵
timecode preset: {timecode}↵
audio input channels: {n}↵
record trigger: {“none”, “recordbit”, “timecoderun”}↵
record prefix: {name}↵
record cache: {“true”, “false”}↵
append timestamp: {“true”, “false”}↵
genlock input resync: {“true”, “false”}↵
reference source: {“auto”, “input”, “external”}↵
xlr input id: {“n”}↵
xlr type: {”line”, ”mic”}↵
usb spill: {“true”, “false”}↵
↵
```

One or more configuration parameters may be specified to change the configuration of the deck.

To change the current video input:

```
configuration: video input: {“SDI”, “HDMI”, “component”}↵
```

Valid video inputs may vary between models. To configure the current audio input:

```
configuration: audio input: {“embedded”, “XLR”, “RCA”}↵
```

Valid audio inputs may vary between models.

To configure the current file format:

```
configuration: file format: {File format}↵
```

Note that changes to the file format may require the deck to reset, which will cause the client connection to be closed. In such case, response code 213 will be returned (instead of 200) before the client connection is closed:

```
“213 deck rebooting”
```

Asynchronous configuration information change notification is disabled by default and may be configured with the “notify” command. When enabled, changes in configuration will generate a “511 configuration:” asynchronous message with the same parameters as the “211 configuration:” message.

Selecting active slot and video format

The "slot select" command instructs the deck to switch to a specified slot, or/and to select a specified output video format.

To switch to a specified slot:

```
slot select: slot id: {slot ID}↵
```

To switch to a disk device, including USB drives that are not yet made active:

```
slot select: device: {identifying name for disk device}↵
```

To select the output video format:

```
slot select: video format: {video format}↵
```

Either or all slot select parameters may be specified. Note that selecting video format will result in a rescan of the disk to reconstruct the timeline with all clips of the specified video format.

Clearing the current timeline

The "clips clear" command instructs the deck to empty the current timeline:

```
clips clear↵
```

The server responds with

```
200 ok↵
```

Adding a clip to the current timeline

The "clips add:" command instructs the deck to add a clip to the current timeline:

```
clips add: name: {clip name}↵
```

The server responds with

```
200 ok↵
```

or in case of error

```
1xx {error description}↵
```

Configuring the watchdog

The “watchdog” command instructs the deck to monitor the connected client and terminate the connection if the client is inactive for at least a specified period of time.

To configure the watchdog:

```
watchdog: period: {period in seconds}↵
```

To avoid disconnection, the client must send a command to the server at least every {period} seconds.
Note that if the period is set to 0 or less than 0, connection monitoring will be disabled.

Network Area Storage

On networks using multicast DNS the “nas discovered” command will list network servers the HyperDeck has discovered:

```
nas discovered↵
225 nas host info:
CloudStoreMini.local. CloudStoreMini
CloudStore80.local. CloudStore80
CloudStore320.local. CloudStore320
```

A network share can be added as a bookmark to the HyperDeck using ‘nas add’

```
nas add:
url: smb://CloudStore80.local/Studio1
```

For shares that require a username and password consider using the secure mode of the HyperDeck Ethernet protocol to avoid passwords being sent as plaintext.

```
nas add:
url: smb://192.168.1.1/Main
username: user1234
password: Password1234
```

A share can be made available for recording and playback using ‘nas select’. If a bookmark exists for that share, ‘nas select’ will use the credentials stored in the bookmark. Otherwise ‘nas select’ will connect using Guest credentials.

```
nas select:
url: smb://192.168.1.1/Main
```

Only one share can be mounted at a time using ‘nas select’.

You can query the currently selected nas share using the ‘nas selected’ command. If ‘notify: slot: true’ was used an asynchronous notification will be sent when the share is mounted.

HyperDeck Control REST API

Si vous êtes un développeur de logiciels, vous pouvez construire des applications personnalisées ou des outils prêts à l'emploi, tels que REST client ou Postman, pour contrôler et interagir de manière fluide avec les enregistreurs à disque HyperDeck via l'HyperDeck Control REST API. Cette API vous permet d'effectuer plusieurs opérations, comme démarrer ou arrêter les enregistrements, gérer la lecture, accéder aux informations des disques et bien plus. Que vous développiez une application sur-mesure ou que vous utilisiez des outils existants, cette API vous offre la possibilité de débloquer tout le potentiel de vos enregistreurs HyperDeck sans difficulté. Nous avons hâte de découvrir ce que vous allez développer !

Transport Control API

API for controlling Transport on Blackmagic Design products.

GET /transports/0

Get device's basic transport status.

Response

200 - Transport status.

The response is a JSON object.

Name	Type	Description
mode	string	Transport mode. Possible values are: InputPreview, InputRecord, Output.

PUT /transports/0

Set device's basic transport status.

Parameters

Name	Type	Description
mode	string	Transport mode. Possible values are: InputPreview, Output.

Response

204 - Transport mode was set.

GET /transports/0/stop

Determine if transport is stopped.

Response

200 - Transport stop response.

The response is a JSON object.

PUT /transports/0/stop

Stop transport. Deprecated, use POST /tranports/0/stop instead.

Response

204 - Transport stopped.

POST /transports/0/stop

Stop transport.

Response

204 - Transport stopped.

GET /transports/0/play

Determine if transport is playing.

Response

200 - Transport play response.
The response is a JSON object.

PUT /transports/0/play

Start playing on transport. Deprecated, use POST /tranports/0/play instead.

Response

204 - Transport playing.

POST /transports/0/play

Start playing on transport.

Response

204 - Transport playing.

GET /transports/0/playback

Get playback state.

Response

200 - OK
The response is a JSON object.

Name	Type	Description
type	string	Possible values are: Play, Jog, Shuttle, Var.
loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
speed	number	Playback Speed, 1.0 for normal forward playback
position	integer	Playback position on the timeline in units of video frames

PUT /transports/0/playback

Set playback state.

Parameters

Name	Type	Description
type	string	Possible values are: Play, Jog, Shuttle, Var.
loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
speed	number	Playback Speed, 1.0 for normal forward playback
position	integer	Playback position on the timeline in units of video frames

Response

204 - No Content

GET /transports/0/record

Get record state.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
recording	boolean	Is transport in Input Record mode

PUT /transports/0/record

Set record state. Deprecated, use POST /transports/0/record instead.

Parameters

Name	Type	Description
recording	boolean	Is transport in Input Record mode
clipName	string	Used to set the requested clipName to record to, when specifying “recording” attribute to True

Response

204 - Recording started.

POST /transports/0/record

Start recording.

Parameters

Name	Type	Description
clipName	string	Specific name of clip to record to.

Response

204 - Recording started.

GET /transports/0/clipIndex

Get the clip index of the currently playing clip on the timeline.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clipIndex	number	The 0-based index of the clip being played on the timeline. null when there is no timeline or an empty timeline.

GET /transports/0/timecode

Get device's timecode.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
display	string	The display timecode serialised as a string.
timeline	string	The timeline timecode serialised as a string.

GET /transports/0/timecode/source

Get timecode source selected on device

Response

200 - OK

The response is a JSON object.

Name	Type	Description
timecode	string	Possible values are: Timeline, Clip.

GET /transports/0/clip

Get clip information about the currently recording (or transferring) clip, if it exists

Response

200 - Information about the clip currently being recorded.

The response is a JSON object.

Name	Type	Description
clip	object	
clip.clipUniqueId	integer	Unique ID used to identify this clip
clip.filePath	string	Path to the file relative to the root of a mount
clip.fileSize	integer	Size of file on disk in bytes
clip.codecFormat	object	
clip.codecFormat.codec	string	Currently selected codec.
clip.codecFormat.container	string	Multimedia container format.
clip.videoFormat (required)	object	Video format configuration.
clip.videoFormat.name	string	Video format serialised as a string.
clip.videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
clip.videoFormat.height	number	Height dimension of video format.
clip.videoFormat.width	number	Width dimension of video format.
clip.videoFormat.interlaced	boolean	Is the display format interlaced?
clip.startTimecode	string	Start timecode of the clip serialised as string
clip.durationTimecode	string	Duration of the clip in timecode format serialised as string
clip.frameCount	integer	Number of frames in clip; duration of the clip in frames

System Control API

API for controlling the System Modes on Blackmagic Design products.

GET /system

Get device system information.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codecFormat	object	
codecFormat.codec	string	Currently selected codec.
codecFormat.container	string	Multimedia container format.
videoFormat (required)	object	Video format configuration.
videoFormat.name	string	Video format serialised as a string.
videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
videoFormat.height	number	Height dimension of video format.
videoFormat.width	number	Width dimension of video format.
videoFormat.interlaced	boolean	Is the display format interlaced?

GET /system/product

Get device product information.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
deviceName	string	Name of device as displayed in Setup
productName	string	Device's product name
softwareVersion	string	Software version running on device

GET /system/supportedCodecFormats

Get the list of supported codecs.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codecs	array	
codecs[i]	object	
codecs[i].codec	string	Currently selected codec.
codecs[i].container	string	Multimedia container format.

GET /system/codecFormat

Get the currently selected codec.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codec	string	Currently selected codec.
container	string	Multimedia container format.

PUT /system/codecFormat

Set the codec.

Parameters

Name	Type	Description
codec	string	Currently selected codec.
container	string	Multimedia container format.

Response

204 - The codec updated successfully.

GET /system/videoFormat

Get the currently selected video format.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
name	string	Video format serialised as a string.
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

PUT /system/videoFormat

Set the timeline video format. Deprecated, use PUT /timelines/0/videoFormat instead.

Parameters

This parameter can be one of the following types:

Name	Type	Description
name	string	Video format serialised as a string.

Name	Type	Description
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

Response

204 - The video format updated successfully.

400 - Invalid request.

409 - Operation unsupported in the current state.

Media Control API

API for controlling media devices in Blackmagic Design products.

GET /media/workingset

Get the list of media devices currently in the working set.

Response

200 - The list of media devices in the working set. Entries are null if there is no media device in that slot.

The response is a JSON object.

Name	Type	Description
size	integer	The fixed size of this device's working set
workingset (required)	array	
workingset[i]	object	
workingset[i].index	integer	Index of this media in the working set
workingset[i].activeDisk	boolean	Is this current item the active disk
workingset[i].volume	string	Volume name
workingset[i].deviceName	string	Internal device name of this media device
workingset[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
workingset[i].totalSpace	integer	Total space on media device in bytes
workingset[i].remainingSpace	integer	Remaining space on media device in bytes
workingset[i].clipCount	integer	Number of clips currently on the device

GET /media/active

Get the currently active media device.

Response

200 - The current active media device.

The response is a JSON object.

Name	Type	Description
workingsetIndex	integer	Working set index of the active media device
deviceName	string	Internal device name of this media device

204 - No media is currently active

PUT /media/active

Set the currently active media device.

Parameters

Name	Type	Description
workingsetIndex	integer	Working set index of the media to become active

Response

204 - The active media device was set successfully.

400 - Setting the currently active media device is not possible in the current state.

GET /media/devices/doformatSupportedFilesystems

Get the list of filesystems available to format the device.

Response

200 - The list of filesystems permitted for formatting.

The response is a JSON object.

GET /media/devices/{deviceName}

Get information about a requested device.

Parameters

Name	Type	Description
{deviceName}	string	

Response

200 - Information about the requested device.

The response is a JSON object.

Name	Type	Description
state	string	The current state of the media device. Possible values are: None, Scanning, Mounted, Uninitialised, Formatting, RaidComponent.

400 - Invalid device name

404 - Device not found

GET /media/devices/{deviceName}/doformat

Get a format key, used to format the device with a PUT request.

Parameters

Name	Type	Description
{deviceName}	string	

Response

200 - Format prepared

The response is a JSON object.

Name	Type	Description
deviceName	string	Internal device name of this media device
key	string	The key used to format this device, it must be fetched with the GET request and then provided back with a PUT request

400 - Cannot format the device

404 - Device not found

PUT /media/devices/{deviceName}/doformat

Perform a format of the media device.

Parameters

Name	Type	Description
{deviceName}	string	

Name	Type	Description
key	string	The key used to format this device, it must be fetched with the GET request and then provided back with a PUT request
filesystem	string	Filesystem to format to. GET doFormatSupportedFilesystems returns list of supported filesystems.
volume	string	Volume name to set for the disk after format

Response

204 - Format successful

400 - Cannot format the device, invalid filesystem or key

404 - Device not found

Timeline Control API

API for controlling playback timeline.

GET /timelines/0

Get the playback timeline.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clips	array	
clips[i]	object	
clips[i].clipUniqueId	integer	Unique identifier used to identify this media clip. If the same media clip is added to the timeline multiple times, each timeline clip has the same clipUniqueId
clips[i].frameCount	integer	Duration of timeline clip in frames, the number of frames in this clip on the timeline
clips[i].durationTimecode	string	Duration of the timeline clip in timecode format serialised as string. This will differ to durationTimecode reported in /clips for this clipUniqueId if clipIn or frameCount was specified when adding this clip to the timeline.
clips[i].clipIn	string	In frame offset for the clip on the timeline, where 0 is the first frame of the on-disk clip
clips[i].inTimecode	string	Clip timecode of the first frame of this timeline clip serialised as string (clip startTimecode + clipIn frames)
clips[i].timelineIn	string	Timeline position of the first frame of this clip, where 0 is the first frame of the timeline
clips[i].timelineInTimecode	string	Timeline timecode of the first frame of this timeline clip serialised as string

Response

404 - No timeline / disk available.

DELETE /timelines/0

Clear the current playback timeline. Deprecated, prefer to use POST /timelines/0/clear

Response

204 - The timeline was cleared.

POST /timelines/0

Add a clip to the timeline.

Parameters

Name	Type	Description
insertBefore	integer	Clip(s) will be inserted before this timeline clip index. If omitted, inserts to the end of the timeline. 0 inserts to the beginning of the timeline.
clips		

Response

204 - The clip was added to the timeline as specified.

POST /timelines/0/add

Add a clip to the end of the timeline. Deprecated, use POST /timelines/0 to add clips within the timeline.

Parameters

This parameter can be one of the following types:

Name	Type	Description
clips	integer	Unique ID (clipUniqueId) of the clip to add to the timeline

Name	Type	Description
clips	array	
clips[i]	integer	Unique ID (clipUniqueId) of the clip to add to the timeline

Response

204 - The clip was added to the end of the timeline.

DELETE /timelines/0/clear

Clear the playback timeline.

Response

204 - The timeline was cleared.

DELETE /timelines/0/clips/{timelineClipIndex}

Remove the specified clip from the timeline.

Parameters

Name	Type	Description
{timelineClipIndex}	integer	

Response

204 - The specified clip was removed from the timeline.

Event Control API

API For working with built-in websocket.

GET /event/list

Get the list of events that can be subscribed to using the websocket API.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
events	array	
events[i]	string	List of events that can be subscribed to using the websocket API

Clips Control API

API for listing clips on disk.

GET /clips

Get the list of clips on the active disk.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clips	array	
clips[i]	object	
clips[i].clipUniqueId	integer	Unique ID used to identify this clip
clips[i].filePath	string	Path to the file relative to the root of a mount
clips[i].fileSize	integer	Size of file on disk in bytes
clips[i].codecFormat	object	
clips[i].codecFormat.codec	string	Currently selected codec.
clips[i].codecFormat.container	string	Multimedia container format.
clips[i].videoFormat (required)	object	Video format configuration.
clips[i].videoFormat.name	string	Video format serialised as a string.
clips[i].videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
clips[i].videoFormat.height	number	Height dimension of video format.
clips[i].videoFormat.width	number	Width dimension of video format.
clips[i].videoFormat.interlaced	boolean	Is the display format interlaced?
clips[i].startTimecode	string	Start timecode of the clip serialised as string
clips[i].durationTimecode	string	Duration of the clip in timecode format serialised as string
clips[i].frameCount	integer	Number of frames in clip; duration of the clip in frames

Response

404 - There is no active disk

HyperDeck Control API

API for controlling HyperDecks.

POST /system/reboot

Reboots the device.

Response

204 - The device will reboot immediately.

409 - Rebooting is not possible in the current state.

GET /system/uptime

Gets the current system uptime.

Response

200 - The current system uptime

The response is a JSON object.

Name	Type	Description
uptimeSeconds	integer	The system uptime in seconds

PUT /system/identify

Sets the identify mode. If set to true, will exit identify mode after 10 seconds.

Parameters

Name	Type	Description
enabled	boolean	Is the device identifying itself?

Response

204 - Identify updated successfully.

GET /transports/0/recordCache

Gets information about the recording cache.

Response

200 - Current information about the recording cache

The response is a JSON object.

Name	Type	Description
status	string	The current status of the cache. “none” means no cache is detected by the device. Possible values are: undetected, unformatted, idle, transferring, queued, recording, disabled.
remainingRecordingTime	integer	The remaining recording time in seconds.
transferringDevice	string	The device name of the disk the cache is currently transferring to.

GET /transports/0/recordCache/enabled

Checks if the record cache is enabled.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
enabled	boolean	Is the record cache enabled?

PUT /transports/0/recordCache/enabled

Enables or disables the record cache. Has no effect if cache is not supported / installed / formatted.

Parameters

Name	Type	Description
enabled	boolean	Is the record cache enabled?

Response

204 - Record cache enabled / disabled was changed.

GET /transports/0/record/spillOrder

Gets media devices in order of which will next be spilled to.

Response

200 - The media device spill order

The response is a JSON object.

Name	Type	Description
devices	array	
devices[i]	object	
devices[i].deviceName	string	Internal device name of the drive.

POST /transports/0/record/spillToNewFile

Spills to a new file.

Response

204 - Spilled to a new file.

POST /transports/0/record/spillToNextDevice

Spills to the next media device

Response

204 - Spilled to the specified drive.

GET /transports/0/inputVideoFormat

Gets the video format of the input video signal.

Response

200 - The video format of the input video signal. “inputVideoFormat” is null when there is no timeline.

The response is a JSON object.

Name	Type	Description
inputVideoFormat (required)	object	Video format configuration.
inputVideoFormat.name	string	Video format serialised as a string.
inputVideoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
inputVideoFormat.height	number	Height dimension of video format.
inputVideoFormat.width	number	Width dimension of video format.
inputVideoFormat.interlaced	boolean	Is the display format interlaced?

GET /transports/0/supportedInputVideoSources

Gets the currently supported input video signal sources.

Response

200 - The supported input video signal sources.

The response is a JSON object.

Name	Type	Description
supportedInputVideoSources	array	
supportedInputVideoSources[i]	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

GET /transports/0/inputVideoSource

Gets the source of the input video signal.

Response

200 - The input video signal source. The source will be one in the list from GET /transports/0/supportedInputVideoSources.

The response is a JSON object.

Name	Type	Description
inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

PUT /transports/0/inputVideoSource

Sets the source of the input video signal.

Parameters

Name	Type	Description
inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

Response

204 - The source of the input video signal was set successfully.

400 - The source specified was invalid or unsupported.

GET /timelines/0/playRange

Gets the current timeline play range. playRange is null if playing the whole timeline, or there is no play range.

Response

200 - The current timeline play range.

The response is a JSON object.

Name	Type	Description
playRange		

PUT /timelines/0/playRange

Sets the timeline play range.

Parameters

Name	Type	Description
playRange		

Response

204 - The timeline play range was set successfully.

POST /timelines/0/playRange/clear

Clears the timeline play range, sets the play range to be the whole timeline.

Response

204 - The timeline play range was cleared successfully.

GET /timelines/0/videoFormat

Gets the video format of the timeline.

Response

200 - The video format of the timeline. “videoFormat” is null when there is no timeline.

The response is a JSON object.

Name	Type	Description
videoFormat (required)	object	Video format configuration.
videoFormat.name	string	Video format serialised as a string.
videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
videoFormat.height	number	Height dimension of video format.
videoFormat.width	number	Width dimension of video format.
videoFormat.interlaced	boolean	Is the display format interlaced?

PUT /timelines/0/videoFormat

Sets the video format of the timeline.

Parameters

This parameter can be one of the following types:

Name	Type	Description
name	string	Video format serialised as a string.

Name	Type	Description
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

Response

204 - The timeline video format was set successfully.

400 - The requested video format was invalid.

409 - The video format cannot be changed at this time.

POST /timelines/0/rebuild

Rebuilds the timeline with default rules in the current timeline format.

Response

204 - The timeline was rebuilt with default rules.

GET /media/external

Gets the list of present external media devices.

Response

200 - The list of present external media devices

The response is a JSON object.

Name	Type	Description
devices	array	
devices[i] (required)	object	
devices[i].volume	string	Volume name
devices[i].deviceName	string	Internal device name of this media device
devices[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
devices[i].totalSpace	integer	Total space on media device in bytes
devices[i].remainingSpace	integer	Remaining space on media device in bytes
devices[i].clipCount	integer	Number of clips currently on the device

GET /media/external/selected

Gets the current selected external media device.

Response

200 - The selected external media device

The response is a JSON object.

Name	Type	Description
selected	object	
selected.deviceName	string	Internal device name of the drive.

404 - No selected external media has been selected

PUT /media/external/selected

Sets the current selected external media device.

Parameters

Name	Type	Description
selected	object	
selected.deviceName	string	Internal device name of the drive.

Response

204 - The selected external media device was set successfully.

GET /media/nas/discovered

Gets the NAS hosts discoverable by the device.

Response

200 - The list of discovered NAS hosts

The response is a JSON object.

Name	Type	Description
hosts	array	
hosts[i]	object	
hosts[i].hostName	string	The hostname of the NAS host
hosts[i].friendlyName	string	The friendly name of the NAS host
hosts[i].ip	string	The IP address of the NAS host

GET /media/nas/bookmarks

Gets all NAS share bookmarks.

Response

200 - The list of NAS share bookmarks

The response is a JSON object.

Name	Type	Description
hosts	array	
hosts[i] (required)	object	
hosts[i].url	string	URL of the NAS share

POST /media/nas/bookmarks

Add a new NAS share bookmarks.

Parameters

Response

204 - The NAS bookmark was added successfully.

400 - The NAS bookmark could not be added.

GET /media/nas/bookmarks/{url}

Get information about a requested network share bookmark.

Parameters

Name	Type	Description
{url}	string	

Response

200 - Information about the requested network share bookmark.

The response is a JSON object.

Name	Type	Description
url	string	URL of the NAS share

404 - Network share bookmark not found

PUT /media/nas/bookmarks/{url}

Adds a bookmark with the requested URL.

Parameters

Name	Type	Description
{url}	string	

Name	Type	Description
username	string	Default value is: guest.
password	string	

Response

204 - The NAS bookmark has been created.

400 - The NAS bookmark could not be created.

DELETE /media/nas/bookmarks/{url}

Deletes a bookmark with the requested URL.

Parameters

Name	Type	Description
{url}	string	

Response

204 - The NAS bookmark has been deleted.

GET /media/nas/selected

Gets the currently selected share bookmark.

Response

200 - Information about the selected network share bookmark.

The response is a JSON object.

Name	Type	Description
selected	object	
selected.url	string	URL of the NAS share

404 - No NAS drive has been selected.

PUT /media/nas/selected

Sets the selected share bookmark to the requested bookmark, or clears the bookmark.

Parameters

Name	Type	Description
selected	object	
selected.url	string	URL of the NAS share

Response

204 - The selected NAS bookmark was set.

400 - The selected NAS bookmark could not be set.

Notification websocket - 1.0.0

Service that notifies subscribers of device state changes.

messages

Subscribe (The messages from the server/device)

Response Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: subscribe, unsubscribe, listSubscriptions, listProperties, websocketOpened .
.data.properties	array	
.data.properties[i]	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.values	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.data.success	boolean	
.type	string	Possible values are: response .
.id	number	Optional parameter that repeats the id in the output for tracking messages

Event Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: propertyValueChanged .
.data.property	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.value	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.type	string	Possible values are: event .

Publish (The messages that user can send to the server/device)

Response Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: subscribe, unsubscribe, listSubscriptions, listProperties, websocketOpened .
.data.properties	array	
.data.properties[i]	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.values	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.data.success	boolean	
.type	string	Possible values are: response .
.id	number	Optional parameter that repeats the id in the output for tracking messages

Device Properties

/media/workingset

The value JSON returned via the eventResponse when the /media/workingset property changes on the device:

Name	Type	Description
size	integer	The fixed size of this device's working set
workingset (required)	array	
workingset[i]	object	
workingset[i].index	integer	Index of this media in the working set
workingset[i].activeDisk	boolean	Is this current item the active disk
workingset[i].volume	string	Volume name
workingset[i].deviceName	string	Internal device name of this media device
workingset[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
workingset[i].totalSpace	integer	Total space on media device in bytes
workingset[i].remainingSpace	integer	Remaining space on media device in bytes
workingset[i].clipCount	integer	Number of clips currently on the device

/media/active

The value JSON returned via the eventResponse when the /media/active property changes on the device:

Name	Type	Description
.workingsetIndex	integer	Working set index of the active media device
.deviceName	string	Internal device name of this media device

/system

The value JSON returned via the eventResponse when the /system property changes on the device:

Name	Type	Description
.codecFormat	object	Currently selected codec
.codecFormat.codec	string	Currently selected codec
.codecFormat.container	string	Multimedia container format
.videoFormat	string	Name of the video format

/system/codecFormat

Currently selected codec

The value JSON returned via the eventResponse when the /system/codecFormat property changes on the device:

Name	Type	Description
.codec	string	Currently selected codec
.container	string	Multimedia container format

/system/videoFormat

Name of the video format

The value JSON returned via the eventResponse when the /system/videoFormat property changes on the device:

Name	Type	Description

/timelines/0

The value JSON returned via the eventResponse when the /timelines/0 property changes on the device:

Name	Type	Description
.clips	array	
.clips[i]	object	
.clips[i].clipUniqueId	integer	Unique identifier used to identify this media clip. If the same media clip is added to the timeline multiple times, each timeline clip has the same clipUniqueId
.clips[i].frameCount	integer	Duration of timeline clip in frames, the number of frames in this clip on the timeline
.clips[i].durationTimecode	string	Duration of the timeline clip in timecode format serialised as string. This will differ to durationTimecode reported in /clips for this clipUniqueId if clipIn or frameCount was specified when adding this clip to the timeline.
.clips[i].clipIn	string	In frame offset for the clip on the timeline, where 0 is the first frame of the on-disk clip
.clips[i].inTimecode	string	Clip timecode of the first frame of this timeline clip serialised as string (clip startTimecode + clipIn frames)
.clips[i].timelineIn	string	Timeline position of the first frame of this clip, where 0 is the first frame of the timeline
.clips[i].timelineInTimecode	string	Timeline timecode of the first frame of this timeline clip serialised as string

/transports/0

The value JSON returned via the eventResponse when the /transports/0 property changes on the device:

Name	Type	Description
.mode	string	Transport mode Possible values are: InputPreview, InputRecord, Output .

/transports/0/stop

true when transport mode is InputPreview or when in Output mode and speed is 0

The value JSON returned via the eventResponse when the /transports/0/stop property changes on the device:

Name	Type	Description

/transports/0/play

True when transport is in Output mode and speed is non-zero

The value JSON returned via the eventResponse when the /transports/0/play property changes on the device:

Name	Type	Description

/transports/0/playback

The value JSON returned via the eventResponse when the /transports/0/playback property changes on the device:

Name	Type	Description
.type	string	Possible values are: Play, Jog, Shuttle, Var .
.loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
.singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
.speed	number	Playback speed, 1.0 for normal forward playback
.position	integer	Playback position on the timeline in units of video frames

/transports/0/record

The value JSON returned via the eventResponse when the /transports/0/record property changes on the device:

Name	Type	Description
.recording	boolean	Is transport in Input Record mode

/transports/0/timecode

The value JSON returned via the eventResponse when the /transports/0/timecode property changes on the device:

Name	Type	Description
display	string	The display timecode serialised as a string.
timeline	string	The timeline timecode serialised as a string.

/transports/0/timecode/source

The value JSON returned via the eventResponse when the /transports/0/timecode/source property changes on the device:

Name	Type	Description
.timecode	string	Possible values are: Timeline, Clip .

/transports/0/clipIndex

The value JSON returned via the eventResponse when the /transports/0/clipIndex property changes on the device:

Name	Type	Description
.clipIndex	number	The 0-based index of the clip being played on the timeline. null when there is no timeline or an empty timeline.

/media/external

The value JSON returned via the eventResponse when the /media/external property changes on the device:

Name	Type	Description
.volume	string	Volume name
.deviceName	string	Name of media device
.remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
.totalSpace	integer	Total space on media device in bytes
.remainingSpace	integer	Remaining space on media device in bytes
.clipCount	integer	Number of clips currently on the device

/media/external/selected

The value JSON returned via the eventResponse when the /media/external/selected property changes on the device:

Name	Type	Description
.deviceName	string	Internal device name of this media device

/transports/0/inputVideoSource

The value JSON returned via the eventResponse when the /transports/0/inputVideoSource property changes on the device:

Name	Type	Description
.inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite .

/transports/0/inputVideoFormat

The value JSON returned via the eventResponse when the /transports/0/inputVideoFormat property changes on the device:

Name	Type	Description
.inputVideoFormat	string	Name of the video format

/timelines/0/videoFormat

The value JSON returned via the eventResponse when the /timelines/0/videoFormat property changes on the device:

Name	Type	Description
.videoFormat	string	Name of the video format

/media/nas/discovered

The value JSON returned via the eventResponse when the /media/nas/discovered property changes on the device:

Name	Type	Description
.hostName	string	Hostname of external network drive
.friendlyName	string	Name of external network drive
.ip	string	IP Address of external network drive

/media/nas/bookmarks

The value JSON returned via the eventResponse when the /media/nas/bookmarks property changes on the device:

Name	Type	Description
.hosts	array	
.hosts[i]	object	
.hosts[i].url	string	URL associated with bookmark

Assistance

Obtenir de l'assistance

Le moyen le plus rapide d'obtenir de l'aide est d'accéder aux pages d'assistance en ligne de Blackmagic Design et de consulter les dernières informations de support concernant votre enregistreur à disque HyperDeck de Blackmagic.

Pages d'assistance en ligne de Blackmagic Design

Les dernières versions du manuel, du logiciel et des notes d'assistance peuvent être consultées sur la page d'assistance technique de Blackmagic Design : www.blackmagicdesign.com/fr/support.

Forum Blackmagic Design

Le forum Blackmagic Design est une source d'information utile qui offre des idées innovantes pour vos productions. Cette plateforme d'aide vous permettra également d'obtenir des réponses rapides à vos questions, car un grand nombre de sujets peuvent avoir déjà été abordés par d'autres utilisateurs. Pour vous rendre sur le forum : http://forum.blackmagicdesign.com

Contacter le service d'assistance de Blackmagic Design

Si vous ne parvenez pas à trouver l'aide dont vous avez besoin dans les pages d'assistance ou sur notre forum, veuillez utiliser l'option « Envoyez-nous un email », accessible sur la page d'assistance pour envoyer une demande d'aide par email. Vous pouvez également cliquer sur le bouton « Trouver un support technique » situé sur la page d'assistance et ainsi contacter le centre d'assistance technique Blackmagic Design le plus proche de chez vous.

Vérification du logiciel actuel

Pour vérifier quelle version du logiciel Blackmagic HyperDeck est installée sur votre ordinateur, ouvrez la fenêtre intitulée About Blackmagic HyperDeck Setup.

- Sur Mac OS, ouvrez le logiciel Blackmagic HyperDeck Setup dans le dossier Applications. Sélectionnez About Blackmagic HyperDeck Setup dans le menu d'application pour connaître le numéro de version.
- Sur Windows, ouvrez l'utilitaire Blackmagic HyperDeck Setup dans votre menu de Démarrage ou sur l'écran de Démarrage. Cliquez sur le menu Aide et sélectionnez About Blackmagic HyperDeck Setup pour connaître le numéro de version.

Comment obtenir les dernières mises à jour du logiciel

Après avoir vérifié quelle version du logiciel Blackmagic HyperDeck Setup est installée sur votre ordinateur, veuillez vous rendre au centre de support technique Blackmagic Design à l'adresse suivante : www.blackmagicdesign.com/fr/support pour vérifier les dernières mises à jour. Même s'il est généralement conseillé d'exécuter les dernières mises à jour, il est prudent d'éviter d'effectuer une mise à jour logicielle au milieu d'un projet important.

Avertissements

Élimination des déchets d'équipements électriques et électroniques au sein de l'Union européenne.



Le symbole imprimé sur ce produit indique qu'il ne doit pas être jeté avec les autres déchets. Cet appareil doit être déposé dans un point de collecte agréé pour être recyclé. La collecte individuelle et le recyclage de votre équipement permettra de préserver les ressources naturelles et garantit un recyclage approprié afin d'éviter la contamination de l'environnement par des substances dangereuses pour la santé. Pour obtenir plus d'informations sur les points de collecte pour recycler votre appareil, veuillez contacter l'organisme responsable du recyclage dans votre région ou le revendeur du produit.



Cet équipement a été testé et déclaré conforme aux limites imposées aux appareils numériques de classe A, en vertu du chapitre 15 des règles de la FCC. Ces limites ont pour objectif d'assurer une protection suffisante contre les interférences nuisibles lorsque l'équipement est utilisé dans un environnement commercial. Cet équipement génère, utilise et peut dégager de l'énergie de radiofréquence et, s'il n'est pas installé et utilisé conformément au manuel d'utilisation, peut provoquer un brouillage préjudiciable aux communications radio. L'utilisation de cet équipement en zone résidentielle est susceptible de provoquer des interférences nuisibles, auquel cas il sera demandé à l'utilisateur de corriger ces interférences à ses frais.

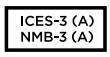
L'utilisation de cet appareil est soumise aux deux conditions suivantes :

1. Cet appareil ne doit pas causer d'interférences nuisibles.
2. Cet appareil doit accepter toute interférence reçue, notamment celles pouvant entraîner un dysfonctionnement.



R-R-BMD-20211410001

Déclaration de ISDE Canada



Cet appareil est conforme aux normes canadiennes relatives aux appareils numériques de Classe A.

Toute modification ou utilisation de ce produit en dehors de son utilisation prévue peut annuler la conformité avec ces normes.

Les connexions aux interfaces HDMI doivent être effectuées avec des câbles HDMI blindés d'excellente qualité.

Cet équipement a été testé pour être en conformité avec une utilisation prévue dans un environnement commercial. Si cet équipement est utilisé dans un environnement domestique, il peut provoquer des interférences radio.

Informations de sécurité

Ce produit peut être utilisé dans un climat tropical lorsque la température ambiante n'excède pas 40°C.

Veillez à ce que l'espace autour du produit soit suffisant afin de ne pas compromettre la ventilation.

Les pièces de cet appareil ne sont pas réparables par l'opérateur. Toute opération d'entretien doit être effectuée par un centre de service Blackmagic Design.



Cet appareil ne peut être utilisé qu'à une altitude inférieure à 2000 mètres.

Déclaration de l'État de Californie

Ce produit est susceptible de vous exposer à des produits chimiques, dont des traces de polybromobiphényle dans les parties en plastique, reconnu par l'État de Californie comme étant responsable de cancers, d'anomalies congénitales ou d'autres effets nocifs sur la reproduction.

Pour de plus amples informations, veuillez vous rendre sur www.P65Warnings.ca.gov.

European Office

Blackmagic Design B.V, Amsterdam
Sloterdijk Teleport Towers Office 2.17,
Kingsfordweg 151,
Amsterdam, 1043GR.

Garantie

Garantie limitée à 12 mois

Par la présente, Blackmagic Design garantit que ce produit sera exempt de défauts matériels et de fabrication pendant une durée d'un an à compter de la date d'achat. Si un produit s'avère défectueux pendant la période de garantie, Blackmagic Design peut, à sa seule discrétion, réparer le produit défectueux sans frais pour les pièces et la main-d'œuvre, ou le remplacer.

Pour se prévaloir du service offert en vertu de la présente garantie, il vous incombe d'informer Blackmagic Design de l'existence du défaut avant expiration de la période de garantie, et de prendre les mesures nécessaires pour l'exécution des dispositions de ce service. Le consommateur a la responsabilité de s'occuper de l'emballage et de l'expédition du produit défectueux au centre de service nommément désigné par Blackmagic Design, en frais de port prépayé. Il incombe au Consommateur de payer tous les frais de transport, d'assurance, droits de douane et taxes et toutes autres charges relatives aux produits qui nous auront été retournés et ce, quelle que soit la raison.

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Juli 2024

Installations- und Bedienungsanleitung

Blackmagicdesign

HyperDeck Shuttle HD



HyperDeck Shuttle HD



Willkommen

Vielen Dank, dass Sie sich zum Kauf eines Blackmagic HyperDeck Shuttle HD Rekorders entschieden haben.

Mit der Entwicklung der originalen Blackmagic HyperDeck Rekorder wollten wir die Aufzeichnung und Wiedergabe von Video mithilfe von SSD-Speichern vereinfachen. Heute freuen wir uns, Ihnen den HyperDeck Shuttle HD vorzustellen.

Der HyperDeck Shuttle HD ist ein kleiner, portabler HDMI-Videorekorder für den Einsatz auf Ihrem Schreibtisch. Ein großer Suchlaufregler und vertraute Transportsteuerelemente gestatten Ihnen die Bedienung mit einer Hand. Darum ist der HyperDeck Shuttle HD der ideale Gefährte für Liveproduktionen mit einem ATEM Mini Mischer. Sie können den HyperDeck Shuttle HD sogar als Teleprompter verwenden.

Der HyperDeck Shuttle HD zeichnet in ProRes-, DNxHD- oder H.264-Codecs auf SD-Karten oder externe Flash-Laufwerke auf und unterstützt damit die Aufzeichnung und Wiedergabe in Blitzgeschwindigkeit.

Bitte sehen Sie auf der Support-Seite unter www.blackmagicdesign.com/de nach der aktuellsten Version dieser Bedienungsanleitung sowie nach Updates für die HyperDeck Software. Halten Sie Ihre Produktsoftware stets auf dem aktuellsten Stand und sichern Sie sich so Zugang zu den neuesten Features. Bitte registrieren Sie sich beim Herunterladen der Software mit Ihren Kontaktdaten, damit wir Sie über neu veröffentlichte Versionen informieren können. Wir arbeiten ständig an neuen Features und Verbesserungen und würden uns über eine Rückmeldung von Ihnen freuen.



Grant Petty CEO Blackmagic Design

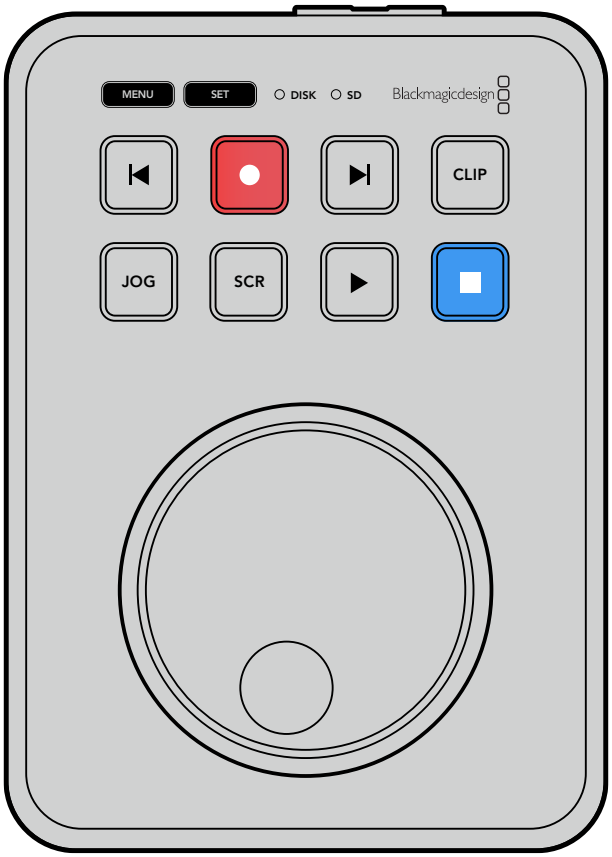
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Erste Schritte

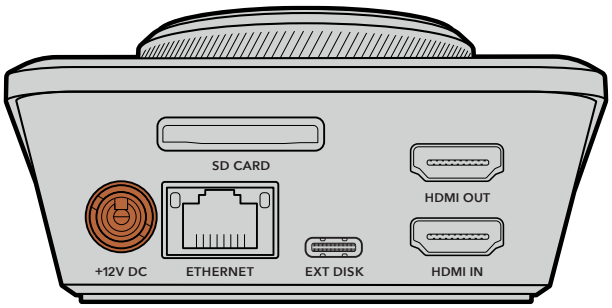
Die ersten Schritte mit Ihrem HyperDeck Shuttle HD sind einfach: Strom anschließen, eine HDMI-Videoquelle verbinden, eine SD-Karte einführen oder einen externen Datenträger anschließen und die Aufnahmetaste drücken.

Dieser Abschnitt des Handbuchs erklärt, wie Sie Ihren HyperDeck Shuttle HD in Betrieb nehmen.



Anschließen an das Stromnetz

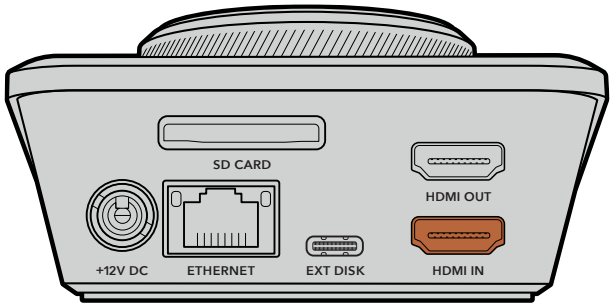
Um Ihren HyperDeck Shuttle HD mit Strom zu versorgen, stecken Sie das mitgelieferte Netzteil in die Strombuchse an der Rückseite. Festziehen der Verriegelung sichert das Kabel, um versehentliche Stromunterbrechungen zu verhindern.



Sichern Sie das Netzteil an der Strombuchse des HyperDeck Shuttle HD

Anschließen von Video- und Audiogeräten

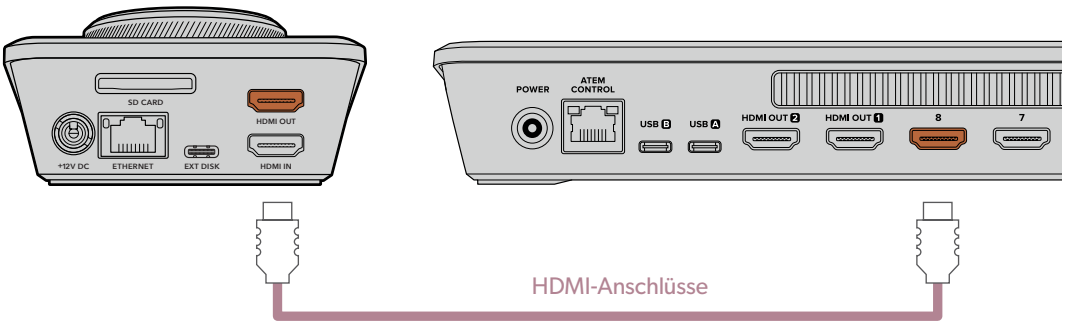
Um ein Videogerät mit Ihrem HyperDeck Shuttle HD zu verbinden, schließen Sie die HDMI-Videoquelle an den HDMI-Eingang an der Rückseite an.



Schließen Sie Ihr Ausgabegerät an den HDMI-Ausgang an. Dies könnte bspw. ein ATEM Mini Mischer oder ein HDMI-Fernseher sein.

Der HDMI-Ausgang dient auch zum Sichten des Einstellungsmenüs beim Ändern von Einstellungen für Ihren HyperDeck. Das Einstellungsmenü wird über die HDMI-Ausgabe als Video-Overlay eingeblendet. Weitere Informationen zu den Menü-Einstellungen finden Sie im Abschnitt „Ändern von Einstellungen“ weiter hinten in diesem Handbuch.

TIPP Sollte Ihre Videoeingabe nicht auf dem angeschlossenen Bildschirm erscheinen, kann es sein, dass sich das Gerät im Wiedergabemodus befindet. Drücken Sie die Aufnahmetaste, um den Aufzeichnungsmodus zu aktivieren.



Verbinden Sie den HDMI-Ausgang mit Ihrem Ausgabegerät, wie einem HDMI-Fernseher oder ATEM Mini Mischer

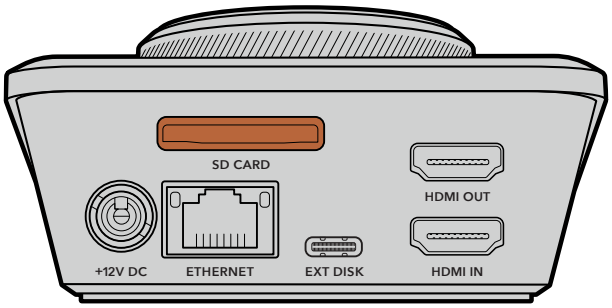
Anschließen von Datenträgern

Alle HyperDeck Shuttle HD Rekorder werden einsatzbereit ausgeliefert und erfordern keine vorherige Konfiguration. Sie benötigen lediglich eine formatierte SD-Karte oder ein externes Laufwerk.

Datenträger lassen sich mühelos über die Menü-Einstellungen formatieren. Sie können dies aber auch auf Ihrem Computer tun. Einzelheiten finden Sie im Abschnitt „Formatieren von Datenträgern“ in diesem Handbuch. Das Handbuch enthält auch Empfehlungen zu den für Videoaufzeichnungen bestgeeigneten Datenträgertypen sowie eine Liste mit empfohlenen SD-Karten und externen Laufwerken.

So führen Sie eine SD-Karte ein:

1 Halten Sie die SD-Karte mit den goldfarbenen Kontakten auf den SD-Kartenschacht ausgerichtet. Schieben Sie die Karte vorsichtig in den Schacht, bis sie in der richtigen Position einrastet.



2 Ihre SD-Karte wird nun vom HyperDeck geprüft. Ein grüner SD-Indikator oben am HyperDeck Shuttle HD zeigt dies an. Nach der Überprüfung erlischt der Indikator.



Das ist schon alles, was für die Inbetriebnahme Ihres HyperDeck Shuttle HD erforderlich ist. Er ist nun aufzeichnungs- und wiedergabebereit.

Näheres zur Aufzeichnung und Wiedergabe von Clips, zum Ändern von Einstellungen und ähnlichem erhalten Sie im weiteren Verlauf des Handbuchs.

Aufzeichnen von Video

Nachdem Sie sich vergewissert haben, dass Ihre Videoquelle auf dem HDMI-Ausgabegerät angezeigt wird, können Sie sofort aufzeichnen.

Starten Sie die Aufzeichnung durch Drücken der Aufnahmetaste. Beim Aufzeichnen auf eine SD-Karte leuchtet der SD-Indikator rot und die Aufnahme- und Wiedergabetasten leuchten ebenfalls. Beim Aufzeichnen auf ein externes Laufwerk leuchtet der DISK-Indikator rot.

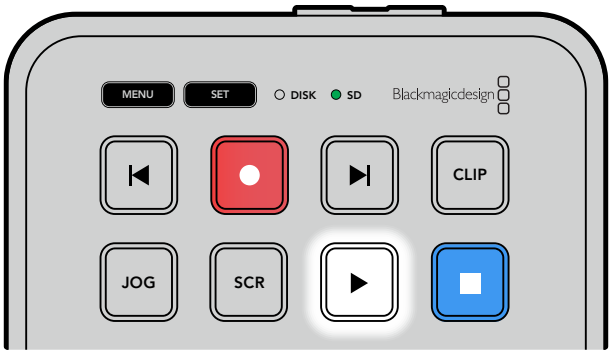


Beenden Sie die Aufzeichnung durch Drücken der Stopptaste.

Wiedergabe

Drücken Sie die Wiedergabetaste, um Video abzuspielen. Während der Wiedergabe leuchtet die Aufnahmetaste. Zudem leuchtet der DISK- oder der SD-Medienschachtindikator grün.

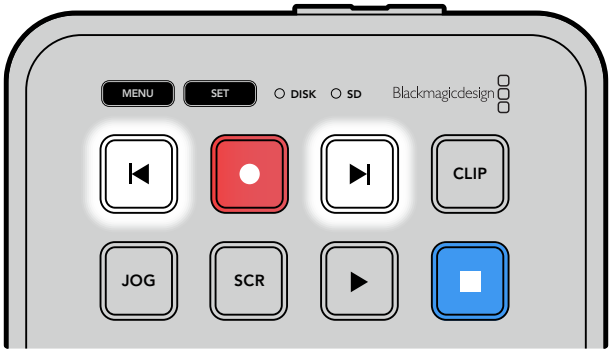
Wenn mehrere Clips aufgezeichnet wurden, können Sie mit den Vor- und Rücklauftasten zügig durch die Clips navigieren.



Verwenden der Vor- und Rücklauftasten

Drücken Sie die Rücklauftaste, um zum Anfang des Clips zu cuen. Durch mehrmaliges Drücken navigieren Sie rückwärts durch zuvor aufgezeichnete Clips.

Drücken Sie die Vorlauftaste, um vorwärts durch Ihre Clips zu navigieren. Die Vor- und Rücklauftasten blinken, wenn im HyperDeck Setup Dienstprogramm das Kontrollkästchen „Identify HyperDeck“ ausgewählt wurde.



Mit den Vor- und Rücklauftasten cuen Sie an den Anfang von Clips

TIPP Um Videodateien auf Ihrem HyperDeck abzuspielen, wählen Sie den Codec, in dem die Dateien aufgezeichnet wurden. Das geht über das Menü. Näheres finden Sie im Abschnitt „Ändern von Einstellungen“ in diesem Handbuch.

Loopen von Clips

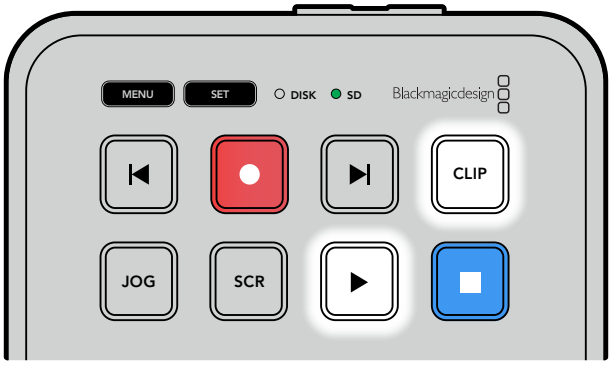
Erneutest Drücken der Wiedergabetaste während der Wiedergabe loopt alle Clips auf dem HyperDeck Shuttle HD, bis Sie die Stopptaste drücken.

Wenn Sie einen einzelnen Clip in Schleife abspielen möchten, stellen Sie Ihren HyperDeck auf den Clipmodus ein. Drücken Sie die Wiedergabetaste zum Abspielen eines Clips einmal, und erneut, um ihn zu loopen.

Alle Clips loopen	Drücken Sie die Wiedergabetaste während der Wiedergabe ein zweites Mal, um alle aufgezeichneten Clips in Schleife abzuspielen.
Aktuellen Clip loopen	Drücken Sie die Wiedergabetaste im Clipmodus ein zweites Mal, um den aktuellen Clip in Schleife abzuspielen.

Clipmodus

Im Clipmodus beschränkt sich die Wiedergabe auf einen einzelnen Clip. Ist der Clipmodus aktiviert, können Sie bspw. spulen oder zu einem anderen Clip springen, und wenn Sie dann die Wiedergabetaste drücken, stoppt die Wiedergabe am Ende des Clips.



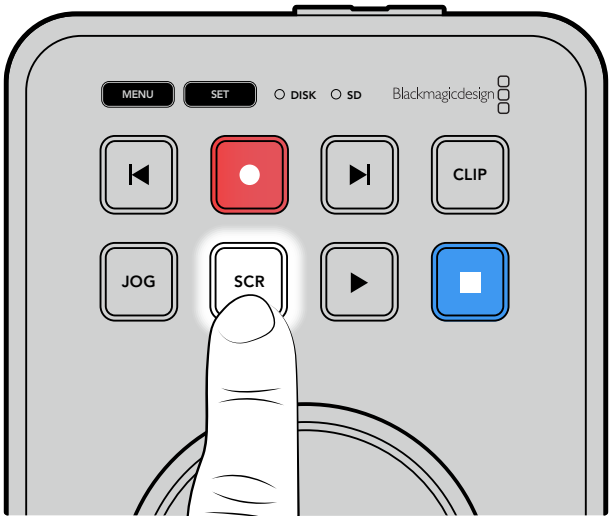
Erneutes Drücken der Wiedergabetaste im Clipmodus spielt den aktuellen Clip in Schleife ab

Verwenden des Suchlaufreglers

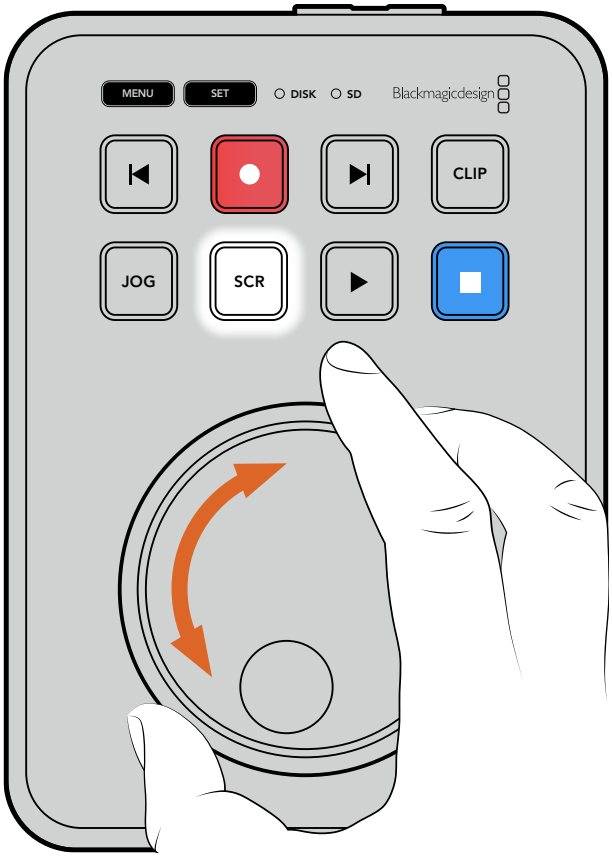
Der Suchlaufregler ermöglicht es Ihnen, während der Wiedergabe schnell durch Ihre Clips zu navigieren und bestimmte Stellen zur Wiedergabe auszuwählen oder diese frameweise zu sichten. Dies ist von Vorteil, wenn Sie eine bestimmte Stelle in einem Clip zur visuellen Kontrolle durch Drehen des Reglers finden müssen. Das ist auch nützlich, um den Abspielkopf an einen bestimmten Cue-Punkt zu setzen, bspw. um den Clip in eine Live-Sendung einzuspielen.

Die Modi des Suchreglers sind Jog, Scroll und Shuttle.

JOG	**Jog**	Spielt Clips frameweise ab und gestattet die präzise Steuerung.
SCR	**Scroll**	Im Scrollmodus navigieren Sie zügig vor- und rückwärts durch Ihr gesamtes aufgezeichnetes Material. Der Scrollmodus reagiert darauf, wie schnell und in welche Richtung Sie den Suchlaufregler drehen. So haben Sie bei der Wiedergabe die volle Kontrolle über die Abspielposition. Durch Drücken der SCR-Taste rufen Sie das Fenster für die Datenträger-Navigation auf, das den Dateipfad zum aktuell abgespielten Video anzeigt. Weitere Informationen zur Datenträger-Navigation finden Sie im gleichnamigen Abschnitt weiter hinten in diesem Handbuch.
JOG SCR	**Shuttle**	Um in den Shuttlemodus zu wechseln, drücken Sie die JOG- und SCR-Tasten gleichzeitig. Ist der Shuttlemodus aktiviert, spulen Sie durch Drehen des Reglers nach links oder rechts durch Ihr Material. Beim Betätigen des Reglers wird das Spulen auf eine bis zu 50-fache Höchstgeschwindigkeit beschleunigt. Um das Shuttletempo zu verringern und anzuhalten, drehen Sie den Regler zur Ausgangsposition zurück. Um beim Shutteln an einer bestimmten Stelle anzuhalten, drücken Sie die Stopptaste. Oder drücken Sie die Wiedergabetaste, um die Wiedergabe von der aktuellen Position fortzusetzen. Es sei erwähnt, dass man die maximale Shuttlegeschwindigkeit im Setup-Menü reduzieren kann. Näheres dazu finden Sie unter „Einstellungen“ weiter hinten im Handbuch.



Drücken Sie die dedizierte JOG- oder SCR-Taste, um den Jog- bzw. Scroll-Suchmodus auszuwählen

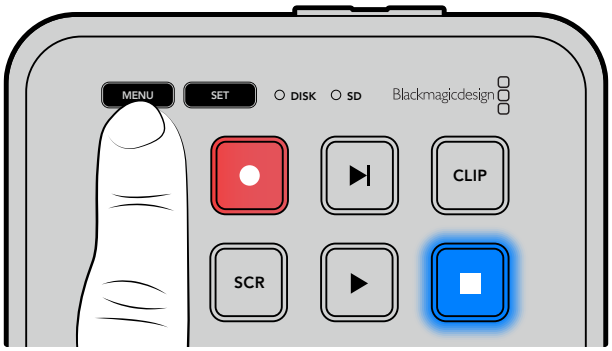


Ist der Suchmodus gewählt, drehen Sie den Regler

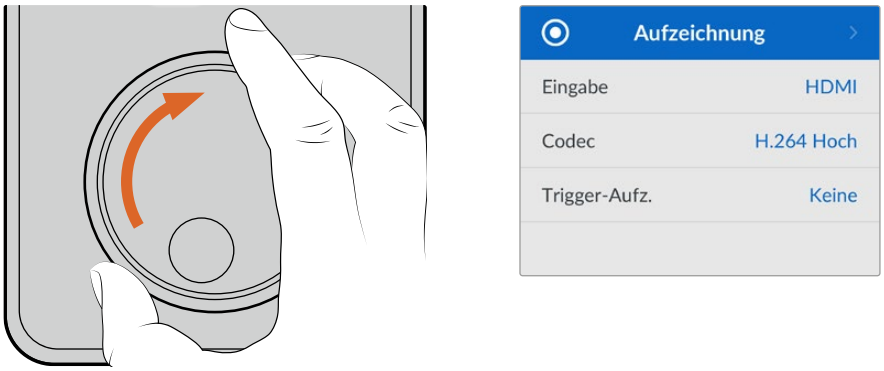
TIPP Um zur normalen Wiedergabe zurückzukehren, drücken Sie die Wiedergabe- oder die Stopptaste.

Ändern von Einstellungen

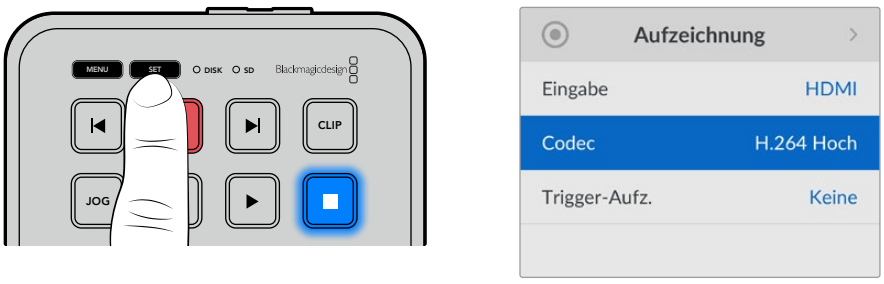
Drücken der MENU-Taste ruft das Einstellungsmenü auf. Auf Ihrem angeschlossenen HDMI-Bildschirm wird das Menü als Video-Overlay in der unteren linken Ecke eingeblendet.



Drücken Sie die MENU-Taste, um das Einstellungsmenü aufzurufen



Navigieren Sie mit dem Suchlaufregler zum Untermenü oder der jeweiligen Einstellung



Drücken Sie die SET-Taste, um das Untermenü oder die Einstellung auszuwählen

Passen Sie Einstellungen mithilfe des Suchlaufreglers oder der Vor- und Rücklauftasten an. Bestätigen Sie die Auswahl durch Drücken der SET-Taste.

Sie verlassen das Menü, indem Sie die MENU-Taste drücken, um zu den Optionen auf der Ebene darüber und schließlich zur Startseite zurückkehren.

TIPP Über das Einstellungsmenü können Sie das Menü in einer der vier Ecken Ihres Bildschirms positionieren. Wir empfehlen, das Menü nach dem Ändern von Einstellungen auszuschalten. Damit gewährleisten Sie, dass die HDMI-Ausgabe an einen HDMI-Mischer wie den ATEM Mini Extreme als Cleanfeed erfolgt.

Einstellungen

Das Einstellungsmenü ist in 5 verschiedene Kategorien unterteilt: Aufzeichnung, Monitor, Audio, Datenträger und Setup. Jedes dieser Untermenüs enthält relevante Einstellungen, von denen die meisten über das HyperDeck Shuttle HD Bedienfeld angepasst werden können. Einige Einstellungen betreffen nur den Bildschirm und werden ausgegraut, so z. B. Dateinamen-Präfix. Diese lassen sich über das HyperDeck Setup Dienstprogramm ändern.

Menü „Aufzeichnung“



Eingabe

Zeigt die HDMI-Eingabequelle für den HyperDeck Shuttle HD.

Codec

Der HyperDeck Shuttle HD kann komprimiertes Video in den Codecs H.264, Apple ProRes und DNxHD aufzeichnen. Um die Teleprompterfunktion zu verwenden, wählen Sie „Teleprompter“.

Trigger-Aufzeichnung

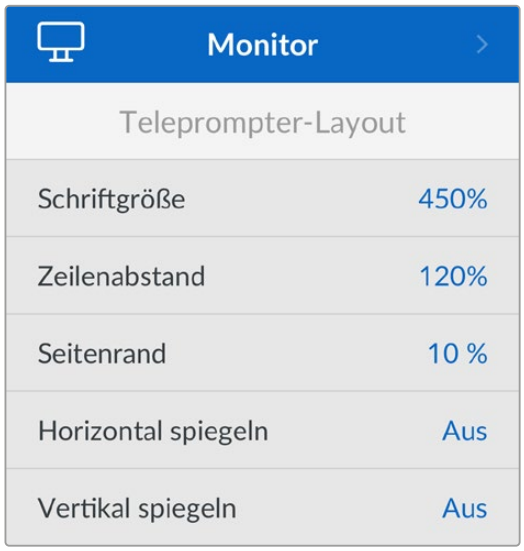
Es sind zwei Modi für die Trigger-Aufzeichnung verfügbar: „Video Start/Stop“ und „Timecode Run“.

Manche Kameras wie die Blackmagic Pocket Cinema Camera 4K senden zum Starten und Stoppen der Aufnahme auf externen Rekordern ein Signal über HDMI. Die Auswahl von „Video Start/Stop“ löst die Aufzeichnung auf einem HyperDeck aus oder stoppt sie, sobald die Aufnahmetaste an der Kamera gedrückt wird.

Verwenden Sie die Option „Timecode Run“, um die Aufzeichnung auszulösen, sobald das Gerät über die Eingänge ein gültiges Timecode-Signal empfängt. Bei Abbruch des Signals stoppt auch die Aufzeichnung. Deaktivieren Sie die Trigger-Aufzeichnung durch Auswählen der Option „Keine“.

HINWEIS Vergewissern Sie sich bei der Aufzeichnung von einer HDMI-Kamera, dass die Ausgabe sauber und frei von Overlays ist. Andernfalls werden diese in der Videoausgabe Ihrer Kamera enthaltenen Einblendungen zusammen mit dem Bild aufgezeichnet.

Menü „Monitor“



Teleprompter-Layout

Das Monitor-Menü enthält alle Einstellungen für den Einsatz des HyperDeck Shuttle HD als Teleprompter.

Schriftgröße

Passen Sie die Größe des Textes an, indem Sie die Option „Schriftgröße“ auswählen und die SET-Taste drücken. Durch Drehen des Reglers im Uhrzeigersinn vergrößern Sie die Schriftgröße, gegen den Uhrzeigersinn reduzieren Sie sie.

Zeilenabstand

Drehen Sie den Regler, um den Zeilenabstand zu vergrößern oder zu reduzieren.

Seitenrand

Mit dieser Einstellung passen Sie die Breite der Seitenränder auf beiden Seiten des Teleprompter-Displays an.

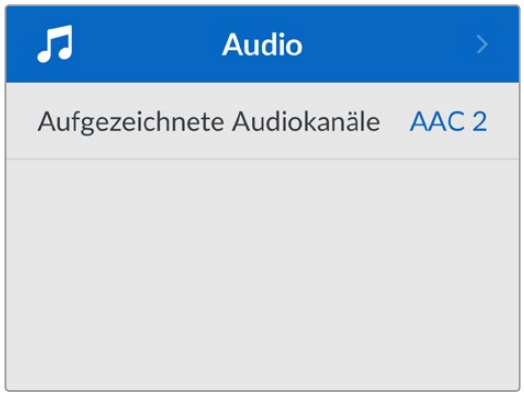
Spiegeln

Verwenden Sie diese Einstellungen, wenn Ihr Teleprompter-Monitor auf Glas vor der Kameraoptik oder an einem Rednerpult gespiegelt wird, damit der Text für den Redner lesbar ist. Es sind zwei Modi zum Spiegeln verfügbar:

Horizontal spiegeln – Nutzen Sie diese Einstellung, wenn der Teleprompter-Monitor sehr nah am Boden des Glases angebracht ist.

Vertikal spiegeln – Nutzen Sie diese Einstellung, wenn der Teleprompter-Monitor abseits des Glases angebracht ist.

Menü „Audio“



Aufgezeichnete Audiokanäle

Der HyperDeck Shuttle HD kann bis zu 8 Kanäle PCM-Audio gleichzeitig aufzeichnen. Um die Anzahl der aufzuzeichnenden Audiokanäle vorzugeben, gehen Sie ins Untermenü. Wählen Sie aus der Liste mit den Audiokanälen 2, 4 oder 8 Kanäle.

Wenn als Codec H.264 ausgewählt ist, können Sie auch 2 Kanäle AAC-Audio vorgeben. Diese Aufnahmen können Sie dann direkt auf YouTube hochladen.

Menü „Speicher“

Verbundene Datenträger erscheinen in den „Speicher“-Einstellungen. Medium 1 zeigt den Namen der eingeführten SD-Karte an und Medium 2 sämtliche an den USB-Port angeschlossene externe Flash-Laufwerke. Bei Einsatz eines USB-Hubs wie der Blackmagic MultiDock 10G wird das aktive Laufwerk angezeigt.



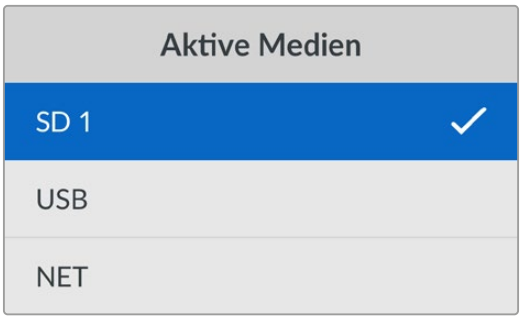
Aktive Medien

Bei Verwendung eines HyperDeck Shuttle können Sie eine SD-Karte, mehrere externe Laufwerke und einen Netzwerkspeicher zugleich anschließen. So stehen Ihnen auf einem HyperDeck Shuttle Digitalrekorder etliche Terabytes an Speicherplatz zur Verfügung.

Ist nur eine einzelne SD-Karte oder ein einzelnes Laufwerk verbunden, fungiert diese bzw. dieses als aktiver Datenträger für alle Wiedergaben und Aufzeichnungen. Bei mehreren an den Rekorder angeschlossenen Datenträgern können Sie bestimmen, welchen Sie für die Aufzeichnung und Wiedergabe nutzen.

So wählen Sie Ihr aktives Speichermedium aus:

1. Markieren Sie im „Speicher“-Menü mithilfe des Suchlaufreglers die Option „Aktive Medien“ und drücken Sie die blinkende SET-Taste.
2. Angeschlossene Medien werden in der Liste angezeigt. Markieren Sie für die Aufzeichnung das gewünschte Medium mithilfe des Suchlaufreglers.

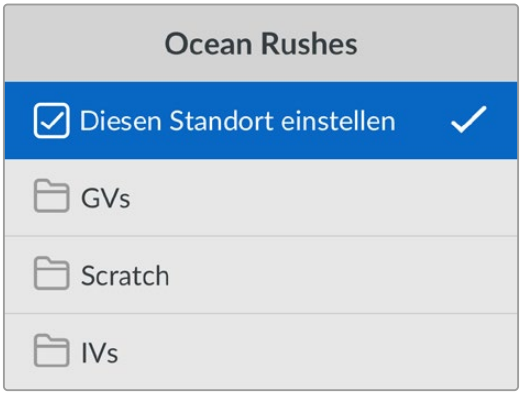


Netzwerk-Standort einstellen

Der HyperDeck Shuttle kann HD-Medien von über Ethernet angeschlossenen Blackmagic Cloud Speichern und anderen Netzwerkspeichern wiedergeben.

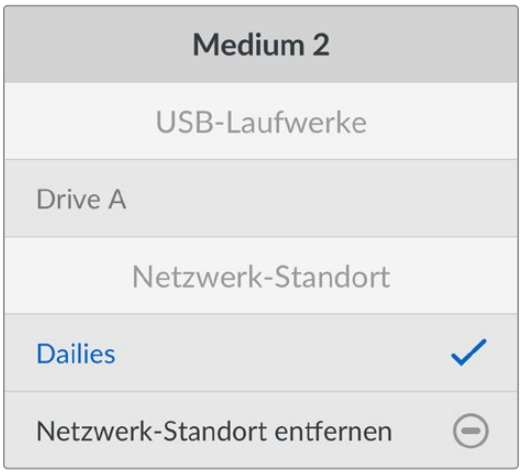
So verbinden Sie den Rekorder mit einem Netzwerk-Ordner:

1. Navigieren Sie mit dem Suchlaufregler zur Option „Netzwerk-Standort auswählen“ und drücken Sie zum Auswählen die SET-Taste. Es erscheint ein Dialogfenster für das lokale Netzwerk.
2. Alle in Ihr lokales Netzwerk eingebundenen Server werden aufgelistet. Markieren Sie den gewünschten Server mithilfe des Suchlaufreglers und drücken Sie zum Auswählen die SET-Taste. Es erscheint eine Liste mit den verfügbaren freigegebenen Ordnern. Markieren Sie den gewünschten Ordner mit dem Suchlaufregler, drücken Sie die SET-Taste und fahren Sie fort, bis der gewünschte Ordner oben auf dem Display angezeigt wird.
3. Der Ordnername erscheint nun oben auf dem LCD. Um diesen Ordner für Aufzeichnung und Wiedergabe auszuwählen, markieren Sie mit dem Suchlaufregler die Option „Diesen Standort einstellen“ und drücken Sie die SET-Taste. Damit wird auf der rechten Seite ein Häkchen gesetzt.



4. Ist die Verbindung hergestellt, erscheint der Speicherort auf der Seite „Medium 2“ unter dem Menüpunkt „Netzwerk-Standort”.

Der zweite Speicherslot des HyperDeck Shuttle Digitalrekorders dient sowohl für USB- als auch für angeschlossene Netzwerkspeicher. Um zwischen angeschlossenen USB- und Netzwerkspeichern zu wechseln, wählen Sie „Medium 2“ aus dem Speichermenü und drücken die blinkende SET-Taste. Wählen Sie aus der Liste „Medium 2“ den gewünschten Speicher und drücken Sie die SET-Taste. Die LCD-Ansicht kehrt nun zum Speichermenü zurück. Sie können den Netzwerkspeicher auch über das Menü „Medium 2“ entfernen, indem Sie unten im Menü die Option „Netzwerk-Standort entfernen“ auswählen.



HINWEIS Für die Wiedergabe von einem Netzlaufwerk setzt der HyperDeck Shuttle HD voraus, dass für den Server ein Gastzugang besteht. Der Serverzugriff mittels Anmeldung und Passwort über die MENU- und SET-Tasten wird derzeit nicht unterstützt. Sie können die Anmeldedaten jedoch über das HyperDeck Ethernet-Protokoll eingeben.

USB-Spill

Aktivieren Sie bei Einsatz einer Blackmagic MultiDock 10G oder ähnlichem die Option „USB-Spill“. Bei Verwendung von mehr als einem Laufwerk über den mit „EXT DISK“ beschrifteten USB-Anschluss stellen Sie so sicher, dass die Aufzeichnung von einem externen Laufwerk auf das nächste übergeht.

Medium formatieren

SD-Karten und an den rückwärtigen „EXT DISK“-Port angeschlossene Laufwerke können direkt mit dem Rekorder oder mit einem Mac- oder Windows-Computer formatiert werden.

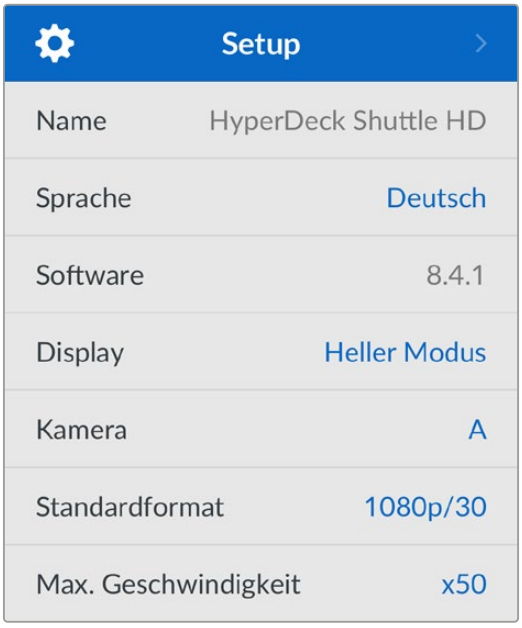
So bereiten Sie Datenträger auf dem HyperDeck Shuttle HD vor:

1. Wählen Sie mit dem Suchlaufregler und der SET-Taste die Option „Medium formatieren“.
2. Wählen Sie den zu formatierenden Datenträger aus der Liste und drücken Sie die SET-Taste.
3. Wählen Sie das Format und drücken Sie die SET-Taste.
4. Der nun erscheinende Bildschirm zeigt, welcher Datenträger in welchem Format formatiert wird. Wählen Sie „Formatieren“.
5. Nach abgeschlossenem Vorgang erscheint eine Bestätigungsmeldung. Wählen Sie OK.

HFS+ wird auch als „Mac OS X Extended“ bezeichnet und ist das empfohlene Format, da es „Journaling“ unterstützt. Auf Datenträgern mit Journaling gespeicherte Daten lassen sich im seltenen Fall einer Beschädigung Ihres Datenträgers mit höherer Wahrscheinlichkeit wiederherstellen. HFS+ wird nativ von Mac unterstützt. ExFAT wird von Mac und Windows nativ ohne Verwendung zusätzlicher Software unterstützt. Es unterstützt jedoch kein Journaling. Näheres zur Formatierung von Datenträgern finden Sie im gleichnamigen Abschnitt.

Menü „Setup“

Das Menü „Setup“ enthält Einstellungen für die Sprachauswahl und das Standardformat sowie für das Bildschirm-Menü, Netzwerkeinstellungen und Timecode-Optionen.



Name

Wenn mehr als ein HyperDeck Shuttle HD in ein Netzwerk eingebunden ist, empfiehlt es sich, die Rekorder zur Erkennung der einzelnen Geräte individuell zu benennen. Das geht über Blackmagic HyperDeck Setup oder das Blackmagic HyperDeck Ethernet Protocol mithilfe eines Terminalprogramms. Der Name wird im Setup-Menü angezeigt.

Sprache

Der HyperDeck Shuttle HD unterstützt 13 Sprachen. Neben Deutsch und Englisch sind das Chinesisch, Französisch, Italienisch, Japanisch, Koreanisch, Polnisch, Portugiesisch, Russisch, Spanisch, Türkisch und Ukrainisch.

So wählen Sie die Sprache aus:

1. Gehen Sie zum Setup-Menü und drücken Sie die SET-Taste.
2. Scrollen Sie mit dem Suchlaufregler zur gewünschten Sprache und drücken Sie die SET-Taste.
3. Scrollen Sie mit dem Suchlaufregler zur gewünschten Sprache und drücken Sie die SET-Taste. Ist die Sprache ausgewählt, kehren Sie automatisch zurück ins Setup-Menü.

Software

Zeigt die aktuelle Version der Produktsoftware an.

Kamera

Diese praktische Einstellung ermöglicht es, die Feeds von mehreren Kameras getrennt als ISO-Dateien aufzuzeichnen. In DaVinci Resolve kann man diese Dateien in einer Multicam-Timeline nachbearbeiten.

Der Kennbuchstabe einzelner Kameras wird in den Metadaten der Datei festgehalten, anhand dessen DaVinci Resolve bei Einsatz der „Sync Bin“-Funktion unterschiedliche Kamerawinkel problemlos erkennt.



Ordnen Sie Kameras Buchstaben von A–Z oder Ziffern von 1–9 zu

Standardformat

Es kann vorkommen, dass der HyperDeck Shuttle HD die gewünschte Videonorm nicht sofort erkennt. Diese Einstellung gibt dem HyperDeck die Videonorm vor, die Sie als Standard verwenden möchten.

Beispiel: Sie haben einen HyperDeck Shuttle HD eingeschaltet, an den keine Videoquelle angeschlossen ist. Dann verbinden Sie den Rekorder mit einem Datenträger, der Dateien in zwei verschiedenen Videonormen enthält. In welchem Videoformat soll der HyperDeck diese nun abspielen? Das Standard-Videoformat gibt Aufschluss darüber, welche Videonorm Sie bevorzugen, und spielt die Dateien in diesem Format ab.

Das Standard-Videoformat ist auch beim ersten Einschalten eines HyperDeck Shuttle HD nützlich, wenn keine Videoquellen oder Datenträger verbunden sind. In diesem Fall ist nämlich nicht klar, welches Videoformat der HyperDeck für die Monitorausgabe verwenden soll. Das Standardformat liefert Hinweise, was zu tun ist.

Dennoch ist das Standardformat nur ein Leitwert. Es überschreibt keine Parameter. Haben Sie einen Datenträger mit nur einer Art von Videodateien und drücken die Wiedergabetaste, wechselt der HyperDeck Rekorder für die Wiedergabe zu diesem Videoformat. Das Standard-Videoformat wird ignoriert, weil offensichtlich ist, dass Sie nur die Dateien von diesem Datenträger abspielen wollen.

Mit der Aufzeichnung verhält es sich ähnlich. Drücken Sie die Aufnahmetaste, wird im Videoformat der angeschlossenen Videoquelle aufgezeichnet. Nach abgeschlossener Aufzeichnung spielt der HyperDeck Shuttle HD die Dateien auf dem Datenträger in derselben Videonorm ab. Dies gilt auch, wenn andere Dateien auf dem Datenträger dem Standard-Videoformat entsprechen. Es wird angenommen, dass Sie Dateien im gleichen Videoformat abspielen wollen, in dem sie aufgezeichnet wurden. Erst wenn Sie den Datenträger trennen und wieder verbinden, dient das Standard-Videoformat zur Auswahl von Dateien in einer bestimmten Videonorm.

Das Standard-Videoformat bietet lediglich Hinweise, um dem HyperDeck Shuttle HD im Zweifelsfall zu kommunizieren, was er tun soll. Es werden keine Parameter überschrieben oder das Verhalten des Decks auf eine bestimmte Weise erzwungen.

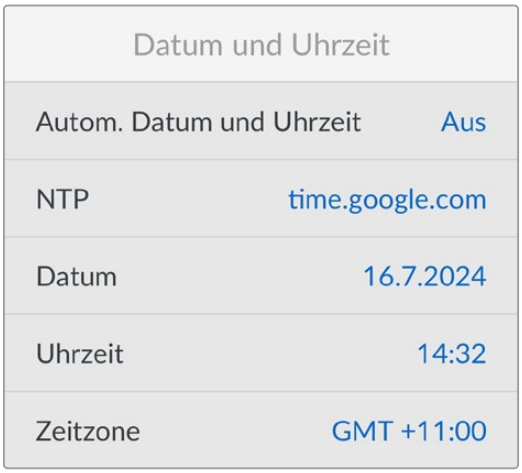
Max. Geschwindigkeit

Die maximale Shuttlegeschwindigkeit auf dem HyperDeck Shuttle HD ist 50-fach beschleunigt. Um diese Geschwindigkeit zu reduzieren, stehen weitere Geschwindigkeits-Presets zur Wahl.

Datum und Uhrzeit

Die korrekte Datum- und Uhrzeiteingabe stellt sicher, dass die Zeit- und Datumangaben Ihres HyperDeck Shuttle mit denen Ihres Netzwerks übereinstimmen.

Dies verhindert auch in manchen Systemen auftretende Netzwerkkonflikte.



Autom. Datum und Uhrzeit

Um Datum und Uhrzeit automatisch einzustellen, setzen Sie diese Option auf „Ein“. Bei der automatischen Datum- und Uhrzeiteingabe verwendet der HyperDeck Shuttle den im NTP-Feld eingestellten Network Time Protocol Server. Um Datum und Uhrzeit manuell einzugeben, setzen Sie die Option auf „Aus“.

NTP

Das NTP ist standardmäßig auf time.cloudflare.com eingestellt. In HyperDeck Setup können Sie ein NTP jedoch auch manuell eingeben. Näheres zum Einstellen des NTP-Servers finden Sie unter „HyperDeck Setup“ weiter hinten in diesem Handbuch.

Datum

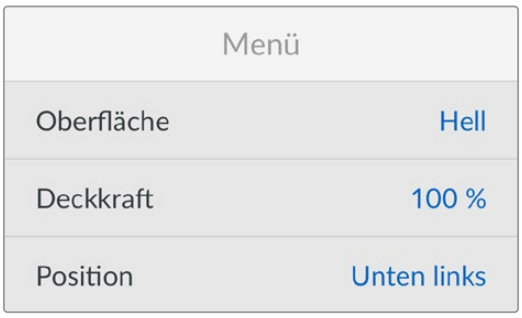
Wählen Sie zur manuellen Eingabe des Datums die Option „Datum“ und drücken Sie die SET-Taste. Wählen Sie Tag, Monat und Jahr mithilfe des Suchlaufreglers aus.

Uhrzeit

Wählen Sie zum Anpassen der Uhrzeit die Option „Uhrzeit“ und drücken Sie die SET-Taste. Geben Sie die Stunden und Minuten mithilfe des Suchlaufreglers vor. Die interne Uhr ist eine 24-Stunden-Uhr.

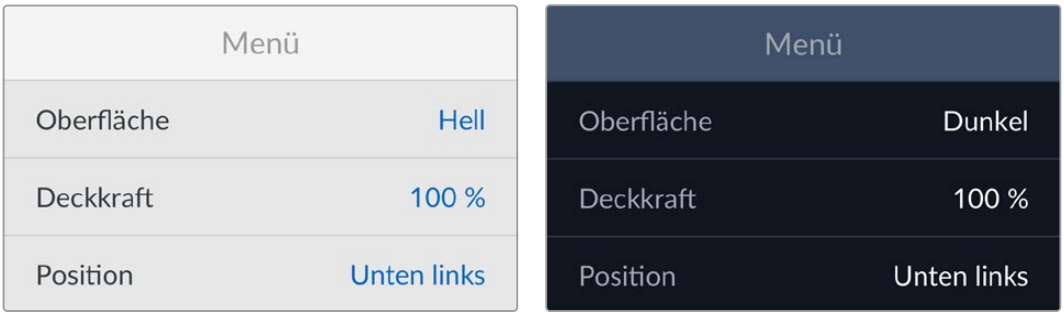
Menü-Einstellungen

Mithilfe der Menü-Einstellungen passen Sie die Platzierung und das Erscheinungsbild des Menüs auf dem angeschlossenen HDMI-Bildschirm an.



Oberfläche

Stellen Sie das Onscreen-Menü Ihres HyperDecks auf den hellen oder dunklen Modus ein. Der helle Modus bietet mehr Kontrast, wenn Sie mit dunklem Material oder im Teleprompermodus arbeiten.



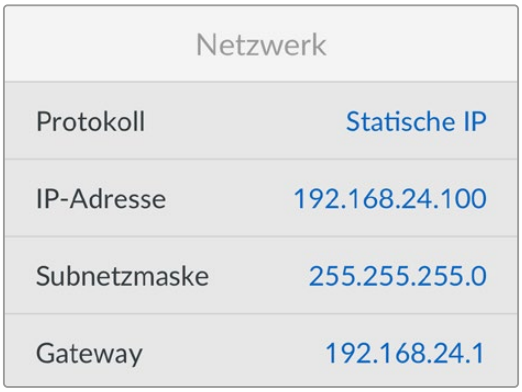
Deckkraft

Passen Sie die Intensität an, um den Standardwert von 100 % für die Deckkraft der Menü-Overlays auf dem angeschlossenen Bildschirm auf 20 % zu reduzieren.

Position

Das Menü-Overlay wird standardmäßig in der unteren linken Ecke des Bildschirms angezeigt. Um das Menü an eine andere Stelle zu verschieben, wählen Sie „Fensterposition“ und drücken Sie die SET-Taste. Nun können Sie „oben links“, „oben rechts“, „unten links“ oder „unten rechts“ auf dem Bildschirm auswählen.

Netzwerk-Einstellungen



Protokoll

Blackmagic HyperDecks werden auf DHCP voreingestellt ausgeliefert. Wird Ihr Rekorder in ein Netzwerk eingebunden, bekommt er vom Netzwerkserver automatisch eine IP-Adresse zugewiesen. Es müssen keine weiteren Netzwerkeinstellungen angepasst werden. Wenn Sie eine Adresse manuell einrichten müssen, können Sie die Verbindung über eine statische IP erstellen.

Um auf das Menü zuzugreifen, wählen Sie „Protokoll“ und drücken Sie die SET-Taste. Scrollen Sie zu „Statische IP“ und drücken Sie die SET-Taste.

IP-Adresse, Subnetzmaske, Gateway, Primärer DNS und Sekundärer DNS

Nach Auswahl von „Statische IP“ können Sie Ihre Netzwerkinformationen manuell eingeben.

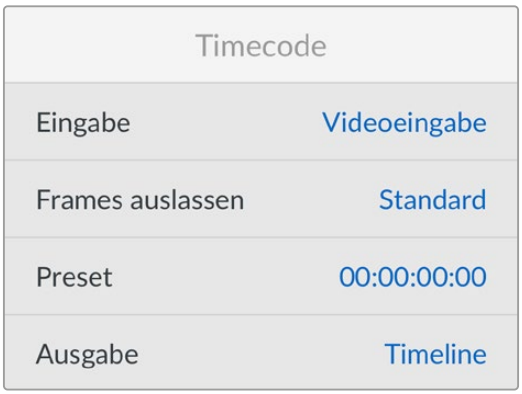
So ändern Sie die IP-Adresse:

1. Navigieren Sie mit dem Suchlaufregler zur Option „IP-Adresse“ und drücken Sie am Bedienfeld Ihres HyperDecks die SET-Taste.
2. Drehen Sie den Suchregler, um die IP-Adresse anzupassen und drücken Sie zur Bestätigung die SET-Taste, ehe Sie den nächsten Zahlenblock anpassen.
3. Drücken Sie zur Bestätigung der Änderung die SET-Taste und machen Sie mit dem nächsten Zahlenblock weiter.

Wenn die Eingabe Ihrer IP-Adresse abgeschlossen ist, wiederholen Sie diese Schritte, um die Subnetzmaske und das Gateway anzupassen. Wenn Sie fertig sind, drücken Sie die MENU-Taste, um zur Startseite zurückzukehren.

Timecode

Geben Sie die Optionen für die Timecode-Ein- und -Ausgabe vor. Sie haben die Wahl, den Timecode nach Referenzquelle, Uhrzeit oder manueller Vorgabe aufzuzeichnen.



Eingabe

Es stehen vier Timecode-Eingabeoptionen für die Aufzeichnung zur Verfügung.

Videoeingabe	Diese Option übernimmt den in die HDMI-Signale eingebetteten Timecode mit SMPTE RP-188 Metadaten. Das sorgt für die Synchronisierung Ihrer HDMI-Quellen mit der auf dem HyperDeck Shuttle HD aufgezeichneten Datei.
Intern	Verwenden Sie diese Option für Uhrzeit-Timecode vom internen Timecode-Generator.
Ende letzter Clip	Mit dieser Auswahl für die Timecode-Eingabe beginnt jede Aufzeichnung einen Frame nach dem letzten Frame des vorherigen Clips. Endet Ihr erster Clip bspw. bei 10:28:30:10, beginnt der Timecode des nächsten Clips bei 10:28:30:11.
Preset	Wählen Sie die „Preset“-Option, um Timecode manuell vorzugeben. Aufgezeichnete Clips beginnen mit dem über die „Preset“-Einstellung vorgegebenen Timecode. Diese Option wird im nachstehenden Abschnitt erklärt.

Timecode-Voreinstellung

Für NTSC-Quellen mit Bildwechselfrequenzen von 29,97 oder 59,94 können Sie für Timecode die Option „Frames auslassen“ oder „Keine Frames auslassen“ wählen. Ist die Quelle unbekannt, wählen Sie „Standard“. Damit wird die Norm der Eingabe beibehalten oder es werden standardmäßig Frames ausgelassen, wenn kein gültiger Timecode erkannt wird.

Preset

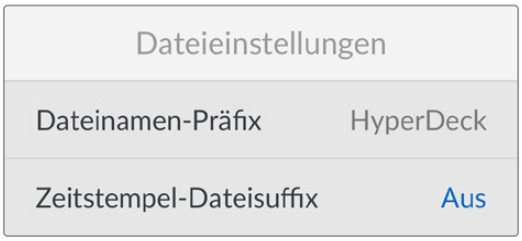
Sie können den Timecode manuell vorgeben, indem Sie die SET-Taste drücken und den Start-Timecode per Suchlaufregler und SET-Taste vorgeben. Vergewissern Sie sich, dass unter „Eingabe“ die Option „Preset“ vorgegeben ist.

Timecode-Ausgabe

Wählen Sie die Timecode-Optionen für Ihre Ausgaben.

Timeline	Um alle auf einen Datenträger aufgezeichneten Clips mit fortlaufendem Timecode auszugeben, wählen Sie die Option „Timeline“.
Clip	Ist die Option „Clip“ aktiviert, wird der Timecode für jeden Clip einzeln ausgegeben.

Dateieinstellungen



Dateinamen-Präfix

Beim ersten Einsatz zeichnet Ihr HyperDeck Shuttle HD Clips auf Ihre SD-Karte oder Ihr USB-Flash-Laufwerk nach der folgenden Namenskonvention auf:

HyperDeck_0001	
HyperDeck_0001	**Präfix**
HyperDeck_**0001**	**Clip-Nummer**

Den Dateinamen-Präfix können Sie über das HyperDeck Setup Dienstprogramm ändern. Näheres finden Sie im Abschnitt „Blackmagic Hyperdeck Setup“ weiter hinten im Handbuch.

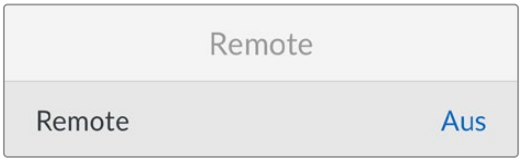
Zeitstempel-Dateisuffix

Standardmäßig ist das Hinzufügen des Zeitstempels zum Dateinamen ausgeschaltet. Schalten Sie diese Option ein, wenn Sie mit Ihrem Dateinamen das Datum und die Uhrzeit speichern möchten.

HyperDeck_2201061438_0001	
HyperDeck_2201061438_0001	**Dateinamen-Präfix**
HyperDeck_**22**01061438_0001	**Jahr**
HyperDeck_22**01**061438_0001	**Monat**
HyperDeck_2201**06**1438_0001	**Tag**
HyperDeck_220106**14**38_0001	**Stunde**
HyperDeck_2201061**38**_0001	**Minute**
HyperDeck_2201061438_**0001**	**Clip-Nummer**

Remote

Die Remote-Einstellung ermöglicht die Fernsteuerung des HyperDeck über andere Videogeräte wie bspw. einen ATEM Mini Extreme Mischer.



Remote

Mit „Remote“ aktivieren Sie die Fernsteuerung per Ethernet. Um den Rekorder lokal zu steuern, deaktivieren Sie „Remote“.

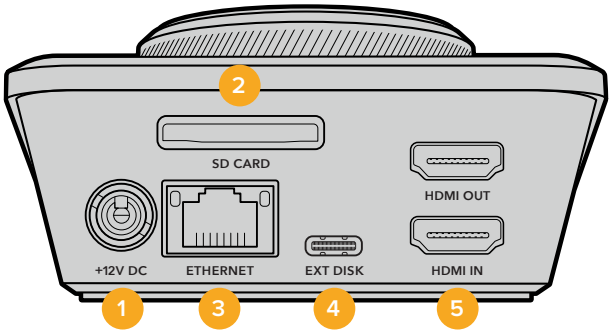
Zurücksetzen



Auf Werkseinstellungen zurücksetzen

Um Ihren HyperDeck auf seine Werkseinstellungen zurückzusetzen, wählen Sie im „Setup“-Menü die Option „Auf Werkseinstellungen“. Nach Drücken der SET-Taste werden Sie aufgefordert, Ihre Auswahl zu bestätigen.

Hintere Anschlüsse



1 Strombuchse

Der HyperDeck Shuttle HD wird über ein AC-Steckernetzteil mit Strom versorgt. Das mit Ihrem HyperDeck Shuttle HD mitgelieferte Stromkabel ist mit einem Sperrmechanismus ausgestattet, um Unterbrechungen zu vermeiden. Zur Stromversorgung des HyperDeck können Sie jedoch jedes beliebige 36W-12V-Stromkabel verwenden.

2 SD-Karte

Führen Sie zum Aufzeichnen und Abspielen eine SD-Karte in den mit „SD CARD“ beschrifteten Schacht ein.

3 Ethernet

Stellen Sie über den Ethernet-Port eine Verbindung zu Ihrem Netzwerk her, um auf einen Netzwerkspeicher aufzuzeichnen, schnelle FTP-Übertragungen und HTTP-Übertragungen über den Webmedia-Manager vorzunehmen. Darüber hinaus ist die Fernsteuerung des Geräts über eine REST API oder das HyperDeck Ethernet-Protokoll möglich. Näheres zur Übertragung von Dateien über den Webmedia-Manager oder einen FTP-Client finden Sie im Abschnitt „Übertragen von Dateien über ein Netzwerk“ weiter hinten im Handbuch.

Wenn Ihr HyperDeck in ein Netzwerk mit einem ATEM Mischer eingebunden ist, können Sie den Rekorder auch unter Einsatz eines ATEM Mischers oder eines ATEM Hardware-Bedienpults steuern.

4 Externes Laufwerk

Schließen Sie ein externes Flash-Laufwerk an den USB-C-Port an, um mit einer Datengeschwindigkeit von bis zu 5 Gbit/s darauf aufzuzeichnen. Sie können HyperDecks auch an USB-C-Hubs mit mehreren Ports oder zur Verwendung einer oder mehrerer SSDs an eine Blackmagic MultiDock 10G anschließen.

5 HDMI-Anschlüsse

Verbinden Sie den HDMI-Ausgang mit HDMI-Fernsehern, -Monitoren oder sogar einem Mischer wie dem ATEM Mini Extreme. Die HDMI-Ausgabe dient auch zur Anzeige des Menü-Overlays.

Datenträger

SD-Karte

Für hochqualitative HD-Aufzeichnungen empfehlen wir Hochgeschwindigkeits-SD-Karten mit UHS-I. Um in Ultra-HD-Formaten bis 2160p/60 aufzunehmen, müssen die Karten Schreibgeschwindigkeiten über 220 MB/s meistern.

Wenn Sie bei niedrigeren Bitraten mit geringerer Kompression aufnehmen, reichen ggf. auch langsamere Karten. Grundsätzlich gilt: Je schneller die Karte, desto besser.

Sehen Sie in der aktuellsten Ausgabe dieses Handbuchs regelmäßig nach den neuesten Infos. Sie steht jederzeit zum Download auf unserer Firmenwebsite www.blackmagicdesign.com/de/support bereit.

Welche SD-Karten sollte ich mit dem HyperDeck Shuttle HD verwenden?

Für Aufzeichnungen in 1080p mit bis zu 60 fps werden folgende SD-Karten empfohlen:

Marke	Kartenname	Speicherkapazität
Angelbird	AV PRO SD UHS-II 300MB/s V90 SDXC	256 GB
Angelbird	AV PRO SD UHS-II 260MB/s V60 SDXC	128 GB
Angelbird	AV PRO SD UHS-II 260MB/s V60 SDXC	64 GB
SanDisk	Extreme Pro UHS-I 95MB/s SDXC	64 GB
Wise	SD2-64U3 UHS-II 285MB/s SDXC	64 GB
Lexar	Professional 1000x UHS-II 150MB/s SDXC	128 GB
SONY	Tough SF-G128T	128 GB
Kingston	CANVAS GO! Plus 170MB/s V30	64 GB
Kingston	CANVAS GO! Plus 170MB/s V30	128 GB
Kingston	CANVAS GO! Plus 170MB/s V30	512 GB
ProGrade Digital	SDXC UHS-II V90 300R	64 GB
ProGrade Digital	SDXC UHS-II V90 300R	128 GB
SONY	Tough SF-G64T UHS-II SDXC	64 GB
Delkin Devices	Black UHS-II V90 SDXC	256 GB
Delkin Devices	Power UHS-II V90 SDXC	128 GB
Delkin Devices	Power UHS-II V90 SDXC	256 GB
Delkin Devices	Black UHS-II V90 SDXC	128 GB
Exascend	Essential SDXC UHS-II V90 R 300MB/s	64 GB
Exascend	Essential SDXC UHS-II V90 R 300MB/s	128 GB
Exascend	Catalyst SDXC UHS-II V90 R 300MB/s	64 GB

Externe Laufwerke

Alle HyperDeck Modelle können direkt auf USB-C-Flash-Laufwerke aufzeichnen. Diese schnellen leistungsfähigen Laufwerke ermöglichen Ihnen Langzeit-Videoaufzeichnungen. Anschließend können Sie die Laufwerke an Ihren Computer anschließen und direkt darauf schneiden.

Noch mehr Speicherkapazität bieten Ihnen USB-C-Dockingstations oder externe Festplatten. Verbinden Sie Ihre Blackmagic MultiDock 10G oder Ihr USB-C-Flash-Laufwerk über ein Kabel mit dem „EXT DISK“-Port an der Rückseite Ihres HyperDecks.

Welche USB-C-Laufwerke sollte ich mit dem HyperDeck Shuttle HD verwenden?

Für Aufzeichnungen in 1080p ProRes HQ mit bis zu 60 fps werden folgende USB-C-Laufwerke empfohlen:

Marke	Kartenname	Speicherkapazität
Wise	PTS-256 Portable SSD 4K	256 GB
OWC	Envoy Pro Ex	240 GB
BUFFALO	SSD-PHE500U3-BA	500 GB

Für Aufzeichnungen in 1080p DNxHD 220x mit bis zu 60 fps werden folgende USB-C-Laufwerke empfohlen:

Marke	Kartenname	Speicherkapazität
OWC	Envoy Pro Ex	240 GB

Für Aufzeichnungen in 1080p H.264 mit bis zu 60 fps werden folgende USB-C-Laufwerke empfohlen:

Marke	Kartenname	Speicherkapazität
OWC	Envoy Pro Ex	240 GB

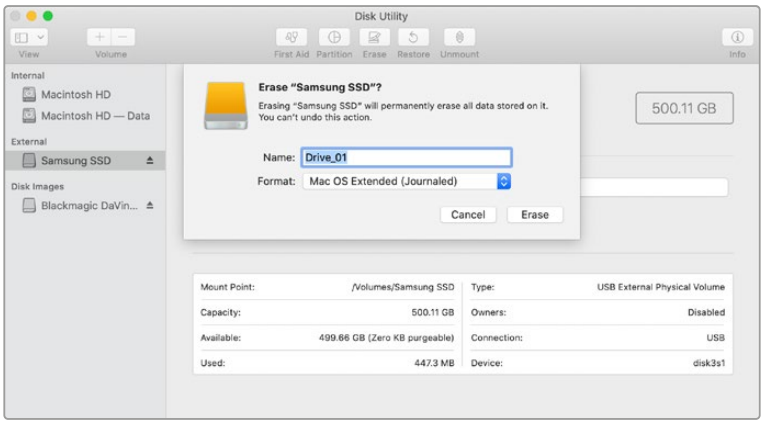
Formatieren von Datenträgern

Datenträger auf einem Mac-Computer formatieren

Mithilfe des im Betriebssystem Ihres Macs enthaltenen Festplattendienstprogramms lässt sich Ihr Datenträger in HFS+ oder exFAT formatieren.

Fertigen Sie unbedingt Sicherungskopien von allen wichtigen Daten auf Ihrem Speichermedium an, da beim Formatieren alle Inhalte gelöscht werden.

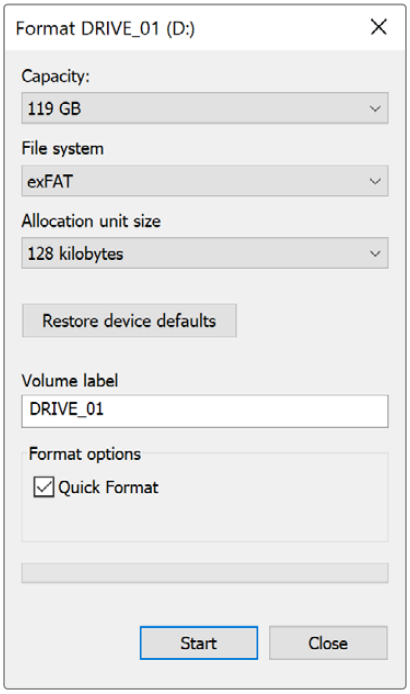
1. Schließen Sie ein USB-Flash-Laufwerk über eine externe Dockingstation oder einen Kabeladapter an Ihren Computer an. Ignorieren Sie jegliche Meldungen, die den Gebrauch Ihrer SSD für Time Machine Backups anbieten. Schließen Sie eine SD-Karte über ein externes Kartenlesegerät an Ihren Computer an.
2. Gehen Sie zu „Programme“ > „Dienstprogramme“ und starten Sie das Festplatten-Dienstprogramm.
3. Klicken Sie auf das Speicherträgersymbol für Ihre SD-Karte oder Ihr USB-Flash-Laufwerk und dann auf „Löschen“.
4. Geben Sie als Format „Mac OS Extended (Journaled)“ oder „exFAT“ vor.
5. Geben Sie einen Namen für das neue Volumen ein und klicken Sie auf „Löschen“. Ihr Datenträger wird schnell formatiert und ist dann mit einem HyperDeck einsatzbereit.



Datenträger auf einem Windows-Computer formatieren

Auf einem Windows-PC erfolgt die Formatierung eines Datenträgers in exFAT über das „Formatieren"-Fenster. Fertigen Sie auf jeden Fall Sicherungskopien von allen wichtigen Daten auf Ihrer SSD oder SD-Karte an, da während der Formatierung alle Inhalte gelöscht werden.

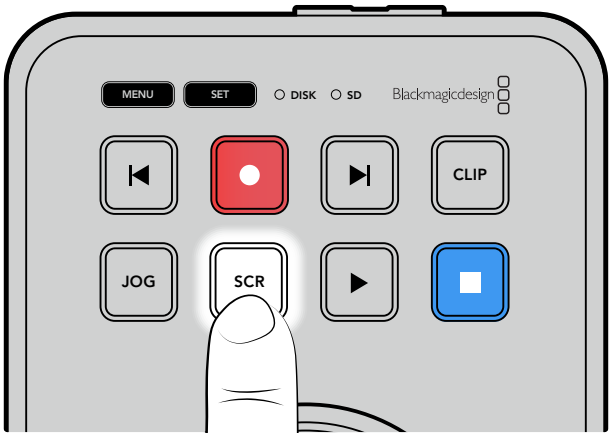
1. Schließen Sie ein USB-Flash-Laufwerk über eine externe Dockingstation oder einen Kabeladapter an Ihren Computer an. Schließen Sie eine SD-Karte über ein externes Kartenlesegerät an Ihren Computer an.
2. Öffnen Sie das Startmenü oder den Startbildschirm und wählen Sie „Dieser PC". Rechtsklicken Sie auf Ihrem USB-Flash-Laufwerk oder Ihrer SD-Karte.
3. Wählen Sie im Kontextmenü „Formatieren".
4. Stellen Sie das Dateisystem auf „exFAT" und die Größe der Zuordnungseinheiten auf „128 Kilobytes" ein.
5. Geben Sie eine Volumenbezeichnung ein, setzen Sie ein Häkchen bei „Schnellformatierung" und klicken Sie auf „Starten".
6. Ihr Datenträger wird schnell formatiert und ist dann mit einem HyperDeck einsatzbereit.



Datenträger-Navigation

Die Datenträger-Navigation ermöglicht die Anzeige eines Dateipfad-Overlays und erleichtert das Auffinden von auf Speicherkarten, Festplatten und Netzlaufwerken gespeicherten Clips. Ist die Funktion aktiviert, wird ein Overlay auf der HDMI-Ausgabe eingeblendet. Verwenden Sie zum Navigieren durch Ihre Verzeichnisse die SCR- und CLIP-Tasten und den Jog-Drehknopf.

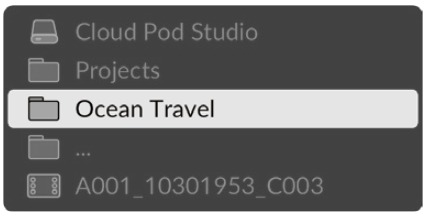
1 Öffnen Sie das Fenster für die Datenträger-Navigation durch Drücken der mit SCR markierten Scrolltaste.





Drücken Sie die SCR-Taste, um das Datenträger-Navigations-Fenster auf der HDMI-Ausgabe einzublenden

2 Scrollen oder springen Sie durch das Material, bis Sie den gewünschten Clip im Ordner gefunden haben.



3 Drücken Sie die SCR- bzw. die CLIP-Taste, um ab- bzw. aufwärts durch die Verzeichnisse zu navigieren.

Drücken Sie zum Schließen des Datenträger-Navigations-Fensters die Stopptaste. Drücken Sie die Wiedergabetaste, um das Fenster zu schließen und sofort mit der Wiedergabe zu beginnen.

HINWEIS Um Clips zu sichten, die mit abweichendem Codec oder abweichender Auflösung und Framerate aufgezeichnet wurden, wählen Sie auf Ihrem HyperDeck den passenden Codec und die passende Videonorm.

Verwenden der Teleprompterfunktion

Der Blackmagic HyperDeck Shuttle HD lässt sich mit einer regulären RTF-Datei oder TXT-Datei als Teleprompter einsetzen. Erstellen Sie Ihre Datei in TextEdit oder WordPad und speichern Sie sie in einer der 13 unterstützten Sprachen im Rich-Text- oder Plain-Text-Format. Nach Öffnen der Datei mit dem HyperDeck Shuttle HD, können Sie die Schriftgröße und den Zeilenabstand Ihres Skripts anpassen.

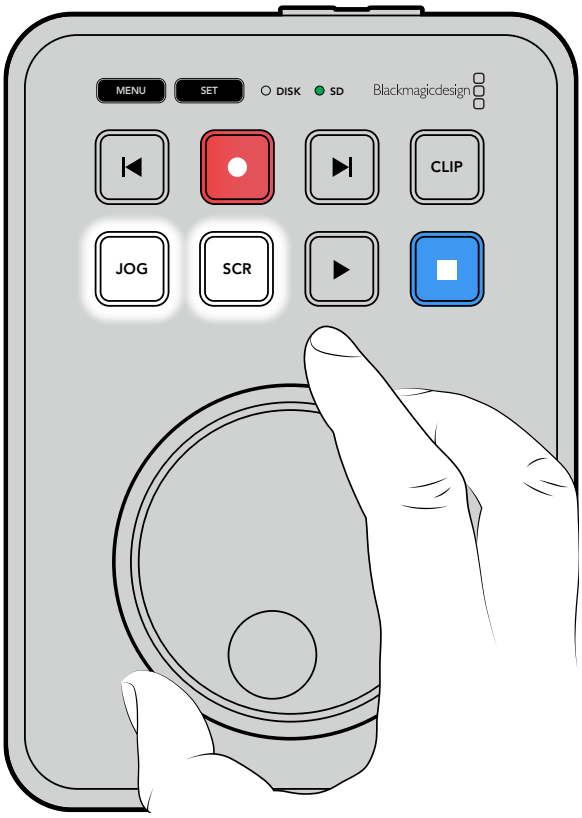
So verwenden Sie die Teleprompterfunktion:

1. Verbinden Sie den HDMI-Ausgang des HyperDeck Shuttle HD mit dem gewünschten HDMI-Bildschirm.
2. Führen Sie die SD-Karte ein, auf der das Skript gespeichert ist, oder schließen Sie das entsprechende externe USB-Flash-Laufwerk an.
3. Wählen Sie im Aufzeichnungs-Menü die gewünschte Codec-Option aus. Navigieren Sie zur Einstellung „Teleprompter“ und drücken Sie die SET-Taste.

Das Skript wird auf Ihrem Bildschirm eingeblendet. Mit der Wiedergabetaste starten Sie die Wiedergabe darauf automatisch, und der Regler bietet weitere Steuerungsoptionen.

Steuern der Wiedergabegeschwindigkeit auf dem Teleprompter

Im Teleprompttermodus dient der große Regler am HyperDeck Shuttle HD wie beim Abspielen von Medien zum Steuern der Wiedergabe. Wenn das Skript geladen ist, drücken Sie die JOG- und SCR-Tasten gleichzeitig, um variable Wiedergabegeschwindigkeit zu aktivieren. Ist variable Geschwindigkeit gewählt, drehen Sie den Regler. Die Betätigung des Reglers bestimmt, wie schnell das Skript läuft. Je schneller Sie den Regler drehen, desto schneller scrollt das Skript.



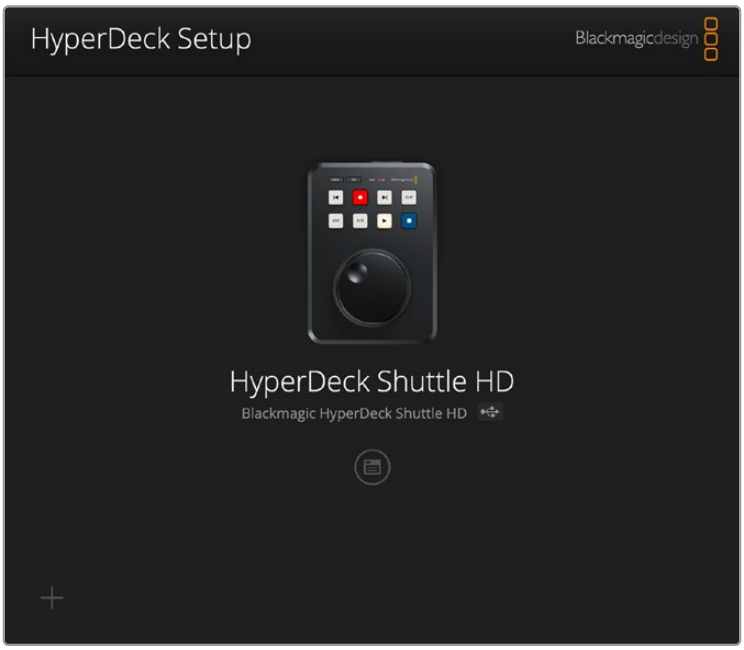
Für gleichmäßige Geschwindigkeit verwenden Sie entweder die JOG-Taste oder die SCR-Taste. Ist gleichmäßige Geschwindigkeit ausgewählt, läuft das Skript im Jog-Modus bei konstant niedriger Geschwindigkeit bzw. im Scroll-Modus schneller.

Um auf Ihrer SD-Karte oder Ihrem externen Laufwerk zwischen Dateien zu navigieren, drücken Sie die Vor- bzw. Rücklauftaste.

Der Teleprompter erkennt die Schriftgröße, -farbe und ob der Text aus der Datei fettgedruckt ist oder nicht. Darüber hinaus können Sie Schriftgröße, Zeilenabstand und Seitenränder anpassen oder den Text horizontal oder vertikal spiegeln, wenn Sie ihn über das Monitor-Menü auf Strahlenteilerglas projizieren. Näheres finden Sie im Abschnitt „Menü-Einstellungen“ weiter vorne im Handbuch.

Blackmagic HyperDeck Setup

Das Blackmagic HyperDeck Setup Dienstprogramm dient zum Ändern von Einstellungen und zum Aktualisieren der Produktsoftware Ihres HyperDeck Rekorders.

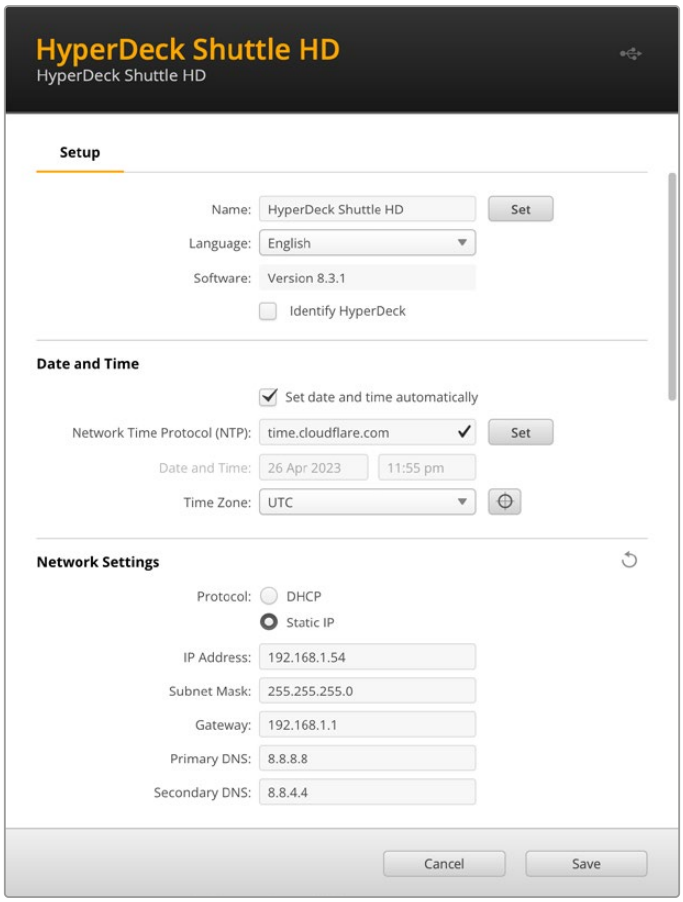


So installieren Sie die Software:

1. Laden Sie die neueste Version des Installationsprogramms Blackmagic HyperDeck Setup unter www.blackmagicdesign.com/de/support herunter.
2. Führen Sie das Installationsprogramm Blackmagic HyperDeck Setup auf Ihrem Computer aus und folgen Sie den Anweisungen auf dem Bildschirm.
3. Verbinden Sie Ihren HyperDeck Shuttle HD nach abgeschlossener Installation über den USB- oder Ethernet-Anschluss an der Rückseite mit dem Computer.
4. Starten Sie Blackmagic HyperDeck Setup und folgen Sie etwaigen Aufforderungen auf Ihrem Bildschirm, die Produktsoftware zu aktualisieren. Erscheint keine Aufforderung, so ist Ihre Produktsoftware auf dem neuesten Stand und es sind keine weiteren Aktionen Ihrerseits notwendig.

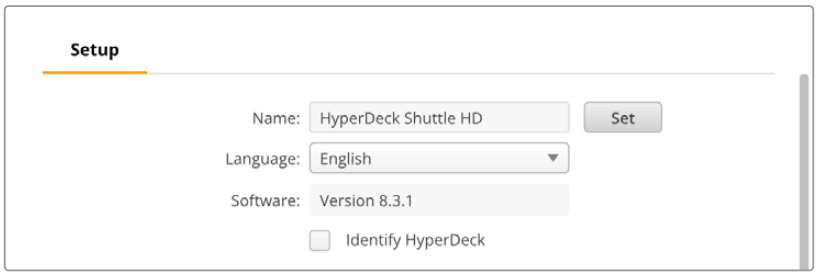
Klicken Sie auf die Abbildung des HyperDecks oder das Einstellungssymbol, um die Einstellungen öffnen.

Der Homescreen zeigt Ihnen Ihren HyperDeck Shuttle HD und den Namen des Geräts. Wenn mehr als ein HyperDeck mit Ihrem Computer verbunden ist, ist eine individuelle Bezeichnung nützlich zur Identifizierung des Geräts.



Setup

Bei Einsatz von mehr als einem HyperDeck Digitalrekorder empfiehlt es sich, jedem Gerät zur leichteren Identifizierung einen eindeutigen Namen zu geben. Geben Sie den neuen Namen dazu einfach in das Namensfeld ein und klicken Sie auf „Set“. Bitte bedenken Sie, dass durch die Namensänderung des HyperDeck alle verwendeten digitalen Zertifikate ungültig werden. Es ist also ratsam, den Namen zu ändern, bevor Sie ein Certificate Signing Request oder ein selbstsigniertes Zertifikat generieren.



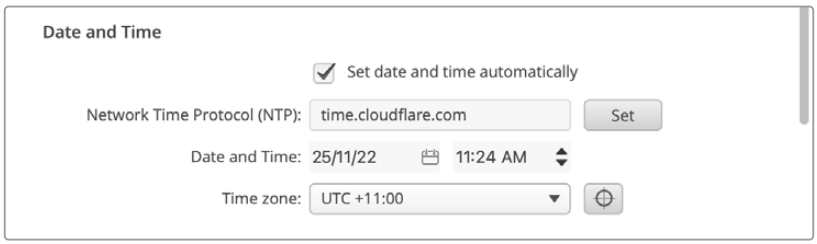
Identify HyperDeck

Durch Anklicken dieses Kontrollkästchens zum Identifizieren eines HyperDeck Geräts beginnen die Vor- und Rücklauftaste oben an Ihrem HyperDeck Shuttle zu blinken. Diese Funktion ist hilfreich, wenn Sie mehr als einen HyperDeck Shuttle in Verwendung haben und Sie herausfinden möchten, mit welchem Gerät Sie über das HyperDeck Setup Dienstprogramm verbunden sind.

DATUM UND UHRZEIT

Aktivieren Sie zur automatischen Eingabe von Datum und Uhrzeit die Dialogbox. Bei der automatischen Datum- und Uhrzeiteingabe verwendet Ihr HyperDeck Shuttle HD den im NTP-Feld eingestellten Network Time Protocol Server. Das NTP ist standardmäßig auf time.cloudflare.com eingestellt. Sie können ein NTP jedoch auch manuell eingeben und mit dem „Set“-Button bestätigen.

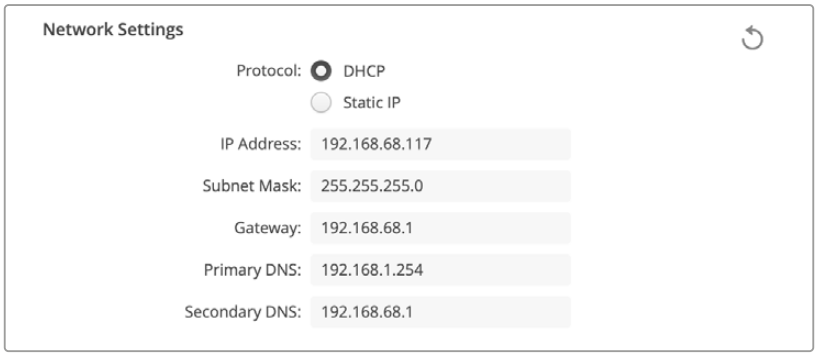
Verwenden Sie zur manuellen Eingabe die Datum-, Uhrzeit- und Zeitzonenfelder „Date and Time“ und „Time zone“. Die korrekte Datum- und Uhrzeiteingabe stellt sicher, dass die Datum- und Zeitangaben Ihrer Aufzeichnung mit denen Ihres Netzwerks übereinstimmen. Dies verhindert eventuelle Netzwerkkonflikte, wie sie in manchen Systemen auftreten.



Netzwerk

Protokoll

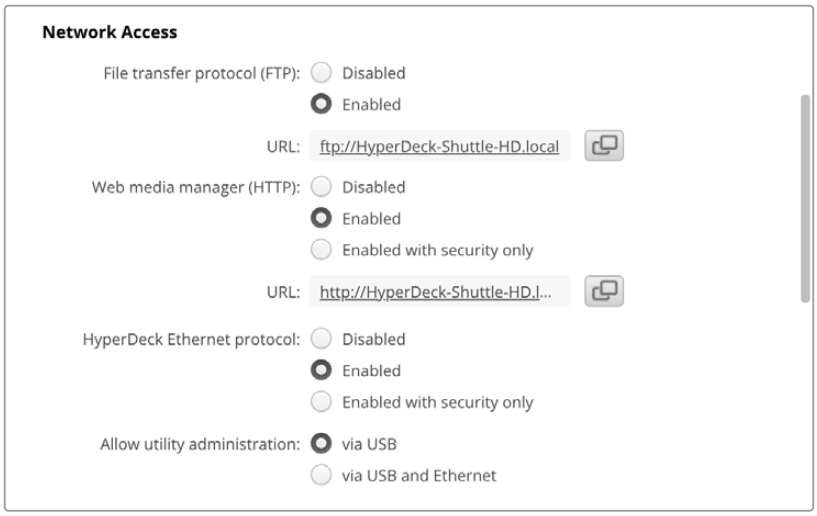
Um Ihren HyperDeck Shuttle HD mit ATEM Mischern zu steuern oder über das HyperDeck Ethernet Protocol fernzusteuern, muss er mithilfe des DHCP oder durch manuelles Hinzufügen einer statischen IP-Adresse im selben Netzwerk wie Ihre anderen Geräte erscheinen.



DHCP	HyperDeck Shuttle HD Rekorder sind standardmäßig auf DHCP eingestellt. Das Dynamic Host Configuration Protocol, kurz DHCP, ist ein auf Netzwerkservern verwendeter Dienst, der Ihren HyperDeck Shuttle HD automatisch auffindet und ihm eine IP-Adresse zuordnet. DHCP erleichtert die Einbindung von Geräten per Ethernet und sorgt dafür, dass deren IP-Adressen nicht miteinander in Konflikt geraten. Die meisten Computer und Netzwerkrouter unterstützen DHCP.
Static IP	Wenn „Static IP“ (Statische IP) eingeschaltet ist, können Sie Ihre Netzwerkdaten manuell eingeben. Achten Sie beim manuellen Einrichten von IP-Adressen zur Kommunikation zwischen allen Geräten darauf, dass sie die gleiche Subnetzmaske und die gleichen Gateway-Einstellungen haben.

Network Access

Der HyperDeck Shuttle HD unterstützt die Dateiübertragung über ein Netzwerk oder per Fernsteuerung über das HyperDeck Ethernet Protocol. Der Zugriff ist standardmäßig aktiviert, lässt sich aber bei Verwendung eines Web Media Managers oder des HyperDeck Ethernet Protocols individuell deaktivieren oder für extra Sicherheit mittels Benutzername und Passwort aktivieren.



File Transfer Protocol

Aktivieren oder deaktivieren Sie den Zugang für die Dateiübertragung via FTP mithilfe des Kontrollkästchens. Wenn Sie den Zugriff über einen FTP-Client wie CyberDuck bereitstellen, klicken Sie zum Kopieren der FTP-Adresse auf das Icon. Weitere Informationen finden Sie im Abschnitt „Übertragen von Dateien über ein Netzwerk“.

Web Media Manager

Auf SD-Karten oder externe Festplatten aufgezeichnete Medien greift man über den Webbrowser im Web Media Manager zu. Klicken Sie auf den Link oder kopieren Sie ihn in den Webbrowser. Es öffnet sich eine Oberfläche, über die Sie Dateien über Ihr Netzwerk direkt auf SD-Karten hoch- oder von diesen herunterladen können.

Standardmäßig ist der Zugang per HTTP aktiviert. Sie können den Zugang jedoch auch komplett deaktivieren oder über die Option „Enabled with security only“ vorgeben, dass der Zugang nur mit Sicherheitsüberprüfung möglich ist. Bei Verwendung eines digitalen Zertifikats werden Verbindungen zum Web Media Manager über HTTPS verschlüsselt. Weitere Informationen zu digitalen Zertifikaten finden Sie im Abschnitt „Sichere Zertifikate“.

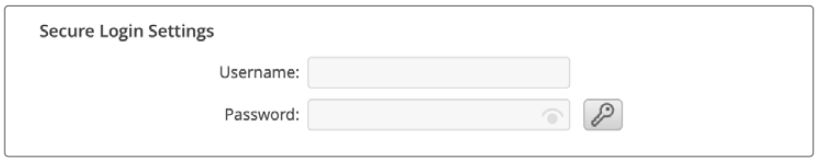
HyperDeck Ethernet Protocol

Eine Verbindung zu Ihrem HyperDeck Digitalrekorder stellen Sie her, indem Sie das HyperDeck Ethernet Protocol und ein Befehlszeilentool wie Terminal (Mac) bzw. Putty (Windows) auf Ihrem Computer einsetzen. Der Zugang kann mit oder ohne Benutzername und Passwort aktiviert oder komplett deaktiviert werden. Bei Verwendung eines Dienstprogramms wie Netcat können Sie Ihre Sitzung mit einem SSL-Protokoll verschlüsseln. Näheres zu verfügbaren Befehlen finden Sie im englischsprachigen Kapitel „Informationen für Entwickler“ in diesem Handbuch.

Allow Utility Administration

Zugriff auf Blackmagic HyperDeck Setup erhält man über einen ins Netzwerk oder via USB eingebundenen Digitalrekorder. Um anderen Benutzern den Zugriff per Netzwerk zu verweigern und nur per USB zu erlauben, wählen Sie „via USB“.

Secure Login Settings



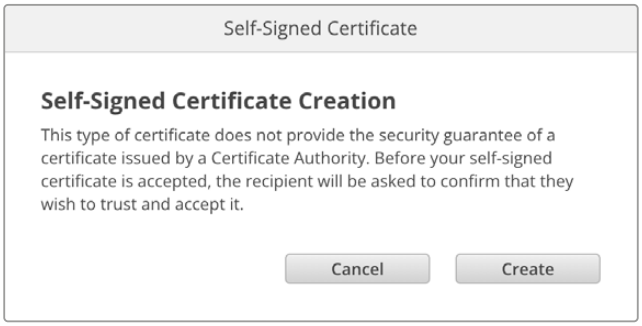
Wenn Sie für den Zugang per HyperDeck Ethernet Protocol die Sicherheitseinstellung „Enabled with security only“ aktiviert haben, müssen Sie einen Benutzernamen und ein Passwort eingeben. Das „Password“-Feld wird direkt nach der Passworteingabe leer angezeigt. Wenn Sie für den Zugang per Web Media Manager die Sicherheitseinstellung „Enabled with security only“ aktiviert haben, müssen Sie einen Benutzernamen und ein Passwort eingeben, sofern diese festgelegt wurden.

Sichere Zertifikate

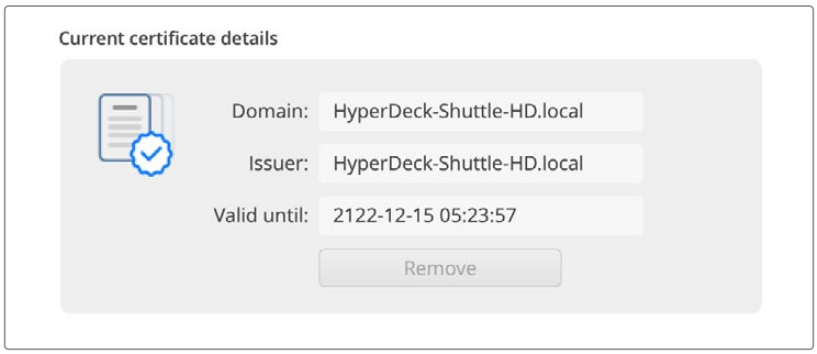
Um den Web-Media-Manager-Zugang via HTTPS zu aktivieren oder wenn für das HyperDeck Ethernet Protocol die Option „Enable with security only“ vorgegeben wurde, benötigen Sie ein sicheres Zertifikat. Dieses digitale Zertifikat dient zur Identifizierung Ihres HyperDeck Shuttle HD, damit alle eingehenden Signale bestätigt und dem korrekten Gerät zugeführt werden können. Ein sicheres Zertifikat bestätigt nicht nur die Identität des Geräts, sondern verschlüsselt auch die zwischen dem HyperDeck Shuttle HD und einem Computer oder Server übertragenen Daten. Mit den Einstellungen für eine sichere Anmeldung wird die Verbindung verschlüsselt und erfordert für den Zugriff eine Authentifizierung.

Es gibt zwei Arten Zertifikate, die Sie für den HyperDeck Shuttle verwenden können, ein sicheres von einer Zertifizierungsstelle signiertes Zertifikat oder ein selbstsigniertes Zertifikat. Für einige User-Workflows ist das selbstsignierte Zertifikat sicher genug, bspw. wenn der Zugriff auf Ihren HyperDeck Shuttle HD nur über ein lokales Netzwerk erfolgen soll.

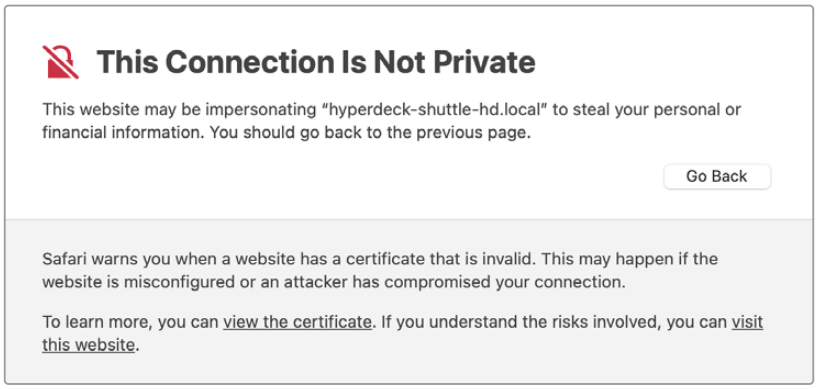
Um ein selbstsigniertes Zertifikat zu generieren, klicken Sie auf „Create“. Im Anschluss werden Sie aufgefordert zu bestätigen, dass Sie sich der Risiken der Verwendung eines selbstsignierten Zertifikats bewusst sind. Sobald Sie auf „Create“ geklickt haben, werden die Felder für „Domain“, „Issuer“ und „Valid until“ („Domain“, „Aussteller“ und „Gültig bis“) in HyperDeck Setup automatisch ausgefüllt.



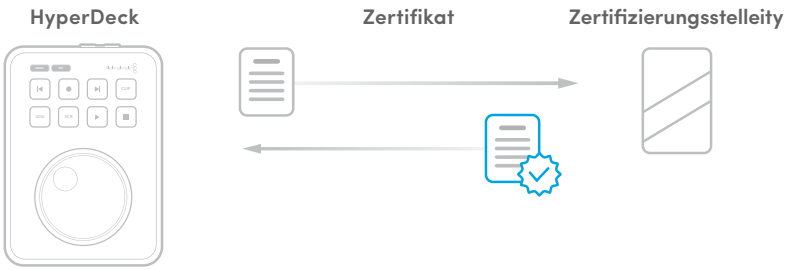
Das Zurücksetzen auf die Werkseinstellungen löscht alle derzeitigen Zertifikate. Sie können ein Zertifikat aber auch entfernen, indem Sie auf den „Remove“-Button klicken und den Anweisungen folgen.



Wenn Sie für den Zugriff auf Mediendateien via HTTPS ein selbstsigniertes Zertifikat verwenden, weist Ihr Webbrowser Sie auf die beim Aufruf der Website bestehenden Risiken hin. Bei einigen Browsern müssen Sie zum Fortfahren nur zustimmen, dass Sie die Risiken verstanden haben. Andere Webbrowser mögen den Zugriff komplett sperren.



Damit Zugriff zu jedem Webbrowser gewährt wird, ist die Verwendung eines signierten Zertifikats notwendig. Ein signiertes Zertifikat erhalten Sie, indem Sie im Dienstprogramm Blackmagic HyperDeck Setup eine Zertifizierungsanforderung (CSR) generieren. Senden Sie diese Anforderung zur Signatur an eine Zertifizierungsstelle (CA) oder an Ihre IT-Abteilung. Von dort erhalten Sie ein signiertes Zertifikat mit der Dateierweiterung CERT, CRT oder PEM, das Sie auf Ihren HyperDeck Shuttle HD importieren können.



So generieren Sie eine Zertifikats-Signierungsanforderung (CSR):

1 Klicken Sie zum Generieren eines Signing Requests auf den Button „Generate Signing Request“.



2 Es erscheint ein Fenster, das Sie auffordert, unter „Common Name“ einen Hauptnamen sowie unter „Subject Alternative Name“ einen alternativen themenbezogenen Namen für Ihren HyperDeck vorzugeben. Passen Sie zudem alle nötigen Details anhand der unten abgebildeten Tabelle an.

Information	Beschreibung	Beispiel
Hauptname	Von Ihnen verwendeter Domainname	hyperdeck.melbourne.com
Alternativer themenbezogener Name	Alternativer Domainname	hyperdeck.melbourne.net
Land	Land Ihres Unternehmens	Australien
Bundesland	Provinz, Region, Kreis oder Bundesland	Victoria
Ort	Name der Stadt, Ortschaft usw.	Port Melbourne
Name des Unternehmens	Name Ihres Unternehmens	Blackmagic Design

3 Wenn Sie alle Einzelheiten für das Zertifikat eingegeben haben, klicken Sie zum Generieren auf „Generate“.

Mit dem Generieren eines CSR-Zertifikats wird jeweils ein öffentlicher und ein privater Schlüssel erstellt. Der öffentliche Schlüssel wird der Signierungsanforderung beigefügt, der private Schlüssel ist nur über das Gerät zugänglich. Sobald die Zertifizierungsstelle oder die IT-Abteilung den Inhalt des CSR-Zertifikats mit Ihrem Unternehmen abgeglichen hat, wird ein signiertes Zertifikat mit den in der obigen Tabelle aufgeführten Details mitsamt Ihres öffentlichen Schlüssels erstellt.

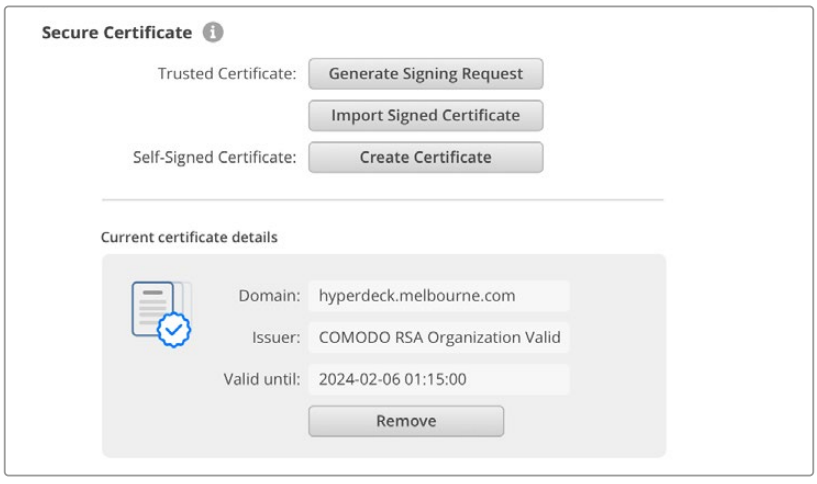
Nach dem Import dienen der private und der öffentliche Schlüssel dazu, den HyperDeck Shuttle HD zu identifizieren und den Datenaustausch via HTTPS, oder bei Verwendung eines SSL-Programms via HyperDeck Ethernet Protocol, zu ver- und entschlüsseln.

So importieren Sie ein signiertes Zertifikat:

1 Klicken Sie zum Importieren des signierten Zertifikats auf „Import Signed Certificate“.

2 Navigieren Sie über den Dateibrowser an die Stelle, wo das signierte Zertifikat abgelegt ist. Wählen Sie es aus und klicken Sie auf „Open“.

Die Felder „Domain“, „Issuer“ und „Valid until“ für „Domain“, „Aussteller“ und „Gültig bis“ werden mit den von Ihrer Zertifizierungsstelle generierten Daten aktualisiert. In der Regel ist ein signiertes Zertifikat etwa ein Jahr lang gültig. Danach muss dieser Vorgang wiederholt werden.

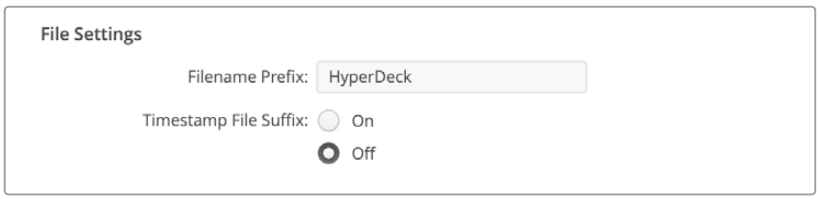


Wurde ein Domainname ausgewählt, kontaktieren Sie Ihre IT-Abteilung, um für den HyperDeck Shuttle HD die Namensauflösung des DNS-Eintrags vorzunehmen. Dies bewirkt, dass der gesamte Datenverkehr für die IP-Adresse des HyperDeck Shuttle HD über die in der Signierungsanforderung angegebene Domain-Adresse läuft.

Diese fungiert auch als die HTTPS-Adresse, die Sie für den Zugang auf Dateien über den Web Media Manager verwenden, z. B. https://hyperdeck.melbourne.com.

Es ist zu beachten, dass das Zertifikat nach Zurücksetzen auf die Werkseinstellungen ungültig wird und ein neues Zertifikat generiert und signiert werden muss.

Dateieinstellungen



Beim ersten Einsatz zeichnet Ihr HyperDeck Shuttle HD Clips mit dem Präfix „HyperDeck“ auf Ihre SD-Karte oder Ihr USB-Flash-Laufwerk auf. Geben Sie einen neuen Dateinamen ein, um das Präfix zu ändern.

Standardmäßig ist das Hinzufügen des Zeitstempels zum Dateinamen ausgeschaltet. Wenn Sie das Datum und die Uhrzeit in Ihrem Dateinamen mitaufzeichnen möchten, wählen Sie für „Timestamp File Suffix“ die Option „On“. Die Einstellungen „Dateinamen-Präfix“ und „Zeitstempel“ sind auch über das Onscreen-Menü auf dem HyperDeck Shuttle HD verfügbar.

Reset

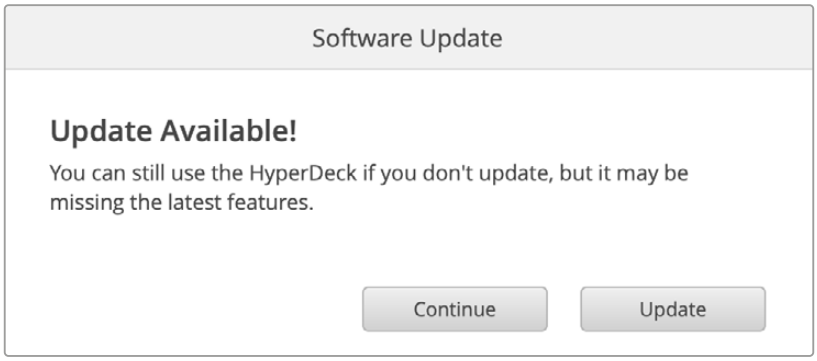
Um Ihren HyperDeck auf die Werkseinstellungen zurückzusetzen, wählen Sie „Factory Reset“. Damit wird das aktuelle Zertifikat ungültig. Wenn Sie ein sicheres Zertifikat verwenden, wird auch dieses ungültig. Sie müssen eine neue Signierungsanforderung generieren und diese zur Signierung an eine Zertifizierungsstelle oder IT-Abteilung schicken.

Aktualisieren der Produktsoftware

So aktualisieren Sie die Produktsoftware:

1. Laden Sie die neueste Version des Installationsprogramms Blackmagic HyperDeck Setup unter www.blackmagicdesign.com/de/support herunter.
2. Führen Sie das Installationsprogramm Blackmagic HyperDeck Setup auf Ihrem Computer aus und folgen Sie den Anweisungen auf dem Bildschirm.
3. Verbinden Sie Ihren HyperDeck Shuttle HD nach abgeschlossener Installation über den USB- oder Ethernet-Anschluss an der Rückseite mit dem Computer.

4 Starten Sie Blackmagic HyperDeck Setup und folgen Sie etwaigen Aufforderungen auf Ihrem Bildschirm, die Produktsoftware zu aktualisieren. Erscheint keine Aufforderung, so ist Ihre Produktsoftware auf dem neuesten Stand und Sie brauchen nichts weiter zu tun.



Übertragen von Dateien über ein Netzwerk

Der HyperDeck Shuttle HD unterstützt die Übertragung von Dateien über das sichere Hypertext Transfer Protocol HTTPS und das File Transfer Protocol FTP. D. h. Sie können Dateien mit den schnellen Geschwindigkeiten eines lokalen Netzwerks direkt von Ihrem Computer auf Ihren HyperDeck kopieren. Kopieren Sie bspw. neue Dateien zur Wiedergabe von Video auf Bildwänden und für Digital Signage auf ein HyperDeck Gerät.

Sie können den Datenaustausch mit Ihrem HyperDeck in beliebigen Formaten vornehmen. Beachten Sie jedoch, dass von Ihrem HyperDeck Shuttle HD abgespielte Dateien mit den von Ihrem HyperDeck unterstützen Codecs und Auflösungen kompatibel sein müssen.

TIPP Sie können Dateien über ein Netzwerk übertragen, während Ihr HyperDeck aufzeichnet. Der HyperDeck passt Übertragungsgeschwindigkeiten automatisch an, um die Aufzeichnung nicht zu beeinträchtigen.

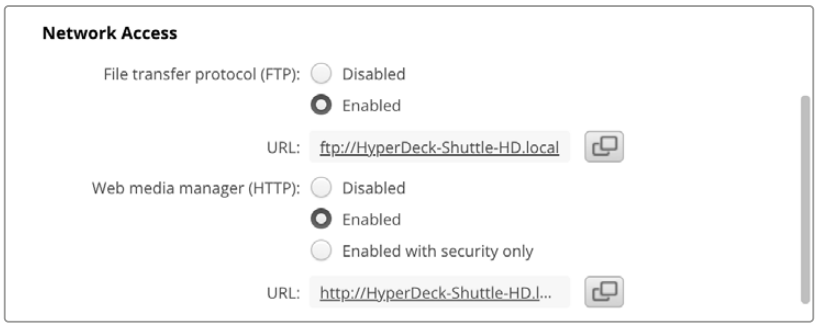
Der Zugriff auf den HyperDeck Shuttle HD über eines dieser Protokolle wird im Dienstprogramm HyperDeck Setup aktiviert oder deaktiviert. Bspw. könnten Sie den FTP-Zugang deaktivieren, während Sie gleichzeitig den HTTPS-Zugang aktivieren.

Verbinden eines HyperDeck Shuttle HD via HTTPS

Für den Zugriff auf den HyperDeck Shuttle HD über den Web Media Manager benötigen Sie die URL, die Sie in den Einstellungen für den Netzwerkzugang finden. Die Einstellungen für den Netzwerkzugang werden in HyperDeck Setup angezeigt, wenn Ihr Computer über USB oder Ethernet angeschlossen ist. Besteht ein Anschluss nur per Ethernet, ist der Zugang deaktiviert.

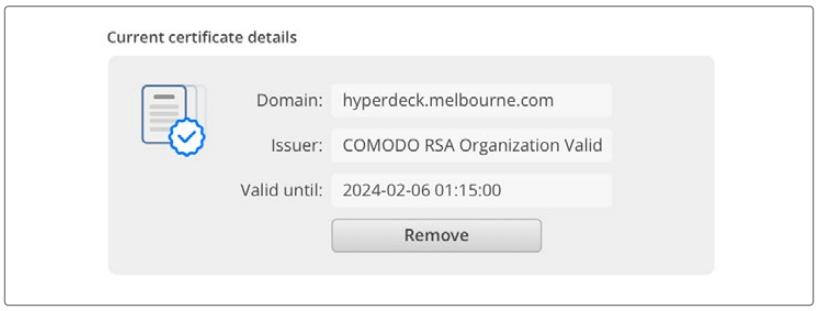
1 Schließen Sie Ihren Computer mit einem USB-C-Kabel über den USB-Port an der Geräterückseite an den HyperDeck Shuttle HD und starten Sie HyperDeck Setup. Neben dem Gerätenamen sollte ein USB-Verbindungssymbol erscheinen. Klicken Sie zum Öffnen der Einstellungen auf das kreisförmige Symbol oder an beliebiger Stelle auf das Produktbild.

2 Navigieren Sie bei Verwendung eines selbstsignierten Zertifikats zu den Einstellungen für den Netzwerkzugang. Klicken Sie zum Kopieren der URL auf das Kopier-Icon. Diese URL basiert auf dem Namen Ihres HyperDecks. Zum Ändern der URL ändern Sie den Gerätenamen.



Klicken Sie bei Verwendung eines selbstsignierten Zertifikats auf den Link

3 Nach dem Import eines von einer Zertifizierungsstelle oder IT-Abteilung signierten Zertifikats, kopieren Sie die für das aktuelle Zertifikat im „Domain“-Feld angegebene Adresse.



Kopieren Sie die Domainadresse und fügen Sie sie in einen Browser ein

4 Öffnen Sie in Ihrem Webbrowser ein neues Fenster und fügen Sie die kopierte Adresse ein. Wenn Sie den Zugang über ein sicheres Protokoll aktiviert haben, werden Sie aufgefordert, den im HyperDeck Setup Dienstprogramm festgelegten Benutzernamen und das Passwort einzugeben.

Wenn Sie ein selbstsigniertes Zertifikat verwenden, erscheint im Browser ein Warnhinweis zur Internetverbindung. Dies bedeutet, dass in HyperDeck Setup kein vertrauenswürdiges signiertes Zertifikat importiert wurde.

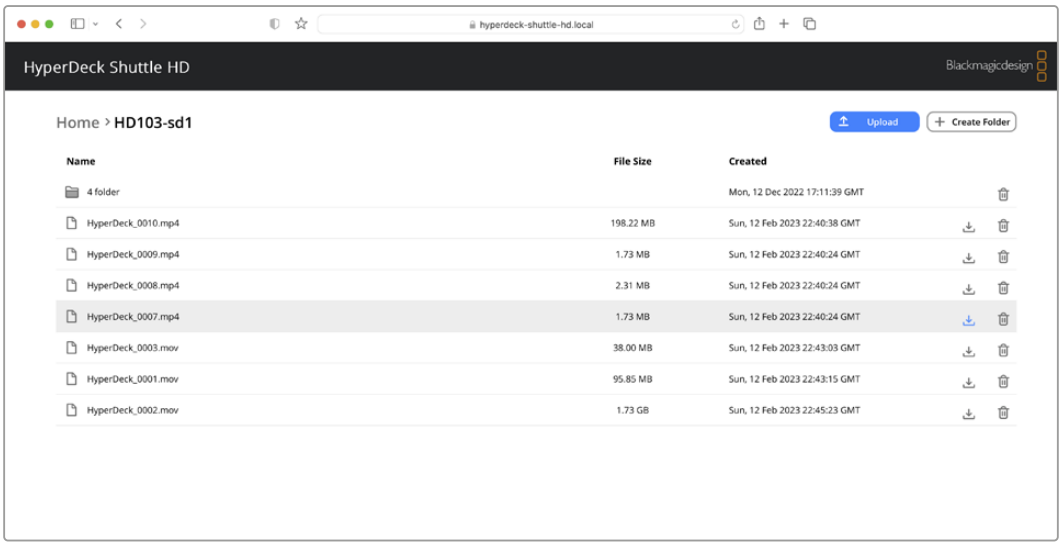
Um ohne ein gültiges und vertrauenswürdiges Zertifikat fortzufahren, folgen Sie den Anweisungen im Browser und akzeptieren Sie die Warnmeldung, um zur Internetseite weitergeleitet zu werden.

Übertragen von Dateien im Web Media Manager

Wenn Sie den Web Media Manager zum ersten Mal in der Browseransicht öffnen, erscheinen Ihre Dateien jeweils nach den vorhandenen Medienslots sortiert.

SD1	Auf SD-Karten gespeicherte Medien.
USB	Angeschlossene USB-Laufwerke werden mit dem Präfix USB/ aufgelistet.

Doppelklicken Sie auf ein Medium, um den Inhalt einer SD-Karte oder eines Laufwerks aufzurufen.



Klicken Sie zum Hinzufügen von Dateien auf den „Upload“-Button

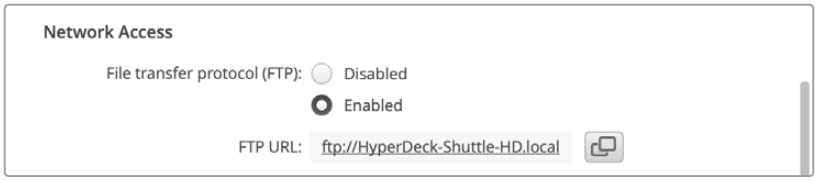
Um Dateien aus der Ferne hochzuladen und wiederzugeben, klicken Sie auf den „Upload“-Button. Navigieren Sie per Dateibrowser zu Ihrer Datei und klicken Sie zum Hochladen auf „Upload“. Ein Dialogfenster zeigt den Upload-Status an. Über den Button „Create Folder“ können Sie bei Bedarf auch Ordner hinzufügen.

Verwenden Sie zum Herunterladen von Dateien das Pfeilsymbol ganz rechts. Ihr Browser fordert Sie möglicherweise auf, Downloads von der Website zuzulassen. Klicken Sie zur Bestätigung auf „Allow“. Klicken Sie zum Löschen von Dateien auf das Mülleimer-Icon. Es erscheint ein Dialogfenster. Klicken Sie darin auf „Delete“, um mit dem Löschen fortzufahren.

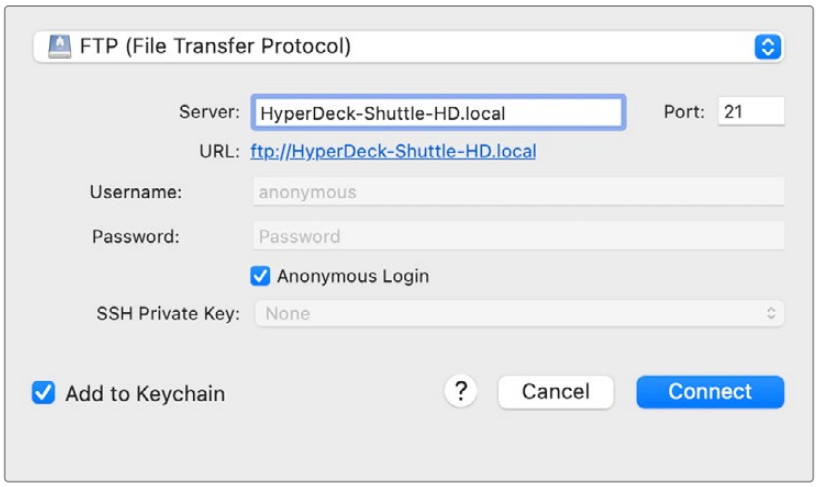
Übertragen von Dateien via FTP

Sind Ihr Computer und Ihr HyperDeck Shuttle HD an dasselbe Netzwerk angeschlossen, brauchen Sie lediglich einen FTP-Client und die IP-Adresse Ihres HyperDeck Shuttle HD oder die FTP-URL aus HyperDeck Setup.

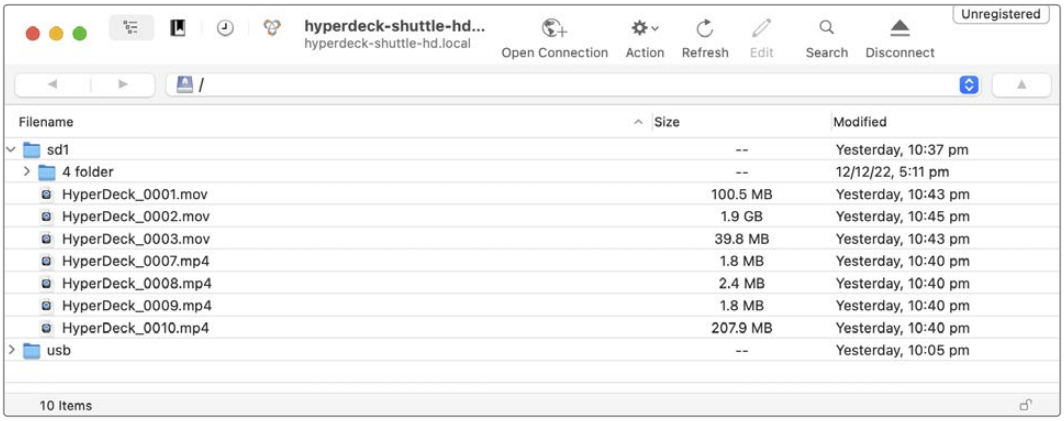
1. Laden Sie einen FTP-Client herunter und installieren Sie ihn auf dem Computer, den Sie mit Ihrem HyperDeck Shuttle HD verbinden möchten. Wir empfehlen die Programme Cyberduck, FileZilla oder Transmit. Es funktioniert aber mit fast allen FTP-Anwendungen. Cyberduck und FileZilla sind als kostenlose Downloads erhältlich.
2. Ist der HyperDeck Shuttle HD in Ihr Netzwerk eingebunden, öffnen Sie HyperDeck Setup und klicken auf die FTP-URL oder zur manuellen Eingabe auf das Kopier-Icon. Wenn das FTP-Programm keine Verbindung herstellt, müssen Sie den Link eventuell ein zweites Mal anklicken.



3. Wenn Sie eine FTP-Verbindung manuell herstellen, fügen Sie die URL in das „Server“-Feld ein. Aktivieren Sie, falls verfügbar, für eine anonyme Anmeldung die Option „Anonymous Login“.



4 SD-Karten sind mit sd1 gekennzeichnet.



Nun können Sie Dateien über die FTP-Bedienoberfläche per Drag-and-drop verwalten.

Developer Information

Blackmagic HyperDeck Ethernet Protocol

The Blackmagic HyperDeck Ethernet Protocol is a text based protocol accessed by connecting to TCP port 9993 on HyperDeck models that have a built in Ethernet connection. If you are a software developer, you can use the protocol to construct devices that integrate with our products. Here at Blackmagic Design our approach is to open up our protocols and we eagerly look forward to seeing what you come up with!

You can connect to your HyperDeck recorder using the HyperDeck Ethernet Protocol using a command line program on your computer, such as Terminal on a Mac and putty on a Windows computer.

The HyperDeck Ethernet Protocol lets you schedule playlists and recordings. The following is an example of how to play 7 clips from clip number 5 onwards via the HyperDeck Ethernet Protocol.

On a Mac

1. Open the Terminal application which is located with the applications > utilities folder.
2. Type in “nc” and a space followed by the IP address of your HyperDeck disk recorder, another space and “9993” which is the HyperDeck Ethernet Protocol port number. For example type: nc 192.168.1.154 9993. The Protocol preamble will appear.
3. Type “playrange set: clip id: 5 count: 7” and press ‘return’.

   On HyperDeck disk recorders with a timeline view, you will see in and out points marked around clips 5 through the end of clip 11.
4. Type “play”. Clips 5 through 11 will now play back.
5. To clear the playrange, type “playrange clear”
6. To exit from the protocol, type ‘quit’.

Protocol Commands

Command	Command Description
help or ?	Provides help text on all commands and parameters
commands	return commands in XML format
device info	return device information
disk list	query clip list on active disk
disk list: slot id: {n}	query clip list on disk in slot {n}
quit	disconnect ethernet control
ping	check device is responding
preview: enable: {true/false}	switch to preview or output
play	play from current timecode
play: speed: {-5000 to 5000}	play at specific speed
play: loop: {true/false}	play in loops or stop-at-end
play: single clip: {true/false}	play current clip or all clips

Command	Command Description
play: {clip id/clip/timecode/timeline/...}	play from the specified position see “goto” command for description of parameters parameters can be combined with {speed/loop/single clip}
playrange	query playrange setting
playrange set: clip id: {n}	set play range to play clip {n} only
playrange set: clip id: {n} count: {m}	set play range to {m} clips starting from clip {n}
playrange set: in: {inT} out: {outT}	set play range to play between: - timecode {inT} and timecode {outT}
playrange set: timeline in: {in} timeline out: {out}	set play range in units of frames between: - timeline position {in} and position {out}
playrange clear	clear/reset play range setting
play on startup	query unit play on startup state
play on startup: enable: {true/false}	enable or disable play on startup
play on startup: single clip: {true/false}	play single clip or all clips on startup
play option	query play options
play option: stop mode: {lastframe/nextframe/black}	set output frame when playback stops
record	record from current input
record: name: {name}	record named clip
record spill	spill current recording to next slot
record: spill: slot id: {n}	spill current recording to specified slot use current id to spill to same slot
spill order	query the device order used for record spill
stop	stop playback or recording
clips count	query number of clips on timeline
clips get	query all timeline clips
clips get: clip id: {n}	query a timeline clip info
clips get: clip id: {n} count: {m}	query m clips starting from n
clips get: version: {1/2/3}	query clip info using specified output version: version 1: id: name startT duration version 1: id: name startT duration startT depends on “configuration: timecode output: {clip/timeline}” version 2: id: clipInT clipDuration inT outT filename version 3: id: clipInT clipDuration inT outT folder/filename
clips add: name: {name}	append a clip to timeline, name can include subfolders e.g. folder1/HyperDeck_0001.mp4
clips add: clip id: {n} name: {name}	insert clip before existing clip {n}
clips add: in: {inT} out: {outT} name: {name}	append the clip portion between clip timecodes {inT} to {outT}
clips add: frame in: {in} frame out: {out} name: {name}	append the clip portion between clip frame numbers {in} to {out}

Command	Command Description
clips remove: clip id: {n}	remove clip {n} from the timeline (invalidates clip ids following clip {n})
clips clear	empty timeline clip list
clips rebuild	rebuild timeline with default rules
clip info	query clip info for the current playing/recording clip
clip info: clip id: {n}	query clip info for timeline clip id {n}
clip info: name: {name}	query clip info for the clip named {name} on active disk
transport info	query current activity
slot info	query active slot
slot info: slot id: {n}	query slot {n}
slot info: device: {device}	query slot containing device USB/network devices can be queried without being active “device” and “slot id” parameters are mutually exclusive in all commands
slot select: slot id: {n}	switch to specified slot
slot select: device: {device}	switch to slot containing device
slot select: video format: {format}	load clips of specified format
slot unblock	unblock active slot
slot unblock: slot id: {n}	unblock slot {n}
slot unblock: device: {device}	unblock disk device
external drive list	list all available USB/network drives for use in external slot
external drive select: device: {device}	switch external slot to specified external drive
external drive selected	query the currently selected external drive
cache info	query cache status
dynamic range	query dynamic range settings
dynamic range: playback override: {off/Rec709/Rec2020_SDR/HLG/ ST2084_300/ST2084_500/ ST2084_800/ST2084_1000/ ST2084_2000/ST2084_4000/ST2084	set playback dynamic range override
dynamic range: record override: {off/Rec709/Rec2020_SDR/HLG/ ST2084_300/ST2084_500/ ST2084_800/ST2084_1000/ ST2084_2000/ST2084_4000/ST2048}	set record dynamic range override
notify	query notification status
notify: remote: {true/false}	set remote notifications
notify: transport: {true/false}	set transport notifications
notify: slot: {true/false}	set slot notifications
notify: configuration: {true/false}	set configuration notifications

Command	Command Description
notify: dropped frames: {true/false}	set dropped frames notifications (reported dropped frame count is approximate)
notify: display timecode: {true/false}	set display timecode notifications
notify: timeline position: {true/false}	set playback timeline position notifications
notify: playrange: {true/false}	set playrange notifications
notify: cache: {true/false}	set cache notifications
notify: dynamic range: {true/false}	set dynamic range settings notifications
notify: slate: {true/false}	set digital slate notifications
notify: clips: {true/false}	set timeline clips notifications where two types of changes can occur: add: partial update with list of clips and insert positions snapshot: complete update of all clips on timeline
notify: disk: {true/false}	set disk clips notifications where two types of changes can occur: add: partial update with list of clips and insert positions snapshot: complete update of all clips on timeline
notify: device info: {true/false}	set device info notifications
notify: nas: {true/false}	set nas notifications triggered by commands such as “nas add” or “nas remove”
goto: clip id: {start/end}	goto first clip or last clip
goto: clip id: {n}	goto clip id {n}
goto: clip id: +{n}	go forward {n} clips
goto: clip id: -{n}	go backward {n} clips
goto: clip: {start/end}	goto start or end of clip
goto: clip: {n}	goto frame position {n} within current clip
goto: clip: +{n}	go forward {n} frames within current clip
goto: clip: -{n}	go backward {n} frames within current clip
goto: timeline: {start/end}	goto start or end of timeline
goto: timeline: {n}	goto frame position {n} within timeline
goto: timeline: +{n}	go forward {n} frames within timeline
goto: timeline: -{n}	go backward {n} frames within timeline
goto: timecode: {timecode}	goto absolute timecode position in timeline
goto: timecode: +{timecode}	go forward {timecode} duration
goto: timecode: -{timecode}	go backward {timecode} duration
goto: slot id: {n}	goto slot id {n}
goto: clip id: {n} clip: {m}	goto clip id {n} and offset to frame position {m} within that clip
goto: clip id: {n} timeline: {m}	goto clip id {n} and offset to frame position {m} within the timeline

Command	Command Description
goto: clip id: {n} timecode: {timecode}	goto clip id {n} and offset {timecode} duration {clip id/clip/timeline/timecode} support absolute and relative offsets use “play” instead of “goto” to play from seeked position
jog: timecode: {timecode}	jog to timecode
jog: timecode: +{timecode}	jog forward {timecode} duration
jog: timecode: -{timecode}	jog backward {timecode} duration
shuttle: speed: {-5000 to 5000}	shuttle with speed
remote	query unit remote control state
remote: enable: {true/false}	enable or disable remote control
remote: override: {true/false}	session override remote control
configuration	query configuration settings
configuration: video input: {SDI/HDMI/component/composite}	change the video input source
configuration: audio input: {embedded/XLR/RCA}	change the audio input source
configuration: file format: {format}	switch to one of the supported formats: H.265High_422, H.264High, H.264Medium, H.264Low, H.264High10_422, H.265High, H.265Medium, H.265Low, QuickTimeProResHQ, QuickTimeProRes, QuickTimeProResLT, QuickTimeProResProxy DNxHR_HQX, QuickTimeDNxHR_HQX, DNxHR_SQ, QuickTimeDNxHR_SQ, DNxHR_LB, QuickTimeDNxHR_LB, DNxHD220x, QuickTimeDNxHD220x, DNxHD145, QuickTimeDNxHD145, DNxHD45, QuickTimeDNxHD45
configuration: audio codec: {PCM/AAC}	switch to specific audio codec
configuration: timecode input: {external/embedded/internal/preset/clip}	change the timecode input
configuration: timecode output: {clip/timeline}	change the timecode output
configuration: timecode preference: {default/dropframe/nondropframe}	whether or not to use drop frame timecodes when not otherwise specified
configuration: timecode preset: {timecode}	set the timecode preset
configuration: audio input channels: {n}	set the number of audio channels recorded to {n}
configuration: record trigger: {none/recordbit/timecoderun}	change the record trigger
configuration: record prefix: {name}	set the record prefix name (supports UTF-8 name)
configuration: record cache: {true/false}	enable or disable record cache, has no effect if cache is not supported/installed/formatted
configuration: append timestamp: {true/false}	append timestamp to recorded filename
configuration: usb spill: {true/false}	enable or disable spilling between usb disks

Command	Command Description
configuration: reference source: {auto/input/external}	set source for the reference signal
configuration: genlock input resync: {true/false}	enable or disable genlock input resync when enabled set reference source to auto/external
configuration: xlr input id: {n} xlr type: {line/mic}	configure xlr input type multiple xlr inputs can be configured in a single command
uptime	return time since last boot
format: slot id: {n} prepare: {exFAT/HFS+} name: {name}	prepare formatting operation filesystem type with volume name {name} “slot id” can be omitted for the current mounted slot “name” defaults to current volume name if mounted (supports UTF-8)
format: device: {device} prepare: {exFAT/HFS+} name: {name}	prepare formatting operation for {device}
format: confirm: {token}	perform a pre-prepared formatting operation using token
identify: enable: {true/false}	identify the device
watchdog: period: {period in seconds}	client connection timeout
reboot	reboot device
slate clips	slate clips information
slate project	slate project information
slate lens	slate lens information
nas list	list all NAS share bookmarks
nas discovered	list all NAS servers that have been discovered via mDNS
nas selected	currently selected NAS share
nas deselect	unmount the currently selected NAS share
connection protocol: response version: {version}	changes which do not affect other client connections change the output of “clips get”, “disk list” and related responses version 1 205 clips get id: filename startT duration startT depends on “configuration: timecode output: {clip/timeline}” 519 clips info id: clipInT clipDuration inT outT filename 206 disk list id: filename codec format duration 520 disk list info id: filename codec format duration version 2 205 clips get id: clipInT clipDuration inT outT folder/filename 519 clips info id: clipInT clipDuration inT outT folder/filename 206 disk list id: codec format duration folder/filename 520 disk list info id: codec format duration folder/filename

Multiline commands:	Command Description
authenticate:↵	authenticate user for secure access
username: {username}	case sensitive username
password: {password}	case sensitive password
slate clips↵	set slate clips information:
reel: {n}	slate reel number, where {n} is in [1, 999]
scene id: {id}	slate scene id value, where {id} is a string
shot type: {WS/MS/CU/BCU/MCU/ECU/none}	slate shot type
take: {n}	slate take number, where {n} is in [1, 99]
take scenario: {PU/VFX/SER/none}	slate take scenario
take auto inc: {true/false}	slate take auto increment
good take: {true/false}	slate good take
environment: {interior/exterior}	slate environment
day night: {day/night}	slate day or night
slate project:↵	set slate project information:
project name: {name}	project name (can be empty, supports UTF-8)
camera: {index}	set camera index e.g. A
director: {name}	director (can be empty, supports UTF-8)
camera operator: {name}	camera operator (can be empty, supports UTF-8)
slate lens:↵	set lens information:
lens type: {type}	lens type (can be empty, supports UTF-8)
iris: {type}	camera iris (can be empty, supports UTF-8)
focal length: {length}	focal length (can be empty, supports UTF-8)
distance: {distance}	lens distance (can be empty, supports UTF-8)
filter: {filter}	lens filter (can be empty, supports UTF-8)
nas add:↵	add a NAS share to the list of bookmarks
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share
username: {username}	username to connect as (optional, defaults to guest)
password: {password}	password to connect with (optional)
nas remove:↵	remove NAS share bookmark, does not unmount share if mounted
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share
nas select:↵	mount NAS share asynchronously. Uses credentials provided in matching bookmark, otherwise uses guest credentials
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share Use “nas selected” or “notify: slot: true” to determine when share is mounted.

Command Combinations

You can combine the parameters into a single command, for example:

```
play: clip id: 3 speed: 200 loop: true single clip: true
```

Or for configuration:

```
configuration: video input: SDI audio input: XLR
```

Or to switch to the second disk, but only play NTSC clips:

```
slot select: slot id: 2 video format: NTSC
```

Using XML

While you can use the Terminal to talk to HyperDeck, if you are writing software, you can use XML to confirm the existence of a specific command based on the firmware of the HyperDeck you are communicating with. This helps your software user interface adjust to the capabilities of the specific HyperDeck model and software version.

Protocol Details

Connection

The HyperDeck Ethernet server listens on TCP port 9993.

Basic syntax

The HyperDeck protocol is a line oriented text protocol. Lines from the server will be separated by an ascii CR LF sequence. Messages from the client may be separated by LF or CR LF.

New lines are represented in this document as a "↵" symbol.

Single line command syntax

Command parameters are usually optional. A command with no parameters is terminated with a new line:

```
{Command name}↵
```

If parameters are specified, the command name is followed by a colon, then pairs of parameter names and values. Each parameter name is terminated with a colon character:

```
{Command name}: {Parameter}: {Value} {Parameter}: {Value} ...↵
```

Multiline command syntax

The HyperDeck protocol also supports an equivalent multiline syntax where each parameter-value pair is entered on a new line. E.g.

```
{Command name}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
↵
```

Response syntax

Simple responses from the server consist of a three digit response code and descriptive text terminated by a new line:

```
{Response code} {Response text}↵
```

If a response carries parameters, the response text is terminated with a colon, and parameter name and value pairs follow on subsequent lines until a blank line is returned:

```
{Response code} {Response text}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
...
↵
```

Successful response codes

A simple acknowledgement of a command is indicated with a response code of 200:

```
200 ok↵
```

Other successful responses carry parameters and are indicated with response codes in the range of 201 to 299.

Failure response codes

Failure responses to commands are indicated with response codes in the range of 100 to 199:

```
100 syntax error
101 unsupported parameter
102 invalid value
103 unsupported
104 disk full
105 no disk
106 disk error
107 timeline empty
108 internal error
109 out of range
110 no input
111 remote control disabled
112 clip not found
120 connection failed
121 authentication failed
122 authentication required
150 invalid state
151 invalid codec
160 invalid format
161 invalid token
162 format not prepared
163 parameterized single line command not supported
```

Asynchronous response codes

The server may return asynchronous messages at any time. These responses are indicated with response codes in the range of 500 to 599:

```
5xx {Response Text}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
↵
```

Connection response

On connection, an asynchronous message will be delivered:

```
500 connection info:↵
protocol version: {Version}↵
model: {Model Name}↵
↵
```

Connection rejection

A limited number of clients may connect at a time. If too many clients attempt to connect concurrently, they will receive an error and be disconnected:

```
120 connection failed↵
```

Timecode syntax

Timecodes are expressed as non-drop-frame timecode in the format:

```
HH:MM:SS:FF
```

Handling of deck "remote" state

The “remote” command may be used to enable or disable the remote control of the deck. Any attempt to change the deck state over ethernet while remote access is disabled will generate an error:

```
111 remote control disabled↵
```

To enable or disable remote control:

```
remote: enable: {“true”, “false”} ↵
```

The current remote control state may be overridden allowing remote access over ethernet irrespective of the current remote control state:

```
remote: override: {“true”, “false”} ↵
```

The override state is only valid for the currently connected ethernet client and only while the connection remains open.

The “remote” command may be used to query the remote control state of the deck by specifying no parameters:

```
remote↵
```

The deck will return the current remote control state:

```
210 remote info:↵
enabled: {“true”, “false”}↵
override: {“true”, “false”}↵
↵
```

Asynchronous remote control information change notification is disabled by default and may be configured with the “notify” command. When enabled, changes in remote state will generate a “510 remote info:”asynchronous message with the same parameters as the “210 remote info:” message.

Closing connection

The "quit" command instructs the server to cleanly shut down the connection:

```
quit↵
```

Checking connection status

The "ping" command has no function other than to determine if the server is responding:

```
ping↵
```

Getting help

The "help" or "?" commands return human readable help text describing all available commands and parameters:

```
help↵
```

Or:

```
?↵
```

The server will respond with a list of all supported commands:

```
201 help:↵
{Help Text}↵
{Help Text}↵
↵
```

Switching to preview mode

The "preview" command instructs the deck to switch between preview mode and output mode:

```
preview: enable: {"true", "false"}↵
```

Playback will be stopped when the deck is switched to preview mode. Switching to playback is not permitted during record. Use the stop command to stop recording before switching to playback.

Controlling device playback

The “play” command instructs the deck to start playing:

```
play↵
```

The play command accepts a number of parameters which may be used together in most combinations.

By default, the deck will play all remaining clips on the timeline then stop.
The “single clip” parameter may be used to override this behavior:

```
play: single clip: {“true”, “false”}↵
```

By default, the deck will play at normal (100%) speed. An alternate speed may be specified in percentage between -5000 to 5000:

```
play: speed: {% normal speed}↵
```

By default, the deck will stop playing when it reaches to the end of the timeline. The “loop” parameter may be used to override this behavior:

```
play: loop: {“true”, “false”}↵
```

To play from the start of a particular clip:

```
play: clip id: {Clip Id}↵
```

To play from a position offset from the start of particular clip:

```
play: clip id: {Clid Id} timecode: +{timecode}↵
```

The “playrange” command returns the current playrange setting if any:

```
playrange↵
```

To override this behaviour and select a particular clip:

```
playrange set: clip id: {Clip ID}↵
```

To only play a certain number of clips starting at a particular clip:

```
playrange set: clip id: {n} count: {m}↵
```

To only play a certain timecode range:

```
playrange set: in: {in timecode} out: {out timecode}↵
```

To play a certain timeline range:

```
playrange set: timeline in: {in} timeline out: {out}↵
```

To clear a set playrange and return to the default value:

```
playrange clear↵
```

The “play on startup command” instructs the deck on what action to take on startup. By default, the deck will not play. Use the “enable” command to start playback after each power up.

```
play on startup: enable {“true”, “false”}↵
```

By default, the unit will play back all clips on startup. Use the “single clip” command to override.

```
play on startup: single clip: {“true”, “false”}↵
```

The “play option” command queries the output frame for when playback stops:

```
play option↵
```

By default, the deck will display the last frame when playback stops. To override this behaviour, the “stop mode” parameter can be used:

```
play option: stop mode: {“lastframe”, “nextframe”, “black”}↵
```

Stopping deck operation

The "stop" command instructs the deck to stop the current playback or capture:

```
stop↵
```

Changing timeline position

The "goto" command instructs the deck to switch to playback mode and change its position within the timeline.

To go to the start of a specific clip:

```
goto: clip id: {Clip ID}↵
```

To move forward/back {count} clips from the current clip on the current timeline:

```
goto: clip id: +/-{count}↵
```

Note that if the resultant clip id goes beyond the first or last clip on timeline, it will be clamp at the first or last clip.

To go to the start or end of the current clip:

```
goto: clip: {“start”, “end”}↵
```

To go to the start of the first clip or the end of the last clip:

```
goto: timeline: {“start”, “end”}↵
```

To go to a specified timecode:

```
goto: timecode: {timecode}↵
```

To move forward or back a specified duration in timecode:

```
goto: timecode: {“+”, “-”}{duration in timecode}↵
```

To specify between slot 1 and slot 2:

```
goto: slot id: {Slot ID}↵
```

Note that only one parameter/value pair is allowed for each goto command.

Enumerating supported commands and parameters

The "commands" command returns the supported commands:

```
commands↵
```

The command list is returned in a computer readable XML format:

```
212 commands:
<commands>↵
     <command name="…"><parameter name="…"/>…</command>↵
     <command name="…"><parameter name="…"/>…</command>↵
     …
</commands>↵
↵
```

More XML tokens and parameters may be added in later releases.

Controlling asynchronous notifications

The “notify” command may be used to enable or disable asynchronous notifications from the server.
To enable or disable transport notifications:

```
notify: transport: {“true”, “false”}↵
```

To enable or disable slot notifications:

```
notify: slot: {“true”, “false”}↵
```

To enable or disable remote notifications:

```
notify: remote: {“true”, “false”}↵
```

To enable or disable configuration notifications:

```
notify: configuration: {“true”, “false”}↵
```

Multiple parameters may be specified. If no parameters are specified, the server returns the current state of all notifications:

```
209 notify:↵
transport: {“true”, “false”}↵
slot: {“true”, “false”}↵
remote: {“true”, “false”}↵
configuration: {“true”, “false”}↵
dropped frames: {“true”, “false”}↵
display timecode: {“true”, “false”}↵
timeline position: {“true”, “false”}↵
playrange: {“true”, “false”}↵
cache: {“true”, “false”}↵
dynamic range: {“true”, “false”}↵
slate: {“true”, “false”}↵
clips: {“true”, “false”}↵
disk: {“true”, “false”}↵
device info: {“true”, “false”}↵
nas: {“true”, “false”}↵
↵
```

Retrieving device information

The "device info" command returns information about the connected deck device:

```
device info↵
```

The server will respond with:

```
204 device info:↵
protocol version: {Version}↵
model: {Model Name}↵
unique id: {unique alphanumeric identifier}↵
slot count: {number of storage slots}↵
software version: {software version}↵
name: {device name}↵
↵
```

Retrieving slot information

The "slot info" command returns information about a slot. Without parameters, the command returns information for the currently selected slot:

```
slot info↵
```

If a slot id is specified, that slot will be queried:

```
slot info: slot id: {Slot ID}↵
```

The server will respond with slot specific information:

```
202 slot info:↵
slot id: {Slot ID}↵
slot name: {“slot name”}↵
device name: {identifying name for disk device}↵
status: {"empty", "mounting", "error", "mounted"}↵
volume name: {Volume name}↵
recording time: {recording time available in seconds}↵
video format: {disk's default video format}↵
blocked: {“true”, “false”}↵
remaining size: {remaining size in bytes}↵
total size: {total size in bytes}↵
↵
```

A slot can also be specificed by its device. This is particularly useful when there are multiple drives connected via USB. First list the available external drives:

```
external drive list↵
226 external drive info:↵
device: {device}↵
```

Then use slot info with device to query the drive:

```
slot info: device: {device}↵
```

Asynchronous slot information change notification is disabled by default and may be configured with the "notify" command. When enabled, changes in slot state will generate a "502 slot info:" asynchronous message with the same parameters as the "202 slot info:" message.

Retrieving clip information

The “disk list” command returns the information for each playable clip on a given disk. Without parameters, the command returns information for the current active disk:

```
disk list↵
```

If a slot id is specified, the disk in that slot will be queried:

```
disk list: slot id: {Slot ID}↵
```

The server responds with the list of all playable clips on the disk in the format of: Index, name, formats, and duration in timecode:

```
206 disk list:↵
slot id: {Slot ID}↵
{clip index}: {name} {file format} {video format} {Duration timecode}↵
{clip index}: {name} {file format} {video format} {Duration timecode}↵
…
↵
```

Note that the *clip index* starts from 1.

Retrieving clip count

The "clips count" command returns the number of clips on the current timeline:

```
clips count ↵
```

The server responds with the number of clips:

```
214 clips count: ↵
clip count: {Count}↵
```

Retrieving timeline information

The "clips get" command returns information for each available clip on the current timeline. Without parameters, the command returns information for all clips on timeline:

```
clips get↵
```

In version 1, the start timecode reported is either a clip timecode or a timeline timecode depending on the configured output timecode.

The server responds with a list of clip IDs, names and timecodes:

```
205 clips info:↵
clip count: {Count}↵
{Clip ID}: {Name} {Start timecode} {Duration timecode}↵
{Clip ID}: {Name} {Start timecode} {Duration timecode}↵
…
↵
```

The “clips get” command provides a more detailed response when using the “version: 2” parameter:

```
clips get: version: 2↵
```

The server responds with a list of clip IDs, timecodes, in points, out points and names. Clip name is the last field making it simpler to parse when names have embedded spaces.

```
{Clip ID}: {Clip start timecode} {Duration timecode} {inTimecode}
{outTimecode}
{name}↵
{Clip ID}: {Clip start timecode} {Duration timecode} {inTimecode}
{outTimecode}
{name}↵
…
↵
```

For models that support recursive timelines “clips get: version: 3” replaces the {name} field with {path to clip name} where the {path to clip name} can include directories and subdirectories.

Retrieving transport information

The “transport info” command returns the state of the transport:

```
transport info ↵
```

The server responds with transport specific information:

```
208 transport info:

status: {“preview”, “stopped”, “play”, “forward”, “rewind”,
“jog”, “shuttle”,”record”}↵

speed: {Play speed between -5000 and 5000 %}↵

slot id: {Slot ID or “none”}↵

slot name: {“slot name”}↵

device name: {identifying name for disk device}↵

clip id: {Clip ID or “none”}↵

single clip: {“true”, “false”}↵

display timecode: {timecode}↵

timecode: {timecode}↵

video format: {Video format}↵

loop: {“true”, “false”}↵

timeline: {n}↵

input video format: {Video format”}↵

dynamic range: {“off”, “Rec709”, “Rec2020_SDR”, “HLG”,
“ST2084_300”, “ST2084_500”, “ST2084_800”, “ST2084_1000”,
“ST2084_2000”, “ST2084_4000”, “ST2048” or “none”}↵

reference locked: {“false”, “true”}

↵
```

The "timecode" value is the timecode within the current timeline for playback or the clip for record. The "display timecode" is the timecode displayed on the front of the deck. The two timecodes will differ in some deck modes.

Asynchronous transport information change notification is disabled by default and may be configured with the "notify" command. When enabled, changes in transport state will generate a "508 transport info:" asynchronous message with the same parameters as the "208 transport info:" message.

Video Formats

The following video formats are currently supported on HyperDeck Extreme, HyperDeck Studio and HyperDeck Shuttle:

720p50, 720p5994, 720p60

1080p23976, 1080p24, 1080p25, 1080p2997, 1080p30, 1080p60

1080i50, 1080i5994, 1080i60

HyperDeck Extreme HDR models also support the following formats:

NTSC, PAL, NTSCp, PALp

2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p30, 2160p50, 2160p59.94, 2160p60

4Kp23976, 4Kp24, 4Kp25, 4Kp2997, 4Kp30

4Kp50, 4Kp5994, 4Kp60

HyperDeckExtreme 8K HDR adds support for the following 8K formats:

4320p23.98, 4320p24, 4320p25, 4320p29.97, 4320p30, 4320p50, 4320p59.94, 4320p60

8Kp23976, 8Kp24, 8Kp25

HyperDeck Studio Pro and Plus models support these 4k formats:

4Kp23976, 4Kp24, 4Kp25, 4Kp2997, 4Kp30

HyperDeck Studio 4K Pro adds support for the following 4k formats:

4Kp50, 4Kp5994, 4Kp60

Video format support may depend on the file format selected and may vary between models and software releases.

File Formats

All HyperDeck models currently support the following file formats:

H.264High_SDI

H.264High

H.264Medium

H.264Low

QuickTimeProResHQ

QuickTimeProRes

QuickTimeProResLT

QuickTimeProResProxy

QuickTimeDNxHD220x

DNxHD220x

QuickTimeDNxHD145

DNxHD145

QuickTimeDNxHD45

DNxHD45

HyperDeck Studio 4K Pro and HyperDeck Extrme HDR models also support the following file formats:

H.265High_SDI

H.265High

H.265Medium

H.265Low

QuickTimeDNxHR_HQX

DNxHR_HQX

QuickTimeDNxHR_SQ

DNxHR_SQ

QuickTimeDNxHR_LB

DNxHR_LB

Supported file formats may vary between models and software releases.

Querying and updating configuration information

The "configuration" command may be used to query the current configuration of the deck:

```
configuration↵
```

The server returns the configuration of the deck:

```
211 configuration:↵
audio input: {“embedded”, “XLR”, “RCA”}↵
audio mapping: {n}↵
video input: {“SDI”, “HDMI”, “component”, “composite”}↵
file format: {format}↵
audio codec: {“PCM”, “AAC”}↵
timecode input: {“external”, “embedded”, “preset”, “clip”}↵
timecode output: {“clip”, “timeline”}↵
timecode preference: {“default”, “dropframe”, “nondropframe”}↵
timecode preset: {timecode}↵
audio input channels: {n}↵
record trigger: {“none”, “recordbit”, “timecoderun”}↵
record prefix: {name}↵
record cache: {“true”, “false”}↵
append timestamp: {“true”, “false”}↵
genlock input resync: {“true”, “false”}↵
reference source: {“auto”, “input”, “external”}↵
xlr input id: {“n”}↵
xlr type: {”line”, ”mic”}↵
usb spill: {“true”, “false”}↵
↵
```

One or more configuration parameters may be specified to change the configuration of the deck.

To change the current video input:

```
configuration: video input: {“SDI”, “HDMI”, “component”}↵
```

Valid video inputs may vary between models. To configure the current audio input:

```
configuration: audio input: {“embedded”, “XLR”, “RCA”}↵
```

Valid audio inputs may vary between models.

To configure the current file format:

```
configuration: file format: {File format}↵
```

Note that changes to the file format may require the deck to reset, which will cause the client connection to be closed. In such case, response code 213 will be returned (instead of 200) before the client connection is closed:

```
“213 deck rebooting”
```

Asynchronous configuration information change notification is disabled by default and may be configured with the “notify” command. When enabled, changes in configuration will generate a “511 configuration:” asynchronous message with the same parameters as the “211 configuration:” message.

Selecting active slot and video format

The "slot select" command instructs the deck to switch to a specified slot, or/and to select a specified output video format.

To switch to a specified slot:

```
slot select: slot id: {slot ID}↵
```

To switch to a disk device, including USB drives that are not yet made active:

```
slot select: device: {identifying name for disk device}↵
```

To select the output video format:

```
slot select: video format: {video format}↵
```

Either or all slot select parameters may be specified. Note that selecting video format will result in a rescan of the disk to reconstruct the timeline with all clips of the specified video format.

Clearing the current timeline

The "clips clear" command instructs the deck to empty the current timeline:

```
clips clear↵
```

The server responds with

```
200 ok↵
```

Adding a clip to the current timeline

The "clips add:" command instructs the deck to add a clip to the current timeline:

```
clips add: name: {clip name}↵
```

The server responds with

```
200 ok↵
```

or in case of error

```
1xx {error description}↵
```

Configuring the watchdog

The “watchdog” command instructs the deck to monitor the connected client and terminate the connection if the client is inactive for at least a specified period of time.

To configure the watchdog:

```
watchdog: period: {period in seconds}↵
```

To avoid disconnection, the client must send a command to the server at least every {period} seconds.
Note that if the period is set to 0 or less than 0, connection monitoring will be disabled.

Network Area Storage

On networks using multicast DNS the “nas discovered” command will list network servers the HyperDeck has discovered:

```
nas discovered↵
225 nas host info:
CloudStoreMini.local. CloudStoreMini
CloudStore80.local. CloudStore80
CloudStore320.local. CloudStore320
```

A network share can be added as a bookmark to the HyperDeck using ‘nas add’

```
nas add:
url: smb://CloudStore80.local/Studio1
```

For shares that require a username and password consider using the secure mode of the HyperDeck Ethernet protocol to avoid passwords being sent as plaintext.

```
nas add:
url: smb://192.168.1.1/Main
username: user1234
password: Password1234
```

A share can be made available for recording and playback using ‘nas select’. If a bookmark exists for that share, ‘nas select’ will use the credentials stored in the bookmark. Otherwise ‘nas select’ will connect using Guest credentials.

```
nas select:
url: smb://192.168.1.1/Main
```

Only one share can be mounted at a time using ‘nas select’.

You can query the currently selected nas share using the ‘nas selected’ command. If ‘notify: slot: true’ was used an asynchronous notification will be sent when the share is mounted.

HyperDeck Control REST API

Wenn Sie Software-Entwickler sind, können Sie mithilfe von HyperDeck Control REST API Ihre eigenen Anwendungen erstellen oder sich gebrauchsfertige Tools wie den REST-Client oder Postman zunutze machen, um HyperDeck Rekorder zu steuern und mit ihnen zu interagieren. Mit dieser API könne Sie eine ganze Bandbreite an Funktionen ausführen, wie bspw. das Starten und Stoppen von Aufzeichnungen, das Verwalten von Wiedergaben, das Zugreifen auf Speicherinformationen u. v. m. Ob Sie Ihre eigenen, auf Ihre Bedürfnisse zugeschnittenen Anwendungen entwickeln oder bereits vorhandene Tools verwenden, die API ermöglicht es Ihnen, das volle Potenzial Ihres HyperDeck Disk Rekorders zu entfalten. Wir freuen uns, von Ihren kreativen Steuerungslösungen zu hören!

Transport Control API

API for controlling Transport on Blackmagic Design products.

GET /transports/0

Get device's basic transport status.

Response

200 - Transport status.

The response is a JSON object.

Name	Type	Description
mode	string	Transport mode. Possible values are: InputPreview, InputRecord, Output.

PUT /transports/0

Set device's basic transport status.

Parameters

Name	Type	Description
mode	string	Transport mode. Possible values are: InputPreview, Output.

Response

204 - Transport mode was set.

GET /transports/0/stop

Determine if transport is stopped.

Response

200 - Transport stop response.

The response is a JSON object.

PUT /transports/0/stop

Stop transport. Deprecated, use POST /tranports/0/stop instead.

Response

204 - Transport stopped.

POST /transports/0/stop

Stop transport.

Response

204 - Transport stopped.

GET /transports/0/play

Determine if transport is playing.

Response

200 - Transport play response.
The response is a JSON object.

PUT /transports/0/play

Start playing on transport. Deprecated, use POST /tranports/0/play instead.

Response

204 - Transport playing.

POST /transports/0/play

Start playing on transport.

Response

204 - Transport playing.

GET /transports/0/playback

Get playback state.

Response

200 - OK
The response is a JSON object.

Name	Type	Description
type	string	Possible values are: Play, Jog, Shuttle, Var.
loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
speed	number	Playback Speed, 1.0 for normal forward playback
position	integer	Playback position on the timeline in units of video frames

PUT /transports/0/playback

Set playback state.

Parameters

Name	Type	Description
type	string	Possible values are: Play, Jog, Shuttle, Var.
loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
speed	number	Playback Speed, 1.0 for normal forward playback
position	integer	Playback position on the timeline in units of video frames

Response

204 - No Content

GET /transports/0/record

Get record state.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
recording	boolean	Is transport in Input Record mode

PUT /transports/0/record

Set record state. Deprecated, use POST /transports/0/record instead.

Parameters

Name	Type	Description
recording	boolean	Is transport in Input Record mode
clipName	string	Used to set the requested clipName to record to, when specifying “recording” attribute to True

Response

204 - Recording started.

POST /transports/0/record

Start recording.

Parameters

Name	Type	Description
clipName	string	Specific name of clip to record to.

Response

204 - Recording started.

GET /transports/0/clipIndex

Get the clip index of the currently playing clip on the timeline.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clipIndex	number	The 0-based index of the clip being played on the timeline. null when there is no timeline or an empty timeline.

GET /transports/0/timecode

Get device's timecode.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
display	string	The display timecode serialised as a string.
timeline	string	The timeline timecode serialised as a string.

GET /transports/0/timecode/source

Get timecode source selected on device

Response

200 - OK

The response is a JSON object.

Name	Type	Description
timecode	string	Possible values are: Timeline, Clip.

GET /transports/0/clip

Get clip information about the currently recording (or transferring) clip, if it exists

Response

200 - Information about the clip currently being recorded.

The response is a JSON object.

Name	Type	Description
clip	object	
clip.clipUniqueId	integer	Unique ID used to identify this clip
clip.filePath	string	Path to the file relative to the root of a mount
clip.fileSize	integer	Size of file on disk in bytes
clip.codecFormat	object	
clip.codecFormat.codec	string	Currently selected codec.
clip.codecFormat.container	string	Multimedia container format.
clip.videoFormat (required)	object	Video format configuration.
clip.videoFormat.name	string	Video format serialised as a string.
clip.videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
clip.videoFormat.height	number	Height dimension of video format.
clip.videoFormat.width	number	Width dimension of video format.
clip.videoFormat.interlaced	boolean	Is the display format interlaced?
clip.startTimecode	string	Start timecode of the clip serialised as string
clip.durationTimecode	string	Duration of the clip in timecode format serialised as string
clip.frameCount	integer	Number of frames in clip; duration of the clip in frames

System Control API

API for controlling the System Modes on Blackmagic Design products.

GET /system

Get device system information.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codecFormat	object	
codecFormat.codec	string	Currently selected codec.
codecFormat.container	string	Multimedia container format.
videoFormat (required)	object	Video format configuration.
videoFormat.name	string	Video format serialised as a string.
videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
videoFormat.height	number	Height dimension of video format.
videoFormat.width	number	Width dimension of video format.
videoFormat.interlaced	boolean	Is the display format interlaced?

GET /system/product

Get device product information.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
deviceName	string	Name of device as displayed in Setup
productName	string	Device's product name
softwareVersion	string	Software version running on device

GET /system/supportedCodecFormats

Get the list of supported codecs.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codecs	array	
codecs[i]	object	
codecs[i].codec	string	Currently selected codec.
codecs[i].container	string	Multimedia container format.

GET /system/codecFormat

Get the currently selected codec.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codec	string	Currently selected codec.
container	string	Multimedia container format.

PUT /system/codecFormat

Set the codec.

Parameters

Name	Type	Description
codec	string	Currently selected codec.
container	string	Multimedia container format.

Response

204 - The codec updated successfully.

GET /system/videoFormat

Get the currently selected video format.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
name	string	Video format serialised as a string.
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

PUT /system/videoFormat

Set the timeline video format. Deprecated, use PUT /timelines/0/videoFormat instead.

Parameters

This parameter can be one of the following types:

Name	Type	Description
name	string	Video format serialised as a string.

Name	Type	Description
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

Response

204 - The video format updated successfully.

400 - Invalid request.

409 - Operation unsupported in the current state.

Media Control API

API for controlling media devices in Blackmagic Design products.

GET /media/workingset

Get the list of media devices currently in the working set.

Response

200 - The list of media devices in the working set. Entries are null if there is no media device in that slot.

The response is a JSON object.

Name	Type	Description
size	integer	The fixed size of this device's working set
workingset (required)	array	
workingset[i]	object	
workingset[i].index	integer	Index of this media in the working set
workingset[i].activeDisk	boolean	Is this current item the active disk
workingset[i].volume	string	Volume name
workingset[i].deviceName	string	Internal device name of this media device
workingset[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
workingset[i].totalSpace	integer	Total space on media device in bytes
workingset[i].remainingSpace	integer	Remaining space on media device in bytes
workingset[i].clipCount	integer	Number of clips currently on the device

GET /media/active

Get the currently active media device.

Response

200 - The current active media device.

The response is a JSON object.

Name	Type	Description
workingsetIndex	integer	Working set index of the active media device
deviceName	string	Internal device name of this media device

204 - No media is currently active

PUT /media/active

Set the currently active media device.

Parameters

Name	Type	Description
workingsetIndex	integer	Working set index of the media to become active

Response

204 - The active media device was set successfully.

400 - Setting the currently active media device is not possible in the current state.

GET /media/devices/doformatSupportedFilesystems

Get the list of filesystems available to format the device.

Response

200 - The list of filesystems permitted for formatting.

The response is a JSON object.

GET /media/devices/{deviceName}

Get information about a requested device.

Parameters

Name	Type	Description
{deviceName}	string	

Response

200 - Information about the requested device.

The response is a JSON object.

Name	Type	Description
state	string	The current state of the media device. Possible values are: None, Scanning, Mounted, Uninitialised, Formatting, RaidComponent.

400 - Invalid device name

404 - Device not found

GET /media/devices/{deviceName}/doformat

Get a format key, used to format the device with a PUT request.

Parameters

Name	Type	Description
{deviceName}	string	

Response

200 - Format prepared

The response is a JSON object.

Name	Type	Description
deviceName	string	Internal device name of this media device
key	string	The key used to format this device, it must be fetched with the GET request and then provided back with a PUT request

400 - Cannot format the device

404 - Device not found

PUT /media/devices/{deviceName}/doformat

Perform a format of the media device.

Parameters

Name	Type	Description
{deviceName}	string	

Name	Type	Description
key	string	The key used to format this device, it must be fetched with the GET request and then provided back with a PUT request
filesystem	string	Filesystem to format to. GET doFormatSupportedFilesystems returns list of supported filesystems.
volume	string	Volume name to set for the disk after format

Response

204 - Format successful

400 - Cannot format the device, invalid filesystem or key

404 - Device not found

Timeline Control API

API for controlling playback timeline.

GET /timelines/0

Get the playback timeline.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clips	array	
clips[i]	object	
clips[i].clipUniqueId	integer	Unique identifier used to identify this media clip. If the same media clip is added to the timeline multiple times, each timeline clip has the same clipUniqueId
clips[i].frameCount	integer	Duration of timeline clip in frames, the number of frames in this clip on the timeline
clips[i].durationTimecode	string	Duration of the timeline clip in timecode format serialised as string. This will differ to durationTimecode reported in /clips for this clipUniqueId if clipIn or frameCount was specified when adding this clip to the timeline.
clips[i].clipIn	string	In frame offset for the clip on the timeline, where 0 is the first frame of the on-disk clip
clips[i].inTimecode	string	Clip timecode of the first frame of this timeline clip serialised as string (clip startTimecode + clipIn frames)
clips[i].timelineIn	string	Timeline position of the first frame of this clip, where 0 is the first frame of the timeline
clips[i].timelineInTimecode	string	Timeline timecode of the first frame of this timeline clip serialised as string

Response

404 - No timeline / disk available.

DELETE /timelines/0

Clear the current playback timeline. Deprecated, prefer to use POST /timelines/0/clear

Response

204 - The timeline was cleared.

POST /timelines/0

Add a clip to the timeline.

Parameters

Name	Type	Description
insertBefore	integer	Clip(s) will be inserted before this timeline clip index. If omitted, inserts to the end of the timeline. 0 inserts to the beginning of the timeline.
clips		

Response

204 - The clip was added to the timeline as specified.

POST /timelines/0/add

Add a clip to the end of the timeline. Deprecated, use POST /timelines/0 to add clips within the timeline.

Parameters

This parameter can be one of the following types:

Name	Type	Description
clips	integer	Unique ID (clipUniqueId) of the clip to add to the timeline

Name	Type	Description
clips	array	
clips[i]	integer	Unique ID (clipUniqueId) of the clip to add to the timeline

Response

204 - The clip was added to the end of the timeline.

DELETE /timelines/0/clear

Clear the playback timeline.

Response

204 - The timeline was cleared.

DELETE /timelines/0/clips/{timelineClipIndex}

Remove the specified clip from the timeline.

Parameters

Name	Type	Description
{timelineClipIndex}	integer	

Response

204 - The specified clip was removed from the timeline.

Event Control API

API For working with built-in websocket.

GET /event/list

Get the list of events that can be subscribed to using the websocket API.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
events	array	
events[i]	string	List of events that can be subscribed to using the websocket API

Clips Control API

API for listing clips on disk.

GET /clips

Get the list of clips on the active disk.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clips	array	
clips[i]	object	
clips[i].clipUniqueId	integer	Unique ID used to identify this clip
clips[i].filePath	string	Path to the file relative to the root of a mount
clips[i].fileSize	integer	Size of file on disk in bytes
clips[i].codecFormat	object	
clips[i].codecFormat.codec	string	Currently selected codec.
clips[i].codecFormat.container	string	Multimedia container format.
clips[i].videoFormat (required)	object	Video format configuration.
clips[i].videoFormat.name	string	Video format serialised as a string.
clips[i].videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
clips[i].videoFormat.height	number	Height dimension of video format.
clips[i].videoFormat.width	number	Width dimension of video format.
clips[i].videoFormat.interlaced	boolean	Is the display format interlaced?
clips[i].startTimecode	string	Start timecode of the clip serialised as string
clips[i].durationTimecode	string	Duration of the clip in timecode format serialised as string
clips[i].frameCount	integer	Number of frames in clip; duration of the clip in frames

Response

404 - There is no active disk

HyperDeck Control API

API for controlling HyperDecks.

POST /system/reboot

Reboots the device.

Response

204 - The device will reboot immediately.

409 - Rebooting is not possible in the current state.

GET /system/uptime

Gets the current system uptime.

Response

200 - The current system uptime

The response is a JSON object.

Name	Type	Description
uptimeSeconds	integer	The system uptime in seconds

PUT /system/identify

Sets the identify mode. If set to true, will exit identify mode after 10 seconds.

Parameters

Name	Type	Description
enabled	boolean	Is the device identifying itself?

Response

204 - Identify updated successfully.

GET /transports/0/recordCache

Gets information about the recording cache.

Response

200 - Current information about the recording cache

The response is a JSON object.

Name	Type	Description
status	string	The current status of the cache. “none” means no cache is detected by the device. Possible values are: undetected, unformatted, idle, transferring, queued, recording, disabled.
remainingRecordingTime	integer	The remaining recording time in seconds.
transferringDevice	string	The device name of the disk the cache is currently transferring to.

GET /transports/0/recordCache/enabled

Checks if the record cache is enabled.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
enabled	boolean	Is the record cache enabled?

PUT /transports/0/recordCache/enabled

Enables or disables the record cache. Has no effect if cache is not supported / installed / formatted.

Parameters

Name	Type	Description
enabled	boolean	Is the record cache enabled?

Response

204 - Record cache enabled / disabled was changed.

GET /transports/0/record/spillOrder

Gets media devices in order of which will next be spilled to.

Response

200 - The media device spill order

The response is a JSON object.

Name	Type	Description
devices	array	
devices[i]	object	
devices[i].deviceName	string	Internal device name of the drive.

POST /transports/0/record/spillToNewFile

Spills to a new file.

Response

204 - Spilled to a new file.

POST /transports/0/record/spillToNextDevice

Spills to the next media device

Response

204 - Spilled to the specified drive.

GET /transports/0/inputVideoFormat

Gets the video format of the input video signal.

Response

200 - The video format of the input video signal. “inputVideoFormat” is null when there is no timeline.

The response is a JSON object.

Name	Type	Description
inputVideoFormat (required)	object	Video format configuration.
inputVideoFormat.name	string	Video format serialised as a string.
inputVideoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
inputVideoFormat.height	number	Height dimension of video format.
inputVideoFormat.width	number	Width dimension of video format.
inputVideoFormat.interlaced	boolean	Is the display format interlaced?

GET /transports/0/supportedInputVideoSources

Gets the currently supported input video signal sources.

Response

200 - The supported input video signal sources.

The response is a JSON object.

Name	Type	Description
supportedInputVideoSources	array	
supportedInputVideoSources[i]	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

GET /transports/0/inputVideoSource

Gets the source of the input video signal.

Response

200 - The input video signal source. The source will be one in the list from GET /transports/0/supportedInputVideoSources.

The response is a JSON object.

Name	Type	Description
inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

PUT /transports/0/inputVideoSource

Sets the source of the input video signal.

Parameters

Name	Type	Description
inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

Response

204 - The source of the input video signal was set successfully.

400 - The source specified was invalid or unsupported.

GET /timelines/0/playRange

Gets the current timeline play range. playRange is null if playing the whole timeline, or there is no play range.

Response

200 - The current timeline play range.

The response is a JSON object.

Name	Type	Description
playRange		

PUT /timelines/0/playRange

Sets the timeline play range.

Parameters

Name	Type	Description
playRange		

Response

204 - The timeline play range was set successfully.

POST /timelines/0/playRange/clear

Clears the timeline play range, sets the play range to be the whole timeline.

Response

204 - The timeline play range was cleared successfully.

GET /timelines/0/videoFormat

Gets the video format of the timeline.

Response

200 - The video format of the timeline. “videoFormat” is null when there is no timeline.

The response is a JSON object.

Name	Type	Description
videoFormat (required)	object	Video format configuration.
videoFormat.name	string	Video format serialised as a string.
videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
videoFormat.height	number	Height dimension of video format.
videoFormat.width	number	Width dimension of video format.
videoFormat.interlaced	boolean	Is the display format interlaced?

PUT /timelines/0/videoFormat

Sets the video format of the timeline.

Parameters

This parameter can be one of the following types:

Name	Type	Description
name	string	Video format serialised as a string.

Name	Type	Description
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

Response

204 - The timeline video format was set successfully.

400 - The requested video format was invalid.

409 - The video format cannot be changed at this time.

POST /timelines/0/rebuild

Rebuilds the timeline with default rules in the current timeline format.

Response

204 - The timeline was rebuilt with default rules.

GET /media/external

Gets the list of present external media devices.

Response

200 - The list of present external media devices

The response is a JSON object.

Name	Type	Description
devices	array	
devices[i] (required)	object	
devices[i].volume	string	Volume name
devices[i].deviceName	string	Internal device name of this media device
devices[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
devices[i].totalSpace	integer	Total space on media device in bytes
devices[i].remainingSpace	integer	Remaining space on media device in bytes
devices[i].clipCount	integer	Number of clips currently on the device

GET /media/external/selected

Gets the current selected external media device.

Response

200 - The selected external media device

The response is a JSON object.

Name	Type	Description
selected	object	
selected.deviceName	string	Internal device name of the drive.

404 - No selected external media has been selected

PUT /media/external/selected

Sets the current selected external media device.

Parameters

Name	Type	Description
selected	object	
selected.deviceName	string	Internal device name of the drive.

Response

204 - The selected external media device was set successfully.

GET /media/nas/discovered

Gets the NAS hosts discoverable by the device.

Response

200 - The list of discovered NAS hosts

The response is a JSON object.

Name	Type	Description
hosts	array	
hosts[i]	object	
hosts[i].hostName	string	The hostname of the NAS host
hosts[i].friendlyName	string	The friendly name of the NAS host
hosts[i].ip	string	The IP address of the NAS host

GET /media/nas/bookmarks

Gets all NAS share bookmarks.

Response

200 - The list of NAS share bookmarks

The response is a JSON object.

Name	Type	Description
hosts	array	
hosts[i] (required)	object	
hosts[i].url	string	URL of the NAS share

POST /media/nas/bookmarks

Add a new NAS share bookmarks.

Parameters

Response

204 - The NAS bookmark was added successfully.

400 - The NAS bookmark could not be added.

GET /media/nas/bookmarks/{url}

Get information about a requested network share bookmark.

Parameters

Name	Type	Description
{url}	string	

Response

200 - Information about the requested network share bookmark.

The response is a JSON object.

Name	Type	Description
url	string	URL of the NAS share

404 - Network share bookmark not found

PUT /media/nas/bookmarks/{url}

Adds a bookmark with the requested URL.

Parameters

Name	Type	Description
{url}	string	

Name	Type	Description
username	string	Default value is: guest.
password	string	

Response

204 - The NAS bookmark has been created.

400 - The NAS bookmark could not be created.

DELETE /media/nas/bookmarks/{url}

Deletes a bookmark with the requested URL.

Parameters

Name	Type	Description
{url}	string	

Response

204 - The NAS bookmark has been deleted.

GET /media/nas/selected

Gets the currently selected share bookmark.

Response

200 - Information about the selected network share bookmark.

The response is a JSON object.

Name	Type	Description
selected	object	
selected.url	string	URL of the NAS share

404 - No NAS drive has been selected.

PUT /media/nas/selected

Sets the selected share bookmark to the requested bookmark, or clears the bookmark.

Parameters

Name	Type	Description
selected	object	
selected.url	string	URL of the NAS share

Response

204 - The selected NAS bookmark was set.

400 - The selected NAS bookmark could not be set.

Notification websocket - 1.0.0

Service that notifies subscribers of device state changes.

messages

Subscribe (The messages from the server/device)

Response Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: subscribe, unsubscribe, listSubscriptions, listProperties, websocketOpened .
.data.properties	array	
.data.properties[i]	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.values	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.data.success	boolean	
.type	string	Possible values are: response .
.id	number	Optional parameter that repeats the id in the output for tracking messages

Event Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: propertyValueChanged .
.data.property	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.value	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.type	string	Possible values are: event .

Publish (The messages that user can send to the server/device)

Response Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: subscribe, unsubscribe, listSubscriptions, listProperties, websocketOpened .
.data.properties	array	
.data.properties[i]	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.values	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.data.success	boolean	
.type	string	Possible values are: response .
.id	number	Optional parameter that repeats the id in the output for tracking messages

Device Properties

/media/workingset

The value JSON returned via the eventResponse when the /media/workingset property changes on the device:

Name	Type	Description
size	integer	The fixed size of this device's working set
workingset (required)	array	
workingset[i]	object	
workingset[i].index	integer	Index of this media in the working set
workingset[i].activeDisk	boolean	Is this current item the active disk
workingset[i].volume	string	Volume name
workingset[i].deviceName	string	Internal device name of this media device
workingset[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
workingset[i].totalSpace	integer	Total space on media device in bytes
workingset[i].remainingSpace	integer	Remaining space on media device in bytes
workingset[i].clipCount	integer	Number of clips currently on the device

/media/active

The value JSON returned via the eventResponse when the /media/active property changes on the device:

Name	Type	Description
.workingsetIndex	integer	Working set index of the active media device
.deviceName	string	Internal device name of this media device

/system

The value JSON returned via the eventResponse when the /system property changes on the device:

Name	Type	Description
.codecFormat	object	Currently selected codec
.codecFormat.codec	string	Currently selected codec
.codecFormat.container	string	Multimedia container format
.videoFormat	string	Name of the video format

/system/codecFormat

Currently selected codec

The value JSON returned via the eventResponse when the /system/codecFormat property changes on the device:

Name	Type	Description
.codec	string	Currently selected codec
.container	string	Multimedia container format

/system/videoFormat

Name of the video format

The value JSON returned via the eventResponse when the /system/videoFormat property changes on the device:

Name	Type	Description

/timelines/0

The value JSON returned via the eventResponse when the /timelines/0 property changes on the device:

Name	Type	Description
.clips	array	
.clips[i]	object	
.clips[i].clipUniqueId	integer	Unique identifier used to identify this media clip. If the same media clip is added to the timeline multiple times, each timeline clip has the same clipUniqueId
.clips[i].frameCount	integer	Duration of timeline clip in frames, the number of frames in this clip on the timeline
.clips[i].durationTimecode	string	Duration of the timeline clip in timecode format serialised as string. This will differ to durationTimecode reported in /clips for this clipUniqueId if clipIn or frameCount was specified when adding this clip to the timeline.
.clips[i].clipIn	string	In frame offset for the clip on the timeline, where 0 is the first frame of the on-disk clip
.clips[i].inTimecode	string	Clip timecode of the first frame of this timeline clip serialised as string (clip startTimecode + clipIn frames)
.clips[i].timelineIn	string	Timeline position of the first frame of this clip, where 0 is the first frame of the timeline
.clips[i].timelineInTimecode	string	Timeline timecode of the first frame of this timeline clip serialised as string

/transports/0

The value JSON returned via the eventResponse when the /transports/0 property changes on the device:

Name	Type	Description
.mode	string	Transport mode Possible values are: InputPreview, InputRecord, Output .

/transports/0/stop

true when transport mode is InputPreview or when in Output mode and speed is 0

The value JSON returned via the eventResponse when the /transports/0/stop property changes on the device:

Name	Type	Description

/transports/0/play

True when transport is in Output mode and speed is non-zero

The value JSON returned via the eventResponse when the /transports/0/play property changes on the device:

Name	Type	Description

/transports/0/playback

The value JSON returned via the eventResponse when the /transports/0/playback property changes on the device:

Name	Type	Description
.type	string	Possible values are: Play, Jog, Shuttle, Var .
.loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
.singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
.speed	number	Playback speed, 1.0 for normal forward playback
.position	integer	Playback position on the timeline in units of video frames

/transports/0/record

The value JSON returned via the eventResponse when the /transports/0/record property changes on the device:

Name	Type	Description
.recording	boolean	Is transport in Input Record mode

/transports/0/timecode

The value JSON returned via the eventResponse when the /transports/0/timecode property changes on the device:

Name	Type	Description
display	string	The display timecode serialised as a string.
timeline	string	The timeline timecode serialised as a string.

/transports/0/timecode/source

The value JSON returned via the eventResponse when the /transports/0/timecode/source property changes on the device:

Name	Type	Description
.timecode	string	Possible values are: Timeline, Clip .

/transports/0/clipIndex

The value JSON returned via the eventResponse when the /transports/0/clipIndex property changes on the device:

Name	Type	Description
.clipIndex	number	The 0-based index of the clip being played on the timeline. null when there is no timeline or an empty timeline.

/media/external

The value JSON returned via the eventResponse when the /media/external property changes on the device:

Name	Type	Description
.volume	string	Volume name
.deviceName	string	Name of media device
.remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
.totalSpace	integer	Total space on media device in bytes
.remainingSpace	integer	Remaining space on media device in bytes
.clipCount	integer	Number of clips currently on the device

/media/external/selected

The value JSON returned via the eventResponse when the /media/external/selected property changes on the device:

Name	Type	Description
.deviceName	string	Internal device name of this media device

/transports/0/inputVideoSource

The value JSON returned via the eventResponse when the /transports/0/inputVideoSource property changes on the device:

Name	Type	Description
.inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite .

/transports/0/inputVideoFormat

The value JSON returned via the eventResponse when the /transports/0/inputVideoFormat property changes on the device:

Name	Type	Description
.inputVideoFormat	string	Name of the video format

/timelines/0/videoFormat

The value JSON returned via the eventResponse when the /timelines/0/videoFormat property changes on the device:

Name	Type	Description
.videoFormat	string	Name of the video format

/media/nas/discovered

The value JSON returned via the eventResponse when the /media/nas/discovered property changes on the device:

Name	Type	Description
.hostName	string	Hostname of external network drive
.friendlyName	string	Name of external network drive
.ip	string	IP Address of external network drive

/media/nas/bookmarks

The value JSON returned via the eventResponse when the /media/nas/bookmarks property changes on the device:

Name	Type	Description
.hosts	array	
.hosts[i]	object	
.hosts[i].url	string	URL associated with bookmark

Hilfe

So erhalten Sie Hilfe

Am schnellsten erhalten Sie Hilfe über die Online-Support-Seiten auf der Blackmagic Design Website. Suchen Sie dort auch nach dem aktuellsten Support-Material für Ihren Blackmagic HyperDeck Rekorder.

Blackmagic Design Online Support Seiten

Die aktuellsten Versionen der Bedienungsanleitung, Produktsoftware und der Support-Hinweise finden Sie im Blackmagic Support Center unter www.blackmagicdesign.com/de/support.

Blackmagic Design Forum

Das Blackmagic Design Forum auf unserer Website ist eine praktische Ressource für weitere Informationen und kreative Ideen. Manchmal finden Sie dort schnellere Lösungen, da möglicherweise bereits hilfreiche Antworten auf ähnliche Fragen von anderen erfahrenen Anwendern und Blackmagic Design Mitarbeitern vorliegen. Das Forum finden Sie unter http://forum.blackmagicdesign.com.

Kontaktaufnahme mit Blackmagic Design Support

Wenn unser Support-Material oder das Forum Ihnen nicht wie gewünscht hilft, gehen Sie bitte auf unsere Support-Seite und schicken Sie uns Ihre Anfrage über „Senden Sie uns eine E-Mail“. Oder klicken Sie auf „Finden Sie Ihr lokales Support-Team“ und rufen Sie Ihre nächstgelegene Blackmagic Design Support Stelle an.

Überprüfen der aktuell installierten Softwareversion

Um herauszufinden, welche Version der Blackmagic HyperDeck Software momentan auf Ihrem Computer installiert ist, öffnen Sie das Fenster „About Blackmagic HyperDeck Setup“.

- Öffnen Sie Blackmagic HyperDeck Setup auf macOS über den Ordner „Programme“. Wählen Sie im Anwendungsmenü „About Blackmagic HyperDeck Setup“, um die Versionsnummer anzuzeigen.
- Öffnen Sie Blackmagic HyperDeck Setup auf Windows über das Startmenü oder den Startbildschirm. Klicken Sie auf das Menü „Help“ (Hilfe) und wählen Sie „About Blackmagic HyperDeck Setup“ aus, um die Versionsnummer anzuzeigen.

So erhalten Sie die aktuellsten Software-Updates

Prüfen Sie zunächst die Versionierung der auf Ihrem Computer installierten Blackmagic HyperDeck Setup Software. Sehen Sie dann im Blackmagic Design Support Center unter www.blackmagicdesign.com/de/support nach neueren Aktualisierungen. In der Regel empfiehltes sich, die neuesten Updates zu laden. Vermeiden Sie Software-Updates jedoch mitten in einem wichtigen Projekt.

Gesetzliche Vorschriften

Entsorgung von elektrischen und elektronischen Geräten innerhalb der Europäischen Union.



Das auf dem Produkt abgebildete Symbol weist darauf hin, dass dieses Gerät nicht zusammen mit anderen Abfallstoffen entsorgt werden darf. Altgeräte müssen daher zur Wiederverwertung an eine dafür vorgesehene Sammelstelle übergeben werden. Mülltrennung und Wiederverwertung von Altgeräten tragen zum nachhaltigen Umgang mit natürlichen Ressourcen bei. Gleichzeitig wird sichergestellt, dass die Wiederverwertung nicht zulasten der menschlichen Gesundheit und der Umwelt geht. Weitere Informationen zur Entsorgung von Altgeräten sowie zu den Standorten der zuständigen Sammelstellen erhalten Sie von Ihren örtlichen Müllentsorgungsbetrieben sowie vom Händler, bei dem Sie dieses Produkt erworben haben.



Dieses Gerät wurde geprüft und entspricht den Grenzwerten für Digitalgeräte der Klasse A gemäß Abschnitt 15 der FCC-Bestimmungen für Funkentstörung. Diese Grenzwerte dienen dem angemessenen Schutz gegen schädliche Störungen bei Betrieb des Geräts in einer gewerblichen Umgebung. Geräte dieser Art erzeugen und verwenden Hochfrequenzen und können diese auch ausstrahlen. Bei Nichteinhaltung der Installations- und Gebrauchsvorschriften können sie zu Störungen beim Rundfunkempfang führen. Der Betrieb solcher Geräte im Wohnbereich führt mit großer Wahrscheinlichkeit zu Funkstörungen. In diesem Fall kann vom Betreiber verlangt werden, selbst für die Beseitigung solcher Störungen aufzukommen.

Der Betrieb unterliegt den folgenden zwei Bedingungen:

1. Dieses Gerät darf keine schädigenden Störungen hervorrufen.
2. Das Gerät muss unanfällig gegenüber beliebigen empfangenen Störungen sein, einschließlich solcher, die einen unerwünschten Betrieb verursachen.



R-R-BMD-20211410001

ISED-Zertifizierung für den kanadischen Markt



Dieses Gerät erfüllt die kanadischen Vorschriften für digitale Geräte der Klasse A.

Jedwede an diesem Produkt vorgenommene Änderung oder unsachgemäße Verwendung kann die Konformitätserklärung zum Erlöschen bringen.

Verbindungen zu HDMI-Schnittstellen müssen über abgeschirmte HDMI-Kabel hergestellt werden.

Die Ausstattung wurde unter Einhaltung der beabsichtigten Nutzung in einer gewerblichen Umgebung getestet. Bei Verwendung in häuslichen Umgebungen können Funkstörungen auftreten.

Sicherheitshinweise

Das Produkt eignet sich für den Einsatz in tropischen Gebieten mit einer Umgebungstemperatur von bis zu 40 °C.

Sorgen Sie rund um das Gerät für eine angemessene und unbehinderte Luftzufuhr.

Im Inneren des Produkts befinden sich keine durch den Anwender zu wartenden Teile. Wenden Sie sich für die Wartung an ein Blackmagic Design Service-Center in Ihrer Nähe.



Nicht in Höhen von über 2000 m über dem Meeresspiegel einsetzen

California Proposition 65

Plastikteile dieses Produkts können Spuren von polybromierten Biphenylen enthalten. Im US-amerikanischen Bundesstaat Kalifornien werden diese Chemikalien mit Krebs, Geburtsfehlern und anderen Schäden der Fortpflanzungsfähigkeit in Verbindung gebracht.

Weitere Informationen finden Sie unter www.P65Warnings.ca.gov.

Niederlassung in Europa:

Blackmagic Design B.V, Amsterdam
Sloterdijk Teleport Towers Office 2.17,
Kingsfordweg 151,
Amsterdam, 1043GR.

Garantie

12 Monate eingeschränkte Garantie

Für dieses Produkt gewährt die Firma Blackmagic Design eine Garantie auf Material- und Verarbeitungsfehler von 12 Monaten ab Kaufdatum. Sollte sich ein Produkt innerhalb dieser Garantiezeit als fehlerhaft erweisen, wird die Firma Blackmagic Design nach ihrem Ermessen das defekte Produkt entweder ohne Kostenerhebung für Teile und Arbeitszeit reparieren oder Ihnen das defekte Produkt ersetzen.

Zur Inanspruchnahme der Garantieleistungen müssen Sie als Kunde Blackmagic Design über den Defekt innerhalb der Garantiezeit in Kenntnis setzen und die entsprechenden Vorkehrungen für die Leistungserbringung treffen. Es obliegt dem Kunden, für die Verpackung und den bezahlten Versand des defekten Produkts an ein spezielles von Blackmagic Design benanntes Service Center zu sorgen und hierfür aufzukommen. Sämtliche Versandkosten, Versicherungen, Zölle, Steuern und sonstige Abgaben im Zusammenhang mit der Rücksendung von Waren an uns, ungeachtet des Grundes, sind vom Kunden zu tragen.

Diese Garantie gilt nicht für Mängel, Fehler oder Schäden, die durch unsachgemäße Handhabung oder unsachgemäße oder unzureichende Wartung und Pflege verursacht wurden. Blackmagic Design ist im Rahmen dieser Garantie nicht verpflichtet, die folgenden Serviceleistungen zu erbringen: a) Behebung von Schäden infolge von Versuchen Dritter, die Installation, Reparatur oder Wartung des Produkts vorzunehmen, b) Behebung von Schäden aufgrund von unsachgemäßer Handhabung oder Anschluss an nicht kompatible Geräte, c) Behebung von Schäden oder Störungen, die durch die Verwendung von nicht Blackmagic-Design-Ersatzteilen oder -Verbrauchsmaterialien entstanden sind, d) Service für ein Produkt, das verändert oder in andere Produkte integriert wurde, sofern eine solche Änderung oder Integration zu einer Erhöhung des Zeitaufwands oder zu Schwierigkeiten bei der Wartung des Produkts führt. ÜBER DIE IN DIESER GARANTIEERKLÄRUNG AUSDRÜCKLICH AUFGEFÜHRTEN ANSPRÜCHE HINAUS ÜBERNIMMT BLACKMAGIC DESIGN KEINE WEITEREN GARANTIEN, WEDER AUSDRÜCKLICH NOCH STILLSCHWEIGEND. DIE FIRMA BLACKMAGIC DESIGN UND IHRE HÄNDLER LEHNEN JEGLICHE STILLSCHWEIGENDEN GARANTIEN IN BEZUG AUF AUSSAGEN ZUR MARKTGÄNGIGKEIT UND GEBRAUCHSTAUGLICHKEIT FÜR EINEN BESTIMMTEN ZWECK AB. DIE VERANTWORTUNG VON BLACKMAGIC DESIGN, FEHLERHAFTE PRODUKTE ZU REPARIEREN ODER ZU ERSETZEN, IST DIE EINZIGE UND AUSSCHLIESSLICHE ABHILFE, DIE GEGENÜBER DEM KUNDEN FÜR ALLE INDIREKTEN, SPEZIELLEN, NEBEN- ODER FOLGESCHÄDEN ZUR VERFÜGUNG GESTELLT WIRD, UNABHÄNGIG DAVON, OB BLACKMAGIC DESIGN ODER DER HÄNDLER VON DER MÖGLICHKEIT SOLCHER SCHÄDEN ZUVOR IN KENNTNIS GESETZT WURDE. BLACKMAGIC DESIGN IST NICHT HAFTBAR FÜR JEGLICHE WIDERRECHTLICHE VERWENDUNG DER GERÄTE DURCH DEN KUNDEN. BLACKMAGIC HAFTET NICHT FÜR SCHÄDEN, DIE SICH AUS DER VERWENDUNG DES PRODUKTS ERGEBEN. NUTZUNG DES PRODUKTS AUF EIGENE GEFAHR.

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Julio 2024

Manual de instalación y funcionamiento

Blackmagicdesign

HyperDeck Shuttle HD



HyperDeck Shuttle HD



Bienvenido

Gracias por haber adquirido este producto.

Cuando diseñamos los equipos HyperDeck originales, nuestro objetivo era facilitar la grabación y la reproducción de material audiovisual en unidades de estado sólido de gran velocidad. Ahora nos complace presentar el nuevo HyperDeck Shuttle HD.

Se trata de un modelo compacto, fácil de transportar y compatible con equipos informáticos. Este dispositivo presenta un mando de búsqueda cómodo y los clásicos controles de reproducción que permiten manejarlo con una sola mano y convierten a este equipo en el complemento ideal para realizar producciones en directo con mezcladores ATEM Mini. El grabador también puede cumplir la función de teleprónter.

Asimismo, es capaz de registrar contenidos en tarjetas SD o unidades de almacenamiento USB externas en formato ProRes, DNxHD o H.264, permitiendo así grabar y reproducir a una velocidad inigualable.

En nuestra página de soporte técnico, encontrarás la versión más reciente de este manual, así como actualizaciones para este producto. Recuerda actualizarlo con frecuencia, a fin de asegurarte de que cuentas con las últimas prestaciones disponibles. Por último, no olvides registrarte al descargar las actualizaciones para que podamos mantenerte informado sobre nuevos lanzamientos. Trabajamos constantemente para desarrollar herramientas innovadoras y superarnos, de modo que nos encantaría conocer tu opinión.



Grant Petty
Director ejecutivo de Blackmagic Design

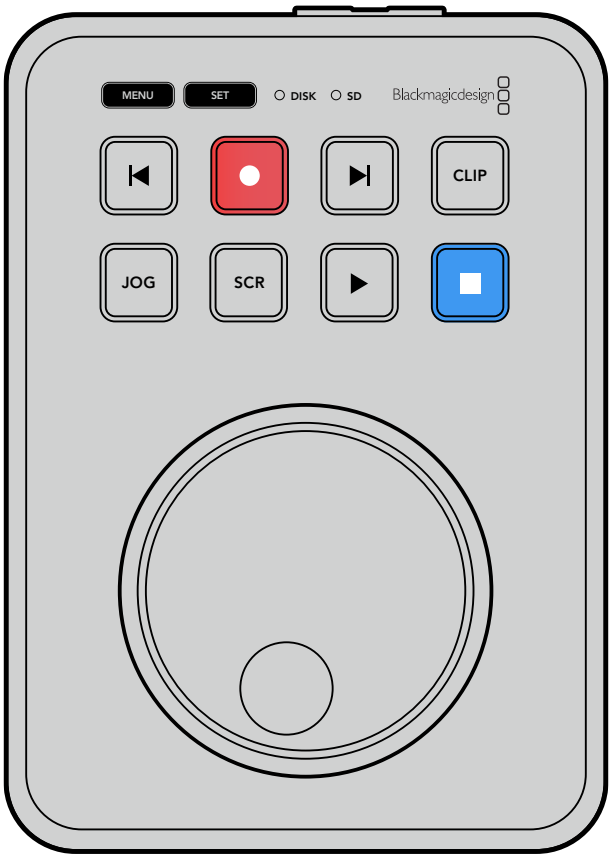
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Primeros pasos

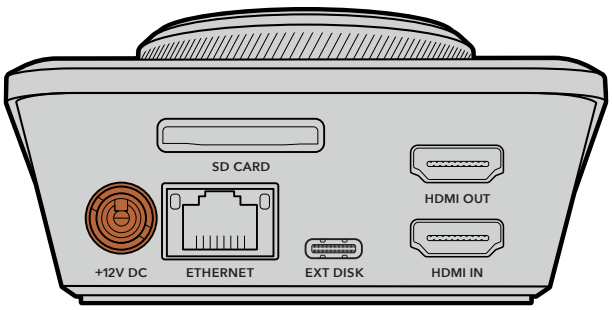
Para comenzar a utilizar el grabador, basta con enchufarlo a una red de suministro eléctrico, conectar la fuente HDMI, emplear una tarjeta SD o una unidad de almacenamiento externa e iniciar la grabación.

Este apartado del manual presenta información básica para utilizar el modelo HyperDeck Shuttle HD.



Conexión del cable de alimentación

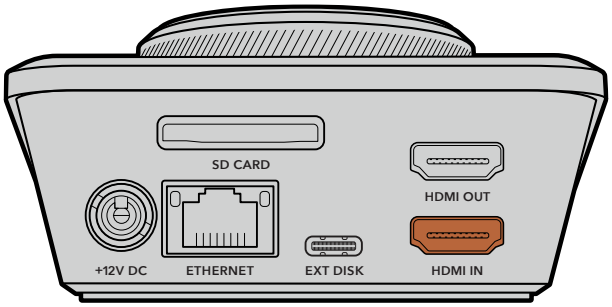
Para conectar el equipo, enchufe el transformador proporcionado a la entrada correspondiente en el panel trasero. Ajuste el aro de seguridad para sujetar el cable y evitar que se desconecte accidentalmente.



Conecte el transformador a la entrada para fuentes de alimentación.

Conexión de fuentes audiovisuales

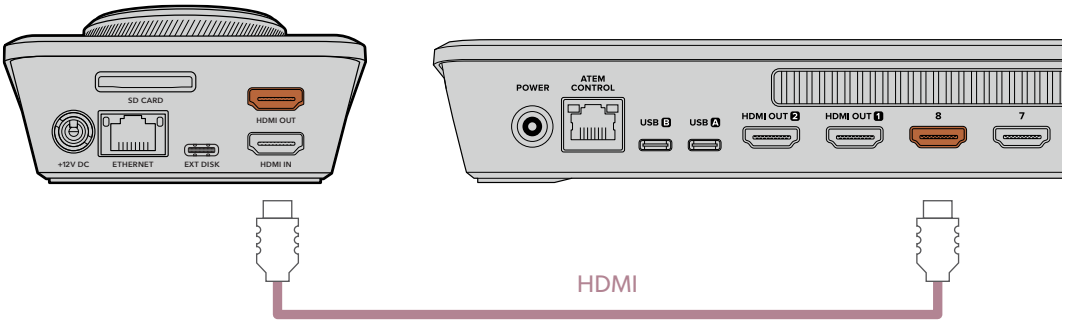
Para conectar una fuente audiovisual, enchufe el cable HDMI a la entrada correspondiente del panel trasero.



Conecte el equipo de destino a la salida HDMI, por ejemplo, un mezclador ATEM Mini o un televisor con conexión HDMI.

La salida HDMI también permite conectar un monitor para acceder al menú de ajustes del grabador, que aparecerá superpuesto a la imagen en la pantalla. Consulte el apartado *Modificar ajustes* para obtener más información sobre las opciones de configuración disponibles.

SUGERENCIA: Si la señal audiovisual no aparece en la pantalla conectada, es posible que esté seleccionado el modo de reproducción. Presione el botón de grabación para habilitar esta función.



Conecte el equipo de destino, tal como un televisor o un mezclador ATEM Mini, a la salida HDMI.

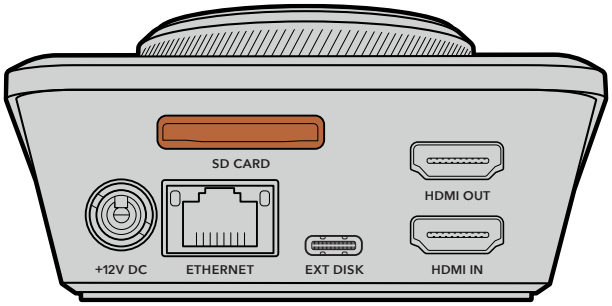
Conexión de soportes de grabación

Todos los equipos HyperDeck Shuttle HD pueden comenzar a grabar contenidos en forma inmediata sin necesidad de modificar ningún tipo de ajuste o configuración. Para ello, solo es necesario contar con una tarjeta SD o un soporte de almacenamiento externo formateado.

Los soportes de grabación pueden formatearse fácilmente mediante las opciones del menú. Cabe destacar que, además, este procedimiento puede realizarse en cualquier equipo informático. Consulte el apartado *Formatear soportes de almacenamiento* para obtener información sobre las unidades más adecuadas. Además, se proporciona una lista de los modelos recomendados.

Para insertar una tarjeta SD:

1. Sostenga la tarjeta SD con los contactos dorados orientados hacia arriba, de forma que coincida con la respectiva ranura en el dispositivo. Insértela y empújela con cuidado hasta que calce en su lugar.



2 A continuación, el dispositivo verificará la tarjeta. El indicador correspondiente se encenderá de color verde mientras este procedimiento se lleva a cabo. Una vez concluida la comprobación, la luz indicadora se apagará.



Esto es todo lo que se necesita saber para comenzar a grabar y reproducir contenidos con el modelo HyperDeck Shuttle HD.

Continúe leyendo este manual para obtener más información sobre cómo grabar y reproducir secuencias de imágenes y modificar los ajustes de la unidad.

Grabación

Después de confirmar que la fuente aparece en el monitor conectado, podrá comenzar a grabar inmediatamente.

Presione el botón de grabación para comenzar a grabar. Si se utiliza una tarjeta SD, el indicador sobre la ranura se encenderá de rojo junto con los botones de grabación y reproducción. De igual modo, al usar una unidad de almacenamiento externa, el indicador correspondiente se encenderá de rojo.



Para finalizar la grabación, presione el botón de detención.

Reproducción

Presione el botón de reproducción para ver la secuencia. Durante este proceso, el botón de reproducción se encenderá, y el indicador del soporte de grabación o de la tarjeta SD se iluminará de verde.

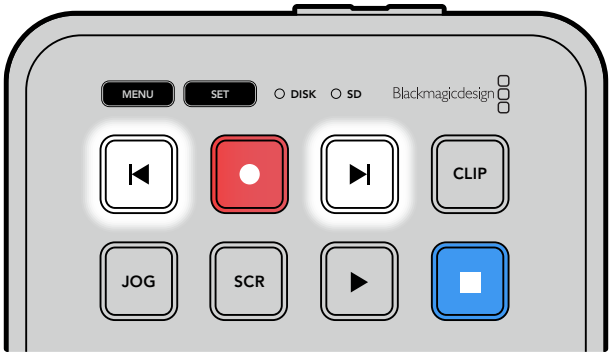
En caso de haber grabado más de un clip, utilice los botones de avance y retroceso para seleccionar el material deseado.



Botones de avance y retroceso

Presione el botón de retroceso una vez para regresar al inicio del clip. Vuelva a presionar el botón para regresar a los clips anteriores.

Presione el botón de avance para ver el clip siguiente. Los botones de avance y retroceso parpadean cuando la casilla **Identify HyperDeck** está marcada en el programa HyperDeck Setup.



Utilice los botones de avance o retroceso para ir al comienzo de cada secuencia.

SUGERENCIA: Para reproducir una secuencia en el dispositivo, es necesario configurar el códec mediante el menú en pantalla, a fin de que coincida con el empleado durante la grabación. Consulte el apartado *Modificar ajustes* para obtener más información al respecto.

Repetición de una misma secuencia

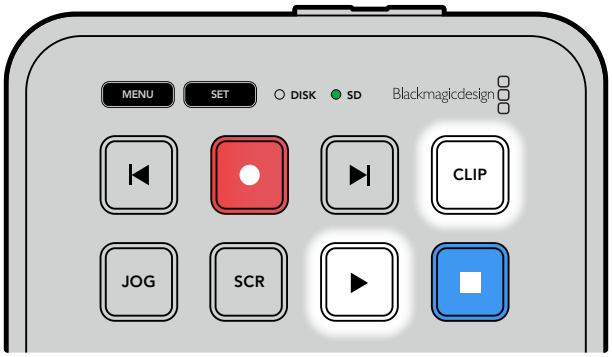
Al presionar el botón de reproducción nuevamente mientras la secuencia está en curso, el dispositivo reproducirá todos los clips disponibles continuamente hasta que se presione el botón de detención.

Si se desea repetir un único clip en forma constante, seleccione el modo de clip y presione el botón de reproducción una vez para dar inicio, y luego otra vez para activar la repetición.

Repetir todos los clips	Para repetir todos los clips, vuelva a presionar el botón de reproducción mientras esta se encuentra en curso.
Repetir el clip en curso	Una vez en el modo de clip, presione el botón de reproducción por segunda vez para repetir el clip actualmente en curso.

Modo de clip

Al habilitar este modo, la reproducción estará limitada a un único clip. Por ejemplo, es posible avanzar, retroceder o saltear una secuencia, sabiendo que, al presionar el botón de reproducción, esta se detendrá al finalizar el clip.



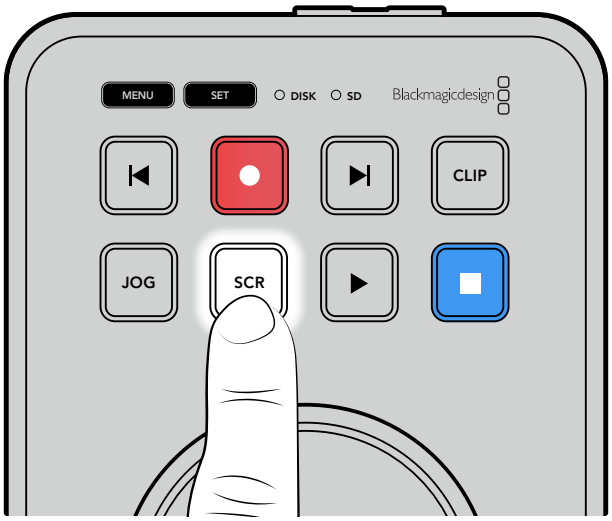
Una vez en el modo de clip, presione el botón de reproducción por segunda vez para repetir la secuencia en curso.

Mando de búsqueda

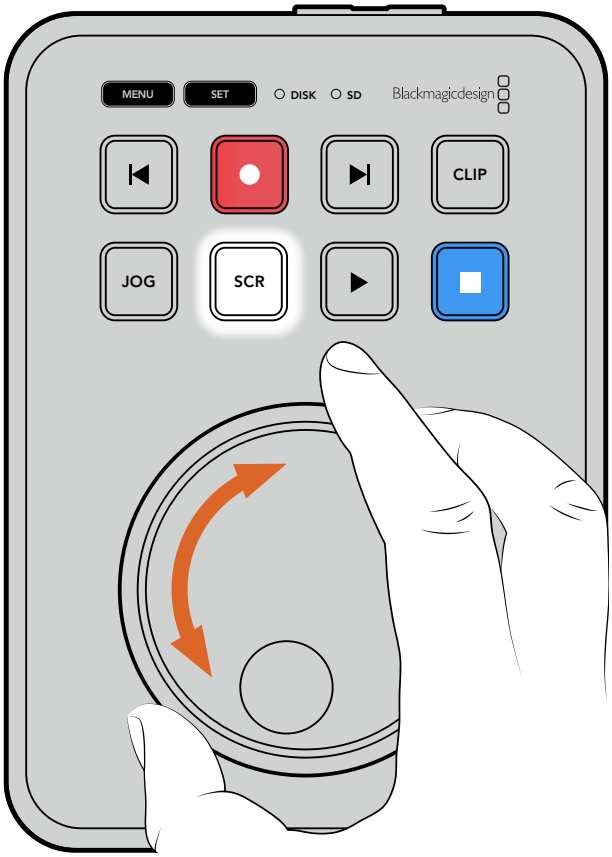
El mando de búsqueda permite encontrar rápidamente una parte específica de un clip y reproducirla o ver las imágenes fotograma por fotograma. Esto reviste gran importancia cuando es necesario encontrar una sección particular de la secuencia mirando las imágenes mientras gira el mando. También es útil cuando es preciso colocar el cabezal de reproducción en un punto específico del clip para emitirlo al aire durante una producción en directo.

Los modos de búsqueda disponibles son los siguientes:

JOG	**Desplazamiento**	El modo de desplazamiento permite reproducir la secuencia fotograma por fotograma para lograr una mayor precisión.
SCR	**Avance y retroceso rápido**	Este modo permite avanzar o retroceder rápidamente el material grabado. Esta función está ligada al mando de búsqueda, por lo que brinda pleno control sobre el punto en el que se desea reanudar la reproducción. Además, el botón **SCR** también permite abrir la ventana de acceso a las unidades, la cual muestra la ubicación del archivo reproducido. Consulte el apartado correspondiente para obtener más información al respecto.
JOG SCR	**Avance y retroceso**	Presione los botones **JOG** y **SCROLL** simultáneamente para activar el modo de avance y retroceso. Posteriormente, podrá retroceder o avanzar a velocidad rápida por las secuencias con el mando de búsqueda. Al girarlo, la velocidad de avance irá aumentando hasta alcanzar el valor máximo de x50. Para detenerse, gire el mando a la posición inicial. Para detenerse en un punto específico durante la búsqueda, presione el botón de detención. Por el contrario, presione el botón de reproducción para reanudar la secuencia a partir de la posición actual. Cabe destacar que es posible reducir la velocidad máxima de avance y retroceso desde el menú de **Ajustes**. Consulte el apartado *Ajustes* para obtener más información al respecto.



Presione los botones **JOG** o **SCR** para acceder a los distintos modos de búsqueda.

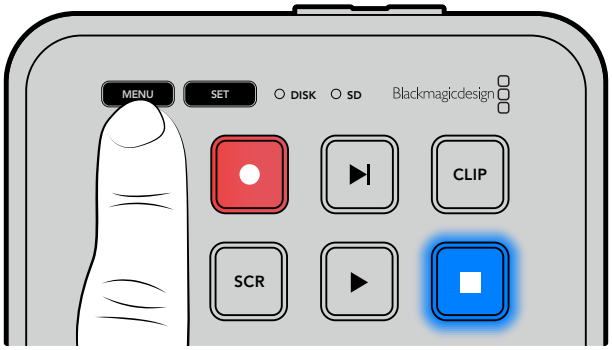


Una vez seleccionado el modo de búsqueda, gire el mando.

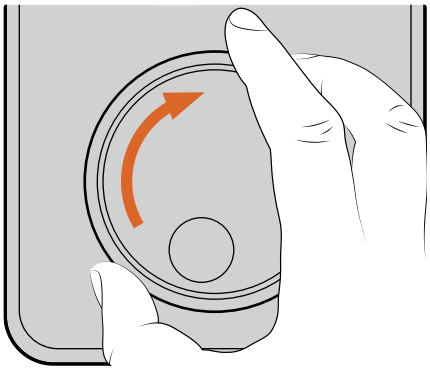
SUGERENCIA: Para reproducir la secuencia de manera habitual, presione el botón de reproducción o detención.

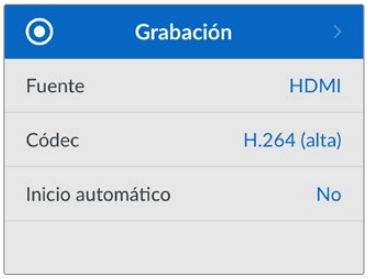
Modificar ajustes

Al presionar el botón **MENU**, se desplegarán los ajustes disponibles como una ventana flotante en la esquina inferior izquierda del monitor HDMI conectado.

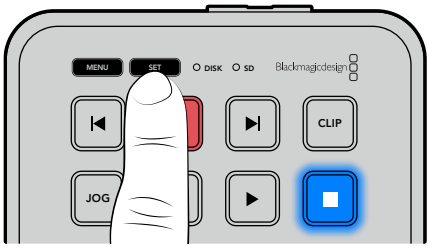


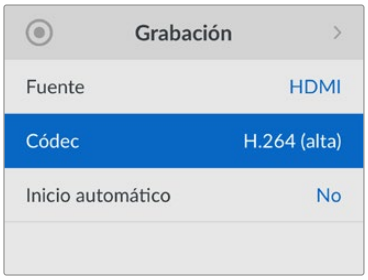
Presione el botón **MENU** para acceder a los ajustes disponibles.





Utilice el mando de búsqueda para acceder al menú deseado o a las opciones de configuración.





Presione el botón **SET** a fin de seleccionar el menú deseado o realizar cambios.

Para realizar cambios en los ajustes, utilice el mando de búsqueda o los botones de avance y retroceso. Presione **SET** para confirmar.

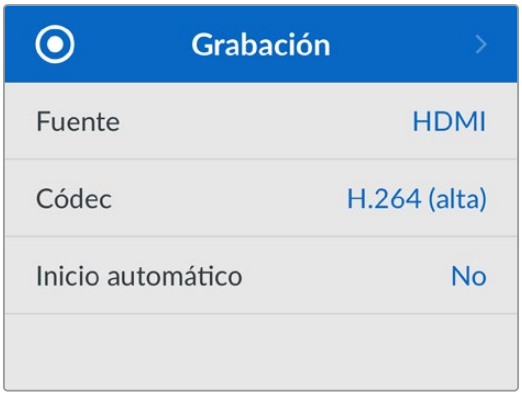
Presione el botón **MENU** para salir y regresar a la pantalla principal.

SUGERENCIA: Es posible ubicar el menú en cualquiera de las cuatro esquinas de la pantalla a través de las opciones de ajustes. Una vez finalizada la configuración, se recomienda salir del menú para asegurarse de transmitir una señal limpia al conectar la salida HDMI a un mezclador, tal como un equipo ATEM Mini Extreme.

Ajustes

Los ajustes están divididos en cinco categorías: grabación, monitor, audio, almacenamiento y configuración. Al acceder a cada uno de estos menús, podrá modificar los ajustes pertinentes a través del panel de control del grabador. Algunos ajustes, como el prefijo del nombre de archivo, no se pueden modificar desde este menú y, por lo tanto, aparecerán en gris. No obstante, en este caso, es posible cambiarlos mediante el programa utilitario.

Menú Grabación



Fuente

Muestra la señal recibida a través de la entrada HDMI del grabador.

Códec

El modelo HyperDeck Shuttle HD permite grabar con compresión en formato H.264, ProRes y DNxHD. Para acceder a la función de teleprónter, seleccione dicha opción.

Inicio automático

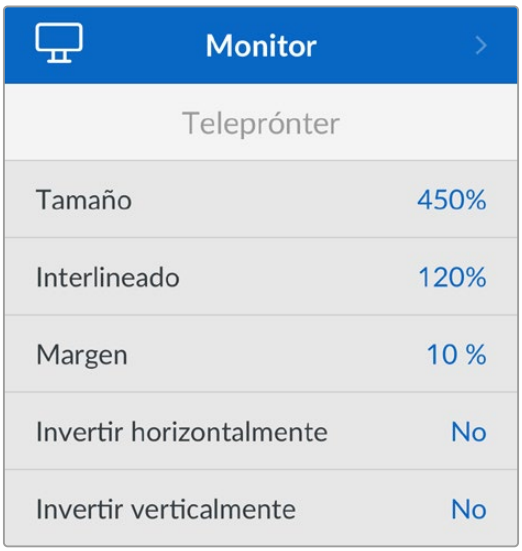
Hay dos modos disponibles para iniciar la grabación automáticamente: **Cámara** y **CT** (código de tiempo).

Algunas cámaras, tales como el modelo Blackmagic Pocket Cinema Camera 4K, transmiten una señal a través de la conexión HDMI para comenzar o detener la grabación en equipos externos. Mediante la opción **Cámara**, el dispositivo comienza o detiene la grabación cuando se presiona el botón correspondiente en la cámara.

Por su parte, la opción **CT** permite que el dispositivo inicie la grabación al recibir un código de tiempo válido a través de la entrada HDMI. Cuando este se detiene, la grabación finaliza. Seleccione la opción **No** para desactivar esta función.

NOTA: Al grabar imágenes captadas por cámaras HDMI, compruebe que la señal no contenga ningún tipo de información superpuesta, ya que, de lo contrario, esta quedará registrada en el material grabado.

Menú Monitor



Teleprónter

En el menú **Monitor** podrá seleccionar los ajustes adecuados para utilizar el grabador a modo de teleprónter.

Tamaño de texto

Para modificar el tamaño del texto, seleccione la opción correspondiente y presione **SET**. Para aumentarlo o disminuirlo, gire el mando hacia la derecha o la izquierda, respectivamente.

Interlineado

Gire el mando hacia la derecha o la izquierda para modificar el interlineado.

Margen

Es posible ajustar los márgenes del teleprónter.

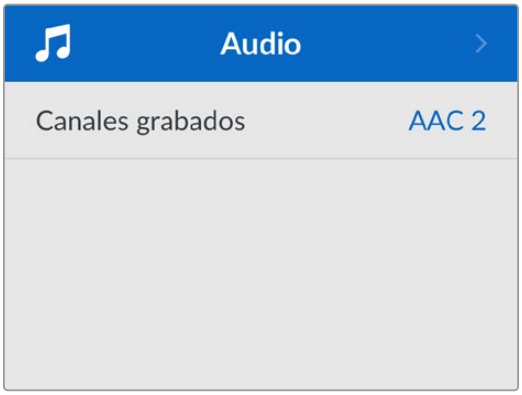
Invertir

Si el monitor empleado a modo de teleprónter está configurado para reflejar la imagen en un interferómetro, por ejemplo, delante de una cámara o un teleprónter de podio, será necesario invertir el texto de manera que el presentador pueda leerlo. Existen dos modos disponibles.

Invertir horizontalmente – Utilice este modo cuando la parte inferior del monitor conectado esté montada lo más cerca posible del pie del interferómetro.

Invertir verticalmente – Utilice este modo cuando la parte inferior del monitor conectado esté montada lejos del pie del interferómetro.

Menú Audio



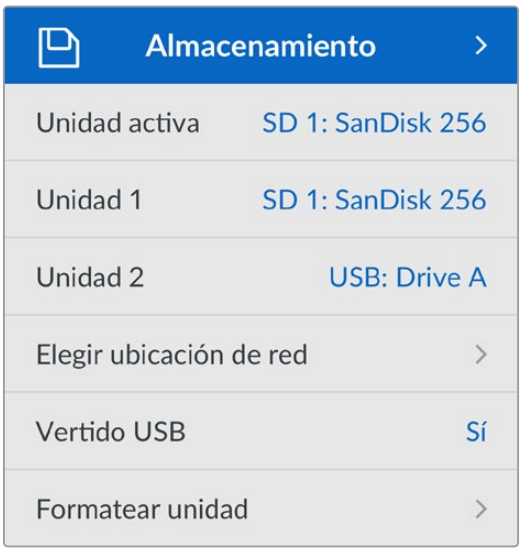
Canales grabados

El modelo HyperDeck Shuttle HD permite grabar hasta ocho canales de audio PCM simultáneamente. Para ello, seleccione la cantidad deseada en la lista desplegable de este menú.

Al usar el códec H.264, también es posible elegir dos canales de audio AAC, a fin de compartir la grabación directamente por YouTube.

Menú Almacenamiento

Los soportes de almacenamiento conectados aparecerán en el menú de ajustes correspondiente. **Unidad 1** refleja la presencia de una tarjeta SD, mientras que **Unidad 2** se refiere a una unidad USB externa conectada. En caso de haber varias conectadas mediante un dispositivo como el modelo Blackmagic MultiDock 10G, se indica la unidad activa.



Unidad activa

Los grabadores HyperDeck Shuttle ofrecen la posibilidad de utilizar simultáneamente una tarjeta SD, varios discos externos y unidades de almacenamiento en red,

brindando de este modo varios terabytes de capacidad con un solo dispositivo.

Cuando hay una sola tarjeta SD o unidad externa conectada al equipo, esta será el soporte de grabación y reproducción activo.

Por el contrario, al emplear más de un medio de almacenamiento, es posible seleccionar cuál se desea emplear.

Para seleccionar la unidad activa:

1. Gire el mando de búsqueda para seleccionar la opción **Unidad activa** en el menú de almacenamiento y presione el botón **SET**, que estará parpadeando.
2. Las unidades conectadas al grabador aparecerán en la lista. Gire el mando de búsqueda para seleccionar la que desea utilizar.



Ubicación de red

Los grabadores HyperDeck Shuttle permiten reproducir archivos multimedia de alta definición desde Blackmagic Cloud y otros soportes de almacenamiento en red mediante una conexión Ethernet.

Para acceder a una carpeta en la red:

1. Gire el mando de búsqueda y presione el botón **SET** para seleccionar la opción **Elegir ubicación de red**. Aparecerá un cuadro de diálogo para buscar redes locales.
2. Aparecerá una lista de los servidores disponibles en la red local. Gire el mando de búsqueda para destacar el nombre del servidor y presione el botón **SET** a fin de seleccionarlo. Aparecerá una lista de los recursos compartidos disponibles en el servidor. Gire el mando de búsqueda para destacar el que desea seleccionar y presione el botón **SET**. Continúe hasta que la carpeta que desea utilizar aparezca en la parte superior de la pantalla.
3. El nombre de la carpeta aparecerá en la parte superior de la pantalla del dispositivo. Si desea usar dicha carpeta a fin de grabar y reproducir contenidos, gire el mando de búsqueda para seleccionar la opción **Elegir esta ubicación** y oprima el botón **SET**. Aparecerá una marca de verificación a la derecha.



4. Una vez que tenga acceso a la carpeta, esta aparecerá en la lista **Unidad 2**, en las ubicaciones de red.

El segundo soporte de grabación en los modelos HyperDeck Shuttle se refiere tanto a unidades USB como a las carpetas en red a las que se tenga acceso. Para seleccionar uno de estos soportes, seleccione la opción **Unidad 2** en el menú de almacenamiento y presione el botón **SET**, que estará parpadeando. Elija la unidad de almacenamiento deseada y presione el botón **SET**. La pantalla mostrará nuevamente el menú de almacenamiento. También es posible eliminar un soporte de grabación en red seleccionando la opción **Quitar ubicación de red** en el menú de la unidad 2.



NOTA: Al reproducir un clip desde un soporte de almacenamiento en red, el grabador asume que se ha iniciado una sesión como invitado en el servidor. Por el momento, no se puede acceder a este con un nombre de usuario y una contraseña mediante los menús y el botón **SET**. No obstante, es posible ingresar dichos datos a través del protocolo de Ethernet para grabadores HyperDeck.

Vertido USB

Al activar esta opción, cuando se alcance el límite de capacidad, el dispositivo continuará grabando en otra unidad de almacenamiento externa que se encuentre conectada.

Conectar unidad en red

Los grabadores HyperDeck Shuttle permiten reproducir archivos multimedia de alta definición desde Blackmagic Cloud y otros soportes de almacenamiento en red mediante una conexión Ethernet.

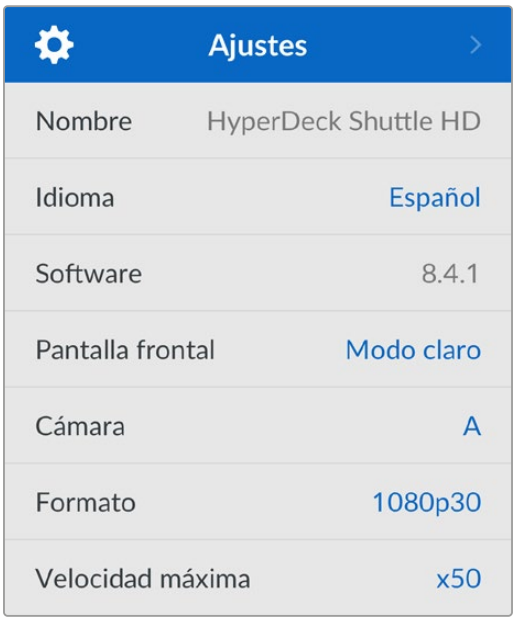
Preparación de unidades de almacenamiento:

1. Gire el mando de búsqueda para seleccionar el menú **Formatear unidad**.
2. Elija la unidad deseada y presione el botón **SET**.
3. Escoja un formato y presione el botón **SET**.
4. Aparecerá un mensaje de confirmación con el nombre de la unidad y el formato seleccionado.
5. Una vez completado el procedimiento, seleccione **Aceptar**.

El formato HFS+ (también conocido como Mac OS X Extended) es el más recomendado, ya que permite registrar la transferencia de los datos a medida que esta se lleva a cabo. De este modo, es más probable que la información pueda recuperarse en caso de un mal funcionamiento de la unidad. Por su parte, el formato exFAT puede emplearse en sistemas operativos macOS y Windows sin necesidad de adquirir programas adicionales, pero no brinda la posibilidad de registrar la transferencia de datos. Consulte el apartado correspondiente para obtener más información al respecto.

Menú Ajustes

Aquí encontrará diversas opciones y podrá seleccionar el idioma de la interfaz, el formato predeterminado, la configuración de red y las opciones del código de tiempo.



Nombre

Al contar con varias unidades HyperDeck Shuttle HD en una misma red, es posible asignarles distintos nombres para diferenciarlas mediante el programa Blackmagic HyperDeck Setup o el protocolo de Ethernet para estos grabadores, a través de una terminal. El nombre asignado aparecerá en el menú de ajustes.

Idioma

La interfaz está disponible en 13 idiomas: español, alemán, chino, coreano, francés, inglés, italiano, japonés, polaco, portugués, ruso, turco y ucraniano.

Para determinar el idioma:

1. Seleccione el menú **Ajustes** y presione **SET**.
2. Gire el mando de búsqueda para seleccionar la opción **Idioma** y presione **SET**.
3. Gire el mando de búsqueda para seleccionar el idioma y presione **SET**. A continuación, la pantalla mostrará nuevamente el menú **Ajustes**.

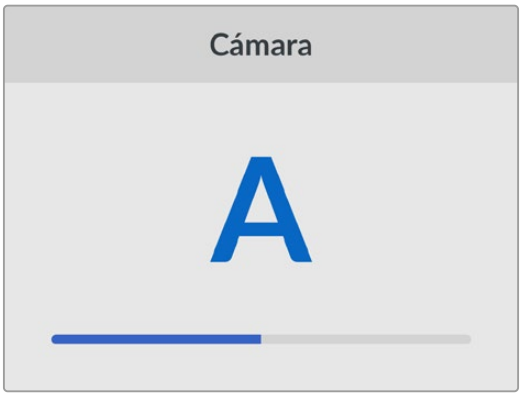
Software

Esta opción muestra la versión del sistema operativo instalado en el dispositivo.

Cámara

Este ajuste es útil al emplear el dispositivo para grabar imágenes aisladas provenientes de distintas cámaras y editarlas conjuntamente en DaVinci Resolve.

La letra correspondiente a cada unidad aparecerá en los metadatos de los archivos, permitiendo así que el programa identifique los ángulos correctamente al utilizar la bandeja de sincronización.



Asigne una letra o un número del 1 al 9 a la cámara.

Formato predeterminado

En ocasiones, el grabador no detecta automáticamente el formato que se desea utilizar, por lo que esta función permite seleccionar el formato que se empleará la mayor parte del tiempo.

Por ejemplo, si se cuenta con un modelo HyperDeck Shuttle HD sin un equipo conectado a la entrada y se inserta un disco con archivos en dos formatos distintos, ¿qué formato debe reproducir el grabador? El formato predeterminado permite que el dispositivo conozca las preferencias del usuario.

Asimismo, esta opción es útil cuando se enciende por primera vez el grabador y no hay otros equipos conectados o un disco insertado. En este caso, el dispositivo no reconoce cual es el formato adecuado para la transmisión de la señal, por lo que esta función sirve de guía.

Cabe destacar que esta función no cancela otros ajustes. Si se cuenta con un soporte de almacenamiento que contiene archivos en un único formato y se presiona el botón de reproducción, el grabador los reproducirá, indistintamente del formato predeterminado.

Al grabar, sucede algo similar. Cuando se presiona el botón de grabación, el dispositivo registrará el contenido en el formato del equipo conectado al él. Cabe destacar que, una vez finalizada la grabación, el dispositivo reproducirá las imágenes con el mismo formato de almacenamiento, independientemente de si hay otros archivos en el soporte donde se han guardado. En otras palabras, se reproducirá el material con el mismo formato que el de grabación. Solo si se retira y se vuelve a introducir el soporte de almacenamiento, el grabador empleará el formato predeterminado.

El formato predeterminado es únicamente una guía para el grabador, a fin de facilitar su automatización ante la ausencia de pautas específicas, y no anula otros ajustes.

Velocidad máxima

La velocidad de obturación máxima en este dispositivo es de x50. Esta se puede disminuir seleccionando otra de las opciones disponibles.

Fecha y hora

Es importante configurar estos parámetros correctamente a fin de garantizar que los datos de la red coincidan con los de las grabaciones. Además, esto permite evitar ciertos problemas que podrían ocurrir cuando se emplean sistemas de almacenamiento en red.



Configuración automática

Para configurar la fecha y la hora de manera automática, active la opción correspondiente. En este caso, el grabador utilizará el protocolo indicado en el campo **Protocolo horario de red**. Desactive esta opción a fin de establecer la fecha y la hora de forma manual.

Protocolo horario de red

El protocolo predeterminado es time.cloudflare.com, pero es posible especificar otro distinto mediante el programa utilitario. Consulte el apartado correspondiente a dicho programa en este manual para obtener más información al respecto.

Fecha

Para ajustar la fecha, seleccione la opción **Fecha** y presione el botón **SET**. Utilice el mando giratorio para modificar el día, el mes y el año.

Hora

Para ajustar la hora, seleccione la opción **Hora** y presione el botón **SET**. Utilice el mando giratorio para modificar la hora y los minutos. La configuración del reloj interno es de 24 horas.

Ajustes

En esta sección es posible modificar la ubicación y la apariencia del menú que puede verse en el monitor conectado a la salida HDMI.



Apariencia

Es posible elegir entre una interfaz clara u oscura. La primera ofrece un mayor contraste si las imágenes son oscuras o cuando se está utilizando el modo de teleprónter.





Opacidad

Permite reducir la opacidad del menú superpuesto a la imagen en el monitor de 100 % (valor predeterminado) a 20 %.

Posición

Por defecto, el menú se muestra en la esquina inferior izquierda de la pantalla. Para mover el menú a otro sitio, seleccione **Posición** y presione el botón **SET**. Ahora podrá elegir cualquiera de las cuatro esquinas.

Ajustes de red



Protocolo

Los grabadores HyperDeck utilizan el protocolo DHCP de forma predeterminada, por lo cual, al conectarlos, el servidor de la red les asignará una dirección IP automáticamente y no será necesario configurar otros ajustes.

Para introducir una dirección particular, seleccione **Protocolo**, presione el botón **SET**, elija la opción **IP estática** y oprima **SET** nuevamente.

Dirección IP, máscara de subred, puerta de enlace y DNS primario y secundario.

Al seleccionar la opción **IP estática**, es posible introducir los datos de la red.

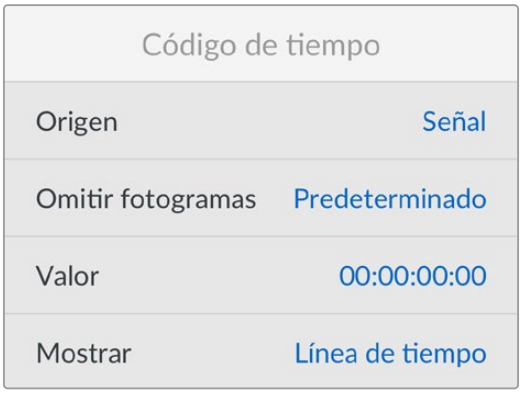
Para cambiar la dirección IP:

1. Gire el mando de búsqueda para seleccionar la opción **Dirección IP** y presione el botón **SET** en el panel frontal del dispositivo.
2. Gire el mando de búsqueda para ajustar cada valor y presione el botón **SET** para confirmar antes de continuar con el siguiente.
3. Presione **SET** para confirmar los cambios.

Una vez introducida la dirección IP, siga los mismos pasos para configurar la máscara de subred y la puerta de enlace. Al finalizar, presione el botón **MENU** para salir y regresar a la pantalla principal.

Ajustes del código de tiempo

Es posible seleccionar el tipo de código de tiempo que el dispositivo recibe y transmite, por ejemplo, el de la fuente, la hora real o el que se determine manualmente.



Fuente

Hay cuatro opciones de código de tiempo disponibles al grabar.

Señal	Al seleccionar esta opción, se utiliza el código de tiempo de la señal HDMI con los metadatos SMPTE RP 188. Esto permite mantener la sincronización entre la fuente HDMI y el material grabado con el dispositivo.
Interno	Seleccione esta opción para grabar el código de tiempo (hora del día) generado internamente.
Continuo	Al seleccionar esta opción, la grabación de cada secuencia se inicia un fotograma después de la anterior. Por ejemplo, si el primer clip finaliza en 10:28:30:10, el siguiente comenzará en 10:28:30:11.
Predeterminado	Seleccione esta opción a fin de indicar un código de tiempo particular para la grabación.

Tipo

Seleccione cualquiera de los modos disponibles en esta opción para fuentes NTSC con una frecuencia de imagen de 29.97 o 59.94 f/s. Si la fuente es desconocida, elija la opción **Predeterminado**. Esto permitirá que se mantenga el formato. Si no se detecta un código de tiempo válido, la opción seleccionada por defecto será **Omitir fotogramas**.

Predeterminado

Es posible indicar un código de tiempo particular presionando el botón **SET** y girando el mando de búsqueda para introducir el valor inicial. Para ello, seleccione la opción **Predeterminado** en el menú **Fuente**.

Salida

Seleccione las opciones para las señales transmitidas.

Línea de tiempo	Seleccione esta opción a fin de ver un código de tiempo continuo para todos los clips grabados.
Clip	Seleccione esta opción para ver el código de tiempo de cada clip.

Archivos



Prefijo

Al configurar el dispositivo por primera vez, este grabará las imágenes en una tarjeta SD o un disco USB siguiendo la nomenclatura convencional para los nombres de archivo.

HyperDeck_0001	
HyperDeck_0001	**Prefijo**
HyperDeck**_0001**	**Número de clip**

Es posible modificar el nombre del archivo a través del programa utilitario. Consulte el apartado correspondiente para obtener más información al respecto.

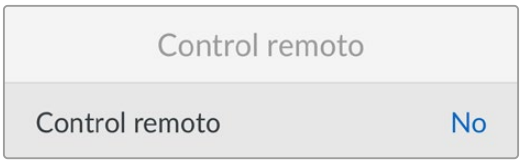
Sufijo con fecha

Por defecto, la opción de añadir el código de tiempo al nombre del archivo se encuentra desactivada. Para añadir la fecha y la hora al nombre del archivo grabado, active la opción **Sufijo con fecha**.

HyperDeck_2201061438_0001	
HyperDeck_2201061438_0001	**Prefijo**
HyperDeck_**22**01061438_0001	**Año**
HyperDeck_**22**01061438_0001	**Mes**
HyperDeck_2201**06**1438_0001	**Día**
HyperDeck_220106**14**38_0001	**Hora**
HyperDeck_2201061**38**_0001	**Minuto**
HyperDeck_2201061438_**0001**	**Número de clip**

Ajustes de control remoto

Aquí podrá establecer las opciones de configuración para controlar el grabador a distancia mediante otros equipos, por ejemplo, un mezclador ATEM Mini Extreme.



Control remoto

Seleccione la opción **Control remoto** para activar el control a distancia mediante una conexión a una red Ethernet. Desactive esta opción para controlar el grabador de manera local.

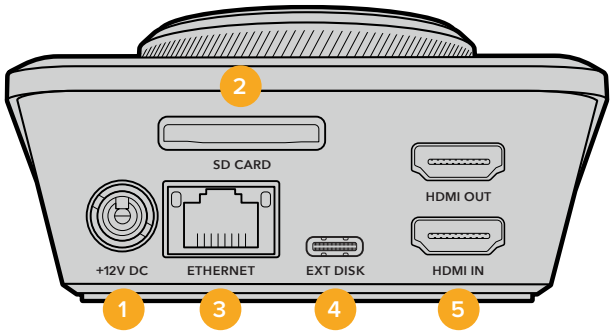
Restablecer ajustes originales



Restablecer ajustes

Seleccione esta opción para restablecer los ajustes de fábrica. Al presionar el botón **SET**, el dispositivo le solicitará que confirme la opción seleccionada.

Panel trasero



1 Alimentación

El grabador se conecta a la red de suministro eléctrico mediante un adaptador para corriente alterna. El cable de alimentación provisto incluye un conector de seguridad que impide que se desconecte accidentalmente, aunque también es posible utilizar cualquier cable de 12 V 36 W.

2 Tarjeta SD

Inserte una tarjeta SD en la ranura para grabar y reproducir contenidos.

3 Ethernet

El puerto Ethernet permite conectar el dispositivo a una red para grabar en unidades de almacenamiento que formen parte de esta o transferir archivos rápidamente mediante los protocolos FTP o HTTP utilizando el organizador web. Además, esto brinda la posibilidad de controlar la unidad a distancia por medio de interfaces de programación para aplicaciones REST o el protocolo para redes Ethernet (HyperDeck Ethernet Protocol). Consulte el apartado *Transferencia de archivos a través de una red* a fin de obtener más información al respecto.

Es posible controlar los grabadores desde mezcladores y paneles ATEM si los dispositivos están conectados a una misma red.

4 Discos externos

Conecte un disco externo al puerto USB-C para grabar a una velocidad máxima de 5 Gb/s. Asimismo, es posible conectar un adaptador con varios puertos USB o un dispositivo Blackmagic MultiDock 10G, a fin de emplear varias unidades SSD.

5 HDMI

Este puerto permite conectar un televisor, un monitor o incluso un mezclador, tal como el modelo ATEM Mini Extreme. Al conectar una pantalla, también podrá ver el menú superpuesto.

Soportes de grabación

Tarjeta SD

Se recomienda utilizar tarjetas SD UHS-I a fin de grabar en HD. Estas ofrecen una velocidad de escritura de 220 MB/s y, por lo tanto, resultan adecuadas para almacenar secuencias en formato 2160p60.

Por el contrario, para grabar con mayor compresión o a una velocidad de bits más baja, es posible emplear tarjetas más lentas. Generalmente, los modelos más rápidos ofrecen un mejor rendimiento.

No obstante, es aconsejable consultar la versión más reciente de este manual en nuestra página de soporte técnico para obtener información actualizada al respecto.

¿Qué tarjetas SD son compatibles con el modelo HyperDeck Shuttle HD?

The following SD Cards are recommended for 1080p up to 60 fps.

Marca	Modelo	Capacidad
Angelbird	AV PRO SD UHS-II 300 MB/s V90 SDXC	256 GB
Angelbird	AV PRO SD UHS-II 260 MB/s V60 SDXC	128 GB
Angelbird	AV PRO SD UHS-II 260 MB/s V60 SDXC	64 GB
SanDisk	Extreme Pro UHS-I 95 MB/s SDXC	64 GB
Wise	SD2-64U3 UHS-II 285 MB/s SDXC	64 GB
Lexar	Professional 1000x UHS-II SDXC 150 MB/s	128 GB
Sony	Tough SF-G128T	128 GB
Kingston	CANVAS GO! Plus 170 MB/s V30	64 GB
Kingston	CANVAS GO! Plus 170 MB/s V30	128 GB
Kingston	CANVAS GO! Plus 170 MB/s V30	512 GB
ProGrade Digital	SDXC UHS-II V90 300 R	64 GB
ProGrade Digital	SDXC UHS-II V90 300 R	128 GB
Sony	Tough SF-G64T UHS-II SDXC	64 GB
Delkin Devices	Black UHS-II V90 SDXC	256 GB
Delkin Devices	Power UHS-II V90 SDXC	128 GB
Delkin Devices	Power UHS-II V90 SDXC	256 GB
Delkin Devices	Black UHS-II V90 SDXC	128 GB
Exascend	Essential SDXC UHS-II V90 R 300 MB/s	64 GB
Exascend	Essential SDXC UHS-II V90 R 300 MB/s	128 GB
Exascend	Catalyst SDXC UHS-II V90 R 300 MB/s	64 GB

Discos externos

Todos los modelos HyperDeck permiten guardar el material digitalizado directamente en discos USB-C. Estas unidades de gran capacidad son rápidas y brindan la posibilidad de grabar durante períodos prolongados. Además, facilitan la edición de los contenidos al instante, al conectarlas a un equipo informático.

También es posible emplear varias unidades simultáneamente para aumentar la capacidad de almacenamiento. A tales efectos, conecte un dispositivo Blackmagic MultiDock 10G al puerto **EXT DISK** en la parte trasera del grabador, mediante un cable USB-C.

¿Qué unidades USB-C son compatibles con el modelo HyperDeck Shuttle HD?

Se recomiendan las siguientes unidades para grabar en formato ProRes HQ a una resolución de 1080p y una frecuencia máxima de 60 f/s:

Marca	Modelo	Capacidad
Wise	PTS-256 Portable SSD 4K	256 GB
OWC	Envoy Pro Ex	240 GB
BUFFALO	SSD-PHE500U3-BA	500 GB

Se recomiendan las siguientes unidades USB-C para grabar en formato DNxHD 220x a una resolución de 1080p y una frecuencia máxima de 60 f/s.

Marca	Modelo	Capacidad
OWC	Envoy Pro Ex	240 GB

Se recomiendan las siguientes unidades para grabar en formato H.264 a una resolución de 1080p y una frecuencia máxima de 60 f/s:

Marca	Modelo	Capacidad
OWC	Envoy Pro Ex	240 GB

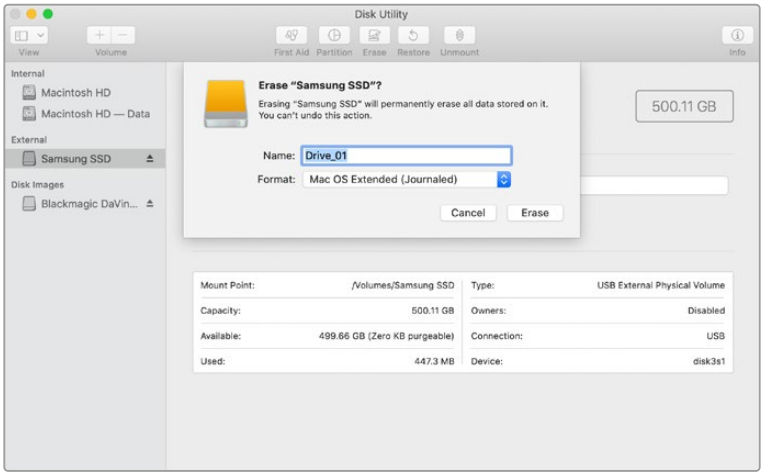
Formatear soportes de almacenamiento

Preparación de soportes en Mac

La aplicación **Utilidad de Discos**, incluida en el sistema operativo macOS, permite formatear unidades de almacenamiento mediante el sistema HFS+ o exFAT.

Asegúrese de hacer una copia de seguridad de cualquier información importante que contenga el soporte de grabación, puesto que, al iniciar este procedimiento, se borrarán todos los datos.

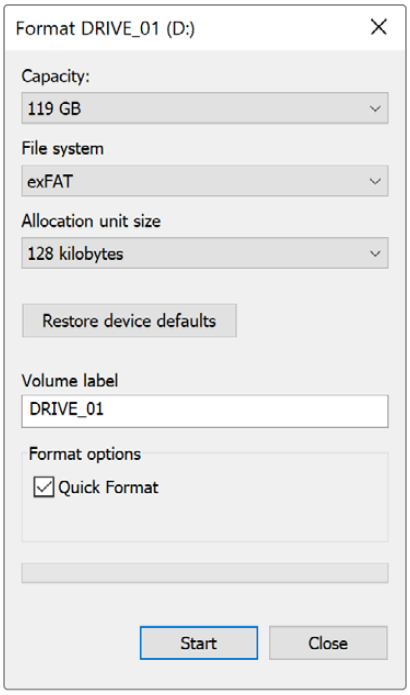
1. Conecte la unidad USB al equipo informático mediante un cable o una base externa e ignore cualquier mensaje relativo a su uso para copias de seguridad con Time Machine. En el caso de las tarjetas SD, utilice un lector externo para este tipo de soportes.
2. Haga clic en **Aplicaciones** y luego seleccione **Utilidades**. A continuación, ejecute la aplicación **Utilidad de Discos**.
3. Haga clic en el ícono de la unidad de almacenamiento y luego en la pestaña **Borrar**.
4. Seleccione la opción **Mac OS Extended (con registro)** o **exFAT**.
5. Ingrese un nombre para la unidad y luego haga clic en **Borrar**. Se dará formato a la unidad rápidamente y quedará lista para ser utilizada.



Preparación de soportes en Windows

El cuadro de diálogo **Formato** en el sistema operativo Windows permite formatear unidades de almacenamiento mediante el sistema exFAT. Asegúrese de hacer una copa de seguridad de cualquier información importante que contenga el soporte de grabación, puesto que, al iniciar este procedimiento, se borrarán todos los datos.

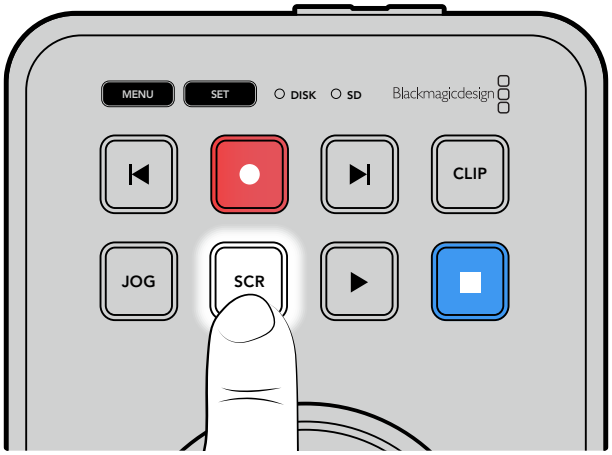
1. Conecte la unidad USB al equipo informático mediante un cable o un dispositivo externo. En el caso de las tarjetas SD, utilice un lector externo para este tipo de soportes.
2. Abra el menú **Inicio** o la **Pantalla de Inicio** y seleccione la opción **PC**. Haga clic en el soporte de almacenamiento con el botón derecho.
3. En el menú contextual, seleccione la opción **Formato**.
4. Elija la opción **exFAT** para el sistema de archivos y **128 kilobytes** para el tamaño de la unidad de asignación.
5. Ingrese un nombre de la unidad, marque la casilla **Formato rápido** y haga clic en **Iniciar**.
6. Se dará formato a la unidad rápidamente y quedará lista para ser utilizada.



Acceso a unidades y soportes de almacenamiento

Esta opción permite ver la ruta de acceso a un archivo almacenado en tarjetas, discos o soportes de almacenamiento en red. Cuando está activada, la información se muestra superpuesta a la imagen transmitida por la salida HDMI. Luego, es posible acceder a los distintos directorios mediante los botones **SCR** y **CLIP**, y el mando giratorio.

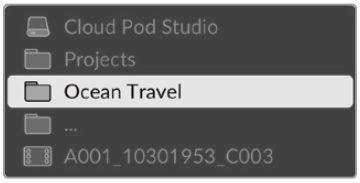
1 Presione el botón **SCR** para abrir la ventana de acceso a unidades y soportes de almacenamiento.





Presione el botón **SCR** para abrir la ventana de acceso a unidades y soportes de almacenamiento superpuesta a la imagen transmitida mediante la salida HDMI.

2 Con ayuda de las imágenes en la pantalla, busque el clip deseado en la carpeta correspondiente.



3 Presione los botones **CLIP** o **SCR** para desplazarse hacia arriba o abajo, respectivamente.

Para cerrar la ventana, presione el botón de detención, o el de reproducción para cerrarla e iniciar la reproducción de inmediato.

NOTA: Para ver clips que se hayan grabado con un códec, una resolución o una frecuencia de imagen diferentes, asegúrese de que el códec y el formato seleccionados en el dispositivo HyperDeck coincidan con estos.

Función Teleprónter

El grabador también puede emplearse a modo de teleprónter si se dispone de un archivo RTF o TXT. Cree un archivo de texto en TextEdit o WordPad en cualquiera de los 13 idiomas admitidos y guárdelo en formato de texto enriquecido o sin formato. Al abrirlo con el modelo HyperDeck Shuttle HD, podrá adaptar el tamaño y el interlineado del texto.

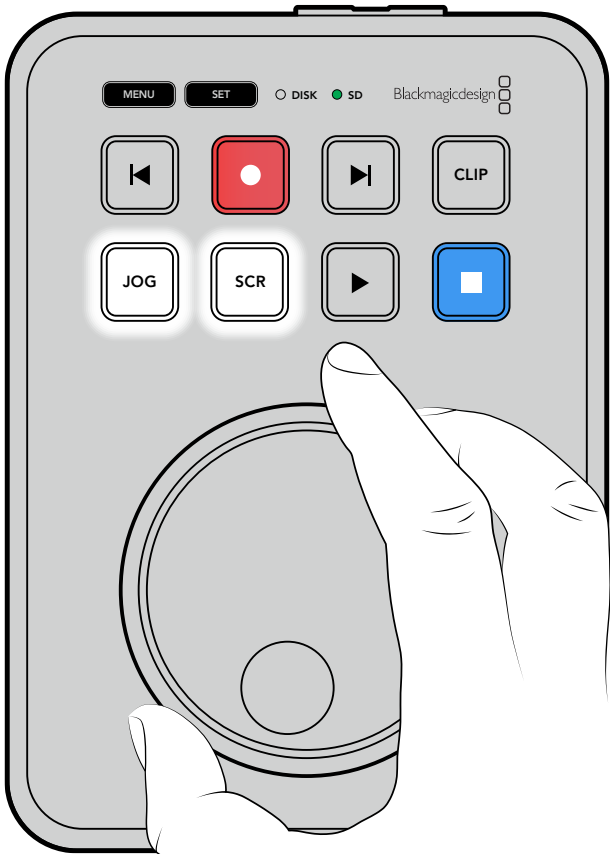
Para utilizar esta función:

1. Conecte el monitor que desee utilizar al puerto HDMI del grabador.
2. Inserte la tarjeta SD o conecte el disco externo USB que contenga el texto.
3. En el menú de grabación, seleccione la opción **Códec**. Luego, seleccione **Teleprónter** y oprima el botón **SET**.

El texto aparecerá en pantalla. Ahora, podrá iniciar la reproducción presionando el botón correspondiente o acceder a opciones adicionales girando el mando.

Control de la velocidad de reproducción del teleprónter

Al igual que con las imágenes, el mando de búsqueda del grabador permite controlar la velocidad de reproducción cuando está activado el modo de teleprónter. Una vez que se haya cargado el texto, presione los botones **JOG** y **SCR** simultáneamente para poder ajustar la velocidad de reproducción. Luego, gire el mando. El texto avanzará a la par del mando de búsqueda. Por ejemplo, cuanto más rápido gire el mando, más rápido se reproducirá el texto.



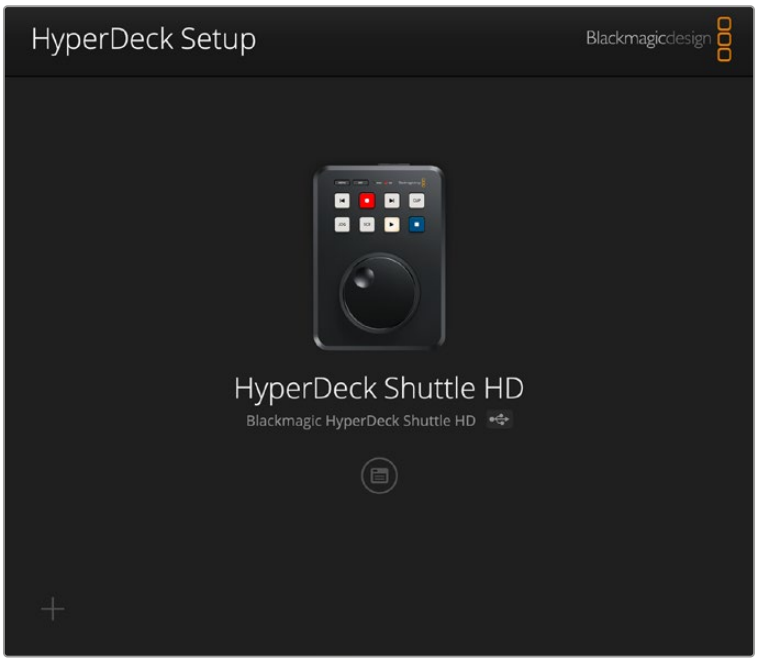
Si desea establecer una velocidad constante, utilice los botones **JOG** y **SCR** por separado. Ahora, la velocidad constante será menor en el modo de desplazamiento o mayor en el de avance y retroceso rápido.

Para alternar entre los archivos disponibles en la unidad de almacenamiento, presione los botones de avance y retroceso.

Al leerlos, el teleprónter reconocerá el tamaño, el color y el estilo aplicado al texto. Asimismo, es posible modificar el tamaño de la fuente, el interlineado, los márgenes e incluso invertir el texto en sentido horizontal o vertical, por ejemplo, en los casos en que se precisa proyectarlo a un interferómetro. Consulte el apartado *Ajustes del menú* para obtener más información al respecto.

Configuración del dispositivo

El programa utilitario Blackmagic HyperDeck Setup permite configurar el dispositivo y actualizar el sistema operativo interno.

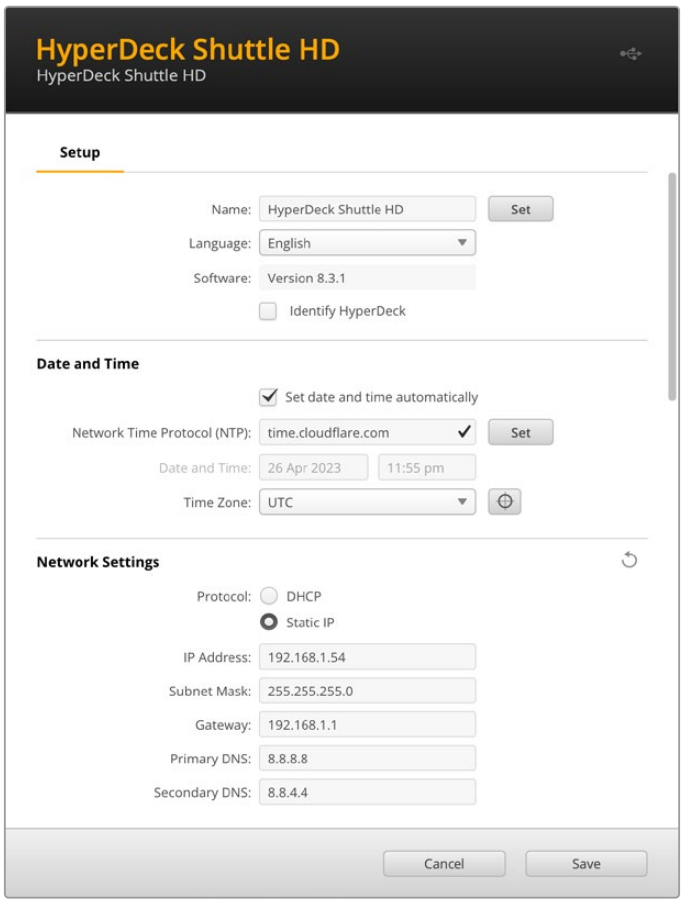


Para instalar el programa:

1. Descargue la última versión del instalador desde nuestra página de soporte técnico.
2. Abra el asistente de instalación en su equipo informático y siga las instrucciones.
3. Una vez que la instalación se haya completado, conecte el grabador al equipo informático mediante los puertos USB o Ethernet situados en la parte trasera.
4. Ejecute el programa Blackmagic HyperDeck Setup y siga las instrucciones que aparecen en la pantalla para actualizar el sistema operativo interno. Si no aparece ningún aviso, el dispositivo ya se encuentra actualizado.

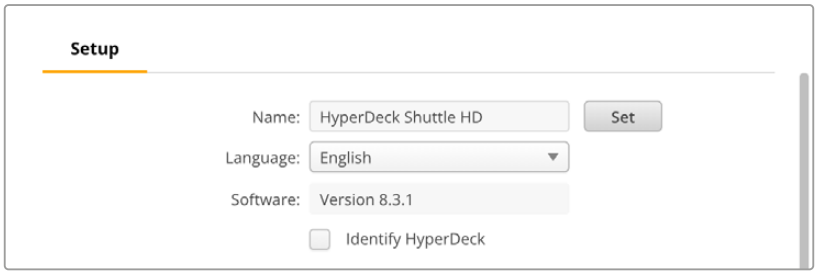
Haga clic en el ícono de ajustes o en la imagen del dispositivo para acceder a la ventana de configuración.

La ventana de inicio muestra el grabador y su nombre, el cual puede determinarse mediante el menú de ajustes del programa utilitario, a fin de poder identificarlo con mayor facilidad cuando hay más de uno conectado al equipo informático.



Preferencias

Al emplear más de un grabador, se recomienda asignarle un nombre a cada unidad, a fin de identificarla fácilmente. Para ello, escriba el nombre deseado en el campo correspondiente y haga clic en el botón **SET**. Cabe destacar que, al cambiar el nombre de la unidad, los certificados digitales en uso perderán validez. Por consiguiente, se recomienda hacerlo antes de generar la solicitud de firma del certificado o un certificado autofirmado.



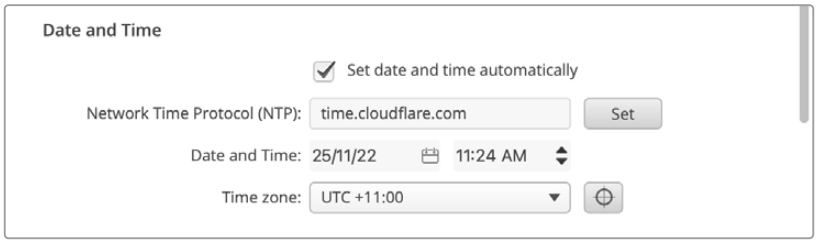
Identificar HyperDeck

Al marcar la casilla **Identify HyperDeck**, los botones de avance y retroceso en la unidad parpadearán. Esto puede resultar de utilidad al usar más de un grabador, a fin de identificar el dispositivo conectado mediante el programa HyperDeck Setup.

Fecha y hora

Marque la casilla para que la fecha y la hora se configuren automáticamente. El grabador utilizará el protocolo seleccionado en la opción **Network Time Protocol (NTP)**. El protocolo predeterminado es time.cloudflare.com, pero es posible especificar otro distinto.

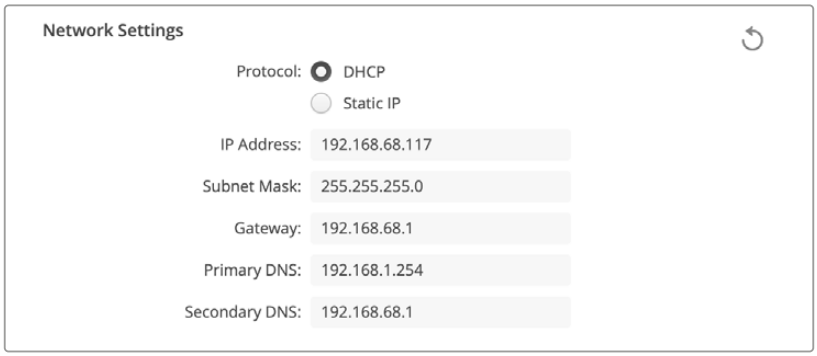
Al seleccionar la opción de configuración manual, ingrese la fecha, la hora y el huso horario en los campos correspondientes. Es importante configurar estos parámetros correctamente a fin de garantizar que los datos de la red coincidan con los de las grabaciones. Además, esto permite evitar ciertos problemas que podrían ocurrir cuando se emplean sistemas de almacenamiento en red.



Ajustes de red

Protocolo

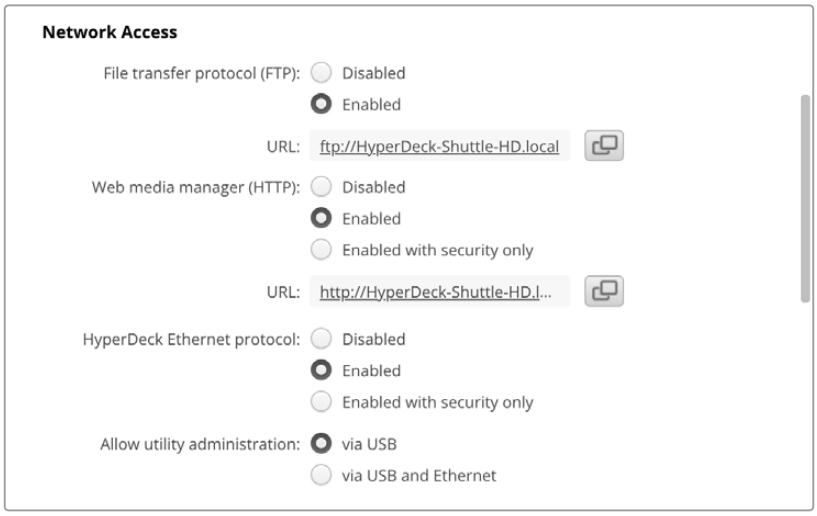
Para controlar grabadores HyperDeck Shuttle HD a través de un mezclador ATEM o remotamente a través del protocolo de Ethernet para grabadores HyperDeck, deben estar conectados a la misma red que el resto de los equipos mediante el protocolo DHCP o una dirección IP fija.



DHCP	De forma predeterminada, el grabador utiliza el protocolo DHCP, que permite a los servidores de red reconocerlo automáticamente y asignarle una dirección IP. Este es un servicio estupendo que facilita la conexión de equipos mediante Ethernet y a la vez garantiza que dichas direcciones sean compatibles entre ellas. La mayoría de los equipos informáticos y conmutadores de red admiten el uso de este protocolo.
Dirección IP fija	Al seleccionar la opción **Static IP**, es posible agregar los datos de la red. Para configurar una dirección IP y que todos los equipos puedan comunicarse, es necesario que compartan los mismos ajustes de máscara de subred y puerta de enlace.

Acceso mediante una red

Es posible acceder al modelo HyperDeck Shuttle HD desde una red a fin de transferir archivos y controlar el grabador a distancia mediante el protocolo de Ethernet para dispositivos HyperDeck. Por defecto, el acceso está activado. Sin embargo, se puede desactivar de manera individual o requerir un nombre de usuario y una contraseña para lograr una mayor seguridad al utilizar el organizador web o el protocolo de Ethernet para dispositivos HyperDeck.



Protocolo de transferencia de archivos

Active o desactive el acceso mediante el protocolo FTP marcando la casilla correspondiente. Para acceder desde un cliente FTP, por ejemplo, CyberDuck, haga clic en el ícono a fin de copiar la dirección. Consulte el apartado *Transferencia de archivos a través de una red* para obtener más información al respecto.

Organización de archivos

Es posible acceder al material grabado en tarjetas SD o discos externos desde un navegador web mediante el organizador web. Al hacer clic en el enlace o copiar y pegar la dirección en el explorador, se abre una interfaz sencilla, en la cual se pueden transferir archivos directamente desde las tarjetas a través de la red.

De forma predeterminada, el acceso se realiza a través del protocolo HTTP, aunque es posible desactivarlo por completo o solicitar un certificado de seguridad mediante la opción **Enabled with security only**. En este último caso, se establece una conexión cifrada con el organizador web a través del protocolo HTTPS. Consulte el apartado sobre certificados de seguridad en este manual a fin de obtener más información al respecto.

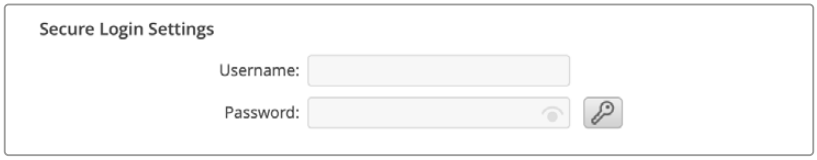
Protocolo de Ethernet para grabadores HyperDeck

Este protocolo brinda la oportunidad de controlar el grabador mediante cualquier consola para ejecutar comandos desde el equipo informático, por ejemplo, Terminal en sistemas Mac o PuTTY en Windows. Cabe la posibilidad de requerir un nombre de usuario y una contraseña a fin de acceder a la unidad, permitir el acceso libremente o deshabilitarlo por completo. A su vez, un programa SSL facilita la codificación de la sesión al usar aplicaciones como netcat. Consulte el apartado *Información para desarrolladores* (en inglés) a fin de obtener más información al respecto.

Acceso mediante el programa utilitario

Es posible acceder al programa Blackmagic HyperDeck Setup cuando el grabador está conectado mediante una red o el puerto USB. Para evitar que otros usuarios accedan a través de la red, seleccione la opción **USB ony**.

Ajustes de inicio de sesión seguro



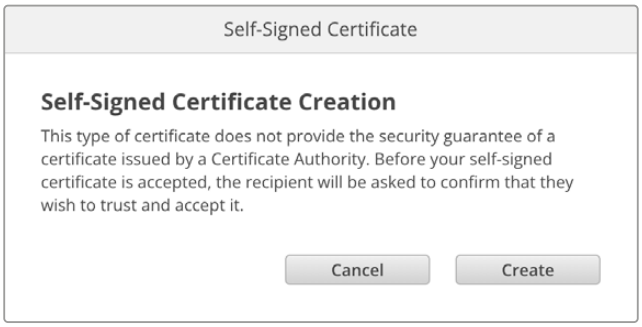
Al seleccionar la opción **Enable with security only**, es necesario contar con un nombre de usuario y una contraseña. Escriba ambos y haga clic en el botón **Save**. El campo correspondiente a la contraseña estará vacío una vez que se ingrese la clave. Una vez establecidos el nombre de usuario y la contraseña, será necesario ingresarlos a fin de acceder al organizador web.

Certificado de seguridad

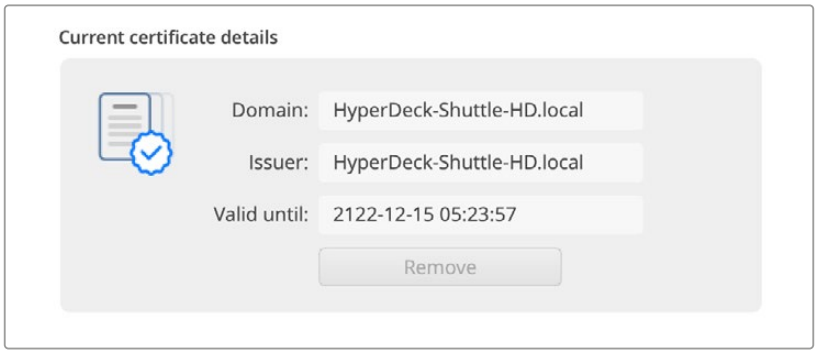
Para acceder al organizador web a través del protocolo HTTPS, o cuando se ha activado la opción de seguridad para el protocolo de Ethernet, es necesario contar con un certificado digital. Este permite identificar el dispositivo, con el propósito de verificar que se establezca una conexión con la unidad correcta. Además, garantiza la encriptación de los datos transmitidos entre el grabador y el servidor o el equipo informático. Adicionalmente, al activar la opción para habilitar una conexión segura, será necesario ingresar un nombre de usuario y una clave a fin de acceder a la unidad.

Existen dos tipos de certificados que pueden utilizarse con los grabadores HyperDeck: un certificado firmado por una entidad de certificación y un certificado autofirmado. Este último brinda un nivel de seguridad adecuado para algunas dinámicas de trabajo, por ejemplo, al acceder al grabador a través de una red local.

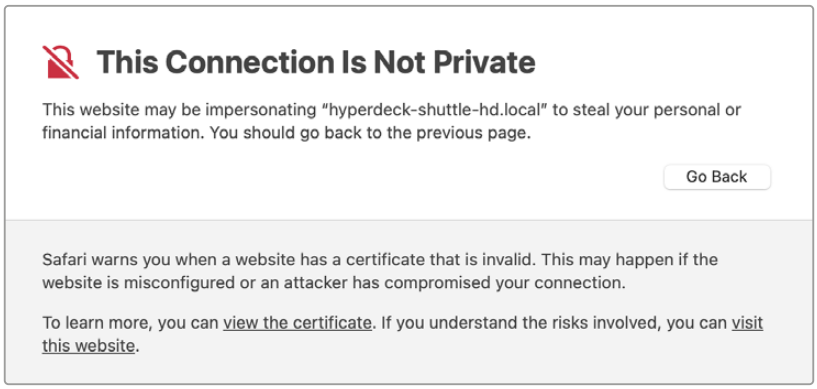
Para generar un certificado autofirmado, haga clic en la opción **Create Certificate**. Deberá confirmar que comprende los riesgos que conlleva utilizar un certificado de este tipo. Al hacer clic en el botón **Create**, los datos relativos al dominio, el emisor y la validez se completan automáticamente en los campos respectivos del programa utilitario HyperDeck Setup.



Al restablecer la configuración de fábrica del dispositivo, se eliminarán los certificados en uso. Asimismo, es posible quitarlos haciendo clic en el botón **Remove** y siguiendo las instrucciones que aparecen en la pantalla.



Al acceder a los archivos multimedia mediante un certificado autofirmado, a través del protocolo HTTPS, el navegador mostrará una advertencia sobre el riesgo de ingresar a dicho sitio web. Algunos navegadores ofrecen la posibilidad de continuar una vez que el usuario confirma que comprende los riesgos, pero otros impiden completamente el acceso.



A los efectos de garantizar el acceso mediante cualquier navegador, es preciso recurrir a un certificado firmado. Para obtenerlo, primero se debe generar una solicitud de firma a través del programa utilitario Blackmagic HyperDeck Setup. Dicha solicitud se envía posteriormente a una entidad de certificación o al departamento de informática para firmarla. Una vez que esto sucede, el usuario recibirá un certificado firmado. Este consiste en un archivo .cert, .crt o .pem que puede importarse desde el grabador.



Para generar la solicitud de firma del certificado:

1 Haga clic en el botón **Generate Signing Request**.



2 Aparecerá una ventana donde se solicita un nombre común y otro alternativo para la unidad. Modifique los demás datos según la tabla proporcionada a continuación:

Datos	Descripción	Ejemplo
Nombre común	Nombre de dominio utilizado	hyperdeck.melbourne.com
Nombre alternativo	Nombre de domino alternativo	hyperdeck.melbourne.net
País	País donde se sitúa la organización	AU
Estado	Provincia, región, departamento, condado o estado.	Victoria
Ubicación	Nombre del estado, la ciudad, etc.	Port Melbourne
Organización	Nombre de la organización	Blackmagic Design

3 Una vez completados los datos, haga clic en el botón **Generate**.

Al generar un archivo .csr, se creará una clave pública y otra privada al mismo tiempo. La primera se incluye en la solicitud de firma, mientras que la segunda permanece en la unidad. Una vez que el departamento de informática o la entidad de certificación hayan cotejado la información de la solicitud con la organización, generarán un certificado firmado con los datos descritos anteriormente y la clave pública.

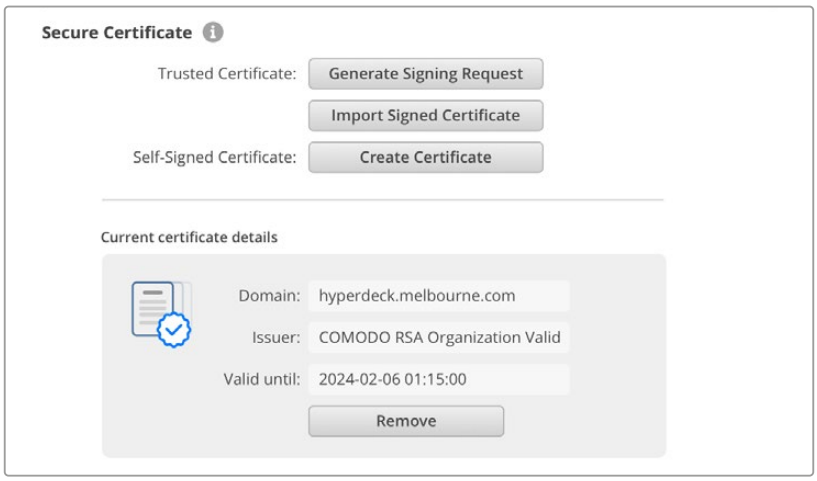
Luego de importarlo, el grabador utilizará dichas claves para confirmar su identidad y codificar o decodificar la información compartida a través de los protocolos HTTPS o de Ethernet para dispositivos HyperDeck, cuando se emplea un programa SSL.

Para importar un certificado firmado:

1 Haga clic en el botón **Import Signed Certificate**.

2 Acceda a la ubicación del certificado mediante el explorador de archivos y haga clic en **Abrir** luego de seleccionarlo.

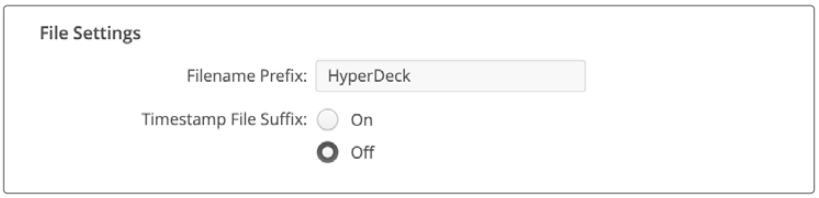
Los campos correspondientes al dominio, el emisor y la validez se actualizarán según la información contenida en el documento. Generalmente, el certificado tiene una validez de un año, por lo cual será necesario repetir el proceso una vez que caduque.



Dado que se ha ingresado un nombre de dominio para la unidad, deberá ponerse en contacto con el departamento de informática a fin de corroborarlo. De esta forma, los datos enviados a la dirección IP del grabador se dirigirán al nombre de dominio indicado en la solicitud de firma. E1ste también forma parte de la dirección HTTPS empleada para acceder a los archivos mediante el organizador web, por ejemplo, https://hyperdeck.melbourne.com.

Cabe destacar que el certificado perderá validez al restablecer la configuración original del dispositivo, por lo cual será necesario generar y firmar uno nuevo.

Archivos



Al emplear el dispositivo por primera vez, los archivos grabados en el soporte de almacenamiento incluirán el prefijo «HyperDeck». Para modificar el nombre, basta con escribir uno nuevo.

Por defecto, la opción para añadir la marca de tiempo se encuentra desactivada. Actívela a fin de agregar la fecha y la hora al nombre del archivo grabado. Estos ajustes también pueden modificarse mediante el menú en la pantalla de la unidad.

Restablecer

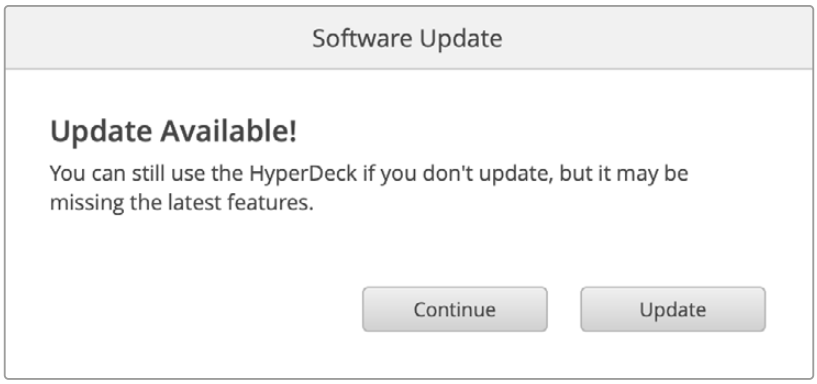
Seleccione esta opción para restablecer la configuración original del grabador. Nótese que el certificado en uso perderá validez. Será necesario generar una nueva solicitud de firma y enviarla al departamento de informática o la entidad de certificación.

Actualización del dispositivo

Para actualizar el sistema operativo interno:

1. Descargue la última versión del instalador para el programa Blackmagic HyperDeck Setup desde nuestro sitio web.
2. Abra el asistente de instalación en su equipo informático y siga las instrucciones.
3. Una vez que la instalación se haya completado, conecte el grabador al equipo informático mediante el puerto USB o Ethernet en la parte trasera.

4 Ejecute el programa y siga las instrucciones que aparecen en la pantalla para actualizar el sistema operativo interno. Si no aparece ningún aviso, el procedimiento ha concluido exitosamente.



Transferencia de archivos a través de una red

Los dispositivos HyperDeck Shuttle HD permiten el uso del protocolo seguro de transferencia de hipertexto (HTTPS) o del protocolo de transferencia de archivos (FTP). De este modo, es posible copiarlos directamente de un equipo informático al dispositivo, a través de una red local de gran velocidad. En particular, esto facilita el traspaso de archivos nuevos a la unidad empleada para reproducir imágenes en una superficie audiovisual o en carteles digitales.

Aunque es posible transferir cualquier tipo de archivos al grabador, nótese que aquellos que vayan a reproducirse desde el dispositivo deben ser compatibles con los códecs y las resoluciones que este admite.

SUGERENCIA: Es posible transferir archivos mientras la unidad está grabando. El dispositivo ajustará automáticamente la velocidad de transferencia para que la grabación no se vea afectada.

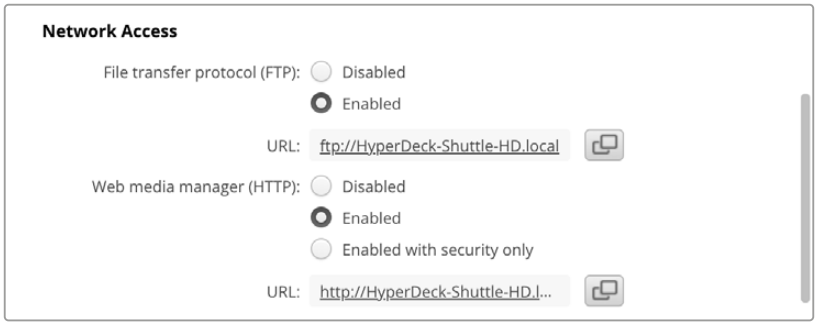
El programa HyperDeck Setup permite activar o desactivar el acceso al dispositivo mediante los protocolos FTP o HTTPS.

Conexión de grabadores HyperDeck Shuttle HD mediante el protocolo HTTPS

Para acceder a los grabadores mediante el organizador web, es necesario contar con la dirección URL indicada en la configuración de acceso a la red. del programa utilitario HyperDeck Setup. Estas opciones están disponibles cuando el equipo informático está conectado a través del puerto USB o una red Ethernet, pero se encuentran desactivadas cuando el dispositivo está conectado solo mediante una red Ethernet.

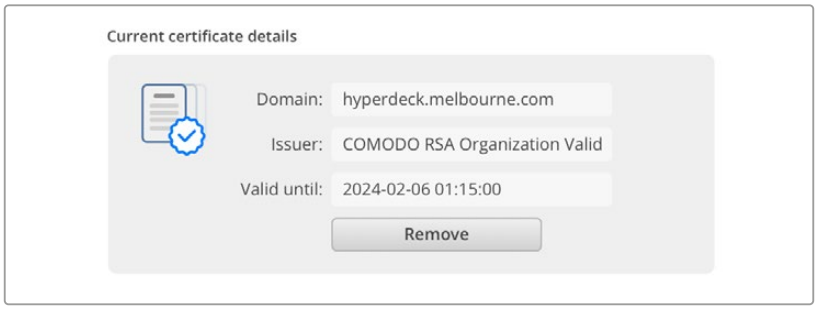
1 Conecte el equipo informático al puerto USB en el panel trasero del dispositivo mediante un cable USB-C y ejecute el programa utilitario. Verá el ícono correspondiente a la conexión UBS junto al nombre de la unidad. Haga clic en el ícono circular o en cualquier parte de la imagen del producto para acceder a la configuración.

2 Al usar un certificado autofirmado, acceda a los ajustes de red y haga clic en el ícono de copia junto a la dirección URL, que se basa en el nombre asignado a la unidad. Si desea modificarla, simplemente cambie el nombre del dispositivo.



Haga clic en el enlace al utilizar un certificado autofirmado.

3 Si se ha importado un certificado firmado por el departamento de informática o una entidad de certificación, copie y pegue la dirección en el campo correspondiente al dominio del certificado.



Copie la dirección del dominio y péguela en un navegador.

4 Abra el navegador y pegue la dirección en una nueva ventana. Si la opción de acceso seguro está activada, deberá ingresar el nombre de usuario y la contraseña configurados en el programa utilitario HyperDeck Setup.

Al utilizar un certificado autofirmado, aparecerá un mensaje de advertencia sobre la privacidad de la conexión. Esto significa que no se ha importado un certificado firmado por medio del programa utilitario HyperDeck Setup.

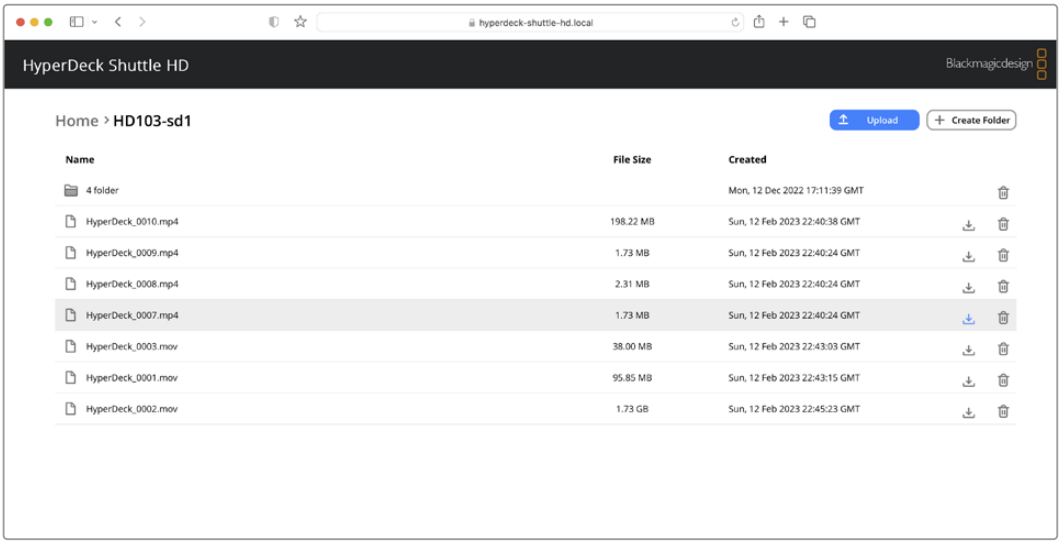
Para continuar sin un certificado válido confiable, siga las instrucciones indicadas en el navegador para aceptar los riesgos y proceder al sitio web.

Transferencia de archivos mediante el organizador web

Al abrir por primera vez el organizador web en el navegador, notará que los archivos están ordenados según el soporte de almacenamiento en el que se encuentran.

SD1	Archivos en tarjetas SD.
USB	Las unidades USB conectadas incluyen el prefijo USB/.

Haga doble clic en ellas para ver su contenido.



Haga clic en el botón **Upload** para agregar archivos.

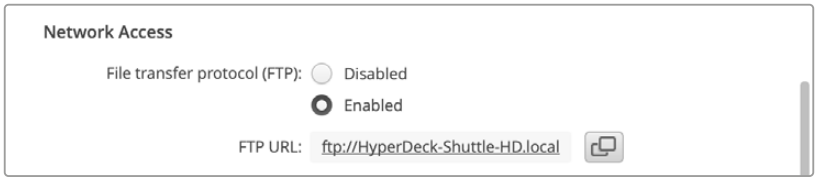
Para agregar archivos de forma remota y reproducirlos, haga clic en el botón **Upload**. Seleccione el archivo en el explorador de archivos y haga clic en **Upload**. Aparecerá una ventana donde se indica el progreso de la carga. También es posible añadir carpetas de ser necesario mediante el botón **Create Folder**.

El ícono de la flecha en el extremo derecho permite descargar archivos. Es posible que el navegador le solicite autorización para descargar contenido del sitio web. Haga clic en **Allow** (permitir). Para eliminar un archivo, haga clic en el ícono de la papelera. Aparecerá una ventana de confirmación. Haga clic en **Delete** (eliminar) para continuar.

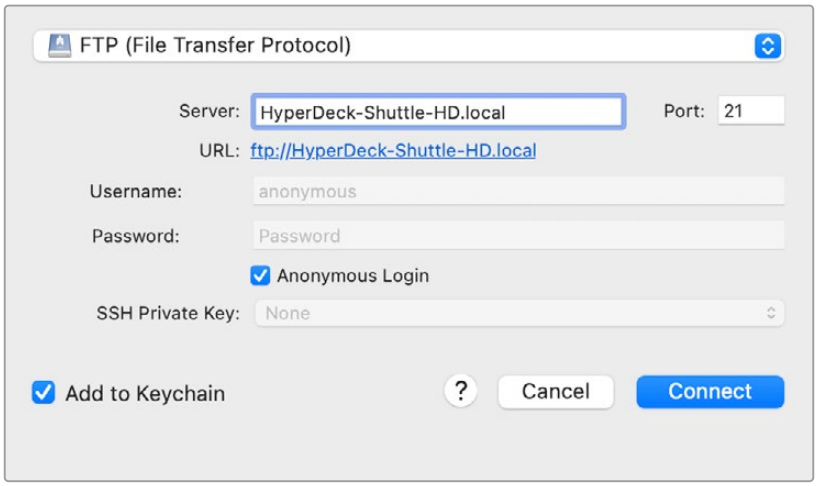
Transferencia de archivos mediante el protocolo FTP

Si el dispositivo y el equipo informático se encuentran conectados a la misma red, solo es necesario contar con un cliente FTP y obtener la dirección IP o el URL del grabador mediante el programa utilitario HyperDeck Setup.

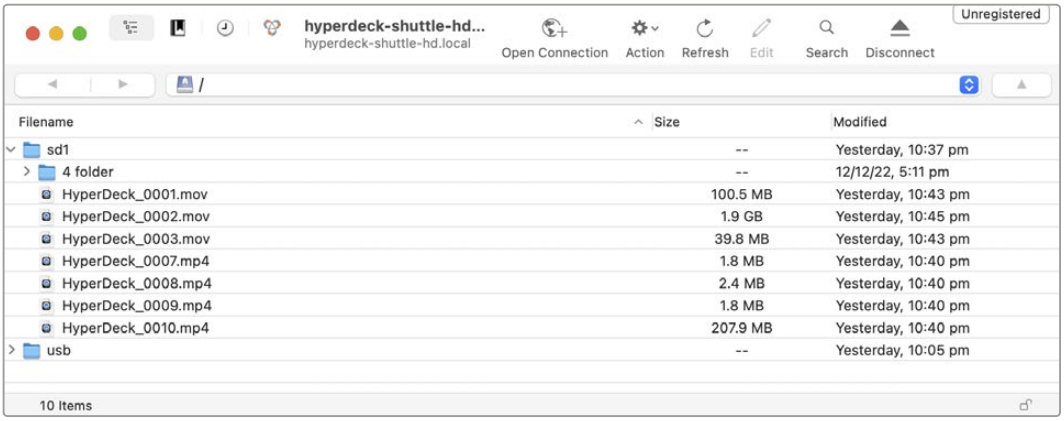
1. Descargue e instale un cliente FTP en el equipo informático al cual desea conectar el grabador. En tal sentido, recomendamos programas tales como Cyberduck, FileZilla o Transmit, aunque es posible utilizar prácticamente cualquier aplicación FTP. Cabe destacar que Cyberduck y FileZilla son programas gratuitos.
2. Una vez conectado el grabador a la red, ejecute el programa utilitario HyperDeck Setup y haga clic en el URL del cliente FTP o en el ícono junto al mismo para copiarlo. Es posible que necesite hacer clic en el enlace por segunda vez si el cliente FTP no establece la conexión.



3 Al establecer la conexión manualmente, pegue el URL en el campo del servidor. Haga clic en la opción **Anonymous Login** (inicio de sesión anónimo), si está disponible.



4 Las tarjetas SD se denominan sd1. Al expandir la carpeta USB, se mostrarán las unidades USB conectadas.



A continuación, podrá arrastrar y soltar los archivos utilizando la interfaz del cliente FTP.

Información para desarrolladores (en inglés)

Blackmagic HyperDeck Ethernet Protocol

The Blackmagic HyperDeck Ethernet Protocol is a text based protocol accessed by connecting to TCP port 9993 on HyperDeck models that have a built in Ethernet connection. If you are a software developer, you can use the protocol to construct devices that integrate with our products. Here at Blackmagic Design our approach is to open up our protocols and we eagerly look forward to seeing what you come up with!

You can connect to your HyperDeck recorder using the HyperDeck Ethernet Protocol using a command line program on your computer, such as Terminal on a Mac and putty on a Windows computer.

The HyperDeck Ethernet Protocol lets you schedule playlists and recordings. The following is an example of how to play 7 clips from clip number 5 onwards via the HyperDeck Ethernet Protocol.

On a Mac

1. Open the Terminal application which is located with the applications > utilities folder.
2. Type in “nc” and a space followed by the IP address of your HyperDeck disk recorder, another space and “9993” which is the HyperDeck Ethernet Protocol port number. For example type: nc 192.168.1.154 9993. The Protocol preamble will appear.
3. Type “playrange set: clip id: 5 count: 7” and press ‘return’.

   On HyperDeck disk recorders with a timeline view, you will see in and out points marked around clips 5 through the end of clip 11.
4. Type “play”. Clips 5 through 11 will now play back.
5. To clear the playrange, type “playrange clear”
6. To exit from the protocol, type ‘quit’.

Protocol Commands

Command	Command Description
help or ?	Provides help text on all commands and parameters
commands	return commands in XML format
device info	return device information
disk list	query clip list on active disk
disk list: slot id: {n}	query clip list on disk in slot {n}
quit	disconnect ethernet control
ping	check device is responding
preview: enable: {true/false}	switch to preview or output
play	play from current timecode
play: speed: {-5000 to 5000}	play at specific speed
play: loop: {true/false}	play in loops or stop-at-end
play: single clip: {true/false}	play current clip or all clips

Command	Command Description
play: {clip id/clip/timecode/timeline/...}	play from the specified position see “goto” command for description of parameters parameters can be combined with {speed/loop/single clip}
playrange	query playrange setting
playrange set: clip id: {n}	set play range to play clip {n} only
playrange set: clip id: {n} count: {m}	set play range to {m} clips starting from clip {n}
playrange set: in: {inT} out: {outT}	set play range to play between: - timecode {inT} and timecode {outT}
playrange set: timeline in: {in} timeline out: {out}	set play range in units of frames between: - timeline position {in} and position {out}
playrange clear	clear/reset play range setting
play on startup	query unit play on startup state
play on startup: enable: {true/false}	enable or disable play on startup
play on startup: single clip: {true/false}	play single clip or all clips on startup
play option	query play options
play option: stop mode: {lastframe/nextframe/black}	set output frame when playback stops
record	record from current input
record: name: {name}	record named clip
record spill	spill current recording to next slot
record: spill: slot id: {n}	spill current recording to specified slot use current id to spill to same slot
spill order	query the device order used for record spill
stop	stop playback or recording
clips count	query number of clips on timeline
clips get	query all timeline clips
clips get: clip id: {n}	query a timeline clip info
clips get: clip id: {n} count: {m}	query m clips starting from n
clips get: version: {1/2/3}	query clip info using specified output version: version 1: id: name startT duration version 1: id: name startT duration startT depends on “configuration: timecode output: {clip/timeline}” version 2: id: clipInT clipDuration inT outT filename version 3: id: clipInT clipDuration inT outT folder/filename
clips add: name: {name}	append a clip to timeline, name can include subfolders e.g. folder1/HyperDeck_0001.mp4
clips add: clip id: {n} name: {name}	insert clip before existing clip {n}
clips add: in: {inT} out: {outT} name: {name}	append the clip portion between clip timecodes {inT} to {outT}
clips add: frame in: {in} frame out: {out} name: {name}	append the clip portion between clip frame numbers {in} to {out}

Command	Command Description
clips remove: clip id: {n}	remove clip {n} from the timeline (invalidates clip ids following clip {n})
clips clear	empty timeline clip list
clips rebuild	rebuild timeline with default rules
clip info	query clip info for the current playing/recording clip
clip info: clip id: {n}	query clip info for timeline clip id {n}
clip info: name: {name}	query clip info for the clip named {name} on active disk
transport info	query current activity
slot info	query active slot
slot info: slot id: {n}	query slot {n}
slot info: device: {device}	query slot containing device USB/network devices can be queried without being active “device” and “slot id” parameters are mutually exclusive in all commands
slot select: slot id: {n}	switch to specified slot
slot select: device: {device}	switch to slot containing device
slot select: video format: {format}	load clips of specified format
slot unblock	unblock active slot
slot unblock: slot id: {n}	unblock slot {n}
slot unblock: device: {device}	unblock disk device
external drive list	list all available USB/network drives for use in external slot
external drive select: device: {device}	switch external slot to specified external drive
external drive selected	query the currently selected external drive
cache info	query cache status
dynamic range	query dynamic range settings
dynamic range: playback override: {off/Rec709/Rec2020_SDR/HLG/ ST2084_300/ST2084_500/ ST2084_800/ST2084_1000/ ST2084_2000/ST2084_4000/ST2084	set playback dynamic range override
dynamic range: record override: {off/Rec709/Rec2020_SDR/HLG/ ST2084_300/ST2084_500/ ST2084_800/ST2084_1000/ ST2084_2000/ST2084_4000/ST2048}	set record dynamic range override
notify	query notification status
notify: remote: {true/false}	set remote notifications
notify: transport: {true/false}	set transport notifications
notify: slot: {true/false}	set slot notifications
notify: configuration: {true/false}	set configuration notifications

Command	Command Description
notify: dropped frames: {true/false}	set dropped frames notifications (reported dropped frame count is approximate)
notify: display timecode: {true/false}	set display timecode notifications
notify: timeline position: {true/false}	set playback timeline position notifications
notify: playrange: {true/false}	set playrange notifications
notify: cache: {true/false}	set cache notifications
notify: dynamic range: {true/false}	set dynamic range settings notifications
notify: slate: {true/false}	set digital slate notifications
notify: clips: {true/false}	set timeline clips notifications where two types of changes can occur: add: partial update with list of clips and insert positions snapshot: complete update of all clips on timeline
notify: disk: {true/false}	set disk clips notifications where two types of changes can occur: add: partial update with list of clips and insert positions snapshot: complete update of all clips on timeline
notify: device info: {true/false}	set device info notifications
notify: nas: {true/false}	set nas notifications triggered by commands such as “nas add” or “nas remove”
goto: clip id: {start/end}	goto first clip or last clip
goto: clip id: {n}	goto clip id {n}
goto: clip id: +{n}	go forward {n} clips
goto: clip id: -{n}	go backward {n} clips
goto: clip: {start/end}	goto start or end of clip
goto: clip: {n}	goto frame position {n} within current clip
goto: clip: +{n}	go forward {n} frames within current clip
goto: clip: -{n}	go backward {n} frames within current clip
goto: timeline: {start/end}	goto start or end of timeline
goto: timeline: {n}	goto frame position {n} within timeline
goto: timeline: +{n}	go forward {n} frames within timeline
goto: timeline: -{n}	go backward {n} frames within timeline
goto: timecode: {timecode}	goto absolute timecode position in timeline
goto: timecode: +{timecode}	go forward {timecode} duration
goto: timecode: -{timecode}	go backward {timecode} duration
goto: slot id: {n}	goto slot id {n}
goto: clip id: {n} clip: {m}	goto clip id {n} and offset to frame position {m} within that clip
goto: clip id: {n} timeline: {m}	goto clip id {n} and offset to frame position {m} within the timeline

Command	Command Description
goto: clip id: {n} timecode: {timecode}	goto clip id {n} and offset {timecode} duration {clip id/clip/timeline/timecode} support absolute and relative offsets use “play” instead of “goto” to play from seeked position
jog: timecode: {timecode}	jog to timecode
jog: timecode: +{timecode}	jog forward {timecode} duration
jog: timecode: -{timecode}	jog backward {timecode} duration
shuttle: speed: {-5000 to 5000}	shuttle with speed
remote	query unit remote control state
remote: enable: {true/false}	enable or disable remote control
remote: override: {true/false}	session override remote control
configuration	query configuration settings
configuration: video input: {SDI/HDMI/component/composite}	change the video input source
configuration: audio input: {embedded/XLR/RCA}	change the audio input source
configuration: file format: {format}	switch to one of the supported formats: H.265High_422, H.264High, H.264Medium, H.264Low, H.264High10_422, H.265High, H.265Medium, H.265Low, QuickTimeProResHQ, QuickTimeProRes, QuickTimeProResLT, QuickTimeProResProxy DNxHR_HQX, QuickTimeDNxHR_HQX, DNxHR_SQ, QuickTimeDNxHR_SQ, DNxHR_LB, QuickTimeDNxHR_LB, DNxHD220x, QuickTimeDNxHD220x, DNxHD145, QuickTimeDNxHD145, DNxHD45, QuickTimeDNxHD45
configuration: audio codec: {PCM/AAC}	switch to specific audio codec
configuration: timecode input: {external/embedded/internal/preset/clip}	change the timecode input
configuration: timecode output: {clip/timeline}	change the timecode output
configuration: timecode preference: {default/dropframe/nondropframe}	whether or not to use drop frame timecodes when not otherwise specified
configuration: timecode preset: {timecode}	set the timecode preset
configuration: audio input channels: {n}	set the number of audio channels recorded to {n}
configuration: record trigger: {none/recordbit/timecoderun}	change the record trigger
configuration: record prefix: {name}	set the record prefix name (supports UTF-8 name)
configuration: record cache: {true/false}	enable or disable record cache, has no effect if cache is not supported/installed/formatted
configuration: append timestamp: {true/false}	append timestamp to recorded filename
configuration: usb spill: {true/false}	enable or disable spilling between usb disks

Command	Command Description
configuration: reference source: {auto/input/external}	set source for the reference signal
configuration: genlock input resync: {true/false}	enable or disable genlock input resync when enabled set reference source to auto/external
configuration: xlr input id: {n} xlr type: {line/mic}	configure xlr input type multiple xlr inputs can be configured in a single command
uptime	return time since last boot
format: slot id: {n} prepare: {exFAT/HFS+} name: {name}	prepare formatting operation filesystem type with volume name {name} “slot id” can be omitted for the current mounted slot “name” defaults to current volume name if mounted (supports UTF-8)
format: device: {device} prepare: {exFAT/HFS+} name: {name}	prepare formatting operation for {device}
format: confirm: {token}	perform a pre-prepared formatting operation using token
identify: enable: {true/false}	identify the device
watchdog: period: {period in seconds}	client connection timeout
reboot	reboot device
slate clips	slate clips information
slate project	slate project information
slate lens	slate lens information
nas list	list all NAS share bookmarks
nas discovered	list all NAS servers that have been discovered via mDNS
nas selected	currently selected NAS share
nas deselect	unmount the currently selected NAS share
connection protocol: response version: {version}	changes which do not affect other client connections change the output of “clips get”, “disk list” and related responses version 1 205 clips get id: filename startT duration startT depends on “configuration: timecode output: {clip/timeline}” 519 clips info id: clipInT clipDuration inT outT filename 206 disk list id: filename codec format duration 520 disk list info id: filename codec format duration version 2 205 clips get id: clipInT clipDuration inT outT folder/filename 519 clips info id: clipInT clipDuration inT outT folder/filename 206 disk list id: codec format duration folder/filename 520 disk list info id: codec format duration folder/filename

Multiline commands:	Command Description
authenticate:↵	authenticate user for secure access
username: {username}	case sensitive username
password: {password}	case sensitive password
slate clips↵	set slate clips information:
reel: {n}	slate reel number, where {n} is in [1, 999]
scene id: {id}	slate scene id value, where {id} is a string
shot type: {WS/MS/CU/BCU/MCU/ECU/none}	slate shot type
take: {n}	slate take number, where {n} is in [1, 99]
take scenario: {PU/VFX/SER/none}	slate take scenario
take auto inc: {true/false}	slate take auto increment
good take: {true/false}	slate good take
environment: {interior/exterior}	slate environment
day night: {day/night}	slate day or night
slate project:↵	set slate project information:
project name: {name}	project name (can be empty, supports UTF-8)
camera: {index}	set camera index e.g. A
director: {name}	director (can be empty, supports UTF-8)
camera operator: {name}	camera operator (can be empty, supports UTF-8)
slate lens:↵	set lens information:
lens type: {type}	lens type (can be empty, supports UTF-8)
iris: {type}	camera iris (can be empty, supports UTF-8)
focal length: {length}	focal length (can be empty, supports UTF-8)
distance: {distance}	lens distance (can be empty, supports UTF-8)
filter: {filter}	lens filter (can be empty, supports UTF-8)
nas add:↵	add a NAS share to the list of bookmarks
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share
username: {username}	username to connect as (optional, defaults to guest)
password: {password}	password to connect with (optional)
nas remove:↵	remove NAS share bookmark, does not unmount share if mounted
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share
nas select:↵	mount NAS share asynchronously. Uses credentials provided in matching bookmark, otherwise uses guest credentials
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share Use “nas selected” or “notify: slot: true” to determine when share is mounted.

Command Combinations

You can combine the parameters into a single command, for example:

```
play: clip id: 3 speed: 200 loop: true single clip: true
```

Or for configuration:

```
configuration: video input: SDI audio input: XLR
```

Or to switch to the second disk, but only play NTSC clips:

```
slot select: slot id: 2 video format: NTSC
```

Using XML

While you can use the Terminal to talk to HyperDeck, if you are writing software, you can use XML to confirm the existence of a specific command based on the firmware of the HyperDeck you are communicating with. This helps your software user interface adjust to the capabilities of the specific HyperDeck model and software version.

Protocol Details

Connection

The HyperDeck Ethernet server listens on TCP port 9993.

Basic syntax

The HyperDeck protocol is a line oriented text protocol. Lines from the server will be separated by an ascii CR LF sequence. Messages from the client may be separated by LF or CR LF.

New lines are represented in this document as a "↵" symbol.

Single line command syntax

Command parameters are usually optional. A command with no parameters is terminated with a new line:

```
{Command name}↵
```

If parameters are specified, the command name is followed by a colon, then pairs of parameter names and values. Each parameter name is terminated with a colon character:

```
{Command name}: {Parameter}: {Value} {Parameter}: {Value} ...↵
```

Multiline command syntax

The HyperDeck protocol also supports an equivalent multiline syntax where each parameter-value pair is entered on a new line. E.g.

```
{Command name}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
↵
```

Response syntax

Simple responses from the server consist of a three digit response code and descriptive text terminated by a new line:

```
{Response code} {Response text}↵
```

If a response carries parameters, the response text is terminated with a colon, and parameter name and value pairs follow on subsequent lines until a blank line is returned:

```
{Response code} {Response text}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
...
↵
```

Successful response codes

A simple acknowledgement of a command is indicated with a response code of 200:

```
200 ok↵
```

Other successful responses carry parameters and are indicated with response codes in the range of 201 to 299.

Failure response codes

Failure responses to commands are indicated with response codes in the range of 100 to 199:

```
100 syntax error
101 unsupported parameter
102 invalid value
103 unsupported
104 disk full
105 no disk
106 disk error
107 timeline empty
108 internal error
109 out of range
110 no input
111 remote control disabled
112 clip not found
120 connection failed
121 authentication failed
122 authentication required
150 invalid state
151 invalid codec
160 invalid format
161 invalid token
162 format not prepared
163 parameterized single line command not supported
```

Asynchronous response codes

The server may return asynchronous messages at any time. These responses are indicated with response codes in the range of 500 to 599:

```
5xx {Response Text}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
↵
```

Connection response

On connection, an asynchronous message will be delivered:

```
500 connection info:↵
protocol version: {Version}↵
model: {Model Name}↵
↵
```

Connection rejection

A limited number of clients may connect at a time. If too many clients attempt to connect concurrently, they will receive an error and be disconnected:

```
120 connection failed↵
```

Timecode syntax

Timecodes are expressed as non-drop-frame timecode in the format:

```
HH:MM:SS:FF
```

Handling of deck "remote" state

The “remote” command may be used to enable or disable the remote control of the deck. Any attempt to change the deck state over ethernet while remote access is disabled will generate an error:

```
111 remote control disabled↵
```

To enable or disable remote control:

```
remote: enable: {“true”, “false”} ↵
```

The current remote control state may be overridden allowing remote access over ethernet irrespective of the current remote control state:

```
remote: override: {“true”, “false”} ↵
```

The override state is only valid for the currently connected ethernet client and only while the connection remains open.

The “remote” command may be used to query the remote control state of the deck by specifying no parameters:

```
remote↵
```

The deck will return the current remote control state:

```
210 remote info:↵
enabled: {“true”, “false”}↵
override: {“true”, “false”}↵
↵
```

Asynchronous remote control information change notification is disabled by default and may be configured with the “notify” command. When enabled, changes in remote state will generate a “510 remote info:”asynchronous message with the same parameters as the “210 remote info:” message.

Closing connection

The "quit" command instructs the server to cleanly shut down the connection:

```
quit↵
```

Checking connection status

The "ping" command has no function other than to determine if the server is responding:

```
ping↵
```

Getting help

The "help" or "?" commands return human readable help text describing all available commands and parameters:

```
help↵
```

Or:

```
?↵
```

The server will respond with a list of all supported commands:

```
201 help:↵
{Help Text}↵
{Help Text}↵
↵
```

Switching to preview mode

The "preview" command instructs the deck to switch between preview mode and output mode:

```
preview: enable: {"true", "false"}↵
```

Playback will be stopped when the deck is switched to preview mode. Switching to playback is not permitted during record. Use the stop command to stop recording before switching to playback.

Controlling device playback

The “play” command instructs the deck to start playing:

```
play↵
```

The play command accepts a number of parameters which may be used together in most combinations.

By default, the deck will play all remaining clips on the timeline then stop.
The “single clip” parameter may be used to override this behavior:

```
play: single clip: {“true”, “false”}↵
```

By default, the deck will play at normal (100%) speed. An alternate speed may be specified in percentage between -5000 to 5000:

```
play: speed: {% normal speed}↵
```

By default, the deck will stop playing when it reaches to the end of the timeline. The “loop” parameter may be used to override this behavior:

```
play: loop: {“true”, “false”}↵
```

To play from the start of a particular clip:

```
play: clip id: {Clip Id}↵
```

To play from a position offset from the start of particular clip:

```
play: clip id: {Clid Id} timecode: +{timecode}↵
```

The “playrange” command returns the current playrange setting if any:

```
playrange↵
```

To override this behaviour and select a particular clip:

```
playrange set: clip id: {Clip ID}↵
```

To only play a certain number of clips starting at a particular clip:

```
playrange set: clip id: {n} count: {m}↵
```

To only play a certain timecode range:

```
playrange set: in: {in timecode} out: {out timecode}↵
```

To play a certain timeline range:

```
playrange set: timeline in: {in} timeline out: {out}↵
```

To clear a set playrange and return to the default value:

```
playrange clear↵
```

The “play on startup command” instructs the deck on what action to take on startup. By default, the deck will not play. Use the “enable” command to start playback after each power up.

```
play on startup: enable {“true”, “false”}↵
```

By default, the unit will play back all clips on startup. Use the “single clip” command to override.

```
play on startup: single clip: {“true”, “false”}↵
```

The “play option” command queries the output frame for when playback stops:

```
play option↵
```

By default, the deck will display the last frame when playback stops. To override this behaviour, the “stop mode” parameter can be used:

```
play option: stop mode: {“lastframe”, “nextframe”, “black”}↵
```

Stopping deck operation

The "stop" command instructs the deck to stop the current playback or capture:

```
stop↵
```

Changing timeline position

The "goto" command instructs the deck to switch to playback mode and change its position within the timeline.

To go to the start of a specific clip:

```
goto: clip id: {Clip ID}↵
```

To move forward/back {count} clips from the current clip on the current timeline:

```
goto: clip id: +/-{count}↵
```

Note that if the resultant clip id goes beyond the first or last clip on timeline, it will be clamp at the first or last clip.

To go to the start or end of the current clip:

```
goto: clip: {“start”, “end”}↵
```

To go to the start of the first clip or the end of the last clip:

```
goto: timeline: {“start”, “end”}↵
```

To go to a specified timecode:

```
goto: timecode: {timecode}↵
```

To move forward or back a specified duration in timecode:

```
goto: timecode: {“+”, “-”}{duration in timecode}↵
```

To specify between slot 1 and slot 2:

```
goto: slot id: {Slot ID}↵
```

Note that only one parameter/value pair is allowed for each goto command.

Enumerating supported commands and parameters

The "commands" command returns the supported commands:

```
commands↵
```

The command list is returned in a computer readable XML format:

```
212 commands:
<commands>↵
     <command name="…"><parameter name="…"/>…</command>↵
     <command name="…"><parameter name="…"/>…</command>↵
     …
</commands>↵
↵
```

More XML tokens and parameters may be added in later releases.

Controlling asynchronous notifications

The “notify” command may be used to enable or disable asynchronous notifications from the server.
To enable or disable transport notifications:

```
notify: transport: {“true”, “false”}↵
```

To enable or disable slot notifications:

```
notify: slot: {“true”, “false”}↵
```

To enable or disable remote notifications:

```
notify: remote: {“true”, “false”}↵
```

To enable or disable configuration notifications:

```
notify: configuration: {“true”, “false”}↵
```

Multiple parameters may be specified. If no parameters are specified, the server returns the current state of all notifications:

```
209 notify:↵
transport: {“true”, “false”}↵
slot: {“true”, “false”}↵
remote: {“true”, “false”}↵
configuration: {“true”, “false”}↵
dropped frames: {“true”, “false”}↵
display timecode: {“true”, “false”}↵
timeline position: {“true”, “false”}↵
playrange: {“true”, “false”}↵
cache: {“true”, “false”}↵
dynamic range: {“true”, “false”}↵
slate: {“true”, “false”}↵
clips: {“true”, “false”}↵
disk: {“true”, “false”}↵
device info: {“true”, “false”}↵
nas: {“true”, “false”}↵
↵
```

Retrieving device information

The "device info" command returns information about the connected deck device:

```
device info↵
```

The server will respond with:

```
204 device info:↵
protocol version: {Version}↵
model: {Model Name}↵
unique id: {unique alphanumeric identifier}↵
slot count: {number of storage slots}↵
software version: {software version}↵
name: {device name}↵
↵
```

Retrieving slot information

The "slot info" command returns information about a slot. Without parameters, the command returns information for the currently selected slot:

```
slot info↵
```

If a slot id is specified, that slot will be queried:

```
slot info: slot id: {Slot ID}↵
```

The server will respond with slot specific information:

```
202 slot info:↵
slot id: {Slot ID}↵
slot name: {“slot name”}↵
device name: {identifying name for disk device}↵
status: {"empty", "mounting", "error", "mounted"}↵
volume name: {Volume name}↵
recording time: {recording time available in seconds}↵
video format: {disk's default video format}↵
blocked: {“true”, “false”}↵
remaining size: {remaining size in bytes}↵
total size: {total size in bytes}↵
↵
```

A slot can also be specificed by its device. This is particularly useful when there are multiple drives connected via USB. First list the available external drives:

```
external drive list↵
226 external drive info:↵
device: {device}↵
```

Then use slot info with device to query the drive:

```
slot info: device: {device}↵
```

Asynchronous slot information change notification is disabled by default and may be configured with the "notify" command. When enabled, changes in slot state will generate a "502 slot info:" asynchronous message with the same parameters as the "202 slot info:" message.

Retrieving clip information

The “disk list” command returns the information for each playable clip on a given disk. Without parameters, the command returns information for the current active disk:

```
disk list↵
```

If a slot id is specified, the disk in that slot will be queried:

```
disk list: slot id: {Slot ID}↵
```

The server responds with the list of all playable clips on the disk in the format of: Index, name, formats, and duration in timecode:

```
206 disk list:↵
slot id: {Slot ID}↵
{clip index}: {name} {file format} {video format} {Duration timecode}↵
{clip index}: {name} {file format} {video format} {Duration timecode}↵
…
↵
```

Note that the *clip index* starts from 1.

Retrieving clip count

The "clips count" command returns the number of clips on the current timeline:

```
clips count ↵
```

The server responds with the number of clips:

```
214 clips count: ↵
clip count: {Count}↵
```

Retrieving timeline information

The "clips get" command returns information for each available clip on the current timeline. Without parameters, the command returns information for all clips on timeline:

```
clips get↵
```

In version 1, the start timecode reported is either a clip timecode or a timeline timecode depending on the configured output timecode.

The server responds with a list of clip IDs, names and timecodes:

```
205 clips info:↵
clip count: {Count}↵
{Clip ID}: {Name} {Start timecode} {Duration timecode}↵
{Clip ID}: {Name} {Start timecode} {Duration timecode}↵
…
↵
```

The “clips get” command provides a more detailed response when using the “version: 2” parameter:

```
clips get: version: 2↵
```

The server responds with a list of clip IDs, timecodes, in points, out points and names. Clip name is the last field making it simpler to parse when names have embedded spaces.

```
{Clip ID}: {Clip start timecode} {Duration timecode} {inTimecode}
{outTimecode}
{name}↵
{Clip ID}: {Clip start timecode} {Duration timecode} {inTimecode}
{outTimecode}
{name}↵
…
↵
```

For models that support recursive timelines “clips get: version: 3” replaces the {name} field with {path to clip name} where the {path to clip name} can include directories and subdirectories.

Retrieving transport information

The “transport info” command returns the state of the transport:

```
transport info ↵
```

The server responds with transport specific information:

```
208 transport info:

status: {“preview”, “stopped”, “play”, “forward”, “rewind”,
“jog”, “shuttle”,”record”}↵

speed: {Play speed between -5000 and 5000 %}↵

slot id: {Slot ID or “none”}↵

slot name: {“slot name”}↵

device name: {identifying name for disk device}↵

clip id: {Clip ID or “none”}↵

single clip: {“true”, “false”}↵

display timecode: {timecode}↵

timecode: {timecode}↵

video format: {Video format}↵

loop: {“true”, “false”}↵

timeline: {n}↵

input video format: {Video format”}↵

dynamic range: {“off”, “Rec709”, “Rec2020_SDR”, “HLG”,
“ST2084_300”, “ST2084_500”, “ST2084_800”, “ST2084_1000”,
“ST2084_2000”, “ST2084_4000”, “ST2048” or “none”}↵

reference locked: {“false”, “true”}

↵
```

The "timecode" value is the timecode within the current timeline for playback or the clip for record. The "display timecode" is the timecode displayed on the front of the deck. The two timecodes will differ in some deck modes.

Asynchronous transport information change notification is disabled by default and may be configured with the "notify" command. When enabled, changes in transport state will generate a "508 transport info:" asynchronous message with the same parameters as the "208 transport info:" message.

Video Formats

The following video formats are currently supported on HyperDeck Extreme, HyperDeck Studio and HyperDeck Shuttle:

720p50, 720p5994, 720p60

1080p23976, 1080p24, 1080p25, 1080p2997, 1080p30, 1080p60

1080i50, 1080i5994, 1080i60

HyperDeck Extreme HDR models also support the following formats:

NTSC, PAL, NTSCp, PALp

2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p30, 2160p50, 2160p59.94, 2160p60

4Kp23976, 4Kp24, 4Kp25, 4Kp2997, 4Kp30

4Kp50, 4Kp5994, 4Kp60

HyperDeckExtreme 8K HDR adds support for the following 8K formats:

4320p23.98, 4320p24, 4320p25, 4320p29.97, 4320p30, 4320p50, 4320p59.94, 4320p60

8Kp23976, 8Kp24, 8Kp25

HyperDeck Studio Pro and Plus models support these 4k formats:

4Kp23976, 4Kp24, 4Kp25, 4Kp2997, 4Kp30

HyperDeck Studio 4K Pro adds support for the following 4k formats:

4Kp50, 4Kp5994, 4Kp60

Video format support may depend on the file format selected and may vary between models and software releases.

File Formats

All HyperDeck models currently support the following file formats:

H.264High_SDI

H.264High

H.264Medium

H.264Low

QuickTimeProResHQ

QuickTimeProRes

QuickTimeProResLT

QuickTimeProResProxy

QuickTimeDNxHD220x

DNxHD220x

QuickTimeDNxHD145

DNxHD145

QuickTimeDNxHD45

DNxHD45

HyperDeck Studio 4K Pro and HyperDeck Extrme HDR models also support the following file formats:

H.265High_SDI

H.265High

H.265Medium

H.265Low

QuickTimeDNxHR_HQX

DNxHR_HQX

QuickTimeDNxHR_SQ

DNxHR_SQ

QuickTimeDNxHR_LB

DNxHR_LB

Supported file formats may vary between models and software releases.

Querying and updating configuration information

The "configuration" command may be used to query the current configuration of the deck:

```
configuration↵
```

The server returns the configuration of the deck:

```
211 configuration:↵
audio input: {“embedded”, “XLR”, “RCA”}↵
audio mapping: {n}↵
video input: {“SDI”, “HDMI”, “component”, “composite”}↵
file format: {format}↵
audio codec: {“PCM”, “AAC”}↵
timecode input: {“external”, “embedded”, “preset”, “clip”}↵
timecode output: {“clip”, “timeline”}↵
timecode preference: {“default”, “dropframe”, “nondropframe”}↵
timecode preset: {timecode}↵
audio input channels: {n}↵
record trigger: {“none”, “recordbit”, “timecoderun”}↵
record prefix: {name}↵
record cache: {“true”, “false”}↵
append timestamp: {“true”, “false”}↵
genlock input resync: {“true”, “false”}↵
reference source: {“auto”, “input”, “external”}↵
xlr input id: {“n”}↵
xlr type: {”line”, ”mic”}↵
usb spill: {“true”, “false”}↵
↵
```

One or more configuration parameters may be specified to change the configuration of the deck.

To change the current video input:

```
configuration: video input: {“SDI”, “HDMI”, “component”}↵
```

Valid video inputs may vary between models. To configure the current audio input:

```
configuration: audio input: {“embedded”, “XLR”, “RCA”}↵
```

Valid audio inputs may vary between models.

To configure the current file format:

```
configuration: file format: {File format}↵
```

Note that changes to the file format may require the deck to reset, which will cause the client connection to be closed. In such case, response code 213 will be returned (instead of 200) before the client connection is closed:

```
“213 deck rebooting”
```

Asynchronous configuration information change notification is disabled by default and may be configured with the “notify” command. When enabled, changes in configuration will generate a “511 configuration:” asynchronous message with the same parameters as the “211 configuration:” message.

Selecting active slot and video format

The "slot select" command instructs the deck to switch to a specified slot, or/and to select a specified output video format.

To switch to a specified slot:

```
slot select: slot id: {slot ID}↵
```

To switch to a disk device, including USB drives that are not yet made active:

```
slot select: device: {identifying name for disk device}↵
```

To select the output video format:

```
slot select: video format: {video format}↵
```

Either or all slot select parameters may be specified. Note that selecting video format will result in a rescan of the disk to reconstruct the timeline with all clips of the specified video format.

Clearing the current timeline

The "clips clear" command instructs the deck to empty the current timeline:

```
clips clear↵
```

The server responds with

```
200 ok↵
```

Adding a clip to the current timeline

The "clips add:" command instructs the deck to add a clip to the current timeline:

```
clips add: name: {clip name}↵
```

The server responds with

```
200 ok↵
```

or in case of error

```
1xx {error description}↵
```

Configuring the watchdog

The “watchdog” command instructs the deck to monitor the connected client and terminate the connection if the client is inactive for at least a specified period of time.

To configure the watchdog:

```
watchdog: period: {period in seconds}↵
```

To avoid disconnection, the client must send a command to the server at least every {period} seconds.
Note that if the period is set to 0 or less than 0, connection monitoring will be disabled.

Network Area Storage

On networks using multicast DNS the “nas discovered” command will list network servers the HyperDeck has discovered:

```
nas discovered↵
225 nas host info:
CloudStoreMini.local. CloudStoreMini
CloudStore80.local. CloudStore80
CloudStore320.local. CloudStore320
```

A network share can be added as a bookmark to the HyperDeck using ‘nas add’

```
nas add:
url: smb://CloudStore80.local/Studio1
```

For shares that require a username and password consider using the secure mode of the HyperDeck Ethernet protocol to avoid passwords being sent as plaintext.

```
nas add:
url: smb://192.168.1.1/Main
username: user1234
password: Password1234
```

A share can be made available for recording and playback using ‘nas select’. If a bookmark exists for that share, ‘nas select’ will use the credentials stored in the bookmark. Otherwise ‘nas select’ will connect using Guest credentials.

```
nas select:
url: smb://192.168.1.1/Main
```

Only one share can be mounted at a time using ‘nas select’.

You can query the currently selected nas share using the ‘nas selected’ command. If ‘notify: slot: true’ was used an asynchronous notification will be sent when the share is mounted.

HyperDeck Control REST API

Esta interfaz ofrece a los programadores la posibilidad de crear aplicaciones personalizadas o valerse de herramientas tales como REST y Postman con el objetivo de controlar grabadores HyperDeck. Además, permite realizar una amplia gama de funciones, tales como iniciar y detener la grabación, reproducir las imágenes o acceder al contenido del disco. De esta forma, brinda la oportunidad de aprovechar al máximo las prestaciones de estos dispositivos con suma facilidad, ya sea al desarrollar aplicaciones que se ajustan a necesidades específicas o al emplear las herramientas mencionadas anteriormente. Esperamos ver pronto lo que crearás.

Transport Control API

API for controlling Transport on Blackmagic Design products.

GET /transports/0

Get device's basic transport status.

Response

200 - Transport status.
The response is a JSON object.

Name	Type	Description
mode	string	Transport mode. Possible values are: InputPreview, InputRecord, Output.

PUT /transports/0

Set device's basic transport status.

Parameters

Name	Type	Description
mode	string	Transport mode. Possible values are: InputPreview, Output.

Response

204 - Transport mode was set.

GET /transports/0/stop

Determine if transport is stopped.

Response

200 - Transport stop response.
The response is a JSON object.

PUT /transports/0/stop

Stop transport. Deprecated, use POST /tranports/0/stop instead.

Response

204 - Transport stopped.

POST /transports/0/stop

Stop transport.

Response

204 - Transport stopped.

GET /transports/0/play

Determine if transport is playing.

Response

200 - Transport play response.
The response is a JSON object.

PUT /transports/0/play

Start playing on transport. Deprecated, use POST /tranports/0/play instead.

Response

204 - Transport playing.

POST /transports/0/play

Start playing on transport.

Response

204 - Transport playing.

GET /transports/0/playback

Get playback state.

Response

200 - OK
The response is a JSON object.

Name	Type	Description
type	string	Possible values are: Play, Jog, Shuttle, Var.
loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
speed	number	Playback Speed, 1.0 for normal forward playback
position	integer	Playback position on the timeline in units of video frames

PUT /transports/0/playback

Set playback state.

Parameters

Name	Type	Description
type	string	Possible values are: Play, Jog, Shuttle, Var.
loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
speed	number	Playback Speed, 1.0 for normal forward playback
position	integer	Playback position on the timeline in units of video frames

Response

204 - No Content

GET /transports/0/record

Get record state.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
recording	boolean	Is transport in Input Record mode

PUT /transports/0/record

Set record state. Deprecated, use POST /transports/0/record instead.

Parameters

Name	Type	Description
recording	boolean	Is transport in Input Record mode
clipName	string	Used to set the requested clipName to record to, when specifying “recording” attribute to True

Response

204 - Recording started.

POST /transports/0/record

Start recording.

Parameters

Name	Type	Description
clipName	string	Specific name of clip to record to.

Response

204 - Recording started.

GET /transports/0/clipIndex

Get the clip index of the currently playing clip on the timeline.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clipIndex	number	The 0-based index of the clip being played on the timeline. null when there is no timeline or an empty timeline.

GET /transports/0/timecode

Get device's timecode.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
display	string	The display timecode serialised as a string.
timeline	string	The timeline timecode serialised as a string.

GET /transports/0/timecode/source

Get timecode source selected on device

Response

200 - OK

The response is a JSON object.

Name	Type	Description
timecode	string	Possible values are: Timeline, Clip.

GET /transports/0/clip

Get clip information about the currently recording (or transferring) clip, if it exists

Response

200 - Information about the clip currently being recorded.

The response is a JSON object.

Name	Type	Description
clip	object	
clip.clipUniqueId	integer	Unique ID used to identify this clip
clip.filePath	string	Path to the file relative to the root of a mount
clip.fileSize	integer	Size of file on disk in bytes
clip.codecFormat	object	
clip.codecFormat.codec	string	Currently selected codec.
clip.codecFormat.container	string	Multimedia container format.
clip.videoFormat (required)	object	Video format configuration.
clip.videoFormat.name	string	Video format serialised as a string.
clip.videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
clip.videoFormat.height	number	Height dimension of video format.
clip.videoFormat.width	number	Width dimension of video format.
clip.videoFormat.interlaced	boolean	Is the display format interlaced?
clip.startTimecode	string	Start timecode of the clip serialised as string
clip.durationTimecode	string	Duration of the clip in timecode format serialised as string
clip.frameCount	integer	Number of frames in clip; duration of the clip in frames

System Control API

API for controlling the System Modes on Blackmagic Design products.

GET /system

Get device system information.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codecFormat	object	
codecFormat.codec	string	Currently selected codec.
codecFormat.container	string	Multimedia container format.
videoFormat (required)	object	Video format configuration.
videoFormat.name	string	Video format serialised as a string.
videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
videoFormat.height	number	Height dimension of video format.
videoFormat.width	number	Width dimension of video format.
videoFormat.interlaced	boolean	Is the display format interlaced?

GET /system/product

Get device product information.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
deviceName	string	Name of device as displayed in Setup
productName	string	Device's product name
softwareVersion	string	Software version running on device

GET /system/supportedCodecFormats

Get the list of supported codecs.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codecs	array	
codecs[i]	object	
codecs[i].codec	string	Currently selected codec.
codecs[i].container	string	Multimedia container format.

GET /system/codecFormat

Get the currently selected codec.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codec	string	Currently selected codec.
container	string	Multimedia container format.

PUT /system/codecFormat

Set the codec.

Parameters

Name	Type	Description
codec	string	Currently selected codec.
container	string	Multimedia container format.

Response

204 - The codec updated successfully.

GET /system/videoFormat

Get the currently selected video format.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
name	string	Video format serialised as a string.
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

PUT /system/videoFormat

Set the timeline video format. Deprecated, use PUT /timelines/0/videoFormat instead.

Parameters

This parameter can be one of the following types:

Name	Type	Description
name	string	Video format serialised as a string.

Name	Type	Description
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

Response

204 - The video format updated successfully.

400 - Invalid request.

409 - Operation unsupported in the current state.

Media Control API

API for controlling media devices in Blackmagic Design products.

GET /media/workingset

Get the list of media devices currently in the working set.

Response

200 - The list of media devices in the working set. Entries are null if there is no media device in that slot.

The response is a JSON object.

Name	Type	Description
size	integer	The fixed size of this device's working set
workingset (required)	array	
workingset[i]	object	
workingset[i].index	integer	Index of this media in the working set
workingset[i].activeDisk	boolean	Is this current item the active disk
workingset[i].volume	string	Volume name
workingset[i].deviceName	string	Internal device name of this media device
workingset[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
workingset[i].totalSpace	integer	Total space on media device in bytes
workingset[i].remainingSpace	integer	Remaining space on media device in bytes
workingset[i].clipCount	integer	Number of clips currently on the device

GET /media/active

Get the currently active media device.

Response

200 - The current active media device.

The response is a JSON object.

Name	Type	Description
workingsetIndex	integer	Working set index of the active media device
deviceName	string	Internal device name of this media device

204 - No media is currently active

PUT /media/active

Set the currently active media device.

Parameters

Name	Type	Description
workingsetIndex	integer	Working set index of the media to become active

Response

204 - The active media device was set successfully.

400 - Setting the currently active media device is not possible in the current state.

GET /media/devices/doformatSupportedFilesystems

Get the list of filesystems available to format the device.

Response

200 - The list of filesystems permitted for formatting.

The response is a JSON object.

GET /media/devices/{deviceName}

Get information about a requested device.

Parameters

Name	Type	Description
{deviceName}	string	

Response

200 - Information about the requested device.

The response is a JSON object.

Name	Type	Description
state	string	The current state of the media device. Possible values are: None, Scanning, Mounted, Uninitialised, Formatting, RaidComponent.

400 - Invalid device name

404 - Device not found

GET /media/devices/{deviceName}/doformat

Get a format key, used to format the device with a PUT request.

Parameters

Name	Type	Description
{deviceName}	string	

Response

200 - Format prepared

The response is a JSON object.

Name	Type	Description
deviceName	string	Internal device name of this media device
key	string	The key used to format this device, it must be fetched with the GET request and then provided back with a PUT request

400 - Cannot format the device

404 - Device not found

PUT /media/devices/{deviceName}/doformat

Perform a format of the media device.

Parameters

Name	Type	Description
{deviceName}	string	

Name	Type	Description
key	string	The key used to format this device, it must be fetched with the GET request and then provided back with a PUT request
filesystem	string	Filesystem to format to. GET doFormatSupportedFilesystems returns list of supported filesystems.
volume	string	Volume name to set for the disk after format

Response

204 - Format successful

400 - Cannot format the device, invalid filesystem or key

404 - Device not found

Timeline Control API

API for controlling playback timeline.

GET /timelines/0

Get the playback timeline.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clips	array	
clips[i]	object	
clips[i].clipUniqueId	integer	Unique identifier used to identify this media clip. If the same media clip is added to the timeline multiple times, each timeline clip has the same clipUniqueId
clips[i].frameCount	integer	Duration of timeline clip in frames, the number of frames in this clip on the timeline
clips[i].durationTimecode	string	Duration of the timeline clip in timecode format serialised as string. This will differ to durationTimecode reported in /clips for this clipUniqueId if clipIn or frameCount was specified when adding this clip to the timeline.
clips[i].clipIn	string	In frame offset for the clip on the timeline, where 0 is the first frame of the on-disk clip
clips[i].inTimecode	string	Clip timecode of the first frame of this timeline clip serialised as string (clip startTimecode + clipIn frames)
clips[i].timelineIn	string	Timeline position of the first frame of this clip, where 0 is the first frame of the timeline
clips[i].timelineInTimecode	string	Timeline timecode of the first frame of this timeline clip serialised as string

Response

404 - No timeline / disk available.

DELETE /timelines/0

Clear the current playback timeline. Deprecated, prefer to use POST /timelines/0/clear

Response

204 - The timeline was cleared.

POST /timelines/0

Add a clip to the timeline.

Parameters

Name	Type	Description
insertBefore	integer	Clip(s) will be inserted before this timeline clip index. If omitted, inserts to the end of the timeline. 0 inserts to the beginning of the timeline.
clips		

Response

204 - The clip was added to the timeline as specified.

POST /timelines/0/add

Add a clip to the end of the timeline. Deprecated, use POST /timelines/0 to add clips within the timeline.

Parameters

This parameter can be one of the following types:

Name	Type	Description
clips	integer	Unique ID (clipUniqueId) of the clip to add to the timeline

Name	Type	Description
clips	array	
clips[i]	integer	Unique ID (clipUniqueId) of the clip to add to the timeline

Response

204 - The clip was added to the end of the timeline.

DELETE /timelines/0/clear

Clear the playback timeline.

Response

204 - The timeline was cleared.

DELETE /timelines/0/clips/{timelineClipIndex}

Remove the specified clip from the timeline.

Parameters

Name	Type	Description
{timelineClipIndex}	integer	

Response

204 - The specified clip was removed from the timeline.

Event Control API

API For working with built-in websocket.

GET /event/list

Get the list of events that can be subscribed to using the websocket API.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
events	array	
events[i]	string	List of events that can be subscribed to using the websocket API

Clips Control API

API for listing clips on disk.

GET /clips

Get the list of clips on the active disk.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clips	array	
clips[i]	object	
clips[i].clipUniqueId	integer	Unique ID used to identify this clip
clips[i].filePath	string	Path to the file relative to the root of a mount
clips[i].fileSize	integer	Size of file on disk in bytes
clips[i].codecFormat	object	
clips[i].codecFormat.codec	string	Currently selected codec.
clips[i].codecFormat.container	string	Multimedia container format.
clips[i].videoFormat (required)	object	Video format configuration.
clips[i].videoFormat.name	string	Video format serialised as a string.
clips[i].videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
clips[i].videoFormat.height	number	Height dimension of video format.
clips[i].videoFormat.width	number	Width dimension of video format.
clips[i].videoFormat.interlaced	boolean	Is the display format interlaced?
clips[i].startTimecode	string	Start timecode of the clip serialised as string
clips[i].durationTimecode	string	Duration of the clip in timecode format serialised as string
clips[i].frameCount	integer	Number of frames in clip; duration of the clip in frames

Response

404 - There is no active disk

HyperDeck Control API

API for controlling HyperDecks.

POST /system/reboot

Reboots the device.

Response

204 - The device will reboot immediately.

409 - Rebooting is not possible in the current state.

GET /system/uptime

Gets the current system uptime.

Response

200 - The current system uptime

The response is a JSON object.

Name	Type	Description
uptimeSeconds	integer	The system uptime in seconds

PUT /system/identify

Sets the identify mode. If set to true, will exit identify mode after 10 seconds.

Parameters

Name	Type	Description
enabled	boolean	Is the device identifying itself?

Response

204 - Identify updated successfully.

GET /transports/0/recordCache

Gets information about the recording cache.

Response

200 - Current information about the recording cache

The response is a JSON object.

Name	Type	Description
status	string	The current status of the cache. “none” means no cache is detected by the device. Possible values are: undetected, unformatted, idle, transferring, queued, recording, disabled.
remainingRecordingTime	integer	The remaining recording time in seconds.
transferringDevice	string	The device name of the disk the cache is currently transferring to.

GET /transports/0/recordCache/enabled

Checks if the record cache is enabled.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
enabled	boolean	Is the record cache enabled?

PUT /transports/0/recordCache/enabled

Enables or disables the record cache. Has no effect if cache is not supported / installed / formatted.

Parameters

Name	Type	Description
enabled	boolean	Is the record cache enabled?

Response

204 - Record cache enabled / disabled was changed.

GET /transports/0/record/spillOrder

Gets media devices in order of which will next be spilled to.

Response

200 - The media device spill order

The response is a JSON object.

Name	Type	Description
devices	array	
devices[i]	object	
devices[i].deviceName	string	Internal device name of the drive.

POST /transports/0/record/spillToNewFile

Spills to a new file.

Response

204 - Spilled to a new file.

POST /transports/0/record/spillToNextDevice

Spills to the next media device

Response

204 - Spilled to the specified drive.

GET /transports/0/inputVideoFormat

Gets the video format of the input video signal.

Response

200 - The video format of the input video signal. “inputVideoFormat” is null when there is no timeline.

The response is a JSON object.

Name	Type	Description
inputVideoFormat (required)	object	Video format configuration.
inputVideoFormat.name	string	Video format serialised as a string.
inputVideoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
inputVideoFormat.height	number	Height dimension of video format.
inputVideoFormat.width	number	Width dimension of video format.
inputVideoFormat.interlaced	boolean	Is the display format interlaced?

GET /transports/0/supportedInputVideoSources

Gets the currently supported input video signal sources.

Response

200 - The supported input video signal sources.

The response is a JSON object.

Name	Type	Description
supportedInputVideoSources	array	
supportedInputVideoSources[i]	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

GET /transports/0/inputVideoSource

Gets the source of the input video signal.

Response

200 - The input video signal source. The source will be one in the list from GET /transports/0/supportedInputVideoSources.

The response is a JSON object.

Name	Type	Description
inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

PUT /transports/0/inputVideoSource

Sets the source of the input video signal.

Parameters

Name	Type	Description
inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

Response

204 - The source of the input video signal was set successfully.

400 - The source specified was invalid or unsupported.

GET /timelines/0/playRange

Gets the current timeline play range. playRange is null if playing the whole timeline, or there is no play range.

Response

200 - The current timeline play range.

The response is a JSON object.

Name	Type	Description
playRange		

PUT /timelines/0/playRange

Sets the timeline play range.

Parameters

Name	Type	Description
playRange		

Response

204 - The timeline play range was set successfully.

POST /timelines/0/playRange/clear

Clears the timeline play range, sets the play range to be the whole timeline.

Response

204 - The timeline play range was cleared successfully.

GET /timelines/0/videoFormat

Gets the video format of the timeline.

Response

200 - The video format of the timeline. “videoFormat” is null when there is no timeline.

The response is a JSON object.

Name	Type	Description
videoFormat (required)	object	Video format configuration.
videoFormat.name	string	Video format serialised as a string.
videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
videoFormat.height	number	Height dimension of video format.
videoFormat.width	number	Width dimension of video format.
videoFormat.interlaced	boolean	Is the display format interlaced?

PUT /timelines/0/videoFormat

Sets the video format of the timeline.

Parameters

This parameter can be one of the following types:

Name	Type	Description
name	string	Video format serialised as a string.

Name	Type	Description
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

Response

204 - The timeline video format was set successfully.

400 - The requested video format was invalid.

409 - The video format cannot be changed at this time.

POST /timelines/0/rebuild

Rebuilds the timeline with default rules in the current timeline format.

Response

204 - The timeline was rebuilt with default rules.

GET /media/external

Gets the list of present external media devices.

Response

200 - The list of present external media devices

The response is a JSON object.

Name	Type	Description
devices	array	
devices[i] (required)	object	
devices[i].volume	string	Volume name
devices[i].deviceName	string	Internal device name of this media device
devices[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
devices[i].totalSpace	integer	Total space on media device in bytes
devices[i].remainingSpace	integer	Remaining space on media device in bytes
devices[i].clipCount	integer	Number of clips currently on the device

GET /media/external/selected

Gets the current selected external media device.

Response

200 - The selected external media device

The response is a JSON object.

Name	Type	Description
selected	object	
selected.deviceName	string	Internal device name of the drive.

404 - No selected external media has been selected

PUT /media/external/selected

Sets the current selected external media device.

Parameters

Name	Type	Description
selected	object	
selected.deviceName	string	Internal device name of the drive.

Response

204 - The selected external media device was set successfully.

GET /media/nas/discovered

Gets the NAS hosts discoverable by the device.

Response

200 - The list of discovered NAS hosts

The response is a JSON object.

Name	Type	Description
hosts	array	
hosts[i]	object	
hosts[i].hostName	string	The hostname of the NAS host
hosts[i].friendlyName	string	The friendly name of the NAS host
hosts[i].ip	string	The IP address of the NAS host

GET /media/nas/bookmarks

Gets all NAS share bookmarks.

Response

200 - The list of NAS share bookmarks

The response is a JSON object.

Name	Type	Description
hosts	array	
hosts[i] (required)	object	
hosts[i].url	string	URL of the NAS share

POST /media/nas/bookmarks

Add a new NAS share bookmarks.

Parameters

Response

204 - The NAS bookmark was added successfully.

400 - The NAS bookmark could not be added.

GET /media/nas/bookmarks/{url}

Get information about a requested network share bookmark.

Parameters

Name	Type	Description
{url}	string	

Response

200 - Information about the requested network share bookmark.

The response is a JSON object.

Name	Type	Description
url	string	URL of the NAS share

404 - Network share bookmark not found

PUT /media/nas/bookmarks/{url}

Adds a bookmark with the requested URL.

Parameters

Name	Type	Description
{url}	string	

Name	Type	Description
username	string	Default value is: guest.
password	string	

Response

204 - The NAS bookmark has been created.

400 - The NAS bookmark could not be created.

DELETE /media/nas/bookmarks/{url}

Deletes a bookmark with the requested URL.

Parameters

Name	Type	Description
{url}	string	

Response

204 - The NAS bookmark has been deleted.

GET /media/nas/selected

Gets the currently selected share bookmark.

Response

200 - Information about the selected network share bookmark.

The response is a JSON object.

Name	Type	Description
selected	object	
selected.url	string	URL of the NAS share

404 - No NAS drive has been selected.

PUT /media/nas/selected

Sets the selected share bookmark to the requested bookmark, or clears the bookmark.

Parameters

Name	Type	Description
selected	object	
selected.url	string	URL of the NAS share

Response

204 - The selected NAS bookmark was set.

400 - The selected NAS bookmark could not be set.

Notification websocket - 1.0.0

Service that notifies subscribers of device state changes.

messages

Subscribe (The messages from the server/device)

Response Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: subscribe, unsubscribe, listSubscriptions, listProperties, websocketOpened .
.data.properties	array	
.data.properties[i]	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.values	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.data.success	boolean	
.type	string	Possible values are: response .
.id	number	Optional parameter that repeats the id in the output for tracking messages

Event Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: propertyValueChanged .
.data.property	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.value	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.type	string	Possible values are: event .

Publish (The messages that user can send to the server/device)

Response Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: subscribe, unsubscribe, listSubscriptions, listProperties, websocketOpened .
.data.properties	array	
.data.properties[i]	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.values	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.data.success	boolean	
.type	string	Possible values are: response .
.id	number	Optional parameter that repeats the id in the output for tracking messages

Device Properties

/media/workingset

The value JSON returned via the eventResponse when the /media/workingset property changes on the device:

Name	Type	Description
size	integer	The fixed size of this device's working set
workingset (required)	array	
workingset[i]	object	
workingset[i].index	integer	Index of this media in the working set
workingset[i].activeDisk	boolean	Is this current item the active disk
workingset[i].volume	string	Volume name
workingset[i].deviceName	string	Internal device name of this media device
workingset[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
workingset[i].totalSpace	integer	Total space on media device in bytes
workingset[i].remainingSpace	integer	Remaining space on media device in bytes
workingset[i].clipCount	integer	Number of clips currently on the device

/media/active

The value JSON returned via the eventResponse when the /media/active property changes on the device:

Name	Type	Description
.workingsetIndex	integer	Working set index of the active media device
.deviceName	string	Internal device name of this media device

/system

The value JSON returned via the eventResponse when the /system property changes on the device:

Name	Type	Description
.codecFormat	object	Currently selected codec
.codecFormat.codec	string	Currently selected codec
.codecFormat.container	string	Multimedia container format
.videoFormat	string	Name of the video format

/system/codecFormat

Currently selected codec

The value JSON returned via the eventResponse when the /system/codecFormat property changes on the device:

Name	Type	Description
.codec	string	Currently selected codec
.container	string	Multimedia container format

/system/videoFormat

Name of the video format

The value JSON returned via the eventResponse when the /system/videoFormat property changes on the device:

Name	Type	Description

/timelines/0

The value JSON returned via the eventResponse when the /timelines/0 property changes on the device:

Name	Type	Description
.clips	array	
.clips[i]	object	
.clips[i].clipUniqueId	integer	Unique identifier used to identify this media clip. If the same media clip is added to the timeline multiple times, each timeline clip has the same clipUniqueId
.clips[i].frameCount	integer	Duration of timeline clip in frames, the number of frames in this clip on the timeline
.clips[i].durationTimecode	string	Duration of the timeline clip in timecode format serialised as string. This will differ to durationTimecode reported in /clips for this clipUniqueId if clipIn or frameCount was specified when adding this clip to the timeline.
.clips[i].clipIn	string	In frame offset for the clip on the timeline, where 0 is the first frame of the on-disk clip
.clips[i].inTimecode	string	Clip timecode of the first frame of this timeline clip serialised as string (clip startTimecode + clipIn frames)
.clips[i].timelineIn	string	Timeline position of the first frame of this clip, where 0 is the first frame of the timeline
.clips[i].timelineInTimecode	string	Timeline timecode of the first frame of this timeline clip serialised as string

/transports/0

The value JSON returned via the eventResponse when the /transports/0 property changes on the device:

Name	Type	Description
.mode	string	Transport mode Possible values are: InputPreview, InputRecord, Output .

/transports/0/stop

true when transport mode is InputPreview or when in Output mode and speed is 0

The value JSON returned via the eventResponse when the /transports/0/stop property changes on the device:

Name	Type	Description

/transports/0/play

True when transport is in Output mode and speed is non-zero

The value JSON returned via the eventResponse when the /transports/0/play property changes on the device:

Name	Type	Description

/transports/0/playback

The value JSON returned via the eventResponse when the /transports/0/playback property changes on the device:

Name	Type	Description
.type	string	Possible values are: Play, Jog, Shuttle, Var .
.loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
.singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
.speed	number	Playback speed, 1.0 for normal forward playback
.position	integer	Playback position on the timeline in units of video frames

/transports/0/record

The value JSON returned via the eventResponse when the /transports/0/record property changes on the device:

Name	Type	Description
.recording	boolean	Is transport in Input Record mode

/transports/0/timecode

The value JSON returned via the eventResponse when the /transports/0/timecode property changes on the device:

Name	Type	Description
display	string	The display timecode serialised as a string.
timeline	string	The timeline timecode serialised as a string.

/transports/0/timecode/source

The value JSON returned via the eventResponse when the /transports/0/timecode/source property changes on the device:

Name	Type	Description
.timecode	string	Possible values are: Timeline, Clip .

/transports/0/clipIndex

The value JSON returned via the eventResponse when the /transports/0/clipIndex property changes on the device:

Name	Type	Description
.clipIndex	number	The 0-based index of the clip being played on the timeline. null when there is no timeline or an empty timeline.

/media/external

The value JSON returned via the eventResponse when the /media/external property changes on the device:

Name	Type	Description
.volume	string	Volume name
.deviceName	string	Name of media device
.remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
.totalSpace	integer	Total space on media device in bytes
.remainingSpace	integer	Remaining space on media device in bytes
.clipCount	integer	Number of clips currently on the device

/media/external/selected

The value JSON returned via the eventResponse when the /media/external/selected property changes on the device:

Name	Type	Description
.deviceName	string	Internal device name of this media device

/transports/0/inputVideoSource

The value JSON returned via the eventResponse when the /transports/0/inputVideoSource property changes on the device:

Name	Type	Description
.inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite .

/transports/0/inputVideoFormat

The value JSON returned via the eventResponse when the /transports/0/inputVideoFormat property changes on the device:

Name	Type	Description
.inputVideoFormat	string	Name of the video format

/timelines/0/videoFormat

The value JSON returned via the eventResponse when the /timelines/0/videoFormat property changes on the device:

Name	Type	Description
.videoFormat	string	Name of the video format

/media/nas/discovered

The value JSON returned via the eventResponse when the /media/nas/discovered property changes on the device:

Name	Type	Description
.hostName	string	Hostname of external network drive
.friendlyName	string	Name of external network drive
.ip	string	IP Address of external network drive

/media/nas/bookmarks

The value JSON returned via the eventResponse when the /media/nas/bookmarks property changes on the device:

Name	Type	Description
.hosts	array	
.hosts[i]	object	
.hosts[i].url	string	URL associated with bookmark

Ayuda

Cómo obtener ayuda

Visite nuestra página de soporte técnico para obtener ayuda rápidamente y acceder al material de apoyo más reciente para los productos descritos en este manual.

Página de soporte técnico

Las versiones más recientes de este manual, los distintos programas mencionados y el material de apoyo se encuentran disponibles en nuestra página de soporte técnico.

Foro

El foro de Blackmagic Design permite compartir ideas creativas y constituye un recurso útil para obtener más información sobre nuestros productos. Por otra parte, brinda la posibilidad de encontrar rápidamente respuestas suministradas por usuarios experimentados o por el personal de Blackmagic Design. Para acceder al foro, visite la página https://forum.blackmagicdesign.com.

Cómo ponerse en contacto con Blackmagic Design

Si no encuentra la ayuda que necesita, solicite asistencia mediante el botón **Enviar correo electrónico**, situado en la parte inferior de nuestra página de soporte técnico. De manera alternativa, haga clic en el botón **Soporte técnico local** para acceder al número telefónico del centro de atención más cercano.

Cómo comprobar la versión del software instalado

Para comprobar la versión del programa instalada en su equipo informático, acceda al menú **About Blackmagic HyperDeck Setup**.

- En macOS, ejecute el programa desde la carpeta de aplicaciones. Seleccione el menú **About Blackmagic HyperDeck Setup** en la barra superior de la ventana para ver el número de versión.
- En Windows, ejecute el programa Blackmagic HyperDeck Setup haciendo clic en el ícono situado en el menú **Inicio**. En el menú **Help**, seleccione la opción **About Blackmagic HyperDeck Setup** para ver el número de versión.

Cómo obtener las actualizaciones más recientes

Después de verificar la versión del programa instalado, visite nuestra página de soporte técnico para comprobar si hay actualizaciones disponibles. Aunque generalmente es recomendable instalar las versiones más recientes, evite realizar modificaciones al sistema operativo interno del dispositivo si se encuentra en medio de un proyecto importante.

Normativas

Tratamiento de residuos de equipos eléctricos y electrónicos en la Unión Europea:



Este símbolo en el producto indica que el dispositivo no debe desecharse con otros residuos domésticos. Por lo tanto, es su responsabilidad entregarlo a un centro de recolección para su posterior reciclado. Esto ayuda a preservar los recursos naturales y garantiza que dicho procedimiento se realice protegiendo la salud y el medioambiente. Para obtener más información en este sentido, comuníquese con el centro de reciclaje más cercano o el distribuidor donde adquirió el producto.



Según las pruebas realizadas, este equipo cumple con los límites indicados para dispositivos digitales Clase A, en conformidad con la sección 15 de las normas establecidas por la Comisión Federal de Comunicaciones. Esto permite proporcionar una protección razonable contra interferencias nocivas al operar el dispositivo en un entorno comercial. Este equipo usa, genera y puede irradiar energía de radiofrecuencia, y si no se instala o utiliza de acuerdo con el manual de instrucciones, podría ocasionar interferencias perjudiciales en las comunicaciones radiales. El funcionamiento de este equipo en una zona residencial podría ocasionar interferencias significativas, en cuyo caso el usuario deberá solucionar dicho inconveniente por cuenta propia.

El funcionamiento de este equipo está sujeto a las siguientes condiciones:

1. Este dispositivo no puede causar interferencias nocivas y,
2. El dispositivo debe admitir cualquier interferencia recibida, incluidas aquellas que pudieran provocar un funcionamiento incorrecto del mismo.



R-R-BMD-20211410001

Declaración ISED (Canadá)



Este dispositivo cumple con las normas del gobierno de Canadá relativas a equipos digitales clase A.

Cualquier modificación o uso indebido del mismo podría acarrear un incumplimiento de dichas normas.

Las conexiones a interfaces HDMI deberán realizarse mediante cables blindados.

Este equipo cumple con las normas descritas anteriormente al emplearse en entornos comerciales. Nótese que podría ocasionar interferencia radial al utilizarlo en ambientes domésticos.

Seguridad

Este equipo puede utilizarse en climas tropicales, a una temperatura ambiente máxima de 40 °C.

Compruebe que haya suficiente ventilación en torno a la unidad.

La reparación de los componentes internos del equipo no debe ser llevada a cabo por el usuario. Comuníquese con nuestro centro de atención más cercano para obtener información al respecto.



Evite utilizar el equipo a una altura mayor de 2000 metros.

Declaración del Estado de California

Las partes plásticas de este producto pueden contener trazas de compuestos químicos, tales como polibromobifenilos (PBB), que el Estado de California reconoce como causantes de cáncer, anomalías congénitas o daños reproductivos.

Consulte el sitio www.P65Warnings.ca.gov para obtener más información al respecto.

European Office

Blackmagic Design B.V, Amsterdam
Sloterdijk Teleport Towers Office 2.17,
Kingsfordweg 151,
Amsterdam, 1043GR.

Garantía

12 meses de garantía limitada

Blackmagic Design ofrece una garantía de 12 meses a partir de la fecha de compra de este producto por defectos relativos a los materiales o la fabricación. Si el producto resulta defectuoso durante el período de validez de la garantía, Blackmagic Design podrá optar por reemplazarlo o repararlo sin cargo alguno por concepto de piezas y/o mano de obra.

Para acceder al servicio proporcionado de acuerdo con los términos de esta garantía, el Cliente deberá dar aviso del defecto a Blackmagic Design antes del vencimiento del período de garantía y encargarse de los arreglos necesarios para la prestación del mismo. El Cliente será responsable del empaque y el envío del producto defectuoso al centro de servicio técnico designado por Blackmagic Design, y deberá abonar las tarifas postales por adelantado. El Cliente será responsable de todos los gastos de envío, seguros, aranceles, impuestos y cualquier otro importe que surja con relación a la devolución de productos por cualquier motivo.

Esta garantía carecerá de validez ante defectos o daños causados por un uso indebido del producto o por falta de cuidado y mantenimiento. Blackmagic Design no tendrá obligación de prestar el servicio estipulado en esta garantía para (a) reparar daños provocados por intentos de personal ajeno a Blackmagic Design de instalar el producto, repararlo o realizar un mantenimiento del mismo; (b) reparar daños resultantes del uso de equipos incompatibles o conexiones a los mismos; (c) reparar cualquier daño o mal funcionamiento provocado por el uso de piezas o repuestos no suministrados por Blackmagic Design; o (d) brindar servicio técnico a un producto que haya sido modificado o integrado con otros productos, cuando dicha modificación o integración tenga como resultado un aumento de la dificultad o el tiempo necesario para reparar el producto. ESTA GARANTÍA OFRECIDA POR BLACKMAGIC DESIGN REEMPLAZA CUALQUIER OTRA GARANTÍA, EXPRESA O IMPLÍCITA. POR MEDIO DE LA PRESENTE, BLACKMAGIC DESIGN Y SUS DISTRIBUIDORES RECHAZAN CUALQUIER GARANTÍA IMPLÍCITA DE COMERCIALIZACIÓN O IDONEIDAD PARA UN PROPÓSITO PARTICULAR. LA RESPONSABILIDAD DE BLACKMAGIC DESIGN EN CUANTO A LA REPARACIÓN O SUSTITUCIÓN DE PRODUCTOS DEFECTUOSOS CONSTITUYE UNA COMPENSACIÓN COMPLETA Y EXCLUSIVA PROPORCIONADA AL CLIENTE POR CUALQUIER DAÑO INDIRECTO, ESPECIAL, FORTUITO O EMERGENTE, AL MARGEN DE QUE BLACKMAGIC DESIGN O SUS DISTRIBUIDORES HAYAN SIDO ADVERTIDOS CON ANTERIORIDAD SOBRE LA POSIBILIDAD DE TALES DAÑOS. BLACKMAGIC DESIGN NO SE HACE RESPONSABLE POR EL USO ILEGAL DE EQUIPOS POR PARTE DEL CLIENTE. BLACKMAGIC DESIGN NO SE HACE RESPONSABLE POR DAÑOS CAUSADOS POR EL USO DE ESTE PRODUCTO. EL USUARIO UTILIZA EL PRODUCTO BAJO SU PROPIA RESPONSABILIDAD.

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2024年7月

安装操作手册

Blackmagicdesign

HyperDeck Shuttle HD



HyperDeck Shuttle HD



欢迎辞

感谢您购买Blackmagic HyperDeck Shuttle HD硬盘录机!

早在构思原版Blackmagic HyperDeck硬盘录机时, 我们的目标就是设计出一款能使用高速SSD存储方案更快捷地记录并播放视频的产品。如今, 我们终于推出了HyperDeck Shuttle HD!

HyperDeck Shuttle HD是一款采用小巧便携设计的台式HDMI视频记录设备。它搭载大尺寸搜索旋钮和熟悉的播放控制, 能实现单手操控, 是搭配ATEM Mini切换台进行现场制作的理想搭档。此外, HyperDeck Shuttle HD还可以作为一台提词器来使用!

HyperDeck Shuttle HD能使用ProRes、DNxHD或H.264编码格式将文件记录到SD卡或外部闪存盘上, 实现非常快速的记录和播放。

请登陆公司网站www.blackmagicdesign.com/cn, 访问支持页面获取最新版操作手册以及HyperDeck软件更新。请注意定期更新您的软件以便获得最新功能。下载软件时, 请注册您的相关信息, 以便我们发布新软件时能及时通知您。我们将不断致力于产品的功能开发和性能改进, 诚挚期待您的意见和建议!



Grant Petty
Blackmagic Design首席执行官

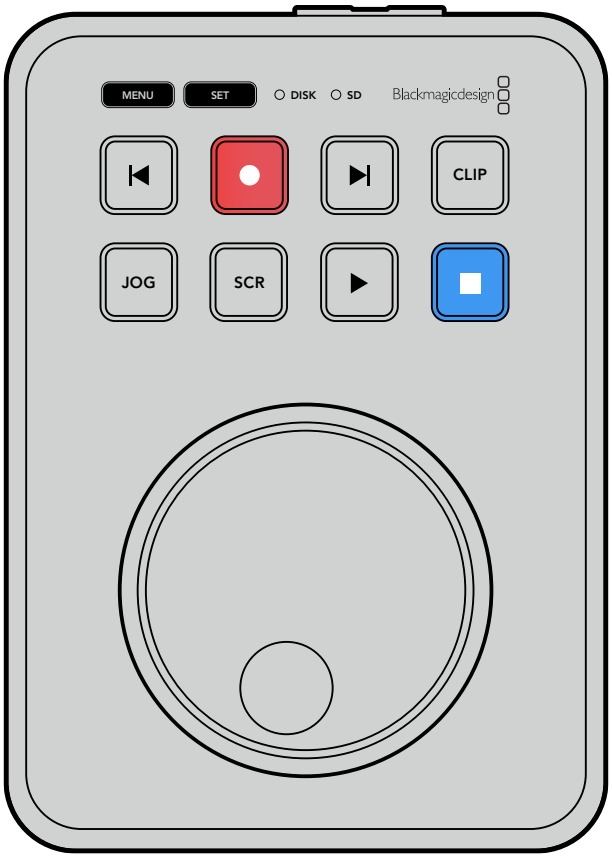
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开始使用

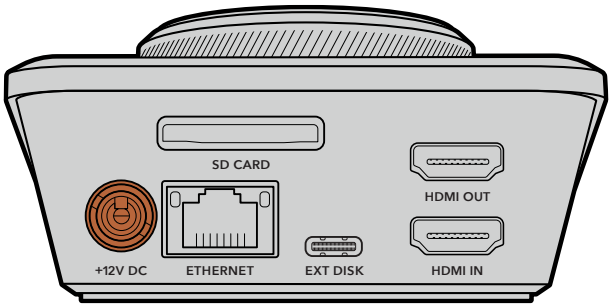
HyperDeck Shuttle HD使用前的准备工作很简单，只要连接电源，连接HDMI视频源，插入SD卡或外接存储介质，然后按下记录就可以了！

本手册的这一部分介绍了开始使用HyperDeck Shuttle HD前的准备事项。



连接电源

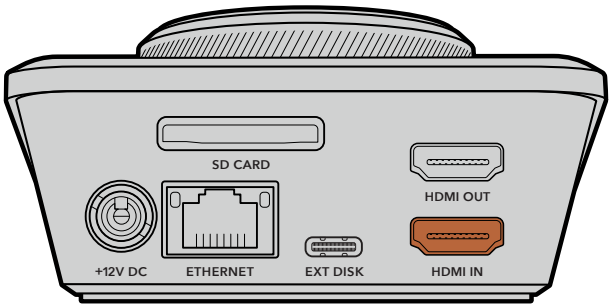
为HyperDeck Shuttle HD连接电源时，请将内附的电源适配器连接到设备后面板的电源输入接口。旋紧电源线的锁定环，防止连接意外断开。



将电源适配器妥善连接到HyperDeck Shuttle HD的电源输入接口

连接视频和音频

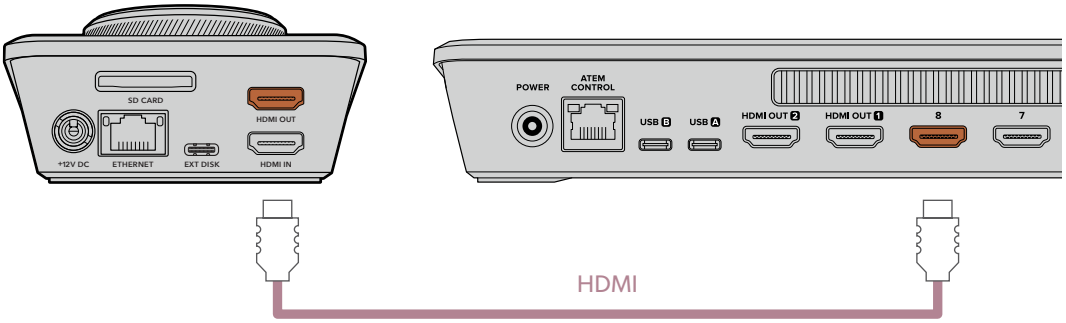
要将视频连接到HyperDeck Shuttle HD，请将HDMI视频源连接设备后面板的HDMI输入接口。



将目标设备连接到HDMI输出接口。比如ATEM Mini切换台或HDMI电视。

HDMI输出也可用来在更改HyperDeck的设置时查看设置菜单。因为设置菜单可通过在HDMI输出上显示视频叠加进行查看。更多关于菜单设置的信息，请阅读本手册后续在“更改设置”部分的介绍。

提示 如果您无法在所连接的显示器上看到输入视频，这可能是因为设备处于播放模式下。按记录按钮启用记录模式。



将HDMI输出连接到目标设备，如HDMI电视或ATEM Mini切换台

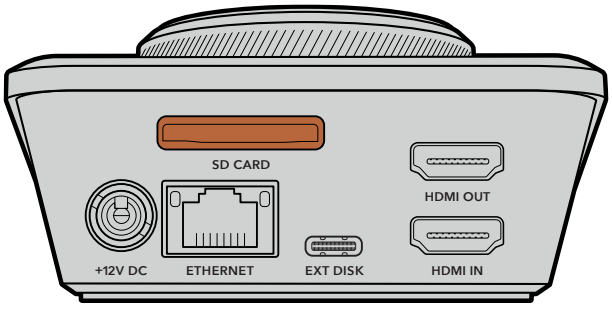
连接存储介质

所有HyperDeck Shuttle HD硬盘录机拆封后便可立即开始记录，无需进行任何配置或设置。您需要准备的只有一个经过格式化的SD卡或外部存储盘。

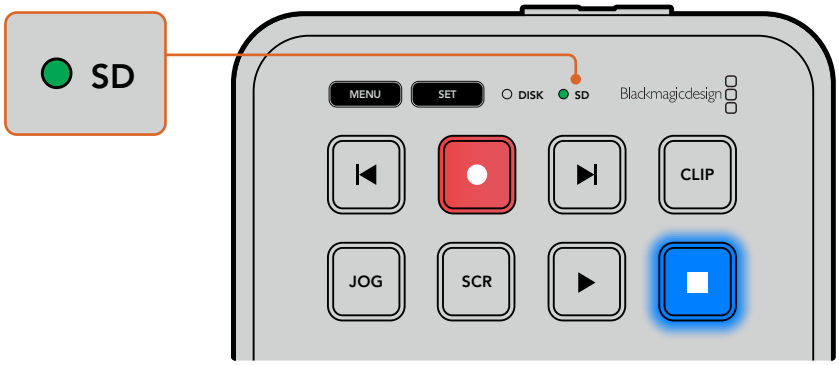
存储介质可通过菜单设置轻松完成格式化，或者使用计算机进行格式化。详情请阅读本手册中“格式化存储介质”部分的介绍。该部分还具体介绍了哪类存储介质适合用于视频记录，以及推荐使用的SD卡和外部硬盘列表相关信息。

插入SD卡步骤如下：

1 手持SD卡，将其金色接触点朝上并对准存储介质插槽。然后，将存储卡轻轻推入卡槽，直至插入到位。



2 您的HyperDeck将验证插入的SD卡。此时，HyperDeck Shuttle HD上方的SD卡提示灯会亮起绿色。验证完毕后，提示灯会熄灭。



至此，HyperDeck Shuttle HD的准备工作全部完成，您现在就可以开始记录和播放了！

请继续阅读本操作手册，了解更多关于如何记录和播放片段、如何更改设置等方面的详细信息。

记录视频

在HDMI目标设备上确认视频源显示后，就可以立即开始记录了！

要开始记录，请按记录按钮。使用SD卡记录时，设备上的SD提示灯会亮起红色，并且记录和播放按钮也会相应亮起。使用外部存储盘记录时，设备上的存储盘提示灯会亮起红色。



要结束记录，请按停止按钮。

播放

按下播放按钮可开始片段播放。播放期间，播放按钮会亮起，并且相应的“DISK”或“SD”存储介质插槽提示灯会亮起绿色。

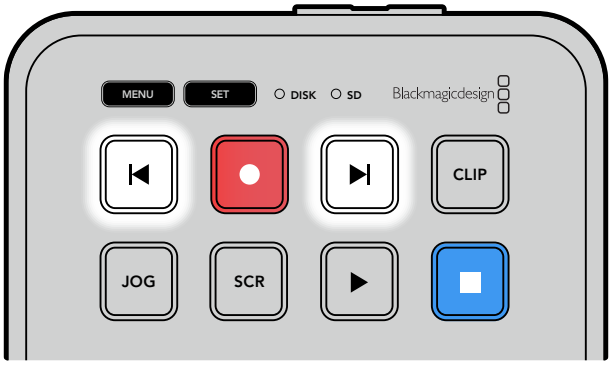
如果记录了多个片段，您可以按向前和向后跳过按钮在这些片段之间快速移动。



使用跳过按钮

按向后跳过按钮可以跳转到片段开始的位置。反复按该按钮可逐个退回到之前记录的片段。

按向前跳过按钮可以逐个向前跳转片段。当在HyperDeck Setup中勾选“Identify HyperDeck”（识别HyperDeck）复选框后，跳过按钮也会闪烁。



使用向前或向后跳过按钮可跳转到每个片段的开始位置

提示 要在HyperDeck上播放视频文件，需要设置相应的编解码以匹配记录文件时所使用的编解码。您可以使用菜单来完成这一操作。详情请阅读本手册后续在“更改设置”部分的介绍。

循环片段

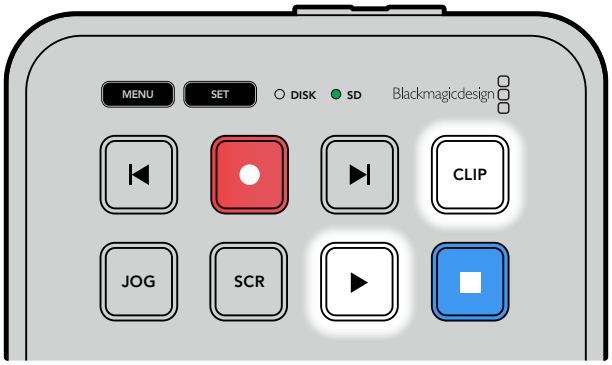
播放期间，再次按下播放按钮可将您的HyperDeck Shuttle HD设置为循环所有片段，按停止按钮可终止循环播放。

如果要循环单个片段，可将HyperDeck设置为“CLIP”（片段）模式。该模式下，按播放按钮一次可开始播放，再次按下播放按钮可循环播放。

循环所有片段	播放期间，再次按下播放按钮可循环播放所有记录片段。
循环当前片段	在片段模式下，再次按下播放按钮可循环播放当前片段。

片段模式

片段模式能将播放限制为单个片段。比如，启用片段模式后，您可以快速运行或跳到某个片段，然后按下播放键，播放将会在片段结束时停止。



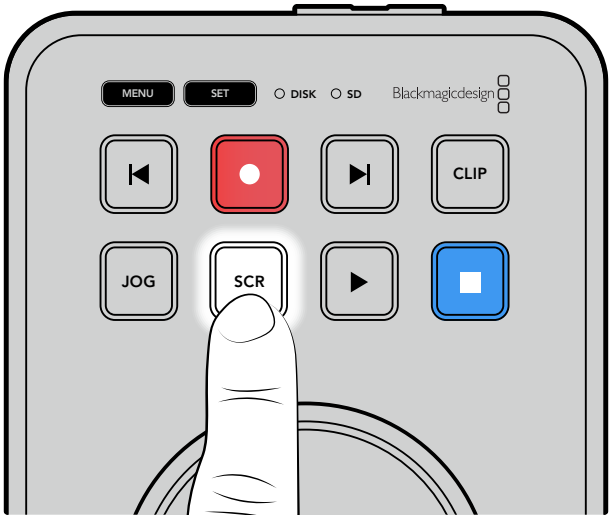
选中片段模式时，再次按下播放按钮将会循环播放当前片段。

使用搜索旋钮

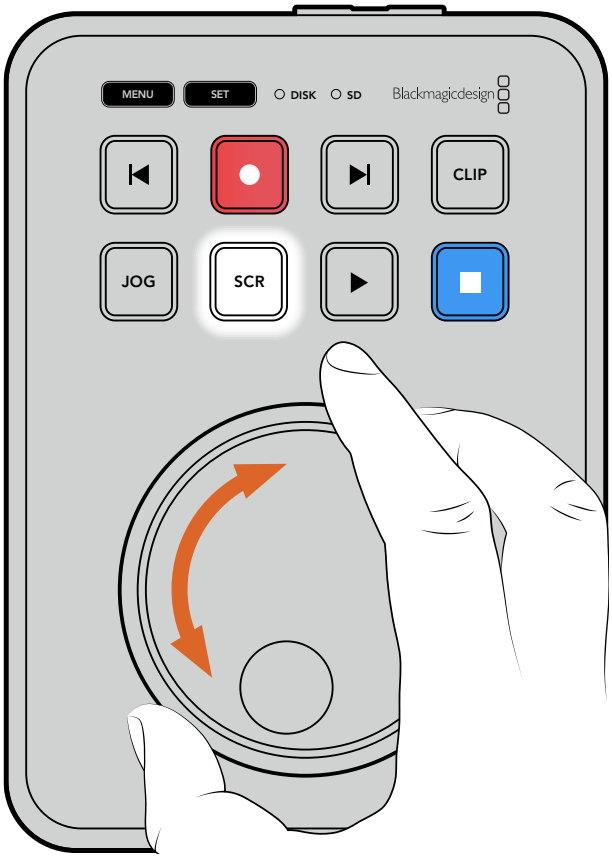
使用搜索旋钮可以在片段之间快速移动，选择某个具体部分进行播放，或者逐帧查看。这是一项重要的功能，您可以转动旋钮以直观的方式查看片段，找到某个特定位置。此外，您还可以使用它将播放头停在特定的提示点做好准备，以便在直播期间切入片段。

搜索旋钮模式包括慢速搜索、极速搜索和快速搜索。

JOG	**慢速**	逐帧播放片段内容，从而实现精准控制。
SCR	**极速**	极速模式能快速地在所有记录的媒体文件中向前或向后移动。在您转动搜索旋钮的时候，极速模式会与您的转动操作绑定，从而全面控制播放的位置。 SCR按钮还可以调出宗卷导航窗口，可显示您当前正在播放的视频文件路径。更多关于宗卷导航功能的信息，请阅读本手册后续在“宗卷导航”部分的介绍。
JOG SCR	**快速**	同时按下“JOG”和“SCR”按钮可进入快速模式。进入快速模式后，只要向左或向右旋转旋钮，就可以在媒体文件之间快退或快进。在您转动旋钮的时候，媒体文件的速度移动会加快，直至达到x50的最大速度。要将快速运行速度降低到停止状态，可转动旋钮使其回到开始位置。快速运行期间，如果想在某个特定位置停止，可按停止按钮；按播放按钮可在当前位置重新开始播放运行。此外，使用设置菜单也可以降低最大快速运行速度。详情请参考本手册“设置”部分的内容。



按下专设的“JOG”和“SCR”按钮可相应选择慢速和极速搜索模式

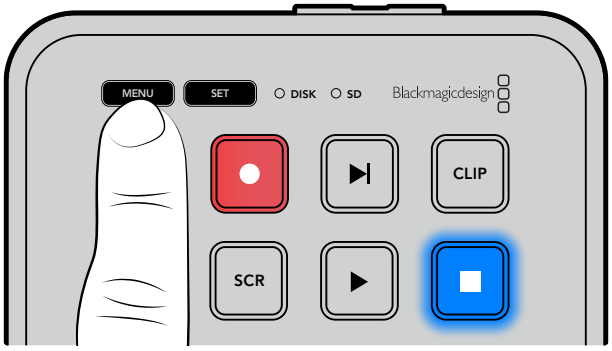


选定搜索模式后，转动旋钮进行搜索

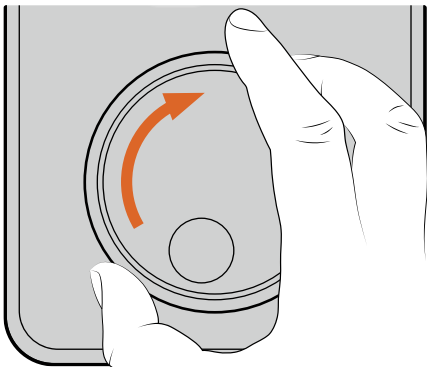
提示 要回到正常播放模式，可按播放或停止按钮。

更改设置

按“MENU”（菜单）按钮可打开设置菜单，该菜单会以视频叠加信息的形式显示在所连接HDMI显示器的左下角。

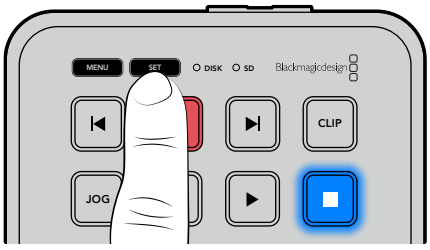


按“MENU”按钮打开设置菜单。





使用搜索旋钮在子菜单或各项设置之间导航





按“SET”按钮选择相应的子菜单或设置

要调整设置，可转动搜索旋钮，或者使用向前、向后跳过按钮。按“SET”按钮确认选择。

要退出菜单界面，可按“MENU”按钮逐层返回各级选项并回到主页面。

提示 您可以使用设置菜单将菜单显示放置在屏幕四角的任意一角上。建议您完成设置更改后关闭菜单显示，从而确保HDMI输出连接ATEM Mini Extreme等HDMI切换台时为干净的画面信号。

设置

设置菜单一共分为5个不同类别，具体是记录、监看、音频、存储以及设置。每个子菜单都包含相关的设置，大部分设置都能通过使用HyperDeck Shuttle HD控制面板进行调整。部分设置仅供显示，并且呈灰色字体，比如“文件名前缀”。在本例中，设置可通过HyperDeck Setup实用程序进行调整。

记录菜单



输入

可显示HyperDeck Shuttle HD的HDMI输入。

编解码

HyperDeck Shuttle HD都可使用H.264、Apple ProRes和DNxHD编解码记录压缩视频。如要使用提词器功能，可选择“提词器”。

触发记录

共有两种触发记录模式，“视频开始/停止”和“时间码运行”。

包括Blackmagic Pocket Cinema Camera 4K在内的部分摄影机可通过HDMI向外部记录设备发送开始和停止记录的信号。选择“视频开始/停止”选项后，按摄影机上的记录按钮就可以触发HyperDeck开始或停止记录。

使用“时间码运行”选项时，只要设备通过HDMI输入接收到有效时间码信号，就会触发开始记录的动作。当信号停止时，记录也停止。选择“无”选项可禁用触发记录功能。

备注 从HDMI摄影机记录时，请确保设备输出的是无叠加信息的纯画面，因为任何显示在摄影机视频输出画面上的叠加信息都将被一同记录下来。

监看菜单



提词器布局

监看菜单包含将HyperDeck Shuttle HD作为提词器使用时所需的全部设置。

字体大小

选择相应的字体大小选项后，按下SET按钮，完成文本大小调整。顺时针转动旋钮可放大字体，逆时针转动可缩小字体。

行距

转动旋钮来增加或减少行距。

侧边距

调整提词器显示的两侧宽度。

翻转

如果提词器的显示器是设置为反射到玻璃上的，比如在摄影机前或演讲台上，就需要使用翻转设置，方便主持人或演讲者阅读。翻转模式共有两种：

水平翻转 – 如果提词器显示器的底部被安装固定在最靠近玻璃底部的位置，可使用这一模式。

垂直翻转 – 如果提词器显示器的底部被安装固定在远离玻璃底部的位置，可使用这一模式。

音频菜单



录音通道

HyperDeck Shuttle HD一次可记录多达8声道PCM音频。要选择记录通道的数量，请扩展录音频通道列表，选择2、4或8声道。

如果编解码被设为H.264，您可以选择2声道AAC音频，以便直接将记录内容上传到YouTube。

存储菜单

连接的存储介质将会显示在存储设置中。存储介质 1会显示所连接的SD卡名称列表，存储介质 2会显示连接到外部存储盘接口的USB硬盘。使用Blackmagic MultiDock 10G等USB集线器设备时，当前活跃的存储盘会被显示出来。



活跃存储介质

使用HyperDeck Shuttle时，您可以同时连接一张SD卡、多个外部存储盘以及网络存储。这意味着您从一台HyperDeck Shuttle硬盘录机上就可以访问数TB的录制空间。

如果您只连接了一张SD卡或存储盘，那么这个SD卡或存储盘就会作为用于所有播放和录制的活跃存储介质。如果您使用多个存储方案，可以根据需要选择任何一个用于录制和播放。

选择您想使用的活跃存储介质：

1. 使用搜索旋钮，将存储菜单中的“活跃存储介质”选项高光显示，然后按闪烁的“SET”按钮。
2. 所连接的存储介质会显示在该列表中。使用搜索旋钮选中您想要用于录制的存储介质。



设置网络位置

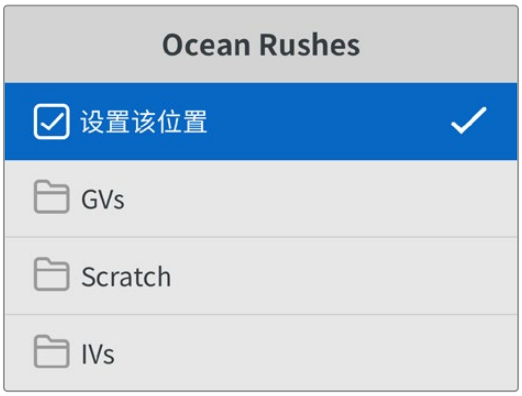
HyperDeck Shuttle可以通过以太网播放来自Blackmagic Cloud和其他网络存储上的HD媒体文件。

连接到网络存储文件夹:

1 使用搜索旋钮和SET按钮, 选择“设置网络位置”。此时会出现一个本地网络搜索对话框。

2 所有位于您本地网络上的服务器都会出现在列表中。使用搜索旋钮, 将相应服务器的名称高光显示, 再按SET按钮将其选中。此时, 界面会出现服务器上可用的共享位置列表。使用搜索旋钮, 将您想要选择的共享位置高光显示, 并按SET按钮, 然后继续操作, 直到您想要使用的文件夹显示在屏幕顶部。

3 文件夹名称会出现在LCD屏幕的顶部。如果要选择这个文件夹用于录制和播放, 可使用搜索旋钮选择“设置该位置”, 并按SET按钮。此时, 该选项右侧会出现一个勾号。



4 完成连接后, 这一位置会出现在网络位置下的存储介质 2存储列表中。

HyperDeck Shuttle硬盘录机的第二个存储介质插槽会被分配为USB和所连接的网络文件夹。要在所连接的USB存储盘和网络存储之间选择, 可从存储介质菜单中选择“存储介质 2”, 并按闪烁的SET按钮。从存储介质 2列表中选择您想要使用的存储介质, 并按SET按钮。此时您将返回到存储菜单。您还可以使用存储介质 2菜单移除网络存储, 在菜单的底部选择“移除网络位置”。



备注 从网络宗卷上播放时, HyperDeck Shuttle HD会假定使用访客登录服务器。目前使用菜单和SET按钮不支持需要登录和密码的服务器访问, 但您可以通过HyperDeck Ethernet Protocol来输入凭证。

USB溢写

如果使用Blackmagic MultiDock 10G或类似产品通过标有“EXT DISK”的USB接口连接多个存储盘，开启“USB溢写”功能可以确保记录内容将从一个外部存储盘跳转到下一个外部存储盘。

格式化存储介质

通过“EXT DISK”接口连接的SD卡和其他存储介质可直接在设备上或通过Mac或Windows计算机格式化。

使用HyperDeck Shuttle HD格式化存储介质：

1. 使用搜索旋钮和“SET”按钮，选择“格式化存储介质”。
2. 从列表中选择要格式化的存储介质，并按“SET”按钮。
3. 选定格式后，按“SET”按钮。
4. 随后会出现确认窗口，显示即将被格式化的存储介质以及选定的格式化选项，选择“格式化”。
5. 格式化完毕后会出现一个提示窗口，选择“确定”。

HFS+也被称为Mac OS X扩展格式，因为它支持“日志功能”，所以被广为推荐。一旦发生存储介质损坏的情况，具有日志功能的存储介质更易恢复数据。HFS+受Mac系统的原生支持。exFAT则受Mac和Windows系统的支持，无需使用额外软件，但不支持日志功能。要在Mac或Windows计算机上格式化存储介质，请参考“格式化存储介质”部分的内容。

设置菜单

设置菜单包含语言选项和默认格式，以及菜单显示、网络设置和时间码等选项。



名称

如果网络中存在多台HyperDeck Shuttle HD，您可以对它们进行命名加以区分。该操作可通过Blackmagic HyperDeck Setup或Blackmagic HyperDeck Ethernet Protocol终端程序操作完成。设备名称将会出现在设置菜单中。

语言

HyperDeck Shuttle HD支持13种语言界面，包括英语、中文、日语、韩语、西班牙语、德语、法语、俄语、意大利语、葡萄牙语、土耳其语、乌克兰语以及波兰语。

选择语言步骤如下：

1. 当设置菜单高光显示时，按“SET”按钮。
2. 旋转搜索旋钮向下滚动菜单，选择“语言”，按“SET”按钮。
3. 使用搜索旋钮选择相应语言，按“SET”按钮。选定后，系统将自动返回设置菜单。

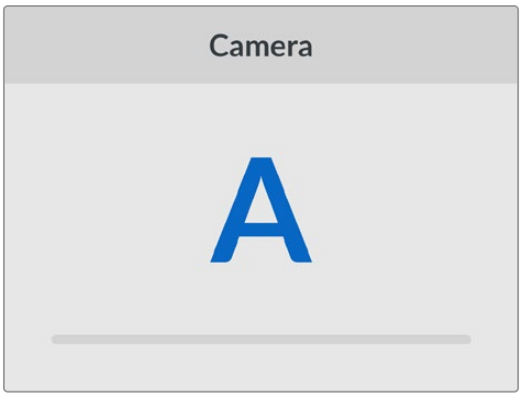
软件

可显示当前安装的软件版本。

摄影机

当使用HyperDeck记录多台摄影机的ISO单独文件，然后要将其在DaVinci Resolve中作为多机位时间线剪辑时，该设置就非常有用。

每台单独的摄影机的识别性字符都将显示在文件的元数据中，从而DaVinci Resolve在使用同步媒体夹功能时可以轻松识别每个角度。



通过A–Z或者1–9来指派摄影机

默认格式

有时，HyperDeck Shuttle HD无法判断您想要使用什么视频格式。这一设置可以让HyperDeck明确大多数情况下您想要使用的视频格式。

一个很好的例子就是，如果您开启了HyperDeck Shuttle HD，设备上并未连接视频输入，此时您插入一块硬盘，硬盘中含有两种不同视频格式的文件，那么HyperDeck会播放哪种视频格式？ 默认视频格式功能会提示设备您所偏好的视频格式，让设备切换到这一格式来播放这些文件。

另外，当您首次开启HyperDeck Shuttle HD，并且没有连接任何视频输入，也没有插入任何存储介质时，默认视频格式功能也会很有帮助。在这类情况下，HyperDeck无法判断应该使用哪类视频格式进行监看输出。此时，默认视频格式会引导设备进行操作。

但是，默认视频格式只是作为指引，它不会覆盖任何内容。因此，如果您的存储介质中只含有一类视频文件，当您按下播放键时，HyperDeck硬盘录机会切换到对应的视频格式进行播放。此时默认视频格式功能会被忽略，因为很明显此时只需要播放存储介质上的文件即可。

记录期间的情况也会类似。当您按下记录键后，HyperDeck只会以连接到视频输入上的视频格式进行记录。此外，当您记录完成后，HyperDeck Shuttle HD会以相同视频格式播放存储介质上的文件，即使存储介质上存在其他匹配默认视频格式的文件。因为设备会认为您想要使用和刚才所记录文件相同的视频格式来进行播放。只有在您将存储介质拔出后再次插入设备的时候，设备才会启用默认视频格式让您选择使用哪类文件播放。

默认视频格式只是作为指引，在HyperDeck Shuttle HD不确定如何操作的情况下帮助其进行判断。该功能不属于覆盖命令，因此不会强制录机以任何特定方式运行。

快速运行最大速度

HyperDeck Shuttle HD的最大快速运行速度为x50倍速。如果您想要降低这一速度，只要在其他速度预设选项中选择一项即可。

日期和时间

正确设置日期和时间，不仅可以确保您的HyperDeck Shuttle拥有和您的网络一致的时间和日期信息，还可以防止和一些网络系统发生冲突。



自动设置日期和时间

如果要自动设置日期和时间，请将“自动设置日期和时间”选项设置为开启状态。如果设置为自动调整日期和时间，HyperDeck会使用NTP栏中设置的网络时间协议服务器。如果要手动覆盖日期和时间，可选择“关闭”。

NTP

默认的NTP服务器为time.cloudflare.com，您也可以使用HyperDeck Setup手动输入其他NTP服务器。更多关于如何设置NTP服务器的信息，请阅读本手册后续在HyperDeck Setup部分的介绍。

日期

要手动输入日期，请选择“日期”栏，然后按“SET”按钮。使用菜单旋钮选择日、月、年。

时间

要调整时间，请选择“时间”，然后按“SET”按钮。使用菜单旋钮调整小时和分钟。内部时钟采用24小时制。

菜单设置

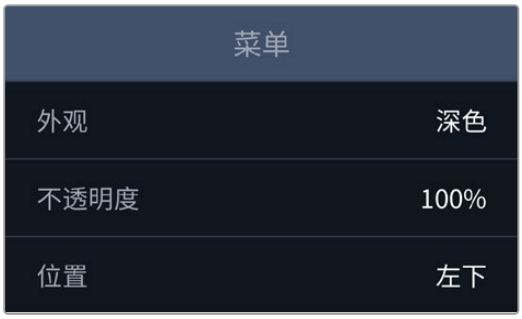
您可以使用菜单设置来调整菜单在所连接HDMI显示器上的位置和外观。



外观

可将HyperDeck的屏幕菜单设置为深色或浅色模式。浅色模式可提供更高的对比度，适用于较暗的媒体素材，或者搭配提词器模式使用。





不透明度

可通过调整来降低所连接显示器上菜单叠加信息的不透明度，调整范围为100%（默认）到20%。

位置

菜单叠加信息的默认位置是屏幕左下角。如果要移动菜单的位置，可选择“位置”然后按“SET”按钮，就可以选择将其移动到屏幕的左上角、右上角、左下角或者右下角了。

网络设置



协议

Blackmagic HyperDeck出厂设置为DHCP，因此连接后，您的网服务器会自动指派一个IP地址，无需调整其他网络设置。如果需要手动设置地址，可通过静态IP连接。

选中“协议”后，按下“SET”按钮，滚动到菜单中的“静态IP”然后按“SET”。

IP地址、子网掩码、网关、主DNS服务器和次DNS服务器

选中“静态IP”后，就可以手动输入网络信息了。

要更改IP地址：

1. 通过搜索旋钮将“IP地址”高光选中，按下HyperDeck控制面板上的“SET”按钮。
2. 使用搜索旋钮调整IP地址：旋转搜索旋钮更改IP地址，按“SET”按钮确认，然后再调整下一个数值。
3. 按下“SET”以确认更改，并跳至下个值。

输入完IP地址后，重复这些步骤调整子网掩码和网关。完成后，按“MENU”按钮退出并返回主页面。

时间码设置

设置时间码输入和输出选项，包括在记录源时间码、当日时间码或手动设置时间码之间选择。



输入

记录时，共有四个时间码输入选项。

视频输入	选择“视频输入”将从带有SMPTE RP 188元数据的HDMI信号源提取其嵌入式时间码。该操作将保存HDMI信号源和HyperDeck Shuttle HD所记录文件之间的同步。
内部	使用此选项可记录通过内置时间码发生器所产生的当日时间码。
从上个片段生成	为时间码输入选择“从上个片段生成”选项时，每个文件将从上一个片段尾帧的下一帧开始。例如，如果首个片段以10:28:30:10结束，那么下一个片段时间码将从10:28:30:11开始。
预设	如果想要手动设置时间码，选择预设选项。记录的片段会按照“预设”中设置的时间码开始，本章节之后会显示。

丢帧

对于29.97或59.94帧率NTSC信号源，您可以选择“丢帧”或“无丢帧”时间码。如果是未知信号源，选择“默认”。这样将保持输入格式，或如果没有有效时间码默认为丢帧。

预设

如果要手动设置时间码，可按“SET”按钮，并使用搜索旋钮和“SET”按钮来输入起始时间码。请确保输入菜单中的“预设”选项被勾选。

输出

为您的输出选择时间码选项。

时间线	要为记录在存储卡或硬盘上的所有片段输出连续时间码，请选择时间线。
片段	选择片段选项可输出每个单独片段的时间码。

文件设置



文件名前缀

首次设置时，您的HyperDeck Shuttle HD将采用以下文件名规范将片段记录至SD卡或USB闪存盘。

HyperDeck_0001	
HyperDeck_0001	**前缀**
HyperDeck_**0001**	**片段编号**

您可以通过HyperDeck Setup实用程序修改文件名前缀。更多信息请参考本手册中“Blackmagic HyperDeck设置”部分的内容。

时间戳文件后缀

默认设置下, 时间戳添加至文件名是关闭状态。如果您想要将日期和时间记录到文件名中, 可将“时间戳文件后缀”选项切换至“开启”状态。

HyperDeck_2201061438_0001	
HyperDeck_2201061438_0001	**文件名前缀**
HyperDeck_**22**01061438_0001	**年**
HyperDeck_22**01**061438_0001	**月**
HyperDeck_2201**06**1438_0001	**日**
HyperDeck_220106**14**38_0001	**时**
HyperDeck_2201061**438**_0001	**分**
HyperDeck_2201061438_**0001**	**片段编号**

远程设置

远程设置可以让HyperDeck被其他视频设备远程控制, 比如ATEM Mini Extreme切换台。



远程

选择“远程”启用以太网远程控制。取消远程控制可回到本机控制。

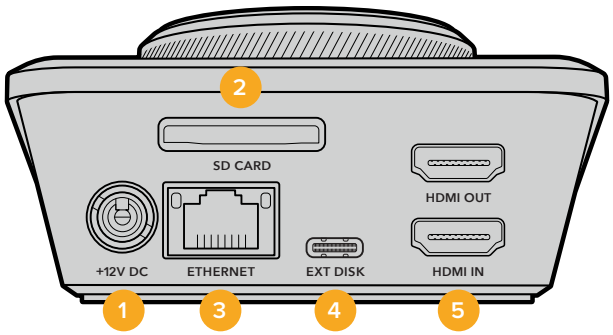
重置设置



恢复出厂设置

在设置菜单中高光“恢复出厂设置”可将HyperDeck恢复到出厂时的设置。按下“SET”时, 设备会弹出确认信息。

后面板



1 电源

HyperDeck Shuttle HD通过一块AC适配器获得电源。提示 附带的电源线配有防止断开的带锁接口，但您也可以使用任何36W 12V的电源线为HyperDeck Shuttle HD供电。

2 SD卡

将SD卡插入卡槽内可实现记录和播放。

3 以太网

设备的以太网端口可用来连接您的网络，以便可以录制到网络存储上，或者通过Web媒体管理器实现快速ftp传输和http传输。此外，您还可以使用REST api或HyperDeck Ethernet Protocol以太网协议远程控制该设备。如需了解更多关于通过Web媒体管理器或FTP客户端传输文件的信息，请参阅本手册后续在“通过网络传输文件”部分的介绍。

连接到ATEM切换台所在的同一个网络下时，您还可以使用ATEM切换台或ATEM硬件控制面板来控制HyperDeck。

4 外接硬盘

将硬盘连接至USB–C接口，您可以高达5Gb/s的速度记录至外接硬盘。您还可以连接多端口USB–C集线器或Blackmagic MultiDock 10G，从而连接一个或多个SSD。

5 HDMI

将HDMI输出连接到HDMI电视机、监视器或者ATEM Mini Extreme等切换台。HDMI输出还可用于查看菜单叠加。

存储介质

SD卡

为获得高质量HD记录，我们建议使用高速UHS-I型SD卡。这些卡需要具备超过220MB/s的写入速度，可记录高达Ultra HD 2160p60的影像。

但是，如果您以低比特率记录更高压缩格式，那么或许能使用更低速的存储卡。通常来讲，卡的速度越快越好。

请定期关注本操作手册是否已有更新版本，以便获得最新信息。请到Blackmagic Design网站www.blackmagicdesign.com/cn/support进行下载。

HyperDeck Shuttle HD应使用哪些SD卡?

建议您使用以下几款SD卡记录最高60fps的1080p影像:

品牌	型号	容量
Angelbird	AV PRO SD UHS-II 300MB/s V90 SDXC	256GB
Angelbird	AV PRO SD UHS-II 260MB/s V60 SDXC	128GB
Angelbird	AV PRO SD UHS-II 260MB/s V60 SDXC	64GB
SanDisk	Extreme Pro UHS-I 95MB/s SDXC	64GB
Wise	SD2-64U3 UHS-II 285MB/s SDXC	64GB
Lexar	Professional 1000x UHS-II 150MB/s SDXC	128GB
SONY	Tough SF-G128T	128GB
Kingston	CANVAS GO! Plus 170MB/s V30	64GB
Kingston	CANVAS GO! Plus 170MB/s V30	128GB
Kingston	CANVAS GO! Plus 170MB/s V30	512GB
ProGrade Digital	SDXC UHS-II V90 300R	64GB
ProGrade Digital	SDXC UHS-II V90 300R	128GB
SONY	Tough SF-G64T UHS-II SDXC	64GB
Delkin Devices	Black UHS-II V90 SDXC	256GB
Delkin Devices	Power UHS-II V90 SDXC	128GB
Delkin Devices	Power UHS-II V90 SDXC	256GB
Delkin Devices	Black UHS-II V90 SDXC	128GB
Exascend	Essential SDXC UHS-II V90 R 300MB/s	64GB
Exascend	Essential SDXC UHS-II V90 R 300MB/s	128GB
Exascend	Catalyst SDXC UHS-II V90 R 300MB/s	64GB

外接硬盘

所有HyperDeck型号都可以直接记录到USB–C存储盘上。这类存储盘速度快，容量大，可进行长时间视频记录。您可以将硬盘连接到计算机，直接在硬盘上进行剪辑！

如要获得更大的存储空间，可以连接USB–C存储盘坞或外置硬盘。如要连接Blackmagic MultiDock 10G或USB–C存储盘，可使用线缆将USB–C设备连接到HyperDeck后方的“EXT DISK”端口。

HyperDeck Shuttle HD应使用哪些USB–C存储盘?

建议使用以下几款USB–C存储盘记录最高60fps的1080p ProRes HQ影像:

品牌	型号	容量
Wise	PTS–256 Portable SSD 4K	256GB
OWC	Envoy Pro Ex	240GB
BUFFALO	SSD–PHE500U3–BA	500GB

建议使用以下几款USB–C存储盘记录最高60fps的1080p DNxHD 220x影像:

品牌	型号	容量
OWC	Envoy Pro Ex	240GB

建议使用以下几款USB–C存储盘记录最高60fps的1080p H.264影像:

品牌	型号	容量
OWC	Envoy Pro Ex	240GB

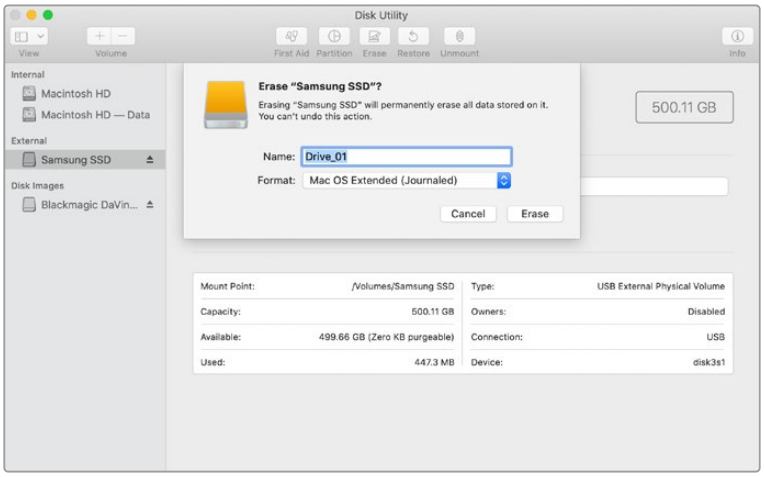
格式化存储介质

在Mac计算机上格式化存储介质

Mac系统自带的“磁盘工具”应用程序可以将硬盘格式化为HFS+或exFAT格式。

由于格式化后硬盘内所有文件都会被清除，因此请务必在格式化前备份硬盘上的所有重要文件。

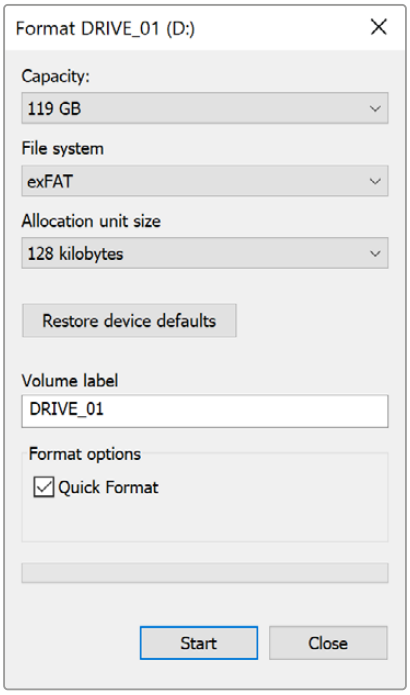
1. 通过外部连接器或数据线将USB硬盘连接至电脑，忽略任何关于使用SSD作为Time Machine备份选择的信息。SD卡可通过外部读卡器连接到您的计算机。
2. 进入“应用程序/实用工具”界面，运行“磁盘工具”程序。
3. 点击SD卡或USB硬盘图标，再点击“抹掉”按钮。
4. 将格式设置为“Mac OS扩展（日志式）”或“exFAT”。
5. 输入新增分区的名字，点击“抹掉”。您的存储介质会迅速格式化，以备HyperDeck使用。



在Windows计算机上格式化存储介质

使用Windows PC的格式化对话框可将硬盘格式化为exFAT。由于格式化后SSD硬盘或SD卡内所有文件都会被清除，因此请务必在格式化前备份硬盘上的所有重要文件。

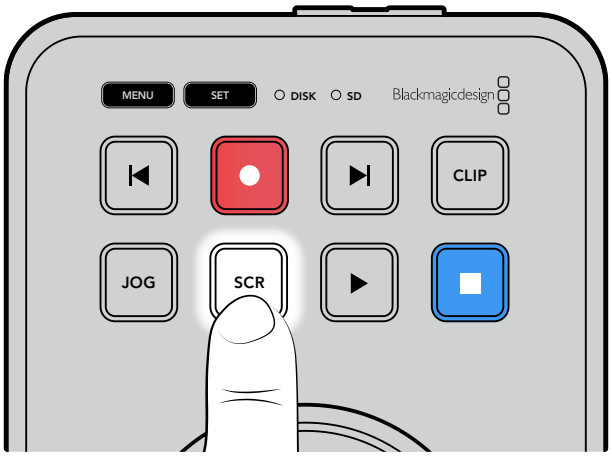
1. 通过外接硬盘座或数据线将USB硬盘连接至计算机。SD卡可通过外部读卡器连接到您的计算机。
2. 打开“开始菜单”或“开始画面”，选择“我的电脑”。右键点击USB硬盘或SD卡。
3. 从上下文菜单中选择“格式化”。
4. 将文件系统设置为“exFAT”，将分配单元大小设置成128kb。
5. 输入卷标，选择“快速格式化”，点击“开始”。
6. 您的存储介质会迅速格式化，以备HyperDeck使用。



宗卷导航

宗卷导航可以打开一个文件路径叠加信息，以便您定位片段在媒体存储卡、存储盘以及网络存储盘上的位置。启用该功能后，叠加信息会出现在HDMI输出上，您可以使用SCR按钮、CLIP按钮以及搜索轮在目录中导航。

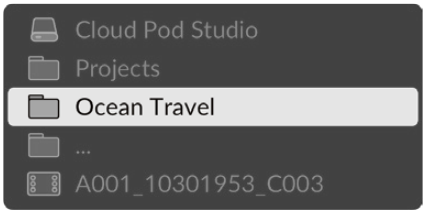
1 按标有“SCR”字样的极速按钮可打开宗卷导航窗口。





按SCR按钮可在HDMI输出上打开宗卷导航窗口

2 搓擦或快进显示器画面中的素材，直到您在文件夹中找到感兴趣的片段。



3 按SCR按钮可在宗卷中向下移动，按CLIP按钮可在宗卷中向上移动。

要关闭宗卷导航窗口，可按停止按钮；要关闭宗卷导航窗口并立即开始播放，可按播放按钮。

备注 要查看使用不同编解码、分辨率或帧率记录的片段，请将HyperDeck的编解码和默认格式设为匹配选项。

使用提词器功能

使用标准RTF或TXT纯文本文件时，您可以将Blackmagic HyperDeck Shuttle HD作为提词器使用。在TextEdit或WordPad中创建文件，以13中支持语言中的任何一种保存为多信息文本格式或纯文本文件。用HyperDeck Shuttle HD打开后，您可以调整稿件文本的字体大小和行距。

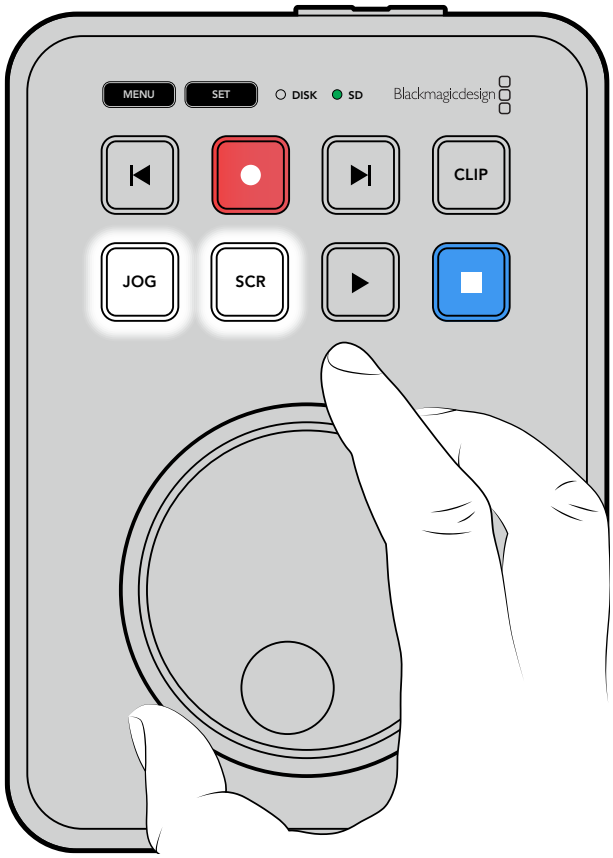
如要使用提词器功能：

1. 将HyperDeck Shuttle HD的HDMI输出与您希望使用的HDMI显示器连接。
2. 插入包含稿件文本的SD卡或者连接USB硬盘。
3. 在记录菜单中选择编解码选项。前往“提词器”设置，按下“SET”按钮。

稿件文本会出现在显示器上。然后您可以用播放按钮开始自动播放，或者通过旋钮进行其他控制。

控制提词器播放速度

HyperDeck Shuttle HD上的大尺寸旋钮在提词器模式下可以用于控制播放，就像播放媒体一样。加载稿件文本后，同时按下“JOG”和“SCR”按钮可以启用变速播放。选定后转动旋钮。稿件文本的移动速度会根据旋钮的移动而变化。比如，转动旋钮的速度越快，稿件文本滚动的速度就会越快。



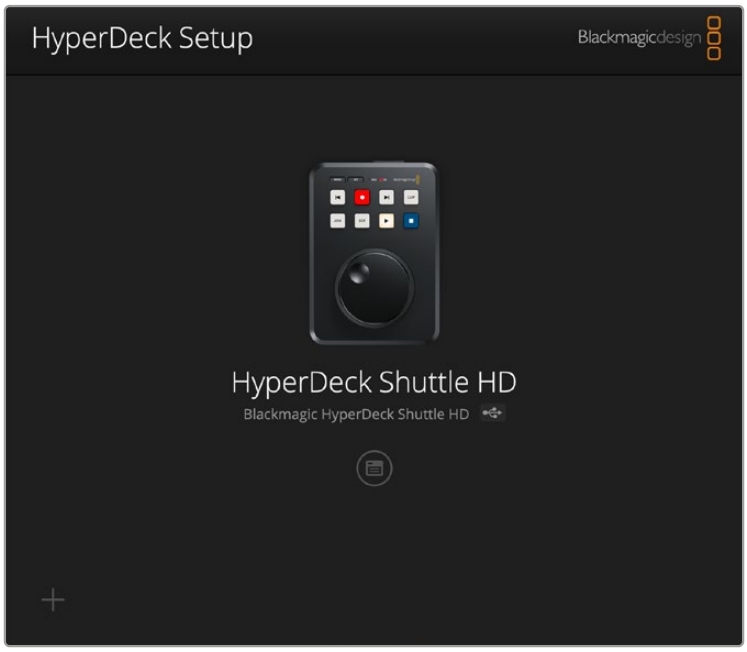
如要获得固定的速度，您可以单独使用JOG和SCR按钮。选定后，在慢速搜索模式下旋转旋钮，稿件文本会按照固定的低速移动，在极速模式下会以更快的速度移动。

要在SD卡或外部硬盘上的文件之间浏览，可以按前进和倒退按钮。

提词器会识别到文件中的字体大小、颜色以及粗体设置。此外，当您把显示内容投射到分光镜上时，可以使用监看菜单调整字体大小、行距、侧边距，还能水平或垂直翻转显示内容。详情请参考本手册前面“菜单设置”部分的内容。

Blackmagic HyperDeck Setup

Blackmagic HyperDeck Setup是一款软件实用程序，可用于更改HyperDeck的各项设置并更新其内部软件。

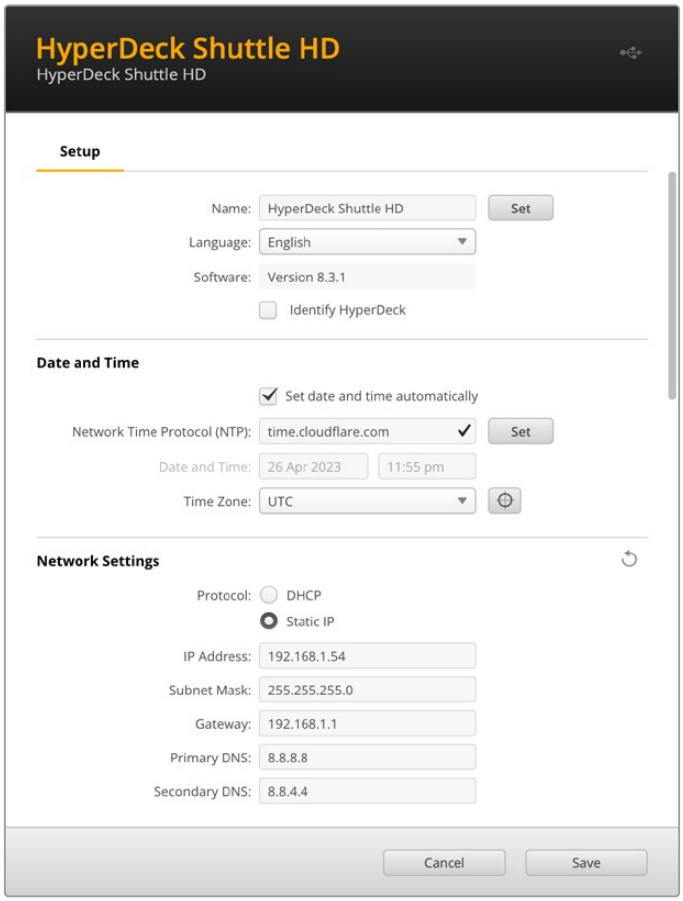


要安装软件：

1. 登陆网址www.blackmagicdesign.com/cn/support，下载最新Blackmagic HyperDeck Setup安装程序。
2. 运行Blackmagic HyperDeck Setup安装程序，根据屏幕提示完成安装。
3. 安装完成后，将HyperDeck Shuttle HD通过后面板的USB或以太网端口连接到计算机。
4. 运行Blackmagic HyperDeck Setup程序，并根据屏幕提示更新内部软件。如果系统未弹出任何提示信息，即表示当前内部软件已是最新版本，无需升级。

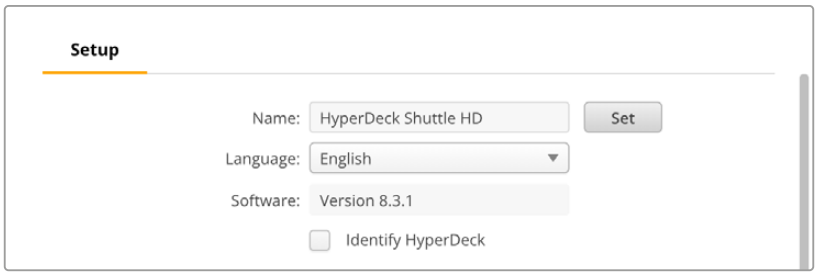
点击HyperDeck画面或者设置图标可以打开设置菜单。

屏幕主页会显示HyperDeck Shuttle HD和设备名称。当您的计算机连接了一台以上的HyperDeck时，该名称可用于识别设备，也可以通过实用程序中的设置菜单进行设置。



设置

如果您拥有多台HyperDeck硬盘录机，请为每台设备单独命名，以便加以区分。您可以在名称栏中输入新的命名，并点击“Set”按钮。需要注意的是，更改HyperDeck名称会使得所使用的数字证书无效，因此，最好是在生成证书签名请求或自签名证书之前更改其名称。



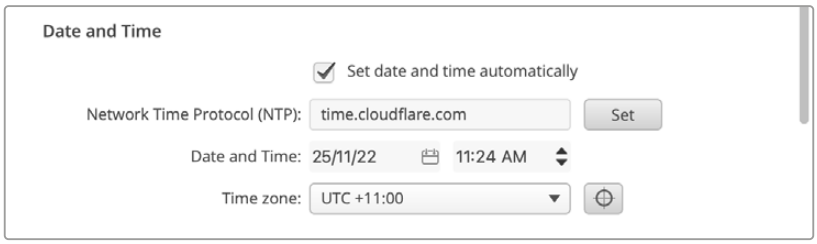
识别HyperDeck

点击“Identify HyperDeck”复选框后，HyperDeck Shuttle上的跳过按钮将会闪烁。如果您拥有多台HyperDeck Shuttle，想要识别出哪一台是您通过HyperDeck Setup实用程序所连接的设备时，这个选项会很有帮助。

日期和时间

点击该复选框可自动设置日期和时间。如果设置为自动调整日期和时间，HyperDeck Shuttle HD会使用NTP字段中设置的网络时间协议服务器。默认的NTP服务器为time.cloudflare.com，您也可以手动输入另一个NTP服务器，然后点击“Set”（设置）。

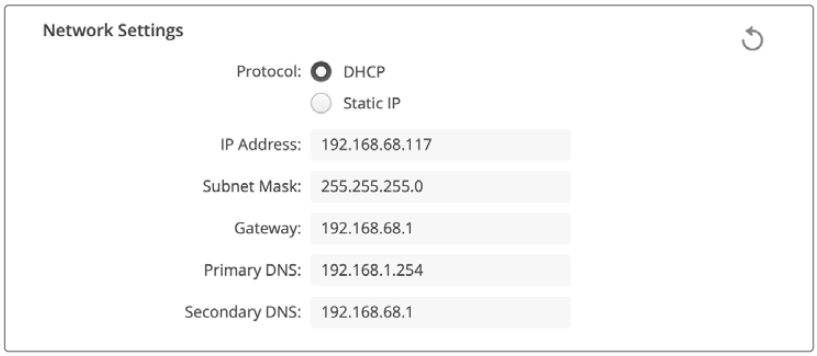
如果要手动键入日期和时间，可使用这些输入栏键入日期、时间和时区。正确设置日期和时间可确保您的记录拥有和网络一样的时间和日期信息，并且可以防止和一些网络存储系统发生冲突。



网络设置

协议

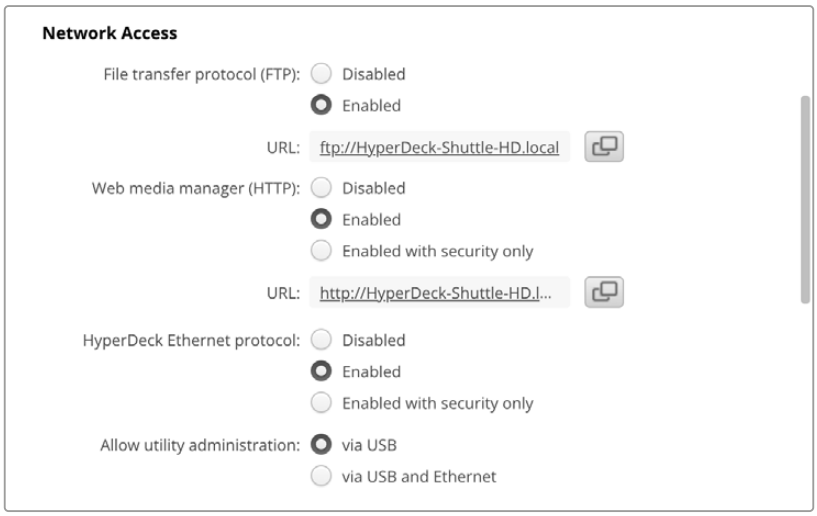
如果要用ATEM切换台控制HyperDeck Shuttle HD，或者通过HyperDeck Ethernet Protocol以太网协议对设备进行远程控制，那么HyperDeck Shuttle HD就需要和其他使用DHCP的设备位于同一网络下，或者您也可以手动添加固定的IP地址。



DHCP	HyperDeck Shuttle HD硬盘录机默认使用DHCP设置。动态主机配置协议也叫DHCP，这个网络服务器可以自动寻找您的HyperDeck硬盘录机并为其指派一个IP地址。DHCP方便易用，可通过以太网连接设备，并确保设备的IP地址相互不冲突。大部分计算机和网络交换机支持DHCP。
静态IP	即“Static IP”，选中该选项后，您可以手动输入具体的网络信息。当您进行手动设置IP地址以便让所有设备都能建立通信时，这些设备必须共享同一个子网掩码和网关设置。

访问网络

HyperDeck Shuttle HD可通过网络进行文件传输，并通过HyperDeck Ethernet Protocol进行远程控制。默认设置下，这些访问是开启状态，但当使用Web媒体管理器或HyperDeck Ethernet Protocol时，您可以选择单独禁用访问或通过用户名和密码访问来提高安全性。



文件传输协议

通过该复选框可开启或禁用通过FTP的访问。如果您通过CyberDuck等FTP客户端进行访问，点击该图标可复制FTP地址。更多信息，请参阅“通过网络传输文件”部分的内容。

Web媒体管理器

记录在SD卡或外部存储盘上的媒体文件可使用Web媒体管理器通过网页浏览器进行访问。当您点击该链接或将其复制粘贴到您的网页浏览器时，会打开一个简单的界面，让您可以通过网络直接上传或下载文件到SD卡上。

默认设置下，通过HTTP访问是启用状态，但您可以完全禁用访问或通过“Enabled with Security Only”（仅以安全性启用）来安全登录。当使用数字证书时，Web媒体管理器连接通过HTTPS加密。更多关于数字证书的信息，请参阅“安全证书设置”部分的介绍。

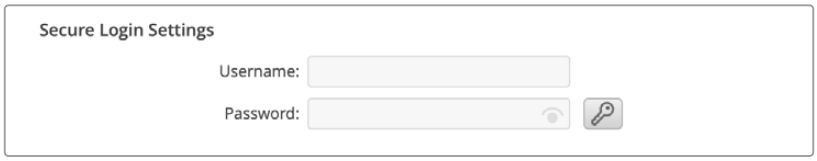
HyperDeck Ethernet Protocol

您可以通过HyperDeck Ethernet Protocol和您计算机上的命令行程序（例如，Mac上的Terminal，Windows计算机上的PuTTY等）连接到HyperDeck硬盘录机。您可以启用带有或不带用户名和密码的访问，或者完全禁用访问。在使用netcat等实用程序时，您可以使用SSL程序来加密访问。更多关于可用命令的信息，请阅读本手册在“Developer Information”（开发人员信息）部分的介绍。

允许实用程序管理

当您的硬盘录机通过网络或通过USB连接时，可访问Blackmagic HyperDeck Setup。要防止用户通过网络访问，请选择“USB only”（仅USB）。

安全登录设置



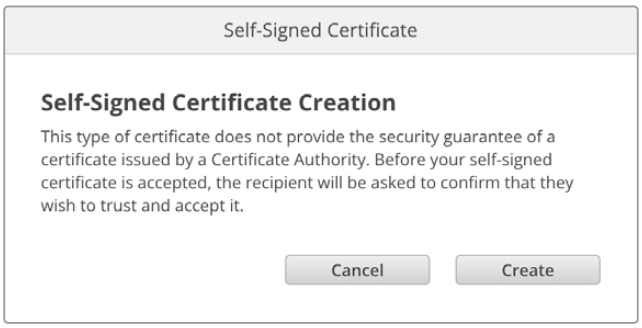
如果您为HyperDeck Ethernet Protocol访问选择了“Enabled with Security”（以安全性启用），就需要输入用户名和密码。键入用户名和密码，并点击“Save”（保存）。输入密码后，密码字段会显示空白。一旦用户名和密码设置后，如果选择了“Enabled with Security”（以安全性启用），那么当访问Web媒体管理器时需要先输入该信息。

安全证书

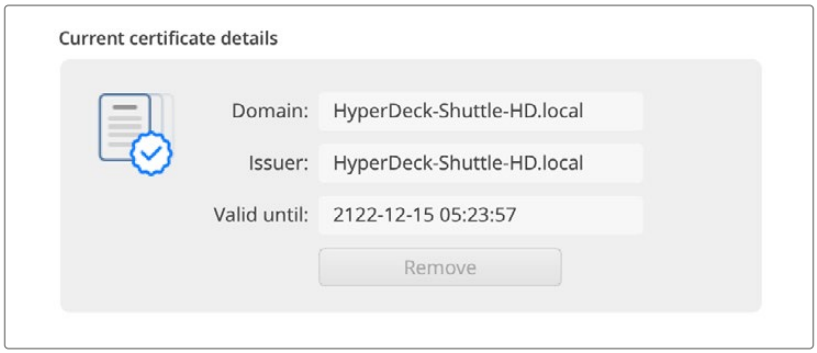
要启用通过HTTPS访问Web媒体管理器，或当HyperDeck Ethernet Protocol配置为仅以安全性访问，那么您将需要一个安全证书。该数字证书可充当您的HyperDeck Shuttle HD身份识别，因此任何收到的连接都可以确认它们连接到正确的设备。除了确认设备身份之外，使用安全证书还可确保HyperDeck Shuttle HD与计算机或服务器之间传输的数据得到加密。使用安全登录设置时，连接不仅会被加密，而且需要身份验证才能访问。

与HyperDeck Shuttle一起使用的证书有两类，一类是由认证机构签署的安全证书，或者另一类是自签名证书。对于某些用户的工作流程，例如仅通过本地网络访问HyperDeck Shuttle HD的情况，自签名证书可能已经足够安全了。

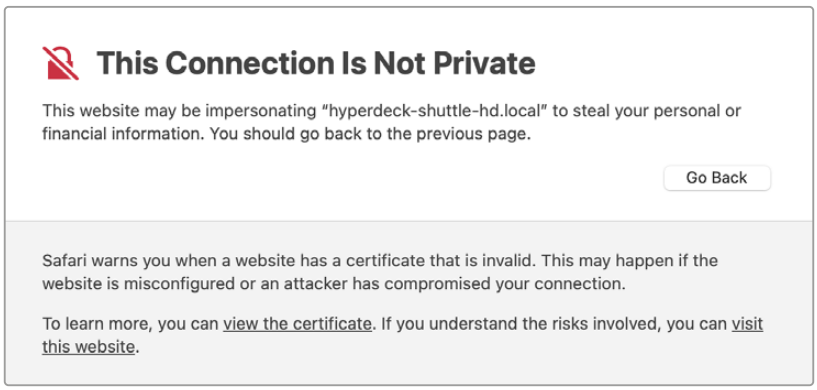
要生成自签名证书，请点击“Create Certificate”（创建证书）。系统将提示您确认是否了解使用自签名证书的风险。一旦点击“Create”（创建），证书的详细信息会自动填充到HyperDeck Setup实用程序中的“Domain”（域）、“Issuer”（颁发者）和“Valid untill”（有效期至）栏。



恢复出厂设置后，任何当前证书都会被删除，但您也可以随时通过点击“Remove”按钮，并按照提示将其移除。



当使用自签名证书通过HTTPS访问媒体文件时，您的网页浏览器会提醒您访问该站点的风险。有些浏览器会在您确认了解风险后允许您继续操作，但有些网页浏览器可能会阻止您继续操作。



为确保授予对任何网页浏览器的访问权限，您将需要使用签名证书。要获得签名证书，您首先需要使用Blackmagic HyperDeck Setup实用程序生成证书签名请求 (CSR) 。然后将这一签名请求发送到证书颁发机构 (CA) 或您的IT部门进行签名。完成后，系统会返回一个带有.cert、.crt或.pem文件扩展名的签名证书，您可以将其导入HyperDeck Shuttle HD。



生成证书签名请求CSR步骤如下:

1 点击“Generate Signing Request” (生成签名申请) 按钮。



2 会出现一个窗口提示您键入HyperDeck的公用名和主题备用名称。根据需要使用以下列表调整其他信息。

信息	描述	示例
Common Name（公用名）	您将要使用的域名	hyperdeck.melbourne.com
Subject Alternative Name（主题备用名称）	备用的域名	hyperdeck.melbourne.net
Country（国家）	您的机构所在的国家	AU
State（省）	省份、区域、县或州	Victoria
Location（位置）	城、镇、乡等地区名称。	Port Melbourne
Organization Name（机构名称）	您机构的名称	Blackmagic Design

3 填完证书信息后，按“Generate”。

生成.csr时，您还将同时创建公钥和私钥。公钥将包含在签名请求中，而私钥将保留在设备中。在CA或IT部门和您的机构核实并验证CSR中的信息后，他们就会生成包含上述详细信息以及公钥的签名证书。

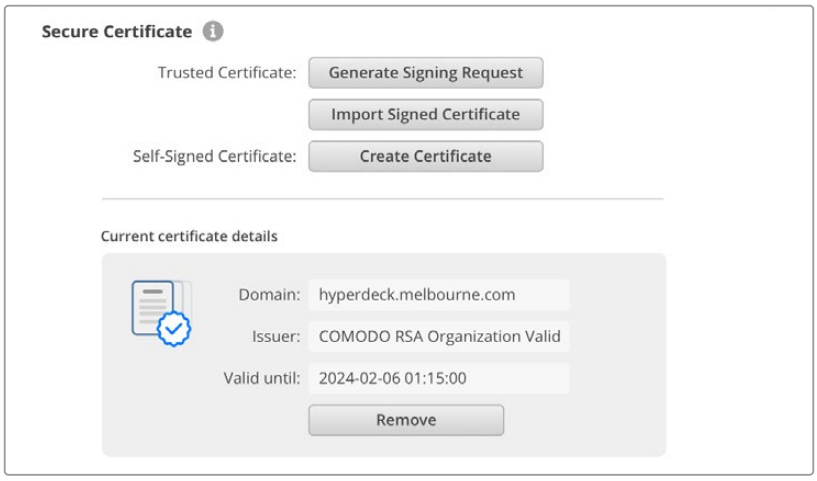
导入后，HyperDeck Shuttle HD将使用公钥和私钥来确认HyperDeck的身份，并在使用SSL程序时通过HTTPS或HyperDeck Ethernet Protocol以太网协议来加密和解密数据共享。

导入签名证书步骤如下:

1 点击“Import Signed Certificate”（导入签名证书）按钮。

2 使用文件浏览器导航到签名证书所在位置，选择文件后单击“Open”（打开）。

“Domain”（域）、“Issuer”（颁发者）和“Valid untill”（有效期至）栏将使用来自您CA的信息进行更新。通常签名证书的有效期约为一年，请您务必在证书即将到期时重复申请过程。

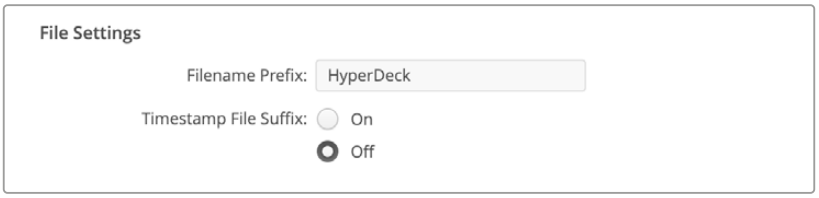


由于选择了域名，您需要与您的IT部门讨论如何解析HyperDeck Shuttle HD设备的DNS条目。这会将HyperDeck Shuttle HD的IP地址的所有流量指向签名请求中选定的域地址。

这也将是您通过Web媒体管理器访问文件时所使用的HTTPS地址，例如：
https://hyperdeck.melbourne.com

需要注意的是，恢复出厂设置后该证书会失效，需要生成并签署一个新的证书。

文件设置



初次设置时，HyperDeck Shuttle HD将会使用“HyperDeck”前缀把片段记录在SD卡或外部USB硬盘上。您可以输入新的文件名修改前缀。

默认设置下，时间戳添加至文件名是关闭状态。如果您希望在文件名中记录日期和时间，可以将其设为开启状态。HyperDeck Shuttle HD的屏幕菜单中也有文件名前缀和时间戳的设置。

重置

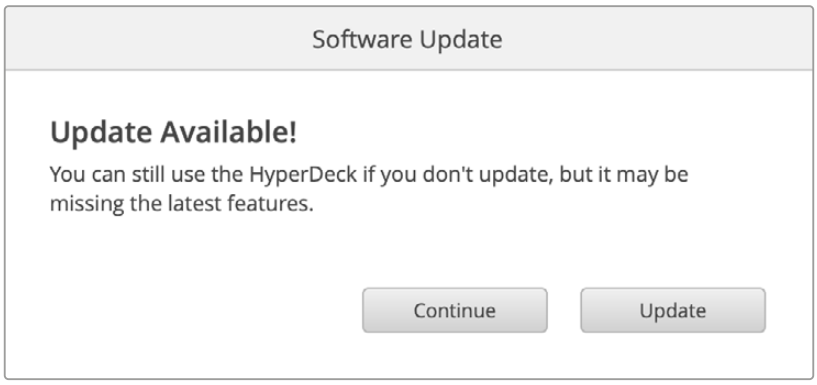
选择“恢复出厂设置”后可将HyperDeck恢复到出厂时的设置。恢复出厂设置后，当前证书会失效。如果使用了安全证书，您需要生成一个新的证书签名请求，交由证书颁发机构或IT部门签名。

更新内部软件

更新内部软件步骤如下：

1. 最新版Blackmagic HyperDeck Setup安装程序下载链接：
   www.blackmagicdesign.com/cn/support
2. 运行Blackmagic HyperDeck Setup安装程序，根据屏幕提示完成安装。
3. 安装完成后，将HyperDeck Shuttle HD通过后面板的USB或以太网端口连接到计算机。

4 运行Blackmagic HyperDeck Setup程序，并根据屏幕提示更新内部软件。如果系统未弹出任何提示信息，即表示当前内部软件已是最新版本，无需升级。



通过网络传输文件

HyperDeck Shuttle HD支持通过超文本传输协议安全 (HTTPS) 和文件传输协议 (FTP) 两种方式进行文件传输。这项功能可让您通过本地网络可提供的快速网络，将文件从您的计算机直接复制到HyperDeck上。

例如，您可以将新文件复制到HyperDeck设备，用于在监视器墙或数字标牌上进行播放。

您的HyperDeck可以发送和接收任何文件，但请注意，如果您需要在HyperDeck Shuttle HD上播放任何文件，该文件必须符合HyperDeck所支持的编解码器和分辨率。

提示 您可以在HyperDeck录制的同时通过网络传输文件。HyperDeck会自动调整传输速度，确保记录不受影响。

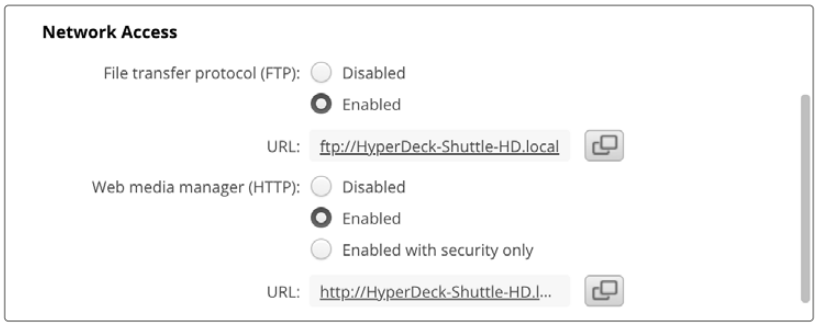
使用这两个协议中的任何一个都可以通过HyperDeck Setup实用程序启用或禁用HyperDeck Shuttle HD。例如，您可以同时禁用FTP访问并启用HTTPS访问。

通过HTTPS连接HyperDeck Shuttle HD

要通过Web媒体管理器访问HyperDeck Shuttle HD，您将需要通过网络访问设置可用的URL。当您的计算机通过USB或以太网连接后，网络访问设置会出现在HyperDeck Setup实用程序中，但仅连接以太网时会被禁用。

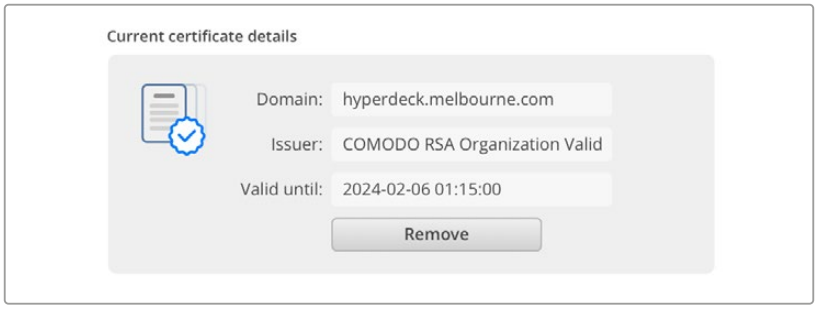
1 使用USB–C线缆，将您的计算机通过HyperDeck Shuttle HD后面板上的USB端口连接，并打开HyperDeck Setup。在设备名称旁边可以看到USB连接图标。点击圆形图标或产品图像的任何位置可打开该设置。

2 使用自签名证书时，导航至网络访问设置并点击URL一侧的复制图标。该URL基于您的HyperDeck名称。要修改该URL，可修改设备名称。



使用自签名证书时，请点击链接。

3 如果您导入了由CA或IT部门签署的证书，请将地址复制并粘贴到当前证书的域字段中。



将域地址复制并粘贴到浏览器中

4 打开您的网页浏览器，将该地址粘贴到新的窗口。如果您启用了仅以安全性访问设置，那么您需要在HyperDeck Setup实用程序中输入用户名和密码。

使用自签名证书时，浏览器会出现有关连接隐私的警告，这意味着尚未通过HyperDeck Setup实用程序导入受信任的签名证书。

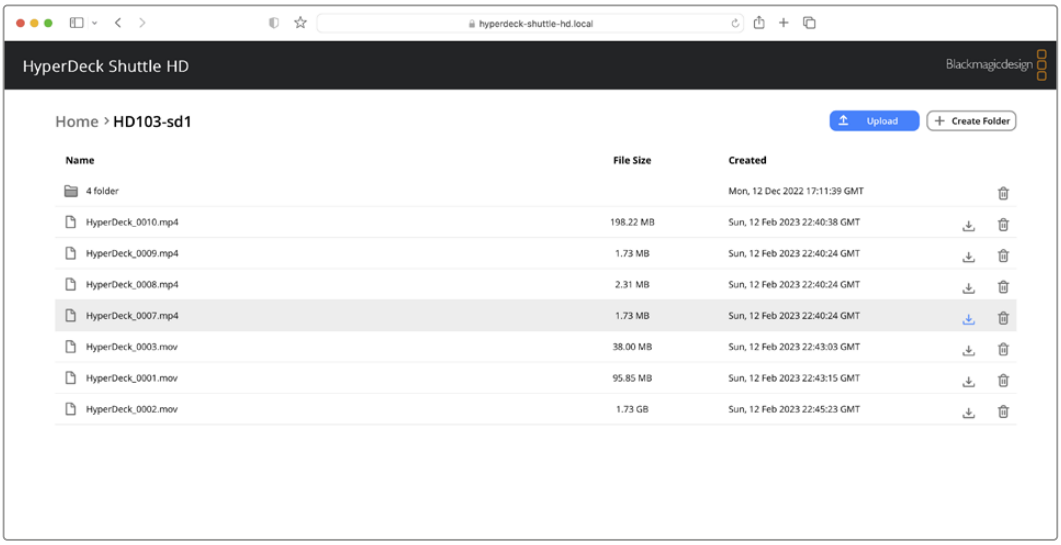
要继续以有效受信任的证书进行操作，请按照您浏览器的提示确认风险并进入网站。

使用Web媒体管理器传输文件

当您第一次打开Web媒体管理器的浏览器视图时，会看到您的文件通过相关存储介质插槽进行排序。

sd1	SD卡上的媒体文件。
USB	所连接的USB存储盘将以前缀USB/列出。

双击存储介质可显示SD卡或存储盘上的内容。



点击“Upload”（上传）按钮添加文件

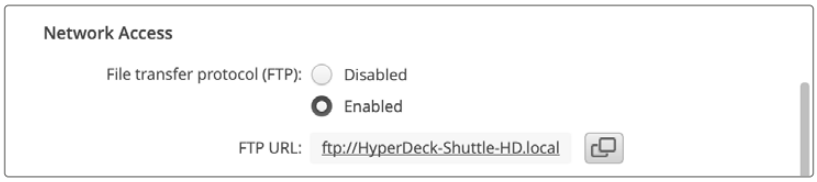
要远程添加文件进行播放，请点击“Upload”（上传）按钮。使用文件浏览器导航到您的文件，并点击“Upload”（上传）。上传过程中会出现一个状态窗口。如有需要，您还可以使用“Create Folder”（创建文件夹）按钮添加文件夹。

要下载文件，请使用最右侧的箭头图标。您的浏览器可能会提示您允许从该站点下载。点击“Allow”（允许）。要删除文件，请点击垃圾桶图标，在弹出的删除文件窗口中，点击“Delete”按钮完成删除操作。

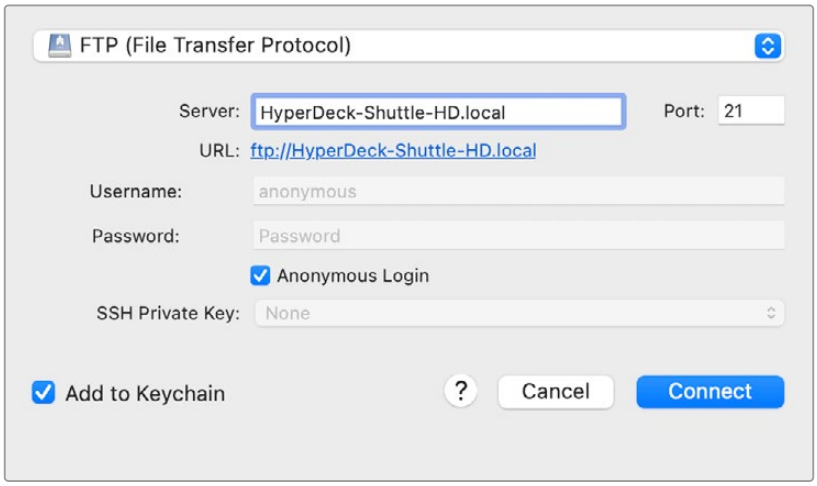
通过FTP传输文件

如果您的计算机和HyperDeck Shuttle HD位于同一个网络，您所需要的只是一个FTP客户端和您HyperDeck Shuttle HD的IP地址或HyperDeck Setup实用程序中的FTP URL。

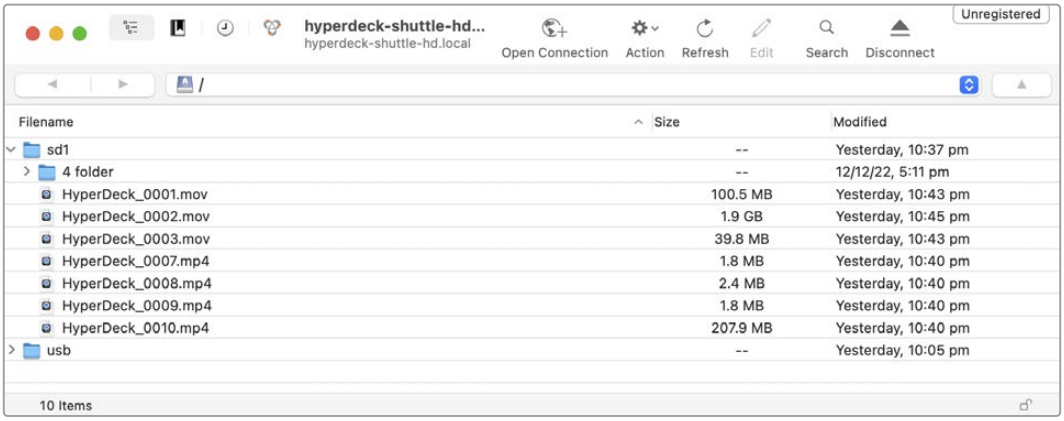
1. 在用来连接HyperDeck Shuttle HD的计算机上下载安装FTP客户端。我们推荐Cyberduck、FileZilla或Transmit，但大多数FTP应用程序都可以使用。Cyberduck与FileZilla均可免费下载。
2. 将HyperDeck Shuttle HD连接到网络后，打开HyperDeck Setup并点击FTP URL，或按复制图标手动粘贴。如果FTP程序没有打开连接，您可能需要再次点击该链接。



3. 如果您手动打开FTP连接，请将URL粘贴到服务器字段中。如果可用，请勾选“Anonymous Login”（匿名登录）。



4 SD卡可通过“sd1”识别。



现在，您就可以使用FTP界面拖放文件了。

Developer Information

Blackmagic HyperDeck Ethernet Protocol

The Blackmagic HyperDeck Ethernet Protocol is a text based protocol accessed by connecting to TCP port 9993 on HyperDeck models that have a built in Ethernet connection. If you are a software developer, you can use the protocol to construct devices that integrate with our products. Here at Blackmagic Design our approach is to open up our protocols and we eagerly look forward to seeing what you come up with!

You can connect to your HyperDeck recorder using the HyperDeck Ethernet Protocol using a command line program on your computer, such as Terminal on a Mac and putty on a Windows computer.

The HyperDeck Ethernet Protocol lets you schedule playlists and recordings. The following is an example of how to play 7 clips from clip number 5 onwards via the HyperDeck Ethernet Protocol.

On a Mac

1. Open the Terminal application which is located with the applications > utilities folder.
2. Type in “nc” and a space followed by the IP address of your HyperDeck disk recorder, another space and “9993” which is the HyperDeck Ethernet Protocol port number. For example type: nc 192.168.1.154 9993. The Protocol preamble will appear.
3. Type “playrange set: clip id: 5 count: 7” and press ‘return’.

   On HyperDeck disk recorders with a timeline view, you will see in and out points marked around clips 5 through the end of clip 11.
4. Type “play”. Clips 5 through 11 will now play back.
5. To clear the playrange, type “playrange clear”
6. To exit from the protocol, type ‘quit’.

Protocol Commands

Command	Command Description
help or ?	Provides help text on all commands and parameters
commands	return commands in XML format
device info	return device information
disk list	query clip list on active disk
disk list: slot id: {n}	query clip list on disk in slot {n}
quit	disconnect ethernet control
ping	check device is responding
preview: enable: {true/false}	switch to preview or output
play	play from current timecode
play: speed: {-5000 to 5000}	play at specific speed
play: loop: {true/false}	play in loops or stop-at-end
play: single clip: {true/false}	play current clip or all clips

Command	Command Description
play: {clip id/clip/timecode/timeline/...}	play from the specified position see “goto” command for description of parameters parameters can be combined with {speed/loop/single clip}
playrange	query playrange setting
playrange set: clip id: {n}	set play range to play clip {n} only
playrange set: clip id: {n} count: {m}	set play range to {m} clips starting from clip {n}
playrange set: in: {inT} out: {outT}	set play range to play between: - timecode {inT} and timecode {outT}
playrange set: timeline in: {in} timeline out: {out}	set play range in units of frames between: - timeline position {in} and position {out}
playrange clear	clear/reset play range setting
play on startup	query unit play on startup state
play on startup: enable: {true/false}	enable or disable play on startup
play on startup: single clip: {true/false}	play single clip or all clips on startup
play option	query play options
play option: stop mode: {lastframe/nextframe/black}	set output frame when playback stops
record	record from current input
record: name: {name}	record named clip
record spill	spill current recording to next slot
record: spill: slot id: {n}	spill current recording to specified slot use current id to spill to same slot
spill order	query the device order used for record spill
stop	stop playback or recording
clips count	query number of clips on timeline
clips get	query all timeline clips
clips get: clip id: {n}	query a timeline clip info
clips get: clip id: {n} count: {m}	query m clips starting from n
clips get: version: {1/2/3}	query clip info using specified output version: version 1: id: name startT duration version 1: id: name startT duration startT depends on “configuration: timecode output: {clip/timeline}” version 2: id: clipInT clipDuration inT outT filename version 3: id: clipInT clipDuration inT outT folder/filename
clips add: name: {name}	append a clip to timeline, name can include subfolders e.g. folder1/HyperDeck_0001.mp4
clips add: clip id: {n} name: {name}	insert clip before existing clip {n}
clips add: in: {inT} out: {outT} name: {name}	append the clip portion between clip timecodes {inT} to {outT}
clips add: frame in: {in} frame out: {out} name: {name}	append the clip portion between clip frame numbers {in} to {out}

Command	Command Description
clips remove: clip id: {n}	remove clip {n} from the timeline (invalidates clip ids following clip {n})
clips clear	empty timeline clip list
clips rebuild	rebuild timeline with default rules
clip info	query clip info for the current playing/recording clip
clip info: clip id: {n}	query clip info for timeline clip id {n}
clip info: name: {name}	query clip info for the clip named {name} on active disk
transport info	query current activity
slot info	query active slot
slot info: slot id: {n}	query slot {n}
slot info: device: {device}	query slot containing device USB/network devices can be queried without being active “device” and “slot id” parameters are mutually exclusive in all commands
slot select: slot id: {n}	switch to specified slot
slot select: device: {device}	switch to slot containing device
slot select: video format: {format}	load clips of specified format
slot unblock	unblock active slot
slot unblock: slot id: {n}	unblock slot {n}
slot unblock: device: {device}	unblock disk device
external drive list	list all available USB/network drives for use in external slot
external drive select: device: {device}	switch external slot to specified external drive
external drive selected	query the currently selected external drive
cache info	query cache status
dynamic range	query dynamic range settings
dynamic range: playback override: {off/Rec709/Rec2020_SDR/HLG/ ST2084_300/ST2084_500/ ST2084_800/ST2084_1000/ ST2084_2000/ST2084_4000/ST2084	set playback dynamic range override
dynamic range: record override: {off/Rec709/Rec2020_SDR/HLG/ ST2084_300/ST2084_500/ ST2084_800/ST2084_1000/ ST2084_2000/ST2084_4000/ST2048}	set record dynamic range override
notify	query notification status
notify: remote: {true/false}	set remote notifications
notify: transport: {true/false}	set transport notifications
notify: slot: {true/false}	set slot notifications
notify: configuration: {true/false}	set configuration notifications

Command	Command Description
notify: dropped frames: {true/false}	set dropped frames notifications (reported dropped frame count is approximate)
notify: display timecode: {true/false}	set display timecode notifications
notify: timeline position: {true/false}	set playback timeline position notifications
notify: playrange: {true/false}	set playrange notifications
notify: cache: {true/false}	set cache notifications
notify: dynamic range: {true/false}	set dynamic range settings notifications
notify: slate: {true/false}	set digital slate notifications
notify: clips: {true/false}	set timeline clips notifications where two types of changes can occur: add: partial update with list of clips and insert positions snapshot: complete update of all clips on timeline
notify: disk: {true/false}	set disk clips notifications where two types of changes can occur: add: partial update with list of clips and insert positions snapshot: complete update of all clips on timeline
notify: device info: {true/false}	set device info notifications
notify: nas: {true/false}	set nas notifications triggered by commands such as “nas add” or “nas remove”
goto: clip id: {start/end}	goto first clip or last clip
goto: clip id: {n}	goto clip id {n}
goto: clip id: +{n}	go forward {n} clips
goto: clip id: -{n}	go backward {n} clips
goto: clip: {start/end}	goto start or end of clip
goto: clip: {n}	goto frame position {n} within current clip
goto: clip: +{n}	go forward {n} frames within current clip
goto: clip: -{n}	go backward {n} frames within current clip
goto: timeline: {start/end}	goto start or end of timeline
goto: timeline: {n}	goto frame position {n} within timeline
goto: timeline: +{n}	go forward {n} frames within timeline
goto: timeline: -{n}	go backward {n} frames within timeline
goto: timecode: {timecode}	goto absolute timecode position in timeline
goto: timecode: +{timecode}	go forward {timecode} duration
goto: timecode: -{timecode}	go backward {timecode} duration
goto: slot id: {n}	goto slot id {n}
goto: clip id: {n} clip: {m}	goto clip id {n} and offset to frame position {m} within that clip
goto: clip id: {n} timeline: {m}	goto clip id {n} and offset to frame position {m} within the timeline

Command	Command Description
goto: clip id: {n} timecode: {timecode}	goto clip id {n} and offset {timecode} duration {clip id/clip/timeline/timecode} support absolute and relative offsets use “play” instead of “goto” to play from seeked position
jog: timecode: {timecode}	jog to timecode
jog: timecode: +{timecode}	jog forward {timecode} duration
jog: timecode: -{timecode}	jog backward {timecode} duration
shuttle: speed: {-5000 to 5000}	shuttle with speed
remote	query unit remote control state
remote: enable: {true/false}	enable or disable remote control
remote: override: {true/false}	session override remote control
configuration	query configuration settings
configuration: video input: {SDI/HDMI/component/composite}	change the video input source
configuration: audio input: {embedded/XLR/RCA}	change the audio input source
configuration: file format: {format}	switch to one of the supported formats: H.265High_422, H.264High, H.264Medium, H.264Low, H.264High10_422, H.265High, H.265Medium, H.265Low, QuickTimeProResHQ, QuickTimeProRes, QuickTimeProResLT, QuickTimeProResProxy DNxHR_HQX, QuickTimeDNxHR_HQX, DNxHR_SQ, QuickTimeDNxHR_SQ, DNxHR_LB, QuickTimeDNxHR_LB, DNxHD220x, QuickTimeDNxHD220x, DNxHD145, QuickTimeDNxHD145, DNxHD45, QuickTimeDNxHD45
configuration: audio codec: {PCM/AAC}	switch to specific audio codec
configuration: timecode input: {external/embedded/internal/preset/clip}	change the timecode input
configuration: timecode output: {clip/timeline}	change the timecode output
configuration: timecode preference: {default/dropframe/nondropframe}	whether or not to use drop frame timecodes when not otherwise specified
configuration: timecode preset: {timecode}	set the timecode preset
configuration: audio input channels: {n}	set the number of audio channels recorded to {n}
configuration: record trigger: {none/recordbit/timecoderun}	change the record trigger
configuration: record prefix: {name}	set the record prefix name (supports UTF-8 name)
configuration: record cache: {true/false}	enable or disable record cache, has no effect if cache is not supported/installed/formatted
configuration: append timestamp: {true/false}	append timestamp to recorded filename
configuration: usb spill: {true/false}	enable or disable spilling between usb disks

Command	Command Description
configuration: reference source: {auto/input/external}	set source for the reference signal
configuration: genlock input resync: {true/false}	enable or disable genlock input resync when enabled set reference source to auto/external
configuration: xlr input id: {n} xlr type: {line/mic}	configure xlr input type multiple xlr inputs can be configured in a single command
uptime	return time since last boot
format: slot id: {n} prepare: {exFAT/HFS+} name: {name}	prepare formatting operation filesystem type with volume name {name} “slot id” can be omitted for the current mounted slot “name” defaults to current volume name if mounted (supports UTF-8)
format: device: {device} prepare: {exFAT/HFS+} name: {name}	prepare formatting operation for {device}
format: confirm: {token}	perform a pre-prepared formatting operation using token
identify: enable: {true/false}	identify the device
watchdog: period: {period in seconds}	client connection timeout
reboot	reboot device
slate clips	slate clips information
slate project	slate project information
slate lens	slate lens information
nas list	list all NAS share bookmarks
nas discovered	list all NAS servers that have been discovered via mDNS
nas selected	currently selected NAS share
nas deselect	unmount the currently selected NAS share
connection protocol: response version: {version}	changes which do not affect other client connections change the output of “clips get”, “disk list” and related responses version 1 205 clips get id: filename startT duration startT depends on “configuration: timecode output: {clip/timeline}” 519 clips info id: clipInT clipDuration inT outT filename 206 disk list id: filename codec format duration 520 disk list info id: filename codec format duration version 2 205 clips get id: clipInT clipDuration inT outT folder/filename 519 clips info id: clipInT clipDuration inT outT folder/filename 206 disk list id: codec format duration folder/filename 520 disk list info id: codec format duration folder/filename

Multiline commands:	Command Description
authenticate:↵	authenticate user for secure access
username: {username}	case sensitive username
password: {password}	case sensitive password
slate clips↵	set slate clips information:
reel: {n}	slate reel number, where {n} is in [1, 999]
scene id: {id}	slate scene id value, where {id} is a string
shot type: {WS/MS/CU/BCU/MCU/ECU/none}	slate shot type
take: {n}	slate take number, where {n} is in [1, 99]
take scenario: {PU/VFX/SER/none}	slate take scenario
take auto inc: {true/false}	slate take auto increment
good take: {true/false}	slate good take
environment: {interior/exterior}	slate environment
day night: {day/night}	slate day or night
slate project:↵	set slate project information:
project name: {name}	project name (can be empty, supports UTF-8)
camera: {index}	set camera index e.g. A
director: {name}	director (can be empty, supports UTF-8)
camera operator: {name}	camera operator (can be empty, supports UTF-8)
slate lens:↵	set lens information:
lens type: {type}	lens type (can be empty, supports UTF-8)
iris: {type}	camera iris (can be empty, supports UTF-8)
focal length: {length}	focal length (can be empty, supports UTF-8)
distance: {distance}	lens distance (can be empty, supports UTF-8)
filter: {filter}	lens filter (can be empty, supports UTF-8)
nas add:↵	add a NAS share to the list of bookmarks
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share
username: {username}	username to connect as (optional, defaults to guest)
password: {password}	password to connect with (optional)
nas remove:↵	remove NAS share bookmark, does not unmount share if mounted
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share
nas select:↵	mount NAS share asynchronously. Uses credentials provided in matching bookmark, otherwise uses guest credentials
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share Use “nas selected” or “notify: slot: true” to determine when share is mounted.

Command Combinations

You can combine the parameters into a single command, for example:

```
play: clip id: 3 speed: 200 loop: true single clip: true
```

Or for configuration:

```
configuration: video input: SDI audio input: XLR
```

Or to switch to the second disk, but only play NTSC clips:

```
slot select: slot id: 2 video format: NTSC
```

Using XML

While you can use the Terminal to talk to HyperDeck, if you are writing software, you can use XML to confirm the existence of a specific command based on the firmware of the HyperDeck you are communicating with. This helps your software user interface adjust to the capabilities of the specific HyperDeck model and software version.

Protocol Details

Connection

The HyperDeck Ethernet server listens on TCP port 9993.

Basic syntax

The HyperDeck protocol is a line oriented text protocol. Lines from the server will be separated by an ascii CR LF sequence. Messages from the client may be separated by LF or CR LF.

New lines are represented in this document as a "↵" symbol.

Single line command syntax

Command parameters are usually optional. A command with no parameters is terminated with a new line:

```
{Command name}↵
```

If parameters are specified, the command name is followed by a colon, then pairs of parameter names and values. Each parameter name is terminated with a colon character:

```
{Command name}: {Parameter}: {Value} {Parameter}: {Value} ...↵
```

Multiline command syntax

The HyperDeck protocol also supports an equivalent multiline syntax where each parameter-value pair is entered on a new line. E.g.

```
{Command name}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
↵
```

Response syntax

Simple responses from the server consist of a three digit response code and descriptive text terminated by a new line:

```
{Response code} {Response text}↵
```

If a response carries parameters, the response text is terminated with a colon, and parameter name and value pairs follow on subsequent lines until a blank line is returned:

```
{Response code} {Response text}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
...
↵
```

Successful response codes

A simple acknowledgement of a command is indicated with a response code of 200:

```
200 ok↵
```

Other successful responses carry parameters and are indicated with response codes in the range of 201 to 299.

Failure response codes

Failure responses to commands are indicated with response codes in the range of 100 to 199:

```
100 syntax error
101 unsupported parameter
102 invalid value
103 unsupported
104 disk full
105 no disk
106 disk error
107 timeline empty
108 internal error
109 out of range
110 no input
111 remote control disabled
112 clip not found
120 connection failed
121 authentication failed
122 authentication required
150 invalid state
151 invalid codec
160 invalid format
161 invalid token
162 format not prepared
163 parameterized single line command not supported
```

Asynchronous response codes

The server may return asynchronous messages at any time. These responses are indicated with response codes in the range of 500 to 599:

```
5xx {Response Text}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
↵
```

Connection response

On connection, an asynchronous message will be delivered:

```
500 connection info:↵
protocol version: {Version}↵
model: {Model Name}↵
↵
```

Connection rejection

A limited number of clients may connect at a time. If too many clients attempt to connect concurrently, they will receive an error and be disconnected:

```
120 connection failed↵
```

Timecode syntax

Timecodes are expressed as non-drop-frame timecode in the format:

```
HH:MM:SS:FF
```

Handling of deck "remote" state

The “remote” command may be used to enable or disable the remote control of the deck. Any attempt to change the deck state over ethernet while remote access is disabled will generate an error:

```
111 remote control disabled↵
```

To enable or disable remote control:

```
remote: enable: {“true”, “false”} ↵
```

The current remote control state may be overridden allowing remote access over ethernet irrespective of the current remote control state:

```
remote: override: {“true”, “false”} ↵
```

The override state is only valid for the currently connected ethernet client and only while the connection remains open.

The “remote” command may be used to query the remote control state of the deck by specifying no parameters:

```
remote↵
```

The deck will return the current remote control state:

```
210 remote info:↵
enabled: {“true”, “false”}↵
override: {“true”, “false”}↵
↵
```

Asynchronous remote control information change notification is disabled by default and may be configured with the “notify” command. When enabled, changes in remote state will generate a “510 remote info:”asynchronous message with the same parameters as the “210 remote info:” message.

Closing connection

The "quit" command instructs the server to cleanly shut down the connection:

```
quit↵
```

Checking connection status

The "ping" command has no function other than to determine if the server is responding:

```
ping↵
```

Getting help

The "help" or "?" commands return human readable help text describing all available commands and parameters:

```
help↵
```

Or:

```
?↵
```

The server will respond with a list of all supported commands:

```
201 help:↵
{Help Text}↵
{Help Text}↵
↵
```

Switching to preview mode

The "preview" command instructs the deck to switch between preview mode and output mode:

```
preview: enable: {"true", "false"}↵
```

Playback will be stopped when the deck is switched to preview mode. Switching to playback is not permitted during record. Use the stop command to stop recording before switching to playback.

Controlling device playback

The “play” command instructs the deck to start playing:

```
play↵
```

The play command accepts a number of parameters which may be used together in most combinations.

By default, the deck will play all remaining clips on the timeline then stop.
The “single clip” parameter may be used to override this behavior:

```
play: single clip: {“true”, “false”}↵
```

By default, the deck will play at normal (100%) speed. An alternate speed may be specified in percentage between -5000 to 5000:

```
play: speed: {% normal speed}↵
```

By default, the deck will stop playing when it reaches to the end of the timeline. The “loop” parameter may be used to override this behavior:

```
play: loop: {“true”, “false”}↵
```

To play from the start of a particular clip:

```
play: clip id: {Clip Id}↵
```

To play from a position offset from the start of particular clip:

```
play: clip id: {Clid Id} timecode: +{timecode}↵
```

The “playrange” command returns the current playrange setting if any:

```
playrange↵
```

To override this behaviour and select a particular clip:

```
playrange set: clip id: {Clip ID}↵
```

To only play a certain number of clips starting at a particular clip:

```
playrange set: clip id: {n} count: {m}↵
```

To only play a certain timecode range:

```
playrange set: in: {in timecode} out: {out timecode}↵
```

To play a certain timeline range:

```
playrange set: timeline in: {in} timeline out: {out}↵
```

To clear a set playrange and return to the default value:

```
playrange clear↵
```

The “play on startup command” instructs the deck on what action to take on startup. By default, the deck will not play. Use the “enable” command to start playback after each power up.

```
play on startup: enable {“true”, “false”}↵
```

By default, the unit will play back all clips on startup. Use the “single clip” command to override.

```
play on startup: single clip: {“true”, “false”}↵
```

The “play option” command queries the output frame for when playback stops:

```
play option↵
```

By default, the deck will display the last frame when playback stops. To override this behaviour, the “stop mode” parameter can be used:

```
play option: stop mode: {“lastframe”, “nextframe”, “black”}↵
```

Stopping deck operation

The "stop" command instructs the deck to stop the current playback or capture:

```
stop↵
```

Changing timeline position

The "goto" command instructs the deck to switch to playback mode and change its position within the timeline.

To go to the start of a specific clip:

```
goto: clip id: {Clip ID}↵
```

To move forward/back {count} clips from the current clip on the current timeline:

```
goto: clip id: +/-{count}↵
```

Note that if the resultant clip id goes beyond the first or last clip on timeline, it will be clamp at the first or last clip.

To go to the start or end of the current clip:

```
goto: clip: {“start”, “end”}↵
```

To go to the start of the first clip or the end of the last clip:

```
goto: timeline: {“start”, “end”}↵
```

To go to a specified timecode:

```
goto: timecode: {timecode}↵
```

To move forward or back a specified duration in timecode:

```
goto: timecode: {“+”, “-”}{duration in timecode}↵
```

To specify between slot 1 and slot 2:

```
goto: slot id: {Slot ID}↵
```

Note that only one parameter/value pair is allowed for each goto command.

Enumerating supported commands and parameters

The "commands" command returns the supported commands:

```
commands↵
```

The command list is returned in a computer readable XML format:

```
212 commands:
<commands>↵
     <command name="…"><parameter name="…"/>…</command>↵
     <command name="…"><parameter name="…"/>…</command>↵
     …
</commands>↵
↵
```

More XML tokens and parameters may be added in later releases.

Controlling asynchronous notifications

The “notify” command may be used to enable or disable asynchronous notifications from the server.
To enable or disable transport notifications:

```
notify: transport: {“true”, “false”}↵
```

To enable or disable slot notifications:

```
notify: slot: {“true”, “false”}↵
```

To enable or disable remote notifications:

```
notify: remote: {“true”, “false”}↵
```

To enable or disable configuration notifications:

```
notify: configuration: {“true”, “false”}↵
```

Multiple parameters may be specified. If no parameters are specified, the server returns the current state of all notifications:

```
209 notify:↵
transport: {“true”, “false”}↵
slot: {“true”, “false”}↵
remote: {“true”, “false”}↵
configuration: {“true”, “false”}↵
dropped frames: {“true”, “false”}↵
display timecode: {“true”, “false”}↵
timeline position: {“true”, “false”}↵
playrange: {“true”, “false”}↵
cache: {“true”, “false”}↵
dynamic range: {“true”, “false”}↵
slate: {“true”, “false”}↵
clips: {“true”, “false”}↵
disk: {“true”, “false”}↵
device info: {“true”, “false”}↵
nas: {“true”, “false”}↵
↵
```

Retrieving device information

The "device info" command returns information about the connected deck device:

```
device info↵
```

The server will respond with:

```
204 device info:↵
protocol version: {Version}↵
model: {Model Name}↵
unique id: {unique alphanumeric identifier}↵
slot count: {number of storage slots}↵
software version: {software version}↵
name: {device name}↵
↵
```

Retrieving slot information

The "slot info" command returns information about a slot. Without parameters, the command returns information for the currently selected slot:

```
slot info↵
```

If a slot id is specified, that slot will be queried:

```
slot info: slot id: {Slot ID}↵
```

The server will respond with slot specific information:

```
202 slot info:↵
slot id: {Slot ID}↵
slot name: {“slot name”}↵
device name: {identifying name for disk device}↵
status: {"empty", "mounting", "error", "mounted"}↵
volume name: {Volume name}↵
recording time: {recording time available in seconds}↵
video format: {disk's default video format}↵
blocked: {“true”, “false”}↵
remaining size: {remaining size in bytes}↵
total size: {total size in bytes}↵
↵
```

A slot can also be specificed by its device. This is particularly useful when there are multiple drives connected via USB. First list the available external drives:

```
external drive list↵
226 external drive info:↵
device: {device}↵
```

Then use slot info with device to query the drive:

```
slot info: device: {device}↵
```

Asynchronous slot information change notification is disabled by default and may be configured with the "notify" command. When enabled, changes in slot state will generate a "502 slot info:" asynchronous message with the same parameters as the "202 slot info:" message.

Retrieving clip information

The “disk list” command returns the information for each playable clip on a given disk. Without parameters, the command returns information for the current active disk:

```
disk list↵
```

If a slot id is specified, the disk in that slot will be queried:

```
disk list: slot id: {Slot ID}↵
```

The server responds with the list of all playable clips on the disk in the format of: Index, name, formats, and duration in timecode:

```
206 disk list:↵
slot id: {Slot ID}↵
{clip index}: {name} {file format} {video format} {Duration timecode}↵
{clip index}: {name} {file format} {video format} {Duration timecode}↵
…
↵
```

Note that the *clip index* starts from 1.

Retrieving clip count

The "clips count" command returns the number of clips on the current timeline:

```
clips count ↵
```

The server responds with the number of clips:

```
214 clips count: ↵
clip count: {Count}↵
```

Retrieving timeline information

The "clips get" command returns information for each available clip on the current timeline. Without parameters, the command returns information for all clips on timeline:

```
clips get↵
```

In version 1, the start timecode reported is either a clip timecode or a timeline timecode depending on the configured output timecode.

The server responds with a list of clip IDs, names and timecodes:

```
205 clips info:↵
clip count: {Count}↵
{Clip ID}: {Name} {Start timecode} {Duration timecode}↵
{Clip ID}: {Name} {Start timecode} {Duration timecode}↵
…
↵
```

The “clips get” command provides a more detailed response when using the “version: 2” parameter:

```
clips get: version: 2↵
```

The server responds with a list of clip IDs, timecodes, in points, out points and names. Clip name is the last field making it simpler to parse when names have embedded spaces.

```
{Clip ID}: {Clip start timecode} {Duration timecode} {inTimecode}
{outTimecode}
{name}↵
{Clip ID}: {Clip start timecode} {Duration timecode} {inTimecode}
{outTimecode}
{name}↵
…
↵
```

For models that support recursive timelines “clips get: version: 3” replaces the {name} field with {path to clip name} where the {path to clip name} can include directories and subdirectories.

Retrieving transport information

The “transport info” command returns the state of the transport:

```
transport info ↵
```

The server responds with transport specific information:

```
208 transport info:

status: {“preview”, “stopped”, “play”, “forward”, “rewind”,
“jog”, “shuttle”,”record”}↵

speed: {Play speed between -5000 and 5000 %}↵

slot id: {Slot ID or “none”}↵

slot name: {“slot name”}↵

device name: {identifying name for disk device}↵

clip id: {Clip ID or “none”}↵

single clip: {“true”, “false”}↵

display timecode: {timecode}↵

timecode: {timecode}↵

video format: {Video format}↵

loop: {“true”, “false”}↵

timeline: {n}↵

input video format: {Video format”}↵

dynamic range: {“off”, “Rec709”, “Rec2020_SDR”, “HLG”,
“ST2084_300”, “ST2084_500”, “ST2084_800”, “ST2084_1000”,
“ST2084_2000”, “ST2084_4000”, “ST2048” or “none”}↵

reference locked: {“false”, “true”}

↵
```

The "timecode" value is the timecode within the current timeline for playback or the clip for record. The "display timecode" is the timecode displayed on the front of the deck. The two timecodes will differ in some deck modes.

Asynchronous transport information change notification is disabled by default and may be configured with the "notify" command. When enabled, changes in transport state will generate a "508 transport info:" asynchronous message with the same parameters as the "208 transport info:" message.

Video Formats

The following video formats are currently supported on HyperDeck Extreme, HyperDeck Studio and HyperDeck Shuttle:

720p50, 720p5994, 720p60

1080p23976, 1080p24, 1080p25, 1080p2997, 1080p30, 1080p60

1080i50, 1080i5994, 1080i60

HyperDeck Extreme HDR models also support the following formats:

NTSC, PAL, NTSCp, PALp

2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p30, 2160p50, 2160p59.94, 2160p60

4Kp23976, 4Kp24, 4Kp25, 4Kp2997, 4Kp30

4Kp50, 4Kp5994, 4Kp60

HyperDeckExtreme 8K HDR adds support for the following 8K formats:

4320p23.98, 4320p24, 4320p25, 4320p29.97, 4320p30, 4320p50, 4320p59.94, 4320p60

8Kp23976, 8Kp24, 8Kp25

HyperDeck Studio Pro and Plus models support these 4k formats:

4Kp23976, 4Kp24, 4Kp25, 4Kp2997, 4Kp30

HyperDeck Studio 4K Pro adds support for the following 4k formats:

4Kp50, 4Kp5994, 4Kp60

Video format support may depend on the file format selected and may vary between models and software releases.

File Formats

All HyperDeck models currently support the following file formats:

H.264High_SDI

H.264High

H.264Medium

H.264Low

QuickTimeProResHQ

QuickTimeProRes

QuickTimeProResLT

QuickTimeProResProxy

QuickTimeDNxHD220x

DNxHD220x

QuickTimeDNxHD145

DNxHD145

QuickTimeDNxHD45

DNxHD45

HyperDeck Studio 4K Pro and HyperDeck Extrme HDR models also support the following file formats:

H.265High_SDI

H.265High

H.265Medium

H.265Low

QuickTimeDNxHR_HQX

DNxHR_HQX

QuickTimeDNxHR_SQ

DNxHR_SQ

QuickTimeDNxHR_LB

DNxHR_LB

Supported file formats may vary between models and software releases.

Querying and updating configuration information

The "configuration" command may be used to query the current configuration of the deck:

```
configuration↵
```

The server returns the configuration of the deck:

```
211 configuration:↵
audio input: {“embedded”, “XLR”, “RCA”}↵
audio mapping: {n}↵
video input: {“SDI”, “HDMI”, “component”, “composite”}↵
file format: {format}↵
audio codec: {“PCM”, “AAC”}↵
timecode input: {“external”, “embedded”, “preset”, “clip”}↵
timecode output: {“clip”, “timeline”}↵
timecode preference: {“default”, “dropframe”, “nondropframe”}↵
timecode preset: {timecode}↵
audio input channels: {n}↵
record trigger: {“none”, “recordbit”, “timecoderun”}↵
record prefix: {name}↵
record cache: {“true”, “false”}↵
append timestamp: {“true”, “false”}↵
genlock input resync: {“true”, “false”}↵
reference source: {“auto”, “input”, “external”}↵
xlr input id: {“n”}↵
xlr type: {”line”, ”mic”}↵
usb spill: {“true”, “false”}↵
↵
```

One or more configuration parameters may be specified to change the configuration of the deck.

To change the current video input:

```
configuration: video input: {“SDI”, “HDMI”, “component”}↵
```

Valid video inputs may vary between models. To configure the current audio input:

```
configuration: audio input: {“embedded”, “XLR”, “RCA”}↵
```

Valid audio inputs may vary between models.

To configure the current file format:

```
configuration: file format: {File format}↵
```

Note that changes to the file format may require the deck to reset, which will cause the client connection to be closed. In such case, response code 213 will be returned (instead of 200) before the client connection is closed:

```
“213 deck rebooting”
```

Asynchronous configuration information change notification is disabled by default and may be configured with the “notify” command. When enabled, changes in configuration will generate a “511 configuration:” asynchronous message with the same parameters as the “211 configuration:” message.

Selecting active slot and video format

The "slot select" command instructs the deck to switch to a specified slot, or/and to select a specified output video format.

To switch to a specified slot:

```
slot select: slot id: {slot ID}↵
```

To switch to a disk device, including USB drives that are not yet made active:

```
slot select: device: {identifying name for disk device}↵
```

To select the output video format:

```
slot select: video format: {video format}↵
```

Either or all slot select parameters may be specified. Note that selecting video format will result in a rescan of the disk to reconstruct the timeline with all clips of the specified video format.

Clearing the current timeline

The "clips clear" command instructs the deck to empty the current timeline:

```
clips clear↵
```

The server responds with

```
200 ok↵
```

Adding a clip to the current timeline

The "clips add:" command instructs the deck to add a clip to the current timeline:

```
clips add: name: {clip name}↵
```

The server responds with

```
200 ok↵
```

or in case of error

```
1xx {error description}↵
```

Configuring the watchdog

The “watchdog” command instructs the deck to monitor the connected client and terminate the connection if the client is inactive for at least a specified period of time.

To configure the watchdog:

```
watchdog: period: {period in seconds}↵
```

To avoid disconnection, the client must send a command to the server at least every {period} seconds.
Note that if the period is set to 0 or less than 0, connection monitoring will be disabled.

Network Area Storage

On networks using multicast DNS the “nas discovered” command will list network servers the HyperDeck has discovered:

```
nas discovered↵
225 nas host info:
CloudStoreMini.local. CloudStoreMini
CloudStore80.local. CloudStore80
CloudStore320.local. CloudStore320
```

A network share can be added as a bookmark to the HyperDeck using ‘nas add’

```
nas add:
url: smb://CloudStore80.local/Studio1
```

For shares that require a username and password consider using the secure mode of the HyperDeck Ethernet protocol to avoid passwords being sent as plaintext.

```
nas add:
url: smb://192.168.1.1/Main
username: user1234
password: Password1234
```

A share can be made available for recording and playback using ‘nas select’. If a bookmark exists for that share, ‘nas select’ will use the credentials stored in the bookmark. Otherwise ‘nas select’ will connect using Guest credentials.

```
nas select:
url: smb://192.168.1.1/Main
```

Only one share can be mounted at a time using ‘nas select’.

You can query the currently selected nas share using the ‘nas selected’ command. If ‘notify: slot: true’ was used an asynchronous notification will be sent when the share is mounted.

HyperDeck Control REST API

If you are a software developer you can build custom applications or leverage ready to use tools such as REST client or Postman to seamlessly control and interact with HyperDeck disk recorders using HyperDeck Control REST API. This API enables you to perform a wide range of operations, such as starting or stopping recordings, managing playback, accessing disk information and much more. Whether you're developing a custom application tailored to your specific needs or utilizing existing tools, this API empowers you to unlock the full potential of HyperDeck disk recorders with ease. We look forward to seeing what you come up with!

Transport Control API

API for controlling Transport on Blackmagic Design products.

GET /transports/0

Get device's basic transport status.

Response

200 - Transport status.

The response is a JSON object.

Name	Type	Description
mode	string	Transport mode. Possible values are: InputPreview, InputRecord, Output.

PUT /transports/0

Set device's basic transport status.

Parameters

Name	Type	Description
mode	string	Transport mode. Possible values are: InputPreview, Output.

Response

204 - Transport mode was set.

GET /transports/0/stop

Determine if transport is stopped.

Response

200 - Transport stop response.

The response is a JSON object.

PUT /transports/0/stop

Stop transport. Deprecated, use POST /tranports/0/stop instead.

Response

204 - Transport stopped.

POST /transports/0/stop

Stop transport.

Response

204 - Transport stopped.

GET /transports/0/play

Determine if transport is playing.

Response

200 - Transport play response.
The response is a JSON object.

PUT /transports/0/play

Start playing on transport. Deprecated, use POST /tranports/0/play instead.

Response

204 - Transport playing.

POST /transports/0/play

Start playing on transport.

Response

204 - Transport playing.

GET /transports/0/playback

Get playback state.

Response

200 - OK
The response is a JSON object.

Name	Type	Description
type	string	Possible values are: Play, Jog, Shuttle, Var.
loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
speed	number	Playback Speed, 1.0 for normal forward playback
position	integer	Playback position on the timeline in units of video frames

PUT /transports/0/playback

Set playback state.

Parameters

Name	Type	Description
type	string	Possible values are: Play, Jog, Shuttle, Var.
loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
speed	number	Playback Speed, 1.0 for normal forward playback
position	integer	Playback position on the timeline in units of video frames

Response

204 - No Content

GET /transports/0/record

Get record state.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
recording	boolean	Is transport in Input Record mode

PUT /transports/0/record

Set record state. Deprecated, use POST /transports/0/record instead.

Parameters

Name	Type	Description
recording	boolean	Is transport in Input Record mode
clipName	string	Used to set the requested clipName to record to, when specifying “recording” attribute to True

Response

204 - Recording started.

POST /transports/0/record

Start recording.

Parameters

Name	Type	Description
clipName	string	Specific name of clip to record to.

Response

204 - Recording started.

GET /transports/0/clipIndex

Get the clip index of the currently playing clip on the timeline.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clipIndex	number	The 0-based index of the clip being played on the timeline. null when there is no timeline or an empty timeline.

GET /transports/0/timecode

Get device's timecode.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
display	string	The display timecode serialised as a string.
timeline	string	The timeline timecode serialised as a string.

GET /transports/0/timecode/source

Get timecode source selected on device

Response

200 - OK

The response is a JSON object.

Name	Type	Description
timecode	string	Possible values are: Timeline, Clip.

GET /transports/0/clip

Get clip information about the currently recording (or transferring) clip, if it exists

Response

200 - Information about the clip currently being recorded.

The response is a JSON object.

Name	Type	Description
clip	object	
clip.clipUniqueId	integer	Unique ID used to identify this clip
clip.filePath	string	Path to the file relative to the root of a mount
clip.fileSize	integer	Size of file on disk in bytes
clip.codecFormat	object	
clip.codecFormat.codec	string	Currently selected codec.
clip.codecFormat.container	string	Multimedia container format.
clip.videoFormat (required)	object	Video format configuration.
clip.videoFormat.name	string	Video format serialised as a string.
clip.videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
clip.videoFormat.height	number	Height dimension of video format.
clip.videoFormat.width	number	Width dimension of video format.
clip.videoFormat.interlaced	boolean	Is the display format interlaced?
clip.startTimecode	string	Start timecode of the clip serialised as string
clip.durationTimecode	string	Duration of the clip in timecode format serialised as string
clip.frameCount	integer	Number of frames in clip; duration of the clip in frames

System Control API

API for controlling the System Modes on Blackmagic Design products.

GET /system

Get device system information.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codecFormat	object	
codecFormat.codec	string	Currently selected codec.
codecFormat.container	string	Multimedia container format.
videoFormat (required)	object	Video format configuration.
videoFormat.name	string	Video format serialised as a string.
videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
videoFormat.height	number	Height dimension of video format.
videoFormat.width	number	Width dimension of video format.
videoFormat.interlaced	boolean	Is the display format interlaced?

GET /system/product

Get device product information.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
deviceName	string	Name of device as displayed in Setup
productName	string	Device's product name
softwareVersion	string	Software version running on device

GET /system/supportedCodecFormats

Get the list of supported codecs.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codecs	array	
codecs[i]	object	
codecs[i].codec	string	Currently selected codec.
codecs[i].container	string	Multimedia container format.

GET /system/codecFormat

Get the currently selected codec.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codec	string	Currently selected codec.
container	string	Multimedia container format.

PUT /system/codecFormat

Set the codec.

Parameters

Name	Type	Description
codec	string	Currently selected codec.
container	string	Multimedia container format.

Response

204 - The codec updated successfully.

GET /system/videoFormat

Get the currently selected video format.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
name	string	Video format serialised as a string.
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

PUT /system/videoFormat

Set the timeline video format. Deprecated, use PUT /timelines/0/videoFormat instead.

Parameters

This parameter can be one of the following types:

Name	Type	Description
name	string	Video format serialised as a string.

Name	Type	Description
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

Response

204 - The video format updated successfully.

400 - Invalid request.

409 - Operation unsupported in the current state.

Media Control API

API for controlling media devices in Blackmagic Design products.

GET /media/workingset

Get the list of media devices currently in the working set.

Response

200 - The list of media devices in the working set. Entries are null if there is no media device in that slot.

The response is a JSON object.

Name	Type	Description
size	integer	The fixed size of this device's working set
workingset (required)	array	
workingset[i]	object	
workingset[i].index	integer	Index of this media in the working set
workingset[i].activeDisk	boolean	Is this current item the active disk
workingset[i].volume	string	Volume name
workingset[i].deviceName	string	Internal device name of this media device
workingset[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
workingset[i].totalSpace	integer	Total space on media device in bytes
workingset[i].remainingSpace	integer	Remaining space on media device in bytes
workingset[i].clipCount	integer	Number of clips currently on the device

GET /media/active

Get the currently active media device.

Response

200 - The current active media device.

The response is a JSON object.

Name	Type	Description
workingsetIndex	integer	Working set index of the active media device
deviceName	string	Internal device name of this media device

204 - No media is currently active

PUT /media/active

Set the currently active media device.

Parameters

Name	Type	Description
workingsetIndex	integer	Working set index of the media to become active

Response

204 - The active media device was set successfully.

400 - Setting the currently active media device is not possible in the current state.

GET /media/devices/doformatSupportedFilesystems

Get the list of filesystems available to format the device.

Response

200 - The list of filesystems permitted for formatting.

The response is a JSON object.

GET /media/devices/{deviceName}

Get information about a requested device.

Parameters

Name	Type	Description
{deviceName}	string	

Response

200 - Information about the requested device.

The response is a JSON object.

Name	Type	Description
state	string	The current state of the media device. Possible values are: None, Scanning, Mounted, Uninitialised, Formatting, RaidComponent.

400 - Invalid device name

404 - Device not found

GET /media/devices/{deviceName}/doformat

Get a format key, used to format the device with a PUT request.

Parameters

Name	Type	Description
{deviceName}	string	

Response

200 - Format prepared

The response is a JSON object.

Name	Type	Description
deviceName	string	Internal device name of this media device
key	string	The key used to format this device, it must be fetched with the GET request and then provided back with a PUT request

400 - Cannot format the device

404 - Device not found

PUT /media/devices/{deviceName}/doformat

Perform a format of the media device.

Parameters

Name	Type	Description
{deviceName}	string	

Name	Type	Description
key	string	The key used to format this device, it must be fetched with the GET request and then provided back with a PUT request
filesystem	string	Filesystem to format to. GET doFormatSupportedFilesystems returns list of supported filesystems.
volume	string	Volume name to set for the disk after format

Response

204 - Format successful

400 - Cannot format the device, invalid filesystem or key

404 - Device not found

Timeline Control API

API for controlling playback timeline.

GET /timelines/0

Get the playback timeline.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clips	array	
clips[i]	object	
clips[i].clipUniqueId	integer	Unique identifier used to identify this media clip. If the same media clip is added to the timeline multiple times, each timeline clip has the same clipUniqueId
clips[i].frameCount	integer	Duration of timeline clip in frames, the number of frames in this clip on the timeline
clips[i].durationTimecode	string	Duration of the timeline clip in timecode format serialised as string. This will differ to durationTimecode reported in /clips for this clipUniqueId if clipIn or frameCount was specified when adding this clip to the timeline.
clips[i].clipIn	string	In frame offset for the clip on the timeline, where 0 is the first frame of the on-disk clip
clips[i].inTimecode	string	Clip timecode of the first frame of this timeline clip serialised as string (clip startTimecode + clipIn frames)
clips[i].timelineIn	string	Timeline position of the first frame of this clip, where 0 is the first frame of the timeline
clips[i].timelineInTimecode	string	Timeline timecode of the first frame of this timeline clip serialised as string

Response

404 - No timeline / disk available.

DELETE /timelines/0

Clear the current playback timeline. Deprecated, prefer to use POST /timelines/0/clear

Response

204 - The timeline was cleared.

POST /timelines/0

Add a clip to the timeline.

Parameters

Name	Type	Description
insertBefore	integer	Clip(s) will be inserted before this timeline clip index. If omitted, inserts to the end of the timeline. 0 inserts to the beginning of the timeline.
clips		

Response

204 - The clip was added to the timeline as specified.

POST /timelines/0/add

Add a clip to the end of the timeline. Deprecated, use POST /timelines/0 to add clips within the timeline.

Parameters

This parameter can be one of the following types:

Name	Type	Description
clips	integer	Unique ID (clipUniqueId) of the clip to add to the timeline

Name	Type	Description
clips	array	
clips[i]	integer	Unique ID (clipUniqueId) of the clip to add to the timeline

Response

204 - The clip was added to the end of the timeline.

DELETE /timelines/0/clear

Clear the playback timeline.

Response

204 - The timeline was cleared.

DELETE /timelines/0/clips/{timelineClipIndex}

Remove the specified clip from the timeline.

Parameters

Name	Type	Description
{timelineClipIndex}	integer	

Response

204 - The specified clip was removed from the timeline.

Event Control API

API For working with built-in websocket.

GET /event/list

Get the list of events that can be subscribed to using the websocket API.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
events	array	
events[i]	string	List of events that can be subscribed to using the websocket API

Clips Control API

API for listing clips on disk.

GET /clips

Get the list of clips on the active disk.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clips	array	
clips[i]	object	
clips[i].clipUniqueId	integer	Unique ID used to identify this clip
clips[i].filePath	string	Path to the file relative to the root of a mount
clips[i].fileSize	integer	Size of file on disk in bytes
clips[i].codecFormat	object	
clips[i].codecFormat.codec	string	Currently selected codec.
clips[i].codecFormat.container	string	Multimedia container format.
clips[i].videoFormat (required)	object	Video format configuration.
clips[i].videoFormat.name	string	Video format serialised as a string.
clips[i].videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
clips[i].videoFormat.height	number	Height dimension of video format.
clips[i].videoFormat.width	number	Width dimension of video format.
clips[i].videoFormat.interlaced	boolean	Is the display format interlaced?
clips[i].startTimecode	string	Start timecode of the clip serialised as string
clips[i].durationTimecode	string	Duration of the clip in timecode format serialised as string
clips[i].frameCount	integer	Number of frames in clip; duration of the clip in frames

Response

404 - There is no active disk

HyperDeck Control API

API for controlling HyperDecks.

POST /system/reboot

Reboots the device.

Response

204 - The device will reboot immediately.

409 - Rebooting is not possible in the current state.

GET /system/uptime

Gets the current system uptime.

Response

200 - The current system uptime

The response is a JSON object.

Name	Type	Description
uptimeSeconds	integer	The system uptime in seconds

PUT /system/identify

Sets the identify mode. If set to true, will exit identify mode after 10 seconds.

Parameters

Name	Type	Description
enabled	boolean	Is the device identifying itself?

Response

204 - Identify updated successfully.

GET /transports/0/recordCache

Gets information about the recording cache.

Response

200 - Current information about the recording cache

The response is a JSON object.

Name	Type	Description
status	string	The current status of the cache. “none” means no cache is detected by the device. Possible values are: undetected, unformatted, idle, transferring, queued, recording, disabled.
remainingRecordingTime	integer	The remaining recording time in seconds.
transferringDevice	string	The device name of the disk the cache is currently transferring to.

GET /transports/0/recordCache/enabled

Checks if the record cache is enabled.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
enabled	boolean	Is the record cache enabled?

PUT /transports/0/recordCache/enabled

Enables or disables the record cache. Has no effect if cache is not supported / installed / formatted.

Parameters

Name	Type	Description
enabled	boolean	Is the record cache enabled?

Response

204 - Record cache enabled / disabled was changed.

GET /transports/0/record/spillOrder

Gets media devices in order of which will next be spilled to.

Response

200 - The media device spill order

The response is a JSON object.

Name	Type	Description
devices	array	
devices[i]	object	
devices[i].deviceName	string	Internal device name of the drive.

POST /transports/0/record/spillToNewFile

Spills to a new file.

Response

204 - Spilled to a new file.

POST /transports/0/record/spillToNextDevice

Spills to the next media device

Response

204 - Spilled to the specified drive.

GET /transports/0/inputVideoFormat

Gets the video format of the input video signal.

Response

200 - The video format of the input video signal. “inputVideoFormat” is null when there is no timeline.

The response is a JSON object.

Name	Type	Description
inputVideoFormat (required)	object	Video format configuration.
inputVideoFormat.name	string	Video format serialised as a string.
inputVideoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
inputVideoFormat.height	number	Height dimension of video format.
inputVideoFormat.width	number	Width dimension of video format.
inputVideoFormat.interlaced	boolean	Is the display format interlaced?

GET /transports/0/supportedInputVideoSources

Gets the currently supported input video signal sources.

Response

200 - The supported input video signal sources.

The response is a JSON object.

Name	Type	Description
supportedInputVideoSources	array	
supportedInputVideoSources[i]	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

GET /transports/0/inputVideoSource

Gets the source of the input video signal.

Response

200 - The input video signal source. The source will be one in the list from GET /transports/0/supportedInputVideoSources.

The response is a JSON object.

Name	Type	Description
inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

PUT /transports/0/inputVideoSource

Sets the source of the input video signal.

Parameters

Name	Type	Description
inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

Response

204 - The source of the input video signal was set successfully.

400 - The source specified was invalid or unsupported.

GET /timelines/0/playRange

Gets the current timeline play range. playRange is null if playing the whole timeline, or there is no play range.

Response

200 - The current timeline play range.

The response is a JSON object.

Name	Type	Description
playRange		

PUT /timelines/0/playRange

Sets the timeline play range.

Parameters

Name	Type	Description
playRange		

Response

204 - The timeline play range was set successfully.

POST /timelines/0/playRange/clear

Clears the timeline play range, sets the play range to be the whole timeline.

Response

204 - The timeline play range was cleared successfully.

GET /timelines/0/videoFormat

Gets the video format of the timeline.

Response

200 - The video format of the timeline. “videoFormat” is null when there is no timeline.

The response is a JSON object.

Name	Type	Description
videoFormat (required)	object	Video format configuration.
videoFormat.name	string	Video format serialised as a string.
videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
videoFormat.height	number	Height dimension of video format.
videoFormat.width	number	Width dimension of video format.
videoFormat.interlaced	boolean	Is the display format interlaced?

PUT /timelines/0/videoFormat

Sets the video format of the timeline.

Parameters

This parameter can be one of the following types:

Name	Type	Description
name	string	Video format serialised as a string.

Name	Type	Description
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

Response

204 - The timeline video format was set successfully.

400 - The requested video format was invalid.

409 - The video format cannot be changed at this time.

POST /timelines/0/rebuild

Rebuilds the timeline with default rules in the current timeline format.

Response

204 - The timeline was rebuilt with default rules.

GET /media/external

Gets the list of present external media devices.

Response

200 - The list of present external media devices

The response is a JSON object.

Name	Type	Description
devices	array	
devices[i] (required)	object	
devices[i].volume	string	Volume name
devices[i].deviceName	string	Internal device name of this media device
devices[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
devices[i].totalSpace	integer	Total space on media device in bytes
devices[i].remainingSpace	integer	Remaining space on media device in bytes
devices[i].clipCount	integer	Number of clips currently on the device

GET /media/external/selected

Gets the current selected external media device.

Response

200 - The selected external media device

The response is a JSON object.

Name	Type	Description
selected	object	
selected.deviceName	string	Internal device name of the drive.

404 - No selected external media has been selected

PUT /media/external/selected

Sets the current selected external media device.

Parameters

Name	Type	Description
selected	object	
selected.deviceName	string	Internal device name of the drive.

Response

204 - The selected external media device was set successfully.

GET /media/nas/discovered

Gets the NAS hosts discoverable by the device.

Response

200 - The list of discovered NAS hosts

The response is a JSON object.

Name	Type	Description
hosts	array	
hosts[i]	object	
hosts[i].hostName	string	The hostname of the NAS host
hosts[i].friendlyName	string	The friendly name of the NAS host
hosts[i].ip	string	The IP address of the NAS host

GET /media/nas/bookmarks

Gets all NAS share bookmarks.

Response

200 - The list of NAS share bookmarks

The response is a JSON object.

Name	Type	Description
hosts	array	
hosts[i] (required)	object	
hosts[i].url	string	URL of the NAS share

POST /media/nas/bookmarks

Add a new NAS share bookmarks.

Parameters

Response

204 - The NAS bookmark was added successfully.

400 - The NAS bookmark could not be added.

GET /media/nas/bookmarks/{url}

Get information about a requested network share bookmark.

Parameters

Name	Type	Description
{url}	string	

Response

200 - Information about the requested network share bookmark.

The response is a JSON object.

Name	Type	Description
url	string	URL of the NAS share

404 - Network share bookmark not found

PUT /media/nas/bookmarks/{url}

Adds a bookmark with the requested URL.

Parameters

Name	Type	Description
{url}	string	

Name	Type	Description
username	string	Default value is: guest.
password	string	

Response

204 - The NAS bookmark has been created.

400 - The NAS bookmark could not be created.

DELETE /media/nas/bookmarks/{url}

Deletes a bookmark with the requested URL.

Parameters

Name	Type	Description
{url}	string	

Response

204 - The NAS bookmark has been deleted.

GET /media/nas/selected

Gets the currently selected share bookmark.

Response

200 - Information about the selected network share bookmark.

The response is a JSON object.

Name	Type	Description
selected	object	
selected.url	string	URL of the NAS share

404 - No NAS drive has been selected.

PUT /media/nas/selected

Sets the selected share bookmark to the requested bookmark, or clears the bookmark.

Parameters

Name	Type	Description
selected	object	
selected.url	string	URL of the NAS share

Response

204 - The selected NAS bookmark was set.

400 - The selected NAS bookmark could not be set.

Notification websocket - 1.0.0

Service that notifies subscribers of device state changes.

messages

Subscribe (The messages from the server/device)

Response Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: subscribe, unsubscribe, listSubscriptions, listProperties, websocketOpened .
.data.properties	array	
.data.properties[i]	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.values	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.data.success	boolean	
.type	string	Possible values are: response .
.id	number	Optional parameter that repeats the id in the output for tracking messages

Event Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: propertyValueChanged .
.data.property	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.value	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.type	string	Possible values are: event .

Publish (The messages that user can send to the server/device)

Response Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: subscribe, unsubscribe, listSubscriptions, listProperties, websocketOpened .
.data.properties	array	
.data.properties[i]	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.values	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.data.success	boolean	
.type	string	Possible values are: response .
.id	number	Optional parameter that repeats the id in the output for tracking messages

Device Properties

/media/workingset

The value JSON returned via the eventResponse when the /media/workingset property changes on the device:

Name	Type	Description
size	integer	The fixed size of this device's working set
workingset (required)	array	
workingset[i]	object	
workingset[i].index	integer	Index of this media in the working set
workingset[i].activeDisk	boolean	Is this current item the active disk
workingset[i].volume	string	Volume name
workingset[i].deviceName	string	Internal device name of this media device
workingset[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
workingset[i].totalSpace	integer	Total space on media device in bytes
workingset[i].remainingSpace	integer	Remaining space on media device in bytes
workingset[i].clipCount	integer	Number of clips currently on the device

/media/active

The value JSON returned via the eventResponse when the /media/active property changes on the device:

Name	Type	Description
.workingsetIndex	integer	Working set index of the active media device
.deviceName	string	Internal device name of this media device

/system

The value JSON returned via the eventResponse when the /system property changes on the device:

Name	Type	Description
.codecFormat	object	Currently selected codec
.codecFormat.codec	string	Currently selected codec
.codecFormat.container	string	Multimedia container format
.videoFormat	string	Name of the video format

/system/codecFormat

Currently selected codec

The value JSON returned via the eventResponse when the /system/codecFormat property changes on the device:

Name	Type	Description
.codec	string	Currently selected codec
.container	string	Multimedia container format

/system/videoFormat

Name of the video format

The value JSON returned via the eventResponse when the /system/videoFormat property changes on the device:

Name	Type	Description

/timelines/0

The value JSON returned via the eventResponse when the /timelines/0 property changes on the device:

Name	Type	Description
.clips	array	
.clips[i]	object	
.clips[i].clipUniqueId	integer	Unique identifier used to identify this media clip. If the same media clip is added to the timeline multiple times, each timeline clip has the same clipUniqueId
.clips[i].frameCount	integer	Duration of timeline clip in frames, the number of frames in this clip on the timeline
.clips[i].durationTimecode	string	Duration of the timeline clip in timecode format serialised as string. This will differ to durationTimecode reported in /clips for this clipUniqueId if clipIn or frameCount was specified when adding this clip to the timeline.
.clips[i].clipIn	string	In frame offset for the clip on the timeline, where 0 is the first frame of the on-disk clip
.clips[i].inTimecode	string	Clip timecode of the first frame of this timeline clip serialised as string (clip startTimecode + clipIn frames)
.clips[i].timelineIn	string	Timeline position of the first frame of this clip, where 0 is the first frame of the timeline
.clips[i].timelineInTimecode	string	Timeline timecode of the first frame of this timeline clip serialised as string

/transports/0

The value JSON returned via the eventResponse when the /transports/0 property changes on the device:

Name	Type	Description
.mode	string	Transport mode Possible values are: InputPreview, InputRecord, Output .

/transports/0/stop

true when transport mode is InputPreview or when in Output mode and speed is 0

The value JSON returned via the eventResponse when the /transports/0/stop property changes on the device:

Name	Type	Description

/transports/0/play

True when transport is in Output mode and speed is non-zero

The value JSON returned via the eventResponse when the /transports/0/play property changes on the device:

Name	Type	Description

/transports/0/playback

The value JSON returned via the eventResponse when the /transports/0/playback property changes on the device:

Name	Type	Description
.type	string	Possible values are: Play, Jog, Shuttle, Var .
.loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
.singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
.speed	number	Playback speed, 1.0 for normal forward playback
.position	integer	Playback position on the timeline in units of video frames

/transports/0/record

The value JSON returned via the eventResponse when the /transports/0/record property changes on the device:

Name	Type	Description
.recording	boolean	Is transport in Input Record mode

/transports/0/timecode

The value JSON returned via the eventResponse when the /transports/0/timecode property changes on the device:

Name	Type	Description
display	string	The display timecode serialised as a string.
timeline	string	The timeline timecode serialised as a string.

/transports/0/timecode/source

The value JSON returned via the eventResponse when the /transports/0/timecode/source property changes on the device:

Name	Type	Description
.timecode	string	Possible values are: Timeline, Clip .

/transports/0/clipIndex

The value JSON returned via the eventResponse when the /transports/0/clipIndex property changes on the device:

Name	Type	Description
.clipIndex	number	The 0-based index of the clip being played on the timeline. null when there is no timeline or an empty timeline.

/media/external

The value JSON returned via the eventResponse when the /media/external property changes on the device:

Name	Type	Description
.volume	string	Volume name
.deviceName	string	Name of media device
.remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
.totalSpace	integer	Total space on media device in bytes
.remainingSpace	integer	Remaining space on media device in bytes
.clipCount	integer	Number of clips currently on the device

/media/external/selected

The value JSON returned via the eventResponse when the /media/external/selected property changes on the device:

Name	Type	Description
.deviceName	string	Internal device name of this media device

/transports/0/inputVideoSource

The value JSON returned via the eventResponse when the /transports/0/inputVideoSource property changes on the device:

Name	Type	Description
.inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite .

/transports/0/inputVideoFormat

The value JSON returned via the eventResponse when the /transports/0/inputVideoFormat property changes on the device:

Name	Type	Description
.inputVideoFormat	string	Name of the video format

/timelines/0/videoFormat

The value JSON returned via the eventResponse when the /timelines/0/videoFormat property changes on the device:

Name	Type	Description
.videoFormat	string	Name of the video format

/media/nas/discovered

The value JSON returned via the eventResponse when the /media/nas/discovered property changes on the device:

Name	Type	Description
.hostName	string	Hostname of external network drive
.friendlyName	string	Name of external network drive
.ip	string	IP Address of external network drive

/media/nas/bookmarks

The value JSON returned via the eventResponse when the /media/nas/bookmarks property changes on the device:

Name	Type	Description
.hosts	array	
.hosts[i]	object	
.hosts[i].url	string	URL associated with bookmark

帮助

获得帮助

获得帮助最快捷的途径是登陆Blackmagic Design在线支持页面并浏览有关Blackmagic HyperDeck硬盘录机的最新支持信息和材料。

Blackmagic Design在线支持页面

请登陆Blackmagic Design支持中心www.blackmagicdesign.com/cn/support获得最新版操作手册、软件以及技术答疑文章。

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查看当前安装的软件版本

要检查您计算机上的Blackmagic HyperDeck软件版本，请打开“About Blackmagic HyperDeck Setup”窗口查看。

- 在Mac OS系统下，请到“应用程序”文件夹下打开Blackmagic HyperDeck Setup。到程序菜单中点击“About Blackmagic HyperDeck Setup”即可查看版本号。
- 在Windows系统下，请到开始菜单或开始界面打开Blackmagic HyperDeck Setup实用程序。点击“Help”（帮助）菜单并选择“About Blackmagic HyperDeck Setup”即可查看版本号。

如何获得软件更新

检查完电脑上安装的Blackmagic HyperDeck Setup软件版本号之后，请登陆网址www.blackmagicdesign.com/cn/support，访问Blackmagic Design支持中心查看最新版本。请及时将软件升级到最新版本，但切勿在重要项目制作过程中升级软件。

监管告知

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本设备经过测试，符合FCC规则的第15部分对A类数字设备的限制。这些限制旨在为运行于商业环境中的设备提供合理保护，使其免受有害干扰的影响。本设备可生成、使用且辐射射频能量，如果未按照安装手册来安装和使用本设备，则可能导致对无线电通信的有害干扰。在住宅区运行本产品可能会产生有害干扰，在这种情况下将由用户自行承担消除干扰的费用。

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R–R–BMD–20211410001

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ICES-3 (A)
NMB-3 (A)

本设备符合加拿大A类数码产品的相关标准。

任何对本产品的改装或预期用途之外的使用均可能导致相关标准认证无效。

必须使用有高品质屏蔽的HDMI电缆连接HDMI接口。

本设备经检测符合商业环境使用要求。在家用环境中，本设备可能会造成无线电干扰。

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本产品适合在环境温度低于40°C的热带地区使用。

确保设备四周留有足够的空间，不受阻碍。

设备内部没有操作人员可维护的零件。维修服务请联系当地Blackmagic Design服务中心。



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欧洲办事处

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Sloterdijk Teleport Towers Office 2.17,
Kingsfordweg 151,
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2024년 7월

설치 및 사용 설명서

Blackmagicdesign

HyperDeck
Shuttle HD



HyperDeck Shuttle HD



환영합니다

Blackmagic HyperDeck Shuttle HD 디스크 레코더를 구매해 주셔서 감사합니다.

Blackmagic HyperDeck 디스크 레코더를 처음 개발할 당시 저희는 속도가 빠른 SSD 스토리지를 사용하여 비디오 녹화 및 재생을 쉽게 할 수 있는 제품을 만들고자 했습니다. 이제 이렇게 HyperDeck Shuttle HD를 출시하게 되어 매우 기쁩니다.

HyperDeck Shuttle HD는 책상에 두고 사용할 수 있도록 설계된 작은 크기의 휴대용 HDMI 비디오 레코더입니다. 커다란 검색 다이얼과 친숙한 트랜스포트 컨트롤을 사용해 레코더를 한 손으로 운영할 수 있기 때문에 HyperDeck Shuttle HD는 라이브 프로덕션 작업 시 ATEM Mini 스위처와 함께 사용하기 완벽한 제품입니다. HyperDeck Shuttle HD는 텔레프롬프터로도 사용 가능합니다!

HyperDeck Shuttle HD는 ProRes, DNxHD, H.264 코덱을 사용하여 SD 카드나 외장 플래시 디스크에 영상을 녹화하기 때문에 매우 빠른 녹화 및 재생 속도를 제공합니다.

또한 자사 웹사이트 www.blackmagicdesign.com/kr 고객지원 페이지에서 최신 버전의 사용 설명서와 HyperDeck 관련 업데이트를 확인하시기 바랍니다. 최신 버전의 소프트웨어로 업데이트해야 모든 신규 기능을 사용하실 수 있습니다. 소프트웨어를 다운로드할 때 사용자 정보를 등록하시면 새로운 소프트웨어가 출시될 때마다 업데이트 소식을 받아보실 수 있습니다. 저희는 새로운 기능과 제품 향상을 위해서 끊임없이 노력하고 있으며, 항상 고객 여러분의 의견을 기다립니다.



Blackmagic Design의 CEO
그랜트 패티

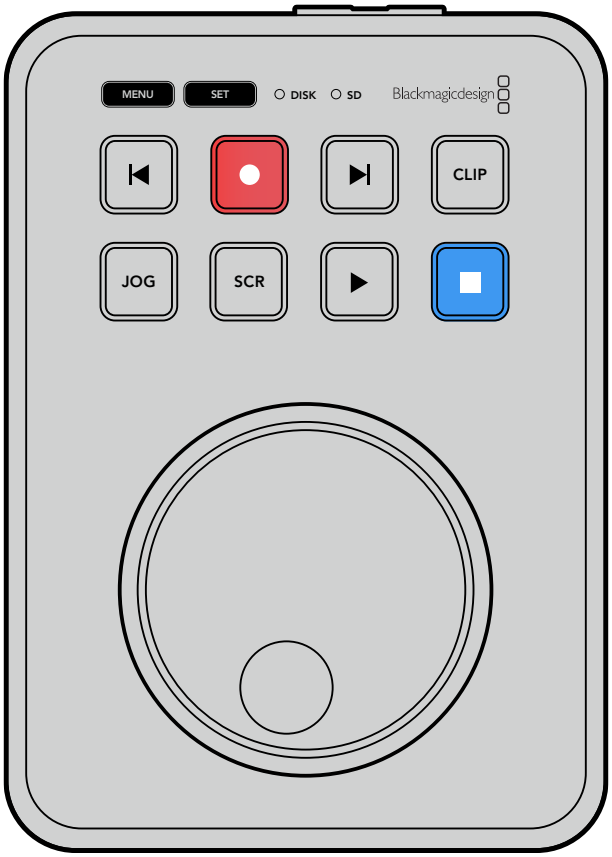
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시작하기

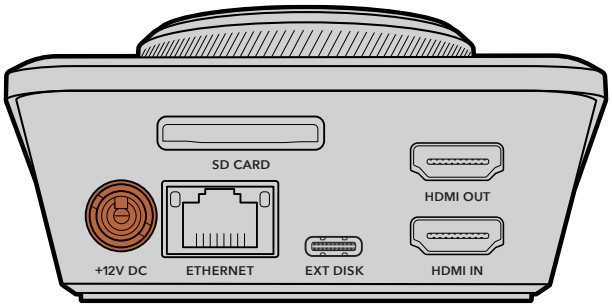
HyperDeck Shuttle HD는 간단히 전원을 연결하고 HDMI 비디오 소스에 연결한 다음 SD 카드나 외장 미디어를 연결해 녹화 버튼을 누르기만 하면 사용 준비가 완료됩니다.

여기서는 HyperDeck Shuttle HD를 사용하는 방법에 대해 설명합니다.



전원 연결하기

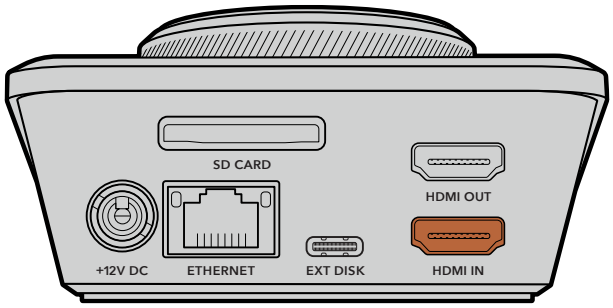
HyperDeck Shuttle HD에 전원을 연결하려면 우선 전원 어댑터를 뒷면 패널에 있는 전원 입력에 연결하세요. 전원 케이블이 실수로 빠지는 일이 없도록 잠금 링을 단단히 조이세요.



전원 어댑터를 HyperDeck Shuttle HD의 전원 입력에 연결하세요.

비디오 및 오디오 연결하기

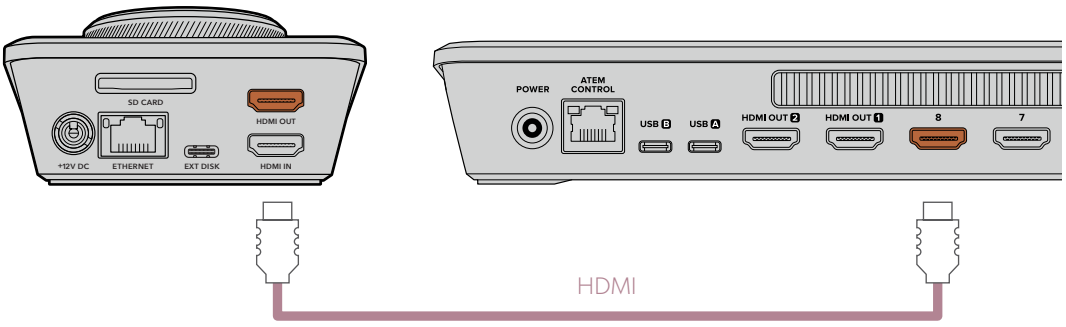
HyperDeck Shuttle HD에 비디오를 연결하려면, HDMI 비디오 소스를 뒷면 패널의 HDMI 입력 단자에 연결하세요.



HDMI 출력 단자에는 수신 장비를 연결하세요. 수신 장비로는 ATEM Mini 스위처나 HDMI TV가 있습니다.

HDMI 출력은 또한 HyperDeck의 설정 변경 시 설정 메뉴를 확인하는 용도로도 사용합니다. 이는 설정 메뉴를 HDMI 출력의 비디오 오버레이를 통해 볼 수 있기 때문입니다. 이러한 설정 변경 방법에 대한 자세한 정보는 본 사용 설명서의 [설정 변경하기] 부분을 참고하세요.

정보 연결된 디스플레이에 입력 비디오 소스가 나타나지 않을 경우, 현재 모드가 재생 모드로 설정되어 있지 않은지 확인하세요. 녹화 버튼을 누르면 녹화 모드가 활성화됩니다.



HDMI TV나 ATEM Mini 스위처 같은 수신 장비는 HDMI 출력에 연결하세요.

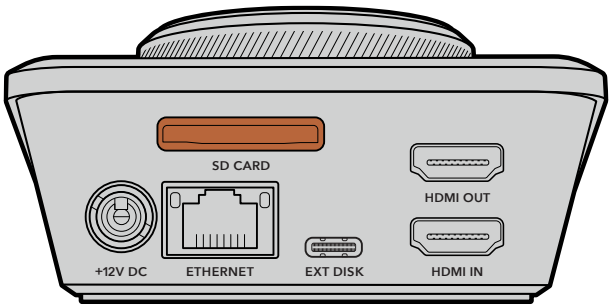
미디어 연결하기

모든 HyperDeck Shuttle HD 디스크 레코더는 설정 변경 없이 바로 녹화할 수 있는 상태로 출고됩니다. 포맷된 SD 카드 또는 외장 디스크만 있으면 바로 녹화를 시작할 수 있습니다.

메뉴 설정을 통해 미디어를 쉽게 포맷할 수 있습니다. 컴퓨터에서 미디어를 포맷할 수도 있습니다. 더 자세한 정보는 본 설명서의 [미디어 포맷하기] 부분을 참고하세요. 영상 녹화에 가장 적합한 미디어 유형과 권장 SD 카드 및 외장 디스크 목록에 대한 정보도 확인할 수 있습니다.

SD 카드 장착하기

1 SD 카드의 금색 접촉부가 위쪽으로 향하도록 잡고 미디어 슬롯에 잘 맞추세요. 이제 카드를 슬롯에 집어넣고 완전히 장착될 때까지 부드럽게 밀어 넣으세요.



2 이제 HyperDeck에서 SD 카드를 인식합니다. 그러면 HyperDeck Shuttle HD 상단에 있는 SD 카드 표시등에 녹색불이 들어옵니다. 확인 과정이 끝나면 표시등의 불이 꺼집니다.



이것으로 모든 준비가 완료되었습니다. 이제 HyperDeck Shuttle HD로 영상을 녹화 및 재생할 수 있습니다.

사용 설명서를 끝까지 읽고 클립 녹화 및 재생, 설정 변경 등에 대한 자세한 정보를 확인하세요.

비디오 녹화하기

비디오 소스가 HDMI 수신 장비에 나타나는 걸 확인하고 나면 녹화를 바로 시작할 수 있습니다.

녹화를 시작하려면 녹화 버튼을 누르세요. SD 카드에 녹화할 경우, SD 표시등에 빨간불이 들어오며 녹화 및 재생 버튼에도 불이 들어옵니다. 외장 디스크에 녹화할 경우엔 디스크 표시등에 빨간불이 들어옵니다.



녹화를 마치려면 정지 버튼을 누르세요.

재생

재생 버튼을 누르면 재생이 시작됩니다. 재생 중에는 재생 버튼에 불이 들어오며 DISK 또는 SD 미디어 슬롯 표시등에 녹색불이 들어옵니다.

여러 개의 녹화 클립이 존재할 경우, 건너뛰기 및 뒤로 가기 버튼을 눌러 클립 간을 이동할 수 있습니다.



스킵 버튼 사용하기

뒤로 가기 버튼을 누르면 클립이 시작 부분으로 큐잉됩니다. 버튼을 한 번 이상 누르면 이전 녹화 클립으로 이동됩니다.

건너뛰기 버튼을 눌러 클립 간을 이동할 수 있습니다. HyperDeck Setup 유틸리티에서 'Identify HyperDeck' 확인란이 선택된 경우에도 뒤로 가기/건너뛰기 버튼에 불이 들어옵니다.



건너뛰기 및 뒤로 가기 버튼을 누르면 각 클립의 시작 지점으로 큐잉됩니다.

정보 HyperDeck에서 비디오 파일을 재생하려면, 파일 녹화에 사용된 코덱과 일치하는 코덱으로 설정해야 합니다. 이 설정은 메뉴를 통해 설정할 수 있습니다. 더 자세한 정보는 본 설명서 뒤편의 [설정 변경하기] 부분을 참고하세요.

클립 반복 재생

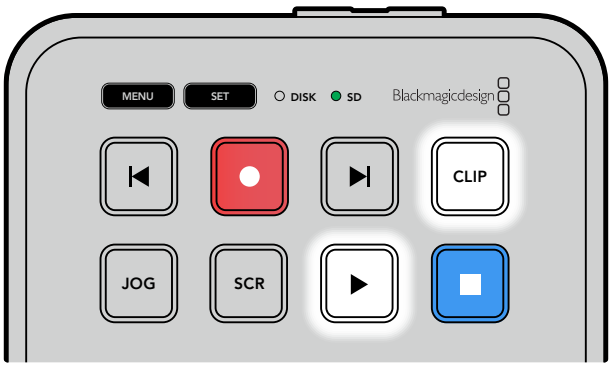
클립 재생 중에 재생 버튼을 한 번 더 누르면 HyperDeck Shuttle HD에서 정지 버튼을 누를 때까지 모든 클립을 반복 재생합니다.

클립 하나만 반복 재생하고자 할 경우, HyperDeck을 '클립' 모드로 하고 재생 버튼을 한 번 누르면 재생이, 한 번 더 누르면 반복 재생이 실행됩니다.

전체 클립 루프	클립 재생 중에 재생 버튼을 한 번 더 누르면 녹화된 모든 클립이 반복 재생됩니다.
현재 클립 루프	클립 모드에서 재생 버튼을 한 번 더 누르면 현재 클립이 반복 재생됩니다.

클립 모드

클립 모드에서는 재생이 단일 클립으로 제한됩니다. 예를 들어, 클립 모드를 활성화하면 클립을 셔틀하거나 다른 클립으로 건너뛸 수 있으며, 이후 재생 버튼을 누르면 클립이 끝나는 지점에서 재생이 종료됩니다.



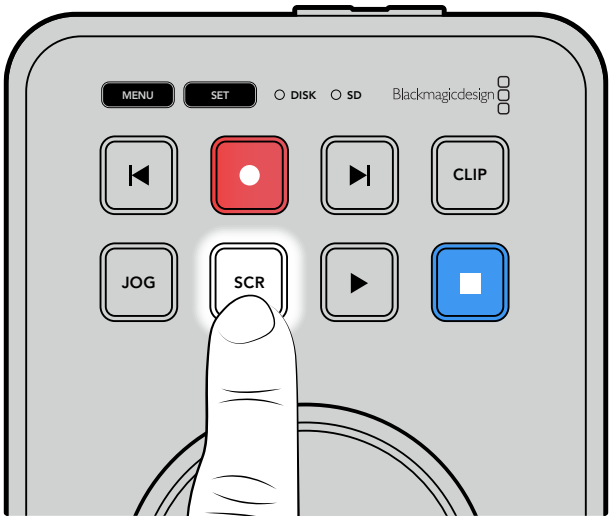
클립 모드가 선택된 상태에서 재생 버튼을 한 번 더 누르면 현재 클립이 반복 재생됩니다.

검색 다이얼 사용하기

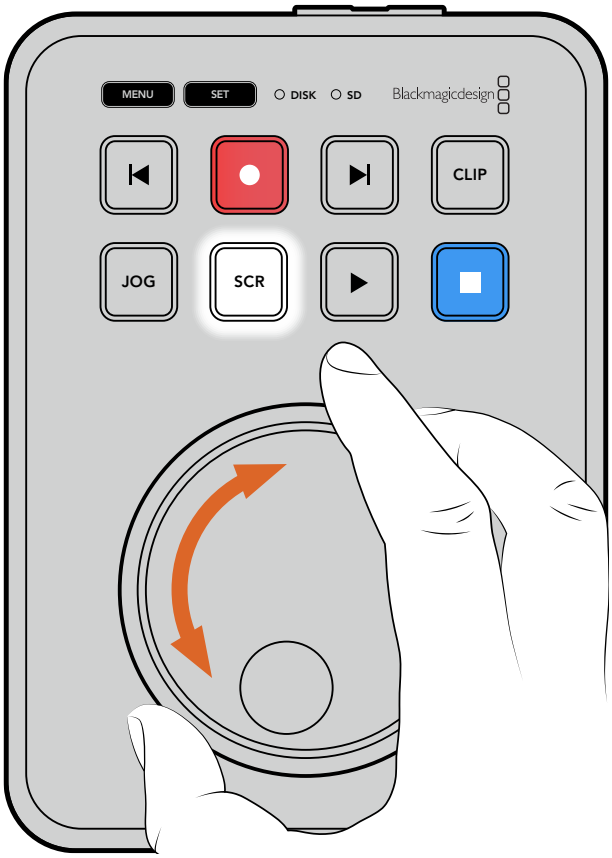
검색 다이얼을 사용해 클립 간을 신속하게 이동할 수 있으며, 특정 부분을 골라 재생하거나 프레임 단위로 검토할 수 있습니다. 이는 특정 부분을 찾을 때 중요한 기능으로, 다이얼을 돌려 클립을 시각적으로 모니터링할 수 있습니다. 또한 플레이헤드를 특정 큐 지점으로 이동시켜 생방송 도중 내보낼 클립을 준비할 때 유용한 기능입니다.

검색 다이얼 모드에는 조그, 셔틀, 스크롤이 있습니다.

JOG	**조그**	클립 전체를 재생해 프레임 단위로 정확하게 컨트롤할 수 있습니다.
SCR	**스크롤**	스크롤 모드에서는 신속하게 앞/뒤로 이동하면서 녹화된 모든 미디어를 검색할 수 있습니다. 검색 다이얼을 돌리면 다이얼을 돌리는 만큼 스크롤되어 재생 위치를 원하는 곳으로 완벽하게 조절할 수 있습니다. 스크롤 버튼을 누르면 볼륨 내비게이션 창도 나타나 현재 재생 중인 비디오 파일 경로를 확인할 수 있습니다. 볼륨 내비게이션 기능에 관한 자세한 정보는 본 성명서 뒷부분의 [볼륨 내비게이션] 부분을 참고하세요.
JOG SCR	**셔틀**	JOG 및 SCR 버튼을 동시에 누르면 셔틀 모드로 전환됩니다. 셔틀 모드로 전환되면 다이얼을 좌/우로 돌려 미디어를 되감기 또는 빨리 감기 할 수 있습니다. 다이얼을 돌리면 최대 50배속에 다다를 때까지 미디어가 빠른 속도로 셔틀됩니다. 셔틀 속도를 줄여서 완전히 멈추려면, 검색 다이얼을 처음 위치로 다시 돌리세요. 셔틀 도중에 특정 지점에서 멈추려면, 정지 버튼을 누르거나 재생 버튼을 눌러 현재 위치에서 재생이 다시 시작되도록 하세요. '설정' 메뉴를 사용해 최대 셔틀 속도를 줄일 수 있다는 점을 기억하세요. 더 자세한 정보는 본 설명서 뒤편의 [설정] 부분을 참고하세요.



JOG 또는 SCR 버튼을 눌러 조그 및 스크롤 검색 모드를 선택하세요.

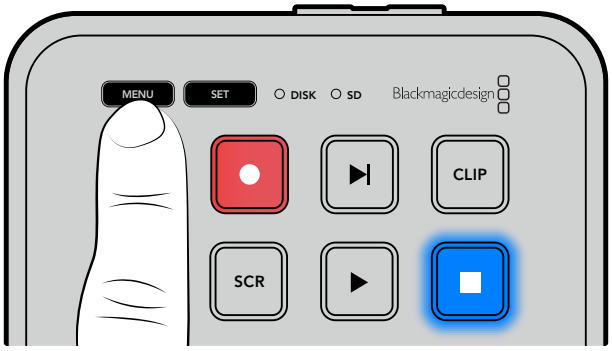


검색 모드를 선택한 다음 검색 다이얼을 돌리세요.

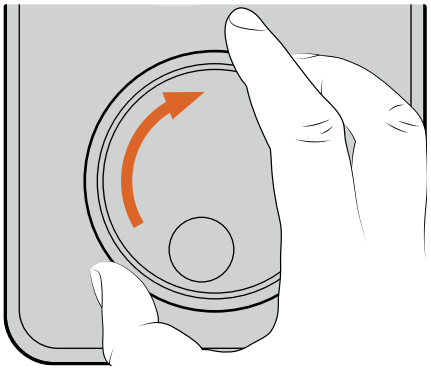
정보 일반 재생 모드로 돌아가려면 재생 또는 정지 버튼을 누르세요.

설정 변경하기

MENU 버튼을 누르면 연결된 HDMI 디스플레이의 좌측 하단에 비디오 오버레이 형태로 설정 메뉴가 나타납니다.

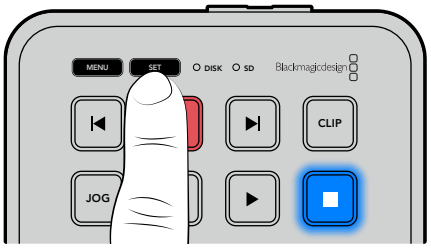


MENU 버튼을 눌러 설정 메뉴에 접속하세요.





검색 다이얼을 사용해 하위 메뉴 또는 설정 화면으로 이동하세요.





SET 버튼을 눌러 하위 메뉴 또는 설정 항목을 선택하세요.

검색 다이얼이나 건너뛰기 및 뒤로 가기 버튼을 사용해 설정을 조정하세요. SET 버튼을 눌러 선택을 완료하세요.

MENU 버튼을 누르면 이전 메뉴 항목으로 이동해 시작 화면으로 되돌아갑니다.

정보 설정 메뉴를 사용해 메뉴가 디스플레이의 네 모서리 중 원하는 부분에 나타나도록 할 수 있습니다. 설정 변경을 마치고 나면 해당 메뉴를 끄는 것이 좋습니다. 그래야 ATEM Mini Extreme과 같은 HDMI 스위처에 연결했을 때 HDMI 출력이 클린 피드로 출력됩니다.

설정

이 설정 메뉴는 녹화, 모니터링, 오디오, 저장 공간, 설정의 총 5개 카테고리로 구성되어 있습니다. 각 하위 메뉴에는 관련 설정이 포함되어 있으며, 대부분은 HyperDeck Shuttle HD 컨트롤 패널에서도 조절할 수 있습니다. 파일명 접두사와 같은 일부 설정은 편집이 불가능하기 때문에 회색으로 처리되어 나타납니다. 이런 경우엔 HyperDeck Setup 유틸리티에서 해당 설정을 조절할 수 있습니다.

녹화 메뉴



입력

HyperDeck Shuttle HD HDMI 입력이 디스플레이됩니다.

코덱

HyperDeck Shuttle HD는 H.264, Apple ProRes 및 DNxHD 코덱을 사용해 압축 비디오로 녹화합니다. 텔레프롬프트 기능을 사용하려면 '텔레프롬프터'를 선택하세요.

트리거 녹화

'비디오 시작/정지'와 '타임코드 런'의 두 가지 모드 중 선택할 수 있습니다.

Blackmagic Pocket Cinema Camera 4K 같은 일부 카메라는 외부 녹화 장비에 녹화를 시작하거나 정지할 때 HDMI를 통해 명령을 전송합니다. '비디오 시작/정지' 모드를 선택하면 촬영 카메라에서 녹화 버튼이 눌러지는 시점에 HyperDeck이 녹화를 시작/정지합니다.

'타임코드 런' 옵션은 유효한 타임코드 신호가 HDMI 입력을 통해 전송되는 시점에 녹화를 시작하도록 합니다. 타임코드 신호 입력이 멈추면 녹화도 자동으로 멈춥니다. '사용 안 함'을 선택하면 트리거가 비활성화됩니다.

참고 HDMI 카메라 영상을 녹화할 경우, 출력에 나타나는 오버레이도 영상과 함께 녹화되므로 오버레이 기능을 끈 상태에서 클린 피드만 출력되는지 확인하세요.

모니터링 메뉴



텔레프롬프터 레이아웃

모니터링 메뉴에는 HyperDeck Shuttle HD를 텔레프롬프터로 사용할 때 필요한 모든 설정이 포함되어 있습니다.

폰트 크기

'폰트 크기' 설정을 선택한 다음 SET 버튼을 눌러 텍스트 크기를 조절하세요. 다이얼을 시계 방향으로 돌려 증가시키거나 시계 반대 방향으로 돌려 감소시킬 수 있습니다.

줄 간격

다이얼을 돌려 줄 간격을 늘리거나 줄일 수 있습니다.

측면 여백

프롬프터 디스플레이의 양쪽 측면 여백 폭을 조절합니다.

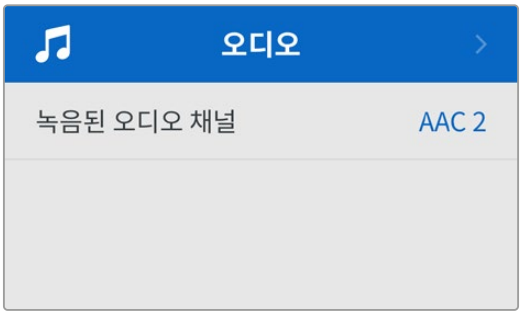
반전

카메라나 단상 앞에 텔레프롬프터 모니터가 유리에 반사되도록 설치해둔 경우, 진행자가 화면 내용을 읽을 수 있도록 반전 설정을 사용해야 합니다. 반전 모드는 두 가지 모드로 지원됩니다.

가로 뒤집기 - 텔레프롬프터 모니터가 유리의 바닥 면과 가깝게 설치된 경우에 사용하세요.

세로 뒤집기 - 텔레프롬프터 모니터가 유리의 바닥 면에서 멀리 떨어진 곳에 설치된 경우에 사용하세요.

오디오 메뉴

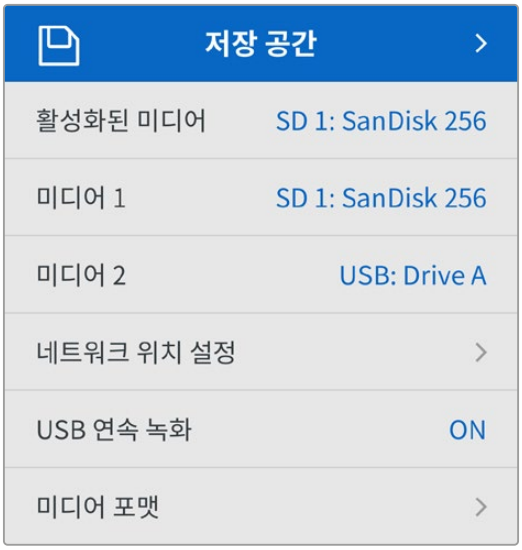


녹음된 오디오 채널

HyperDeck Shuttle HD를 사용하여 한 번에 최대 8개의 PCM 오디오 채널을 녹음할 수 있습니다. 녹화할 채널 수를 선택하려면, 녹음된 오디오 채널 목록을 확장한 다음 2채널 또는 8채널 중에서 선택하세요.

코덱이 H.264로 설정된 경우, 2채널의 AAC 오디오를 선택하면 유튜브에 바로 업로드할 수 있습니다.

저장 공간 메뉴



'저장 공간' 설정에는 연결된 미디어가 나타납니다. '미디어 1'에는 연결된 SD 카드명이, '미디어 2'에는 EXT DISK 단자에 연결된 모든 USB 플래시 디스크명이 표시됩니다. Blackmagic MultiDock 10G와 같은 USB 허브를 사용할 경우, 활성화된 디스크가 표시됩니다.

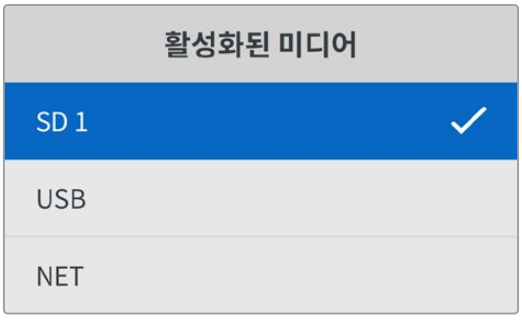
활성화된 미디어

HyperDeck Shuttle 사용 시 한 번에 SD 카드 1개와 여러 개의 외장 드라이브, 네트워크 스토리지를 동시에 연결할 수 있습니다. 따라서 한 대의 HyperDeck Shuttle 디스크 레코더를 사용해 테라바이트에 달하는 저장 공간을 녹화에 사용할 수 있습니다.

만약 한 개의 SSD 또는 드라이브만 연결되어 있다면 이 저장 공간이 모든 재생 및 녹화에 사용되는 미디어로 활성화됩니다. 하나 이상의 미디어를 사용한다면 재생 및 녹화에 어느 것을 사용할지 선택할 수 있습니다.

활성화된 미디어 선택하기

1. 검색 미디어를 사용하여 스토리지 메뉴의 '활성화된 미디어'를 하이라이트하고 깜박거리는 SET 버튼을 누르세요.
2. 연결된 미디어가 목록에 나타납니다. 검색 다이얼을 사용해 녹화할 미디어를 선택하세요.



네트워크 위치 설정

HyperDeck Shuttle은 이더넷을 통해 Blackmagic Cloud 및 기타 네트워크 스토리지에 저장된 HD 미디어를 재생할 수 있습니다.

네트워크 스토리지 폴더에 연결하기

1. 검색 다이얼 및 SET 버튼을 사용하여 '네트워크 위치 설정'을 누르세요. 로컬 네트워크 검색 창이 나타납니다.
2. 사용자의 네트워크에서 검색된 모든 서버가 목록에 나타납니다. 검색 다이얼로 서버를 하이라이트한 뒤, SET 버튼을 눌러 선택하세요. 서버의 사용 가능한 공유 목록이 나타납니다. 검색 다이얼을 사용하여 선택하려는 공유 목록을 하이라이트하고 SET 버튼을 누른 다음, 사용하려는 폴더가 화면 상단에 표시될 때까지 계속하세요.
3. 이제 LCD 화면 상단에 폴더명이 나타납니다. 이 폴더에 녹화 및 재생하려면 검색 다이얼을 사용해 '현재 위치를 네트워크 위치로 설정'을 선택하고 SET 버튼을 누르세요. 확인란이 오른쪽에 나타납니다.



4. 연결이 완료되면 '미디어 2'의 스토리지 목록 중 '네트워크 위치' 밑에 해당 위치가 나타납니다.

HyperDeck Shuttle 디스크 레코더의 두 번째 미디어 슬롯은 USB 및 연결된 네트워크 폴더용입니다. 연결된 USB 드라이브 및 네트워크 스토리지 중 하나를 선택하려면 미디어 스토리지 메뉴에서 '미디어 2'을 선택하고 깜박거리는 SET 버튼을 누르세요. '미디어 2' 목록에서 사용하고자 하는 스토리지를 선택한 다음 SET 버튼을 누르세요. 이제 자동으로 스토리지 메뉴로 돌아갑니다. '미디어 2' 메뉴 하단에 있는 ' 네트워크 위치 삭제'를 선택하여 네트워크 스토리지를 삭제할 수도 있습니다.



참고 네트워크 볼륨으로부터 영상을 재생할 경우, HyperDeck Shuttle HD는 게스트가 서버에 로그인한 것으로 간주합니다. MENU 및 SET 버튼을 사용하기 때문에 로그인 및 비밀번호를 요구하는 서버 접속 기능은 현재 지원되지 않지만, HyperDeck 이더넷 프로토콜을 사용해 로그인 정보를 입력하도록 설정할 수 있습니다.

USB 연속 녹화

Blackmagic MultiDock 10G 등의 장비에 있는 EXT DISK 단자에 USB를 연결하여 하나 이상의 드라이브를 연결하고자 할 경우, 'USB 연속 녹화' 기능을 활성화하여 녹화가 한 외장 디스크에서 다른 디스크로 이어질 수 있도록 하세요.

미디어 포맷

SD 카드와 뒷면 EXT DISK 단자에 연결된 미디어는 장치에서 바로 포맷하거나, Mac/Windows 컴퓨터에서 포맷할 수 있습니다.

HyperDeck Shuttle HD에서 미디어 사용 준비하기

1. 검색 다이얼과 SET 버튼으로 포맷할 미디어를 선택하세요.
2. 해당 목록에서 포맷하려는 미디어를 선택하고 SET 버튼을 누르세요.
3. 포맷을 선택하고 SET 버튼을 누르세요.
4. 포맷하려는 카드와 선택된 포맷 옵션을 보여주는 확인 창이 나타납니다.
5. 작업 완료 후, 포맷 창이 나타나면 '확인'을 선택하세요.

Mac OS X 확장 포맷으로도 알려진 HFS+는 저널링이 가능하므로 사용을 권장합니다. 사용하는 저장 미디어에 문제가 생길 경우, 저널링이 적용된 미디어 카드의 데이터는 복원될 가능성이 훨씬 높습니다. HFS+는 Mac에서 기본 지원됩니다. exFAT는 Mac과 Windows에서 기본 지원되므로 추가 소프트웨어가 필요하지 않으나, 저널링을 지원하지는 않습니다. Mac/Windows 컴퓨터에서 미디어를 포맷하려면 [미디어 포맷하기] 부분을 참고하세요.

설정 메뉴

'설정' 메뉴에는 언어 선택, 기본 표준 설정, 메뉴 디스플레이, 네트워크 설정, 타임코드 설정 옵션이 포함되어 있습니다.



이름

한 대 이상의 HyperDeck Shuttle HD가 네트워크에 연결된 경우, 고유의 이름을 설정하여 다른 장치를 쉽게 구분할 수 있습니다. 이는 Blackmagic HyperDeck Setup 또는 터미널 응용 프로그램을 사용하는 Blackmagic HyperDeck 이더넷 프로토콜을 통해서도 설정할 수 있습니다. 해당 이름은 '설정' 메뉴에 나타납니다.

언어

HyperDeck Shuttle HD는 한국어, 영어, 중국어, 일본어, 스페인어, 독일어, 불어, 러시아어, 이탈리아어, 포르투갈어, 터키어, 우크라이나어, 폴란드어를 포함해 총 13개 언어를 지원합니다.

언어 설정 방법

1. '설정' 메뉴가 하이라이트되면 SET 버튼을 누르세요.
2. 검색 다이얼로 스크롤하여 '언어'를 선택한 뒤, SET 버튼을 누르세요.
3. 검색 다이얼로 원하는 언어를 선택한 뒤, SET 버튼을 누르세요. 언어가 선택되면 자동으로 설정 메뉴로 되돌아갑니다.

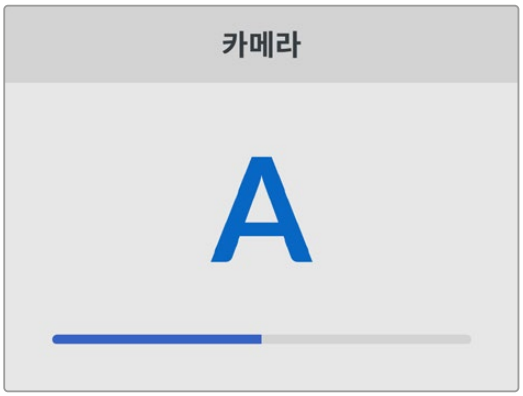
소프트웨어

현재 소프트웨어의 버전을 표시합니다.

카메라

이 설정은 HyperDeck을 사용해 여러 대의 카메라로부터 개별 카메라 파일을 녹화하여 DaVinci Resolve의 멀티카메라 타임라인으로 편집할 경우에 유용한 기능입니다.

파일 메타데이터에 개별 카메라 식별 글자가 나타나 DaVinci Resolve에서 동기화 빈 기능을 사용해 각각의 카메라 앵글을 쉽게 확인할 수 있습니다.



A~Z 또는 1~9를 사용해 카메라를 지정하세요.

기본 비디오 표준

HyperDeck Shuttle HD는 때때로 사용자가 사용하길 원하는 비디오 표준이 무엇인지 알지 못합니다. 이 설정을 통해 HyperDeck이 사용자가 가장 선호하는 비디오 표준을 알 수 있습니다.

한 가지 좋은 예는, HyperDeck Shuttle HD를 켰을 때 연결된 비디오 입력이 없고 삽입된 디스크에 저장된 파일들이 2개의 서로 다른 비디오 표준을 가지는 경우입니다. 이런 경우엔 HyperDeck에서 어느 비디오 표준을 사용하여 재생할까요? '기본 비디오 표준' 설정은 사용자가 선호하는 비디오 표준을 파악하여 해당 포맷으로 파일을 전환해 재생하도록 합니다.

'기본 비디오 표준'은, 처음으로 HyperDeck Shuttle HD를 켰을 때 연결된 비디오 및 삽입된 미디어 디스크가 없을 시에도 유용하게 사용됩니다. 이 경우, HyperDeck Shuttle HD는 모니터링 출력에 어느 비디오 표준을 사용할지 알지 못합니다. 이때 '기본 비디오 표준' 설정이 이를 알려줍니다.

하지만, '기본 비디오 표준'은 단순히 가이드 역할을 하며, 다른 어떤 설정도 덮어쓰지 않습니다. 따라서, 1개의 파일이 담긴 미디어 디스크를 재생하면 HyperDeck Shuttle HD에서 해당 파일의 비디오 표준으로 전환하여 재생을 실행합니다. 이는 단순히 디스크에 저장된 파일을 재생하려는 사용자의 의도가 명확하기 때문에 '기본 비디오 표준' 설정을 무시하게 됩니다.

녹화에도 비슷한 상황이 적용됩니다. 녹화 버튼을 누르면, HyperDeck은 비디오 입력 단자에 연결된 비디오 표준과 상관없이 그대로 녹화합니다. 또한 녹화를 마친 뒤, '기본 비디오 표준'과 일치하는 다른 파일이 디스크에 있더라도 HyperDeck Shuttle HD는 디스크에 방금 녹화한 비디오 표준 파일을 재생합니다. 이는 사용자가 방금 녹화한 비디오 표준과 동일한 비디오 표준으로 재생을 원하는 것으로 가정하기 때문입니다. 만약 미디어 디스크를 빼낸 후 다시 삽입하면 '기본 비디오 표준' 기본 설정을 사용하여 재생할 파일을 고르게 됩니다.

'기본 비디오 표준' 설정은 HyperDeck Shuttle HD가 어떤 결정을 내려야 할지 불명확할 때 오로지 가이드로써 사용됩니다. 이는 특정 방식으로 실행시키도록 우선하는 기능은 아닙니다.

최대 셔틀 속도

HyperDeck Shuttle HD의 최대 셔틀 속도는 50배속입니다. 속도를 줄이려면 다른 속도 프리셋을 선택하세요.

날짜 및 시간

시간 및 날짜를 정확하게 설정해야 HyperDeck Shuttle에서 녹화 정보가 네트워크 정보와 일치하게 될 뿐 아니라 일부 네트워크 스토리지 시스템에서 발생할 수 있는 충돌을 예방할 수 있습니다.



날짜 및 시간 자동 설정

날짜 및 시간을 자동으로 설정하게 하려면 '날짜 및 시간 자동 설정' 기능을 'ON'으로 설정하세요. 날짜 및 시간이 자동으로 설정되도록 하면 HyperDeck가 NTP 필드에서 설정된 네트워크 시간 프로토콜 서버를 사용합니다. 날짜 및 시간을 수동으로 설정하려면 이를 'OFF'로 설정하세요.

NTP

NTP 서버는 time.cloudflare.com으로 기본 설정되어 있지만, HyperDeck Setup을 사용하여 다른 NTP 서버를 수동으로 입력할 수 있습니다. NTP 서버 설정에 대한 더 자세한 정보는 본 설명서 뒷부분의 [HyperDeck Setup] 부분을 참고하세요.

날짜

날짜를 수동으로 입력하려면, 입력란을 선택하고 SET 버튼을 누르세요. 메뉴 다이얼을 사용하여 년/월/일을 선택하세요.

시간

시간을 설정하려면 '시간'을 선택하고 SET 버튼을 누르세요. 메뉴 다이얼을 사용하여 시간과 분을 조절하세요. 내부 시계는 24시간 형식으로 표시됩니다.

메뉴 설정하기

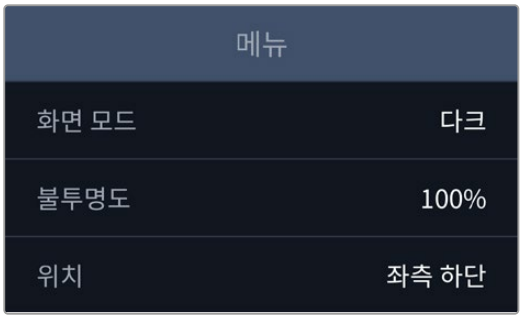
메뉴 설정을 사용하면 연결된 HDMI 디스플레이에 나타나는 메뉴의 위치와 화면 모드를 조절할 수 있습니다.



화면 모드

HyperDeck의 온스크린 메뉴를 다크 또는 라이트 모드로 설정할 수 있습니다. 라이트 모드는 미디어 화면이 어두울 경우나 텔레프롬프터 모드 사용 시 더욱 풍부한 콘트라스트를 제공합니다.





불투명도

이 레벨을 조절할 경우, 연결된 디스플레이에 나타나는 메뉴 오버레이 불투명도를 기본 설정된 100%에서 20%까지 줄일 수 있습니다.

위치

메뉴 오버레이는 화면 좌측 하단에 나타나도록 기본 설정되어 있습니다. 메뉴를 다른 위치로 옮기려면 '위치'를 선택한 다음 SET 버튼을 누르세요. 그러면 이제 메뉴 위치를 좌측 상단, 우측 상단, 좌측 하단, 우측 하단으로 설정할 수 있습니다.

네트워크 설정



프로토콜

Blackmagic HyperDeck은 DHCP로 기본 설정되어 있으므로, 장치를 연결하면 사용하는 네트워크 서버가 자동으로 IP 주소를 지정하여 다른 네트워크 설정을 변경하지 않아도 됩니다. 수동으로 IP 주소를 입력해야 하는 경우, 고정 IP 주소를 통해 연결하세요.

'프로토콜'을 선택한 상태에서 깜빡이는 SET 버튼을 눌러 메뉴에 접속한 뒤, '고정 IP'로 스크롤해 SET 버튼을 누르세요.

IP 주소, 서브넷 마스크, 게이트웨이, 프라이머리 DNS, 세컨더리 DNS

고정 IP를 선택한 후 네트워크 세부사항을 직접 입력할 수 있습니다.

IP 주소 변경하기

1. 검색 다이얼을 사용하여 'IP address'로 맞춘 뒤, HyperDeck의 전면 패널에서 깜박이는 SET 버튼을 누르세요.
2. 검색 다이얼을 사용하여 IP 주소를 조정한 다음 '설정'을 눌러 확인한 후 다음 값 설정 단계로 넘어갑니다.
3. SET 버튼을 눌러 변경 사항을 확인하고 다음 값으로 이동하세요.

IP 주소 입력이 끝나면 위 단계를 반복하여 서브넷 마스크 및 게이트웨이를 조정할 수 있습니다. 완료되면 깜박이는 MENU 버튼을 눌러 종료하고 시작 화면으로 돌아갑니다.

타임코드 설정하기

소스 타임코드, 타임코드 입력 및 출력 옵션과 현재 시각 타임코드, 또는 수동 타임코드 설정 등 타임코드 입/출력 옵션을 설정하세요.



입력

녹화 시 총 4개의 타임코드 입력 중 선택하여 사용할 수 있습니다.

비디오 입력	비디오 입력을 선택하면 SMPTE RP 188 메타데이터가 있는 HDMI 소스에서 타임코드를 가져와 사용합니다. 이를 통해 HDMI 소스와 HyperDeck Studio 녹화 파일 간 동기화가 유지됩니다.
내장 타임코드	내장 타임임코드 생성기를 통한 현재 시간 타임코드를 사용하고자 할 경우, 이 옵션을 선택하세요.
마지막 클립 이어가기	이 옵션을 선택하면, 이전 클립 마지막 프레임의 바로 다음 프레임에 이어 타임코드가 시작됩니다. 예를 들어, 첫 번째 클립이 10:28:30:10에 끝난다면 다음 클립의 타임코드는 10:28:30:11에서 시작합니다.
프리셋	타임코드를 수동으로 설정하는 경우 프리셋 옵션을 선택하세요. 녹화 클립은 프리셋 설정을 통한 특정 타임코드에서 시작합니다. 다음의 자세한 설명을 확인하세요.

드롭 프레임

29.97 혹은 59.94 프레임 레이트의 NTSC 소스로부터 타임코드를 전송받는 경우 '드롭 프레임' 또는 '논드롭 프레임' 타임코드를 선택할 수 있습니다. 소스가 불명확할 시 '기본값'을 선택하세요. 이 경우, 입력 소스의 표준을 그대로 사용하거나, 유효한 타임코드 입력이 없는 경우에는 드롭 프레임 방식으로 처리합니다.

프리셋

타임코드를 수동으로 설정하려면 SET 버튼을 누르고 검색다이얼과 SET 버튼을 사용하여 시작 시간을 입력하세요. 입력 메뉴의 하위 항목에 있는 '프리셋'을 선택해야 합니다.

출력

출력을 위한 타임코드 옵션은 다음과 같습니다.

타임라인	카드 또는 드라이브에 녹화된 모든 클립에 대해 연속 타임 코드를 출력하려면 '타임라인'을 선택하세요.
클립	'클립'을 선택하면 각 개별 클립의 타임코드가 출력됩니다.

파일 설정하기



파일명 접두사

처음 설치 시, HyperDeck Shuttle HD는 SD 카드나 USB 플래시 디스크에 녹화할 때 다음과 같은 파일명 규칙을 사용합니다.

HyperDeck_0001	
HyperDeck_0001	**접두사**
HyperDeck_**0001**	**클립 번호**

이러한 파일명 접두사는 HyperDeck Setup 유틸리티에서 변경할 수 있습니다. 자세한 정보는 본 설명서의 뒷편의 [Blackmagic HyperDeck 셋업] 부분을 참고하세요.

타임스탬프 파일 접미사

타임스탬프가 파일명에 포함되는 기능은 OFF로 기본 설정되어 있습니다. 파일명에 날짜와 시간을 포함하려면 '타임스탬프 파일 접미사' 기능을 ON으로 변경하세요.

HyperDeck_2201061438_0001	
HyperDeck_2201061438_0001	**파일명 접두사**
HyperDeck_**22**01061438_0001	**연도**
HyperDeck_22**01**061438_0001	**월**
HyperDeck_220**106**1438_0001	**일**
HyperDeck_22010**14**38_0001	**시**
HyperDeck_2201061**438**_0001	**분**
HyperDeck_2201061438_**0001**	**클립 번호**

원격 기능 설정하기

원격 기능 설정을 통해 ATEM Mini Extreme 스위처와 같은 다른 영상 장비에서 HyperDeck을 제어할 수 있습니다.



원격

'원격' 기능을 활성화하면 이더넷을 통한 원격 제어가 가능합니다. 장치를 직접 제어하려면 이 옵션을 비활성화 하세요.

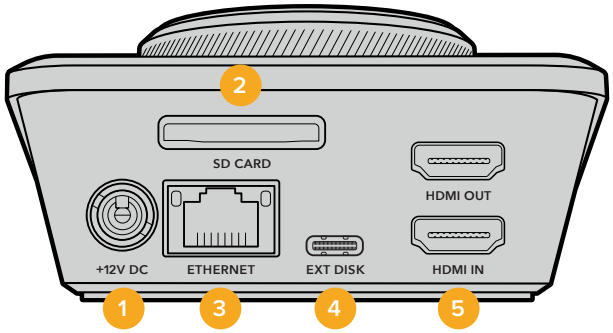
초기화 설정하기



공장 초기화

HyperDeck을 공장 초기화 설정으로 돌리려면 '설정' 메뉴의 '공장 초기화' 메뉴로 가세요. SET 버튼을 누르면 선택을 확인하는 메시지가 뜹니다.

뒷면 패널



1 **전원**

HyperDeck Shuttle HD는 AC 플러그 팩을 통해 전원을 공급받습니다. 함께 제공되는 전원 케이블은 안전한 연결을 위해 잠금 커넥터가 있습니다. 하지만 다른 케이블을 사용하고자 할 경우, 종류에 관계 없이 36W 12V 전원 케이블을 연결하여 HyperDeck Shuttle HD에 전원을 공급할 수 있습니다.

2 **SD 카드**

녹화 및 재생을 위해 SD 카드를 슬롯에 삽입하세요.

3 **이더넷**

이더넷 포트를 통해 네트워크에 연결하여 네트워크 스토리지로 녹화할 수 있으며, 웹 미디어 매니저를 통한 빠른 FTP 전송 및 http 전송이 가능합니다. 또한 REST API 또는 HyperDeck 이더넷 프로토콜을 사용하여 유닛을 원격으로 제어할 수 있습니다. 웹 미디어 매니저 또는 FTP 클라이언트를 통한 파일 전송에 관한 자세한 내용은 본 사용 설명서 뒤편의 [네트워크를 통해 파일 전송하기] 부분을 참고하세요.

ATEM 스위처와 공유하는 네트워크에 연결하면 ATEM 스위처 또는 ATEM 하드웨어 패널을 사용하여 HyperDeck을 제어할 수 있습니다.

4 **외장 디스크**

USB-C 단자에 플래시 디스크를 연결하여 최대 5Gb/s의 속도로 녹화할 수 있습니다. 이 외에도 다포트 USB-C 허브를 연결하거나 Blackmagic MultiDock 10G를 연결하여 한 개 또는 여러 개의 SSD 카드를 사용할 수도 있습니다.

5 **HDMI**

HDMI 출력을 HDMI TV 및 모니터, ATEM Mini Extreme 스위처 등으로 연결하세요. HDMI 출력을 통해 메뉴 오버레이를 표시할 수 있습니다.

저장 미디어

SD 카드

고화질의 HD로 녹화할 경우, 초고속 UHS-I SD 카드를 사용할 것을 권장합니다. SD 카드는 최대 2160p60의 UHD 화질의 녹화 시 220MB/s 이상의 쓰기 속도를 지원해야 합니다.

하지만, 낮은 비트 전송률의 고압축 영상으로 녹화할 경우에는 이렇게 빠른 카드를 사용할 필요가 없습니다. 일반적으로 카드 속도는 빠를수록 좋습니다.

최신 버전의 설명서를 통해 주기적으로 최신 정보를 확인하는 것이 좋습니다. Blackmagic Design 웹사이트 www.blackmagicdesign.com/kr/support에서 다운로드할 수 있습니다.

HyperDeck Shuttle HD에는 어떤 SD 카드를 사용해야 하나요?

다음은 최대 60 fps의 1080p 녹화에 권장되는 SD 카드 목록입니다.

제조사	모델	용량
Angelbird	AV PRO SD UHS-II 300MB/s V90 SDXC	256GB
Angelbird	AV PRO SD UHS-II 260MB/s V60 SDXC	128GB
Angelbird	AV PRO SD UHS-II 260MB/s V60 SDXC	64GB
SanDisk	Extreme Pro UHS-I 95MB/s SDXC	64GB
Wise	SD2-64U3 UHS-II 285MB/s SDXC	64GB
Lexar	Professional 1000x UHS-II 150MB/s SDXC	128GB
SONY	Tough SF-G128T	128GB
Kingston	CANVAS GO! Plus 170MB/s V30	64GB
Kingston	CANVAS GO! Plus 170MB/s V30	128GB
Kingston	CANVAS GO! Plus 170MB/s V30	512GB
ProGrade Digital	SDXC UHS-II V90 300R	64GB
ProGrade Digital	SDXC UHS-II V90 300R	128GB
SONY	Tough SF-G64T UHS-II SDXC	64GB
Delkin Devices	Black UHS-II V90 SDXC	256GB
Delkin Devices	Power UHS-II V90 SDXC	128GB
Delkin Devices	Power UHS-II V90 SDXC	256GB
Delkin Devices	Black UHS-II V90 SDXC	128GB
Exascend	Essential SDXC UHS-II V90 R 300MB/s	64GB
Exascend	Essential SDXC UHS-II V90 R 300MB/s	128GB
Exascend	Catalyst SDXC UHS-II V90 R 300MB/s	64GB

외장 디스크

HyperDeck 전체 모델은 USB-C 플래시 디스크에 바로 녹화할 수 있습니다. 이 디스크는 속도가 빠르고 용량이 커서 장시간 녹화에 사용할 수 있습니다. 녹화 후에는 플래시 디스크를 컴퓨터에 연결하여 바로 편집 작업을 시작할 수 있습니다.

더 큰 저장 공간을 사용하고 싶다면 USB-C 도크 장비나 외장 하드 드라이브를 연결할 수 있습니다. Blackmagic MultiDock 10G 또는 USB-C 플래시 디스크를 연결하기 위해서는 해당 USB-C 장비와 HyperDeck 후면 패널의 EXT 디스크 단자를 케이블로 연결하세요.

HyperDeck Shuttle HD로 녹화 시, 어떤 USB-C 드라이브를 사용해야 하나요?

다음은 최대 60 fps의 1080p ProRes HQ 녹화에 권장되는 USB-C 드라이브 목록입니다.

제조사	모델	용량
Wise	PTS-256 Portable SSD 4K	256GB
OWC	Envoy Pro Ex	240GB
BUFFALO	SSD-PHE500U3-BA	500GB

다음은 최대 60 fps의 1080p DNxHD 220x 녹화에 권장되는 USB-C 드라이브 목록입니다.

제조사	모델	용량
OWC	Envoy Pro Ex	240GB

다음은 최대 60 fps의 1080p H.264 녹화에 권장되는 USB-C 드라이브 목록입니다.

제조사	모델	용량
OWC	Envoy Pro Ex	240GB

미디어 포맷하기

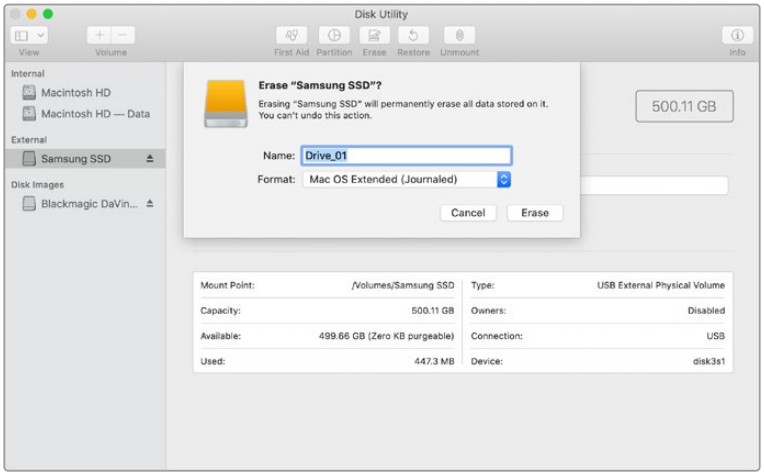
컴퓨터에서 미디어 준비하기

Mac 컴퓨터를 이용하여 미디어 포맷하기

Mac에 포함된 디스크 유틸리티를 사용하여 각 드라이브를 HFS+ 또는 exFAT 형식으로 포맷하세요.

포맷이 진행되면 디스크의 모든 정보가 삭제되므로 중요한 정보는 포맷 전에 반드시 백업해 두어야 합니다.

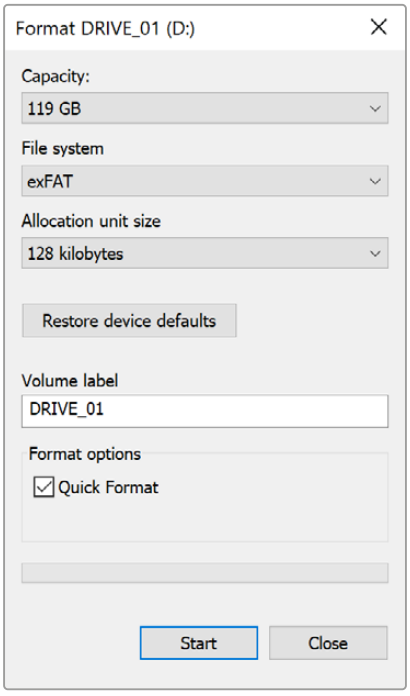
1. 외장 도크 또는 케이블 어댑터를 사용하여 USB 플래시 디스크를 컴퓨터에 연결하세요. SSD를 타임머신 백업 용도로 사용할 것인지 묻는 메시지는 모두 거절하세요. SD 카드를 포맷하려면 외장 카드 리더기에 장착해 컴퓨터에 연결하세요.
2. '응용 프로그램 > 유틸리티'로 이동해 '디스크 유틸리티'를 실행하세요.
3. SD 카드 또는 USB 플래시 디스크 아이콘을 클릭한 뒤, '지우기' 탭을 클릭하세요.
4. 포맷을 'Mac OS 확장(저널링)' 또는 'exFAT'로 설정하세요.
5. 새로운 볼륨의 이름을 입력하고 '지우기'를 클릭하세요. 미디어가 신속하게 포맷되어 HyperDeck에 사용할 준비가 완료됩니다.



Windows 컴퓨터에서 미디어 포맷하기

Windows PC의 포맷 대화 상자에서 드라이브를 exFAT 형식으로 포맷할 수 있습니다. 포맷이 진행되면 SSD 또는 SD 카드의 모든 정보가 삭제되므로 중요한 정보는 포맷하기 전에 반드시 백업해 두어야 합니다.

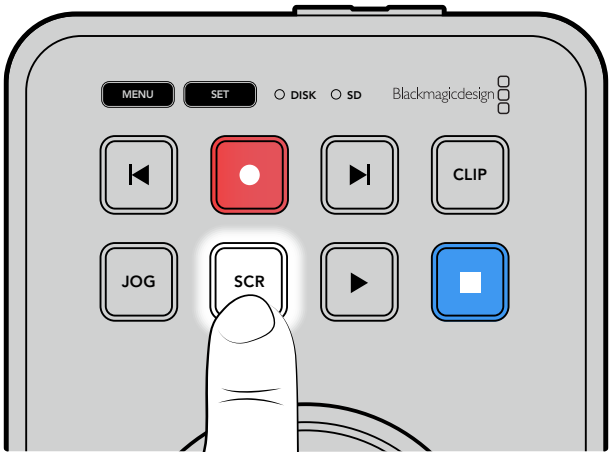
1. 외장 도크 또는 케이블 어댑터를 사용하여 USB 플래시 디스크를 컴퓨터에 연결하세요. SD 카드를 포맷하려면 외장 카드 리더기에 장착해 컴퓨터에 연결하세요.
2. '시작 메뉴' 또는 '시작 화면'을 열고 '내컴퓨터'를 선택하세요. USB 플래시 디스크 또는 SD 카드를 우클릭하세요.
3. 나타나는 메뉴에서 '포맷'을 선택하세요.
4. '파일 시스템'을 'exFAT'으로 설정한 뒤, '할당 단위'를 '128킬로바이트'로 설정하세요.
5. 볼륨 라벨을 입력하고 '빠른 포맷'을 선택한 뒤, '시작'을 클릭하세요.
6. 미디어가 신속하게 포맷되어 HyperDeck에 사용할 준비가 완료됩니다.



볼륨 내비게이션

볼륨 내비게이션 기능을 통해 파일 경로가 오버레이로 나타나 미디어 카드, 디스크, 네트워크 드라이브에서 클립을 검색할 수 있습니다. 이 기능이 활성화되면 오버레이가 HDMI 출력에 나타나기 때문에 SCR 버튼과 CLIP 버튼, 조그 휠을 사용해 디렉토리를 검색할 수 있습니다.

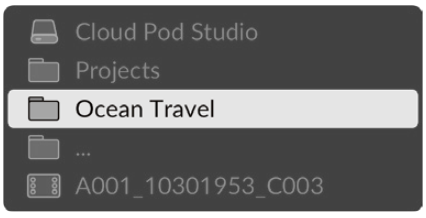
1 SCR이라고 표시된 스크롤 버튼을 누르면 볼륨 내비게이션 창이 열립니다.





SCR 버튼을 누르면 HDMI 출력에 볼륨 네비게이션 창이 열립니다.

2 폴더에서 관심 있는 클립을 찾을 때까지 화면에서 푸티지를 스크러빙하거나 건너뛰세요.



3 SCR 버튼을 눌러 아래쪽 볼륨으로, CLIP 버튼을 눌러 위로 이동할 수 있습니다.

볼륨 내비게이션 창을 닫으려면 정지 버튼을 누르세요. 재생 버튼을 누르면 창이 종료된 직후에 재생이 시작됩니다.

참고 서로 다른 코덱, 해상도, 프레임 레이트를 사용해 녹화된 클립을 보려면 HyperDeck에서 코덱 및 기본 설정된 표준이 매칭되도록 설정하세요.

텔레프롬프터 기능 사용하기

표준 RTF 또는 기본 TXT 파일을 사용하여 Backmagic HyperDeck Shuttle HD를 텔레프롬프터로 사용할 수 있습니다. TextEdit 또는 WordPad에서 파일을 생성한 후, 지원되는 13개 언어 중 하나로 '리치 텍스트 형식(RTF)' 또는 기본 텍스트 파일로 저장하세요. HyperDeck Shuttle HD로 열면 스크립트의 글꼴 크기와 줄 간격을 조정할 수 있습니다.

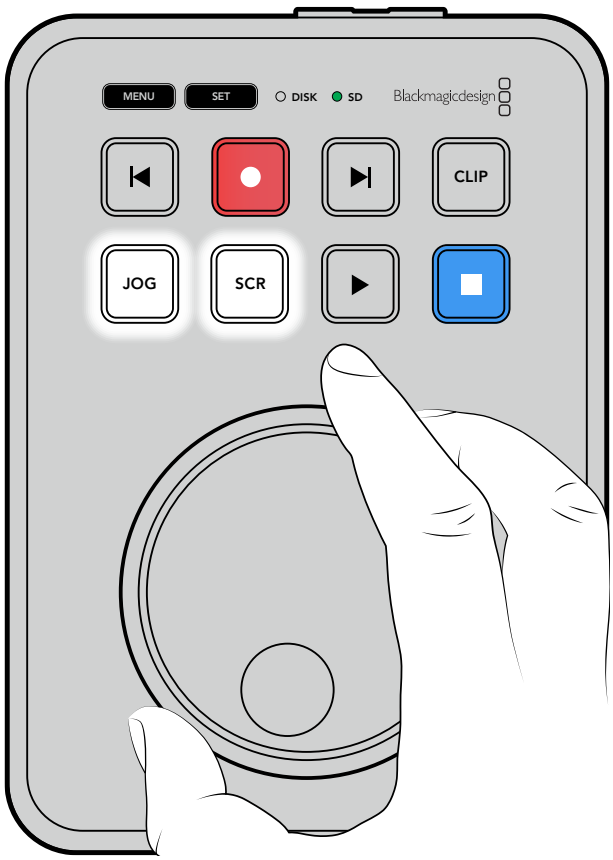
텔레프롬프터 사용하기

1. HyperDeck Shuttle HD의 HDMI 출력을 사용하려는 HDMI 디스플레이에 연결하세요.
2. SD 카드를 삽입하거나 스크립트가 저장된 외장 USB 플래시 디스크를 연결하세요.
3. '녹화' 메뉴에서 '코덱' 옵션을 선택하세요. '텔레프롬프터' 설정으로 이동한 후 SET 버튼을 누르세요.

스크립트가 디스플레이에 나타납니다. 여기에서 재생 버튼을 사용하여 자동으로 재생을 시작하거나 다이얼을 사용하여 이 외의 제어 기능을 사용할 수 있습니다.

텔레프롬프터 재생 속도 제어하기

HyperDeck Shuttle HD의 큰 다이얼을 사용하여 미디어를 재생하는 방식과 동일하게 텔레프롬프터 모드에서 재생을 제어할 수 있습니다. 스크립트가 로딩된 상태에서 JOG 및 SCR 버튼을 함께 눌러 가변 속도 재생 기능을 켜세요. 선택한 후 다이얼을 돌리세요. 스크립트는 다이얼이 움직이는 속도로 이동합니다. 예를 들어 다이얼을 빨리 돌릴수록 스크립트가 더 빨리 스크롤됩니다.



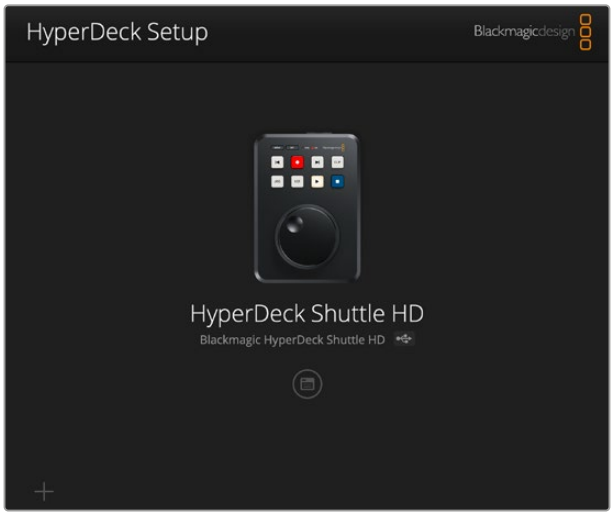
일정한 속도의 경우 조그 및 스크롤 버튼을 개별적으로 사용할 수 있습니다. 버튼을 선택 후, 다이얼을 돌리면 조그 모드에서 일정하게 낮은 속도로 스크립트를 이동하거나 스크롤 모드에서 더 빠른 속도로 스크립트를 이동시킬 수 있습니다.

SD 카드 또는 외장 디스크의 파일을 탐색하려면 앞으로 가기 및 뒤로가기 키를 누르세요.

텔레프롬프터는 글꼴 크기, 색상 및 파일에서 볼드체로 설정되었는지 여부를 확인합니다. 또한 글꼴 크기, 줄 간격, 여백을 조정하거나, 모니터 메뉴를 사용하여 디스플레이를 빔 스플리터 글래스에 투사하는 경우를 위해 디스플레이를 수평 또는 수직으로 뒤집을 수 있습니다. 정보 더욱 자세한 정보는 본 설명서의 [메뉴 설정하기] 부분을 참고하세요.

Blackmagic HyperDeck Setup

Blackmagic HyperDeck Setup은 HyperDeck 설정을 변경하고 내부 소프트웨어를 업데이트하는 소프트웨어 유틸리티입니다.

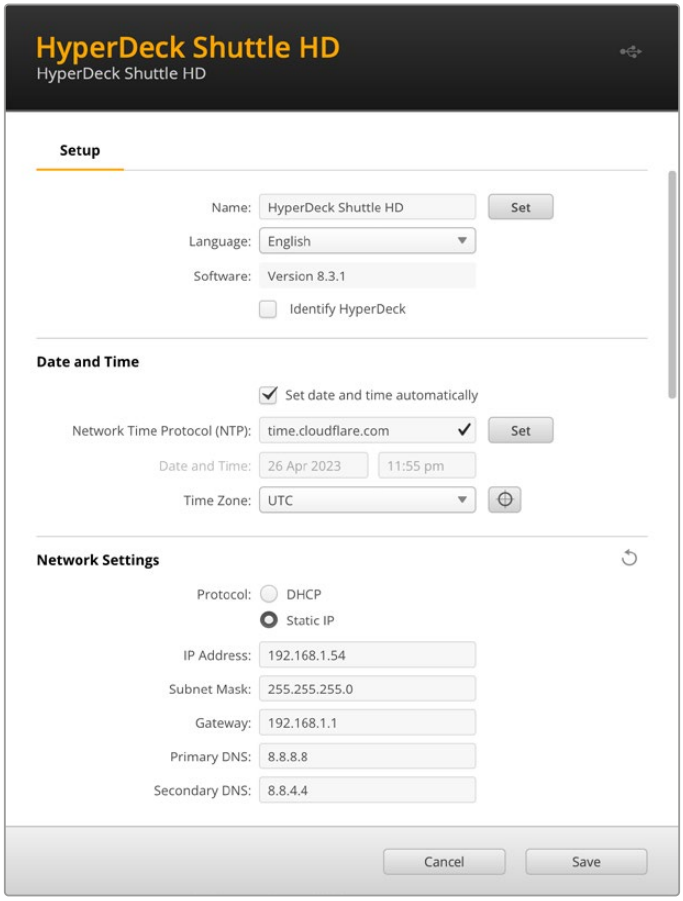


Blackmagic HyperDeck Setup 소프트웨어 설치하기

1. www.blackmagicdesign.com/kr/support 에서 최신 Blackmagic HyperDeck Setup 인스톨러를 다운받으세요.
2. 컴퓨터에 설치된 Blackmagic HyperDeck Setup 설치 프로그램을 실행하고 화면에 나타나는 지시 사항을 따르세요.
3. 설치가 완료되면 HyperDeck Shuttle HD 뒷면 패널에 있는 이더넷 단자 또는 USB를 통해 컴퓨터에 연결하세요.
4. Blackmagic HyperDeck Setup을 실행한 뒤, 화면에 나타나는 지시 사항에 따라 내부 소프트웨어 업데이트를 진행하세요. 내부 소프트웨어가 최신 버전일 경우 아무런 메시지가 나타나지 않으며 더 이상의 추가 작업이 필요하지 않습니다.

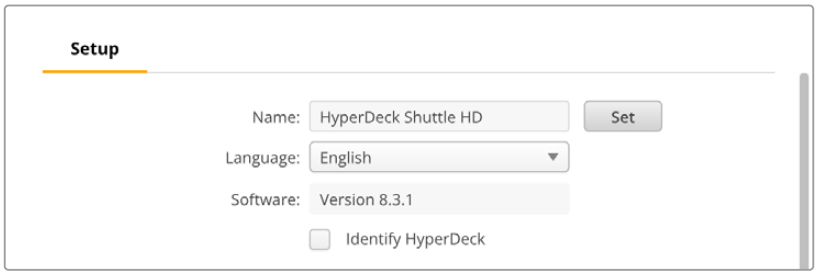
HyperDeck 이미지 또는 설정 아이콘을 클릭하여 설정 메뉴를 여세요.

홈 화면에 HyperDeck Shuttle HD와 기기명이 표시됩니다. 기기명은 컴퓨터에 두 대 이상의 HyperDeck이 연결되어 있을 때 장치를 식별하는 데 도움이 되며 소프트웨어의 설정 메뉴를 사용하여 설정할 수 있습니다.



설정(Setup)

한 대 이상의 HyperDeck 디스크 레코더를 운용할 경우, 쉽게 확인할 수 있도록 기기명을 다르게 설정할 수도 있습니다. 이름란에 새로운 이름을 입력한 다음 'Set' 버튼을 클릭하면 됩니다. HyperDeck 이름을 변경하면 현재 사용 중인 모든 인증서의 효력이 상실되기 때문에 인증서 서명 요청 또는 자가 서명 인증서를 생성하기 전에 이름을 변경하는 것이 좋습니다.



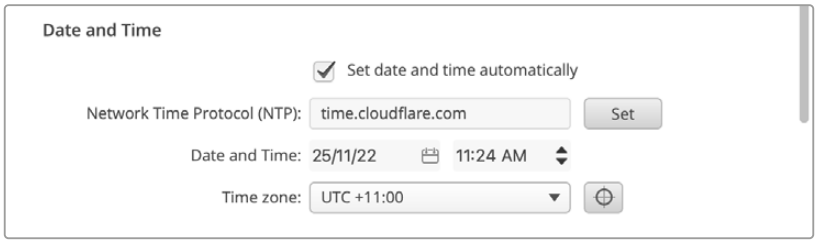
HyperDeck 식별하기(Identify HyperDeck)

이 확인란을 클릭하면 HyperDeck Shuttle 상단에 있는 뒤로 가기/건너뛰기 버튼에 불이 들어옵니다. 한 대 이상의 HyperDeck Shuttle을 운용할 경우, HyperDeck Setup 유틸리티를 통해 연결된 유닛을 확인할 수 있어 유용합니다.

날짜 및 시간(Date and Time)

이 확인란을 클릭해 날짜 및 시간이 자동으로 설정되도록 하세요. 날짜 및 시간이 자동으로 설정되도록 하면 HyperDeck Shuttle HD가 NTP 필드에서 설정된 네트워크 시간 프로토콜 서버를 사용합니다. NTP 서버는 time.cloudflare.com으로 기본 설정되어 있지만, 다른 NTP 서버를 수동으로 입력한 다음 'Set' 버튼을 누를 수도 있습니다.

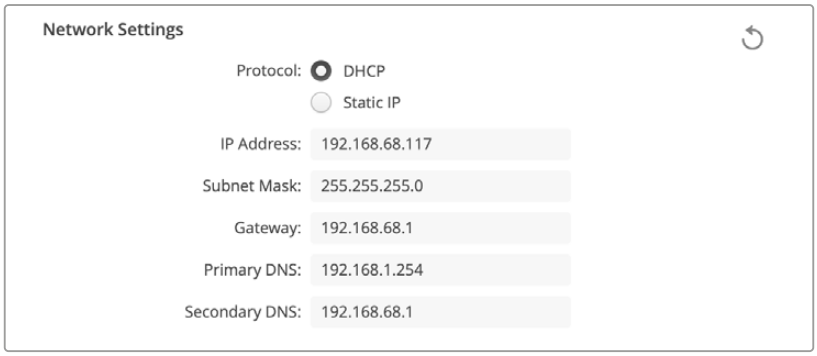
날짜 및 시간을 수동으로 입력할 경우, 해당 필드를 사용해 날짜와 시간, 시간대를 입력하세요. 시간 및 날짜를 정확하게 설정해야 녹화 영상의 정보가 네트워크 정보와 일치하게 될 뿐 아니라 일부 네트워크 스토리지 시스템에서 발생 가능한 충돌을 예방할 수 있습니다.



네트워크 설정(Network Settings)

프로토콜(Protocol)

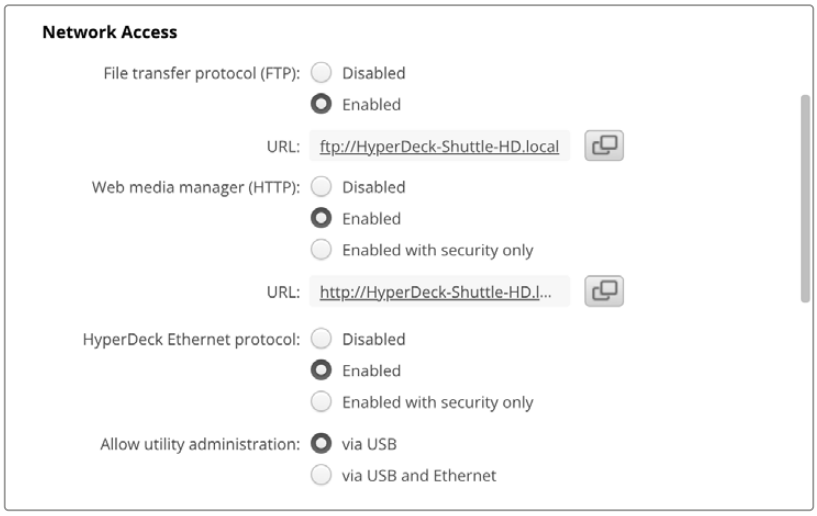
HyperDeck Shuttle HD와 ATEM 스위처를 함께 제어하거나, HyperDeck 이더넷 프로토콜을 통해 원격으로 제어하려는 경우, DHCP를 사용하거나, 수동으로 고정 IP 주소를 추가하는 방식으로 HyperDeck Shuttle HD를 다른 장비에서 사용하는 네트워크에 연결해야 합니다.



DHCP	HyperDeck Shuttle HD 디스크 레코더는 DHCP로 기본 설정되어 있습니다. DHCP(Dynamic Host Configuration Protocol)는 자동으로 HyperDeck 디스크 레코더를 검색하여 IP 주소를 지정하는 네트워크 서버의 서비스입니다. 또한 DHCP는 이더넷을 통해 장비를 쉽게 연결하도록 돕고 지정된 IP 주소가 서로 충돌하지 않도록 하는 훌륭한 서비스입니다. 대부분의 컴퓨터와 네트워크 스위처는 DHCP를 지원합니다.
고정 IP (Static IP)	'Static IP'를 선택한 후 네트워크 세부 사항을 직접 입력할 수 있습니다. 모든 장치가 통신할 수 있도록 고정 IP 주소를 수동으로 설정할 경우, 동일한 서브넷 마스크 및 게이트웨이 설정을 공유하도록 해야 합니다.

네트워크 접속(Network Access)

HyperDeck Shuttle HD는 네트워크를 통해 파일을 전송하고 HyperDeck 이더넷 프로토콜을 통해 원격으로 제어할 수 있습니다. 접속이 활성화되도록 기본 설정되어 있지만, 웹 미디어 매니저나 HyperDeck 이더넷 프로토콜을 사용해 개별적으로 접속을 비활성화하거나 사용자 이름 및 비밀번호를 입력해 접속이 활성화되도록 보안 설정을 강화할 수 있습니다.



파일 전송 프로토콜(FTP)

이 확인란을 사용해 파일 전송 프로토콜을 통해 접속이 활성화 또는 비활성화되도록 설정하세요. CyberDuck과 같은 FTP 클라이언트를 통해 접속되도록 할 경우, 아이콘을 클릭해 FTP 주소를 복사하세요. 더 자세한 정보는 [네트워크를 통해 파일 전송하기] 부분을 참고하세요.

웹 미디어 매니저(Web Media Manager)

SD 카드나 외장 디스크에 녹화된 미디어는 웹 미디어 매니저를 사용하여 웹브라우저를 통해 접속할 수 있습니다. 링크를 클릭하거나 링크를 웹 브라우저에 붙여 넣으면 간단한 인터페이스가 열립니다. 여기서 네트워크를 통해 파일을 SD 카드로 직접 업로드 및 다운로드할 수 있습니다.

HTTP를 통해 접속이 활성화되도록 기본 설정되어 있지만, ‘Enabled with security only’ 옵션을 사용해 모든 접속을 비활성화하거나 보안 인증서를 요구하도록 할 수 있습니다. 디지털 인증서를 사용할 경우, HTTPS를 통해 웹 미디어 매니저 연결이 암호화됩니다. 디지털 인증서에 관한 자세한 정보는 [보안 인증서] 부분에서 확인할 수 있습니다.

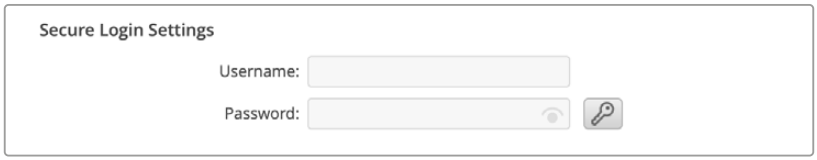
HyperDeck 이더넷 프로토콜(HyperDeck Ethernet Protocol)

HyperDeck 이더넷 프로토콜과 Mac의 터미널 및 Windows 컴퓨터의 PuTTY와 같은 컴퓨터의 커맨드 라인 프로그램을 사용하여 HyperDeck 디스크 레코더에 연결할 수 있습니다. 자동으로 접속되도록 하거나 사용자 이름 및 비밀번호를 사용해 접속되도록 설정할 수 있으며, 완전히 비활성화되도록 설정할 수도 있습니다. Netcat과 같은 유틸리티 프로그램을 사용할 경우, SSL 프로그램을 사용해 연결을 암호화할 수 있습니다. 사용 가능한 명령어에 대한 자세한 정보는 본 설명서의 [개발자 정보] 부분을 참고하세요.

유틸리티 관리 허용하기(Allow Utility Administration)

Blackmagic HyperDeck Setup는 디스크 레코더가 네트워크나 USB를 통해 연결되었을 경우에 접속 가능합니다. 사용자들이 네트워크를 통해 접속하지 못하도록 설정하려면 ‘via USB’ 설정을 선택하세요.

로그인 보안 설정(Secure Login Settings)



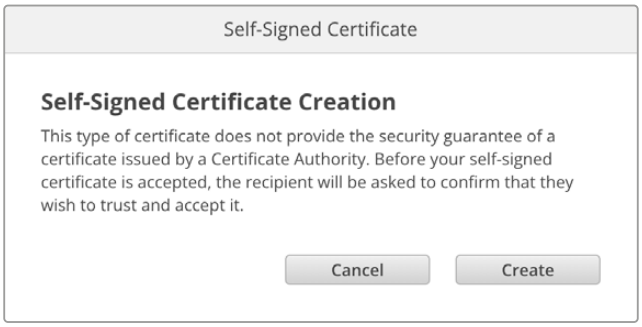
HyperDeck 이더넷 프로토콜 접속을 위해 ‘Enable with security only’를 선택한 경우, 사용자 이름과 비밀번호를 입력해야 합니다. 사용자 이름과 비밀번호를 입력한 다음 ‘Save’를 클릭하세요. 비밀번호를 입력하면 입력란이 공란으로 표시됩니다. 사용자 이름과 비밀번호가 설정된 이후에 ‘Enable with security only’ 항목을 선택할 경우, 웹 미디어 매니저에 접속하려면 사용자 이름과 비밀번호를 입력해야 합니다.

보안 인증서

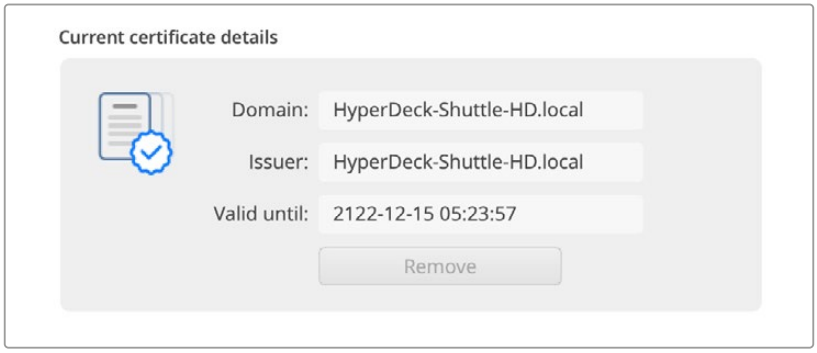
HTTPS를 통해 웹 미디어 매니저를 활성화하고자 할 경우, 또는 ‘HyperDeck Ethernet protocol’에서 ‘Enable with security only’ 항목을 선택한 경우엔 보안 인증서가 요구됩니다. 이 디지털 인증서는 HyperDeck Shuttle HD를 위한 식별 카드처럼 작동해 들어오는 모든 연결이 올바른 유닛으로 연결되는지 확인할 수 있습니다. 유닛 식별 기능과 함께 보안 인증서를 사용하면 HyperDeck Shuttle HD와 컴퓨터 또는 서버가 주고받는 데이터가 암호화됩니다. 보안 로그인 설정을 사용하면 데이터가 암호화될 뿐 아니라 접속 인증 과정도 거쳐야 합니다.

HyperDeck Shuttle은 인증 기관에서 서명받은 보안 인증서나 자가 서명 인증서를 사용하는 두 가지 인증서 유형과 함께 사용 가능합니다. 자가 서명 인증서는 안전한 옵션으로, 특히 HyperDeck Shuttle HD에 접속 시 로컬 네트워크를 통해서만 접속하는 일부 사용자 워크플로에 사용하기 적합합니다.

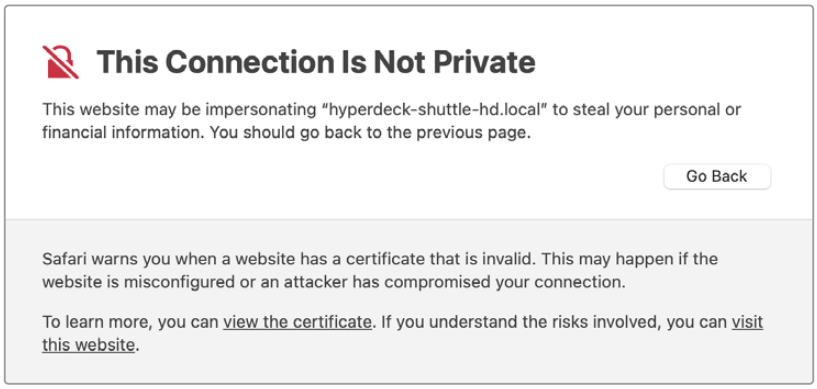
자가 서명 인증서를 생성하려면 ‘Create Certificate’를 클릭하세요. 그러면 자가 서명 인증서 사용 시 발생 가능한 위험성 인지 여부를 확인하는 메시지가 나타납니다. ‘Create’를 클릭하면 HyperDeck Setup 유틸리티에서 인증서 세부 정보 섹션의 ‘Domain’, ‘Issuer’, ‘Valid until’ 항목이 자동 입력됩니다.



공장 초기화 이후엔 현재 사용 중인 모든 인증서가 삭제되지만, ‘Remove’ 버튼을 클릭하고 화면에 나타나는 지시에 따라 언제든지 인증서를 삭제할 수 있습니다.



자가 서명 인증서를 사용할 경우, HTTPS를 통해 미디어 파일 접속을 시도하면 웹 브라우저에서 해당 사이트 접속 시 발생 가능한 위험성에 대해 경고합니다. 일부 브라우저는 사용자가 위험성을 인지했다고 확인하면 접속을 허용하지만, 다른 웹 브라우저의 경우엔 다음 단계로 넘어가는 것 자체가 불가능하기도 합니다.



모든 웹 브라우저에서 접속을 승인받으려면 서명 인증서를 사용해야 합니다. 서명 인증서를 얻으려면, 우선 Blackmagic HyperDeck Setup을 사용해 인증서 서명 요청(CSR)을 생성하세요. 이후 이 서명 요청은 서명서 인증 기관(CA)이나 IT 부서로 전송되어 서명을 받게 됩니다. 서명이 완료되면 .cert, .crt, .pem 파일 확장자 포맷의 서명 인증서가 되돌아오는데, 이를 HyperDeck Shuttle HD에 임포트할 수 있습니다.



인증서 서명 요청(CSR) 생성하는 방법

1 'Generate Signing Request' 버튼을 클릭하세요.



2 HyperDeck의 도메인 이름 및 주체 대체 이름을 입력하라는 창이 하나 나타납니다. 아래 표를 참고해 다른 세부 사항을 조정하세요.

정보	설명	예시
도메인 이름	사용하려는 도메인 이름	hyperdeck.melbourne.com
주체 대체 이름	사용 가능한 대체 도메인 이름	hyperdeck.melbourne.net
국가	기관이 속한 국가	AU
시/도	지방, 지역, 자치주, 주	Victoria
장소	시, 도, 군	Port Melbourne
기관 이름	기관명	Blackmagic Design

3 인증서 세부 사항을 적은 다음 'Generate'를 누르세요.

.csr을 생성할 때 공개 키와 비공개 키가 동시에 생성됩니다. 공개 키는 서명 요청에 포함되지만 비공개 키는 유닛에 그대로 남아 있습니다. 인증 기관(CA)이나 IT 부서에서 CSR에 담긴 정보와 요청 기관이 일치하는지 확인하고 나면, 위의 세부 정보와 공개 키를 바탕으로 서명 인증서를 생성합니다.

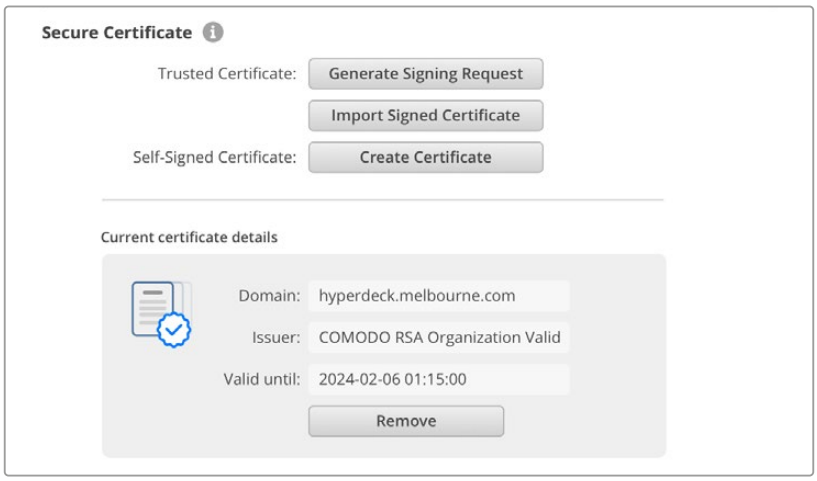
인증서를 임포트하면 HyperDeck Shuttle HD에서 공개 키와 비공개 키를 사용해 HyperDeck을 식별한 다음 HTTPS를 통해, 혹은 SSL 프로그램을 사용할 경우, HyperDeck 이더넷 프로토콜을 통해 데이터 공유를 암호화하거나 암호를 해독합니다.

서명 인증서 임포트하는 방법

1 'Import Signed Certificate'를 클릭하세요.

2 파일 브라우저를 사용해 서명 인증서의 위치를 검색해 파일을 선택한 다음 'Open'을 클릭하세요.

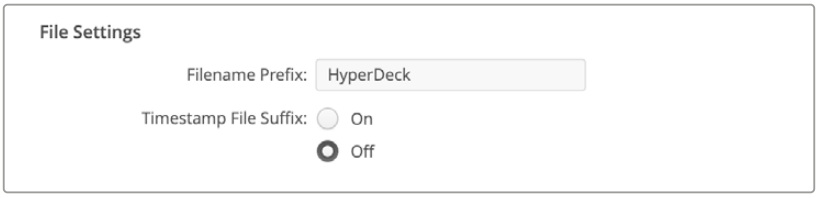
'Domain', 'Issuer', 'Valid until' 항목이 인증 기관(CA) 정보에 맞게 업데이트됩니다. 보통 서명 인증서의 유효 기간은 1년이기 때문에 인증서 만료일이 다가오면 같은 과정을 반복해 인증서를 업데이트하세요.



도메인 이름을 선택하고 나면 IT 부서에 연락해 HyperDeck Shuttle HD 유닛을 위한 DNS 도메인 이름을 IP 주소로 변환해달라고 요청하세요. 그러면 HyperDeck Shuttle HD의 IP 주소에 대한 모든 트래픽이 서명 요청에서 선택한 도메인 주소로 연결됩니다. 이는 또한 웹 미디어 매니저를 통한 파일 접속에 사용하는 https://hyperdeckextreme.melbourne.com 같은 HTTPS 주소가 될 수 있습니다.

공장 초기화 이후엔 인증서가 효력을 상실하기 때문에 새로운 인증서를 생성해 서명을 받아야 합니다.

파일 설정(File Settings)



처음 설정 시, HyperDeck Shuttle HD는 'HyperDeck'을 접두사로 사용하여 SD 카드 또는 USB 플래시 디스크에 클립을 녹화합니다. 접두사를 변경하려면 새 파일 이름을 입력하세요.

타임스탬프가 파일명에 포함되는 기능은 OFF로 기본 설정되어 있습니다. 파일명에 날짜와 시간을 기록하려면 ON으로 전환하세요. 파일명 접두어 및 타임스탬프 설정은 HyperDeck Shuttle HD의 화면 메뉴를 통해서도 사용할 수 있습니다.

초기화

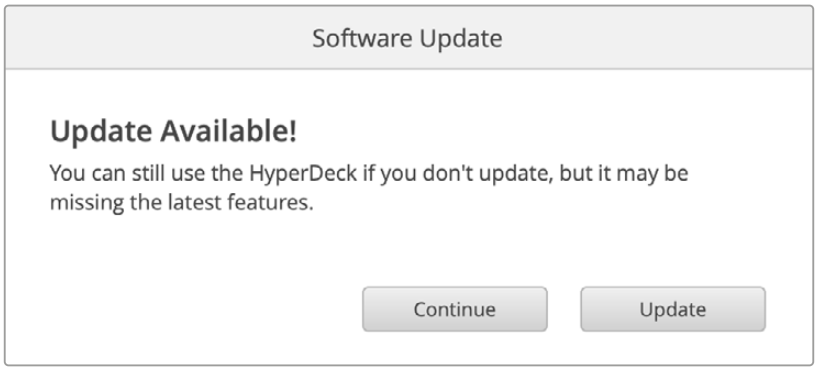
HyperDeck을 공장 초기화 상태로 되돌리려면 'Factory reset'을 선택하세요. 공장 초기화 이후엔 현재 사용 중인 인증서의 효력이 상실됩니다. 보안 인증서를 사용 중일 경우, 새로운 인증서 서명 요청을 생성해 인증 기관이나 IT 인증 부서를 통해 서명받아야 합니다.

내부 소프트웨어 업데이트

내부 소프트웨어 업데이트하기

1. www.blackmagicdesign.com/kr/support에서 최신 Blackmagic HyperDeck Setup 설치 프로그램을 다운받으세요.
2. 컴퓨터에 설치된 Blackmagic HyperDeck Setup 설치 프로그램을 실행하고 화면에 나타나는 지시 사항을 따르세요.
3. 설치가 완료되면 HyperDeck Shuttle HD 뒷면 패널에 있는 이더넷 단자 또는 USB를 통해 컴퓨터에 연결하세요.

4 Blackmagic HyperDeck Setup을 실행한 뒤, 화면에 나타나는 지시 사항에 따라 내부 소프트웨어 업데이트를 진행하세요. 내부 소프트웨어가 최신 버전일 경우 어떠한 메시지도 나타나지 않으며 더 이상의 추가 작업이 필요하지 않습니다.



네트워크를 통해 파일 전송하기

HyperDeck Shuttle HD는 하이퍼텍스트 전송 프로토콜 보안(HTTPS) 및 파일 전송 프로토콜(FTP)을 통해 파일을 전송합니다. 이는 네트워크를 통해 컴퓨터에서 바로 HyperDeck 장비에 파일을 전송하는 기능으로, 로컬 네트워크에서 제공하는 최고의 속도로 전송할 수 있습니다. 예를 들어, 새 파일을 복사하여 HyperDeck으로 전송하면 모니터 월이나 디지털 사이니지에서 영상을 재생할 수 있습니다.

HyperDeck에서 모든 파일을 주고받을 수 있지만 HyperDeck Shuttle HD에서 재생하려는 모든 파일은 HyperDeck에서 지원하는 코덱 및 해상도를 준수해야 합니다.

정보 HyperDeck에서 녹화가 진행되는 동안 네트워크를 통해 파일을 전송할 수 있습니다. HyperDeck이 자동으로 전송 속도를 조절하기 때문에 녹화에 영향을 끼치지 않습니다.

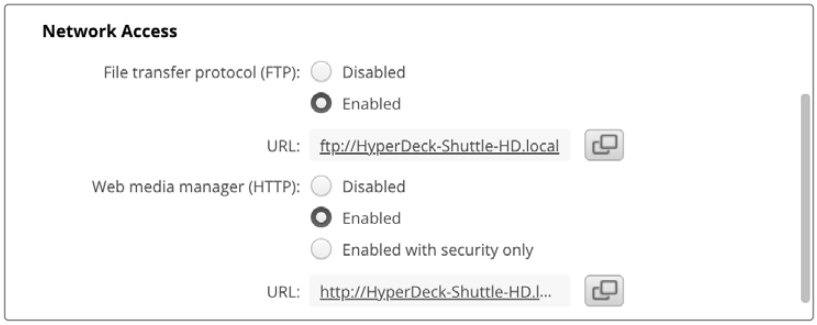
둘 중 하나의 프로토콜을 사용하여 HyperDeck Shuttle HD에 접속하는 기능은 HyperDeck Setup 유틸리티를 통해 활성화 또는 비활성화할 수 있습니다. 예를 들어, FTP 접속을 비활성화하는 동시에 HTTPS 접속을 활성화시킬 수 있습니다.

HTTPS를 통해 HyperDeck Shuttle HD에 연결하기

웹 미디어 매니저를 통해 HyperDeck Shuttle HD에 접속하려면 네트워크 접속 설정에서 사용할 URL을 준비해야 합니다. USB 및 이더넷을 통해 컴퓨터를 연결한 경우엔 네트워크 접속 설정이 HyperDeck Setup 유틸리티에 나타나지만, 이더넷으로만 연결된 경우엔 비활성화됩니다.

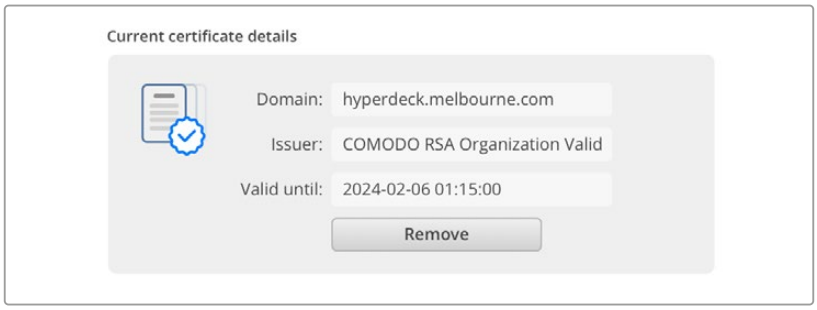
1 USB-C 케이블을 사용해 컴퓨터와 HyperDeck Shuttle HD 뒷면 패널의 USB 포트를 연결한 다음 HyperDeck Setup을 실행하세요. 그러면 USB 연결 아이콘이 유닛 이름 옆에 나타납니다. 원형 아이콘이나 제품 이미지를 클릭하면 설정 창이 열립니다.

2 자가 서명 인증서를 사용할 경우, 'Network Access' 항목으로 이동한 다음 URL 옆에 있는 복사 아이콘을 클릭하세요. 이 URL은 HyperDeck의 이름을 기반으로 합니다. URL을 변경하려면 유닛 이름을 변경하세요.



자가 서명 인증서를 사용할 경우, 링크를 클릭하세요.

3 인증 기관(CA)이나 IT 부서를 통해 서명받은 인증서를 임포트한 경우, ‘Domain’ 항목에 현재 인증서 주소를 복사 및 붙여넣기 하세요.



도메인 주소를 복사한 뒤 브라우저에 붙여넣기 하세요.

4 웹 브라우저를 열고 주소를 새로운 창에 붙여넣기 하세요. ‘Enabled access with security only’ 옵션을 선택한 경우, HyperDeck Setup 유틸리티에서 설정한 사용자 이름과 비밀번호를 입력하라는 메시지가 나타납니다.

자가 서명 인증서를 사용할 경우에 연결 보안과 관련된 브라우저 경고가 나타난다면, 이는 HyperDeck Setup 유틸리티를 통해 신뢰할만한 로그인 인증서를 불러오지 못했다는 사실을 의미합니다.

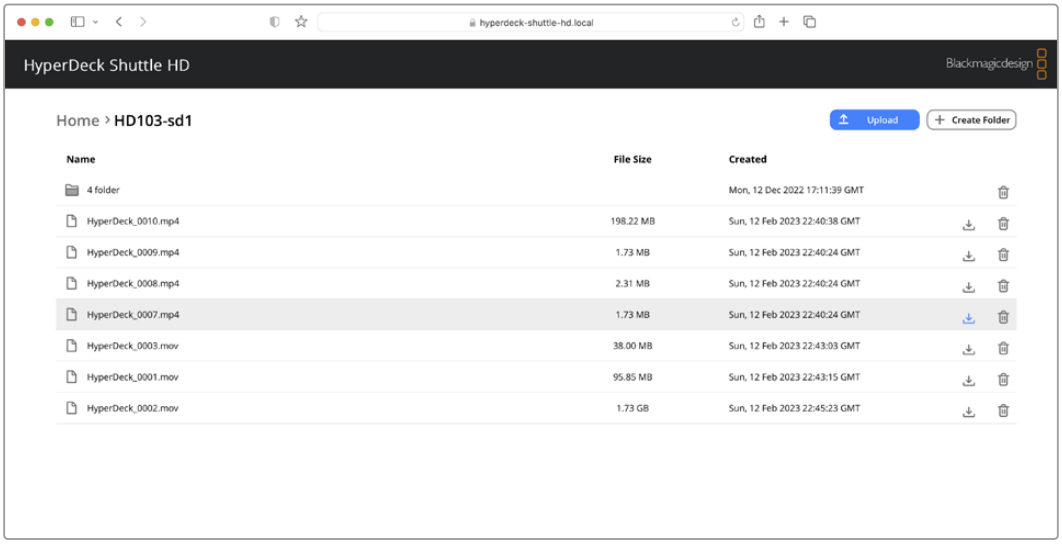
신뢰할 수 있는 유효한 인증서 없이 진행하려면, 브라우저에 나타나는 위험 감수 내용을 확인한 다음 웹사이트로 이동하세요.

웹 미디어 매니저를 사용해 파일 전송하기

웹 미디어 매니저 브라우저를 처음 열면 관련 미디어 슬롯에 따라 분류된 파일이 나타납니다.

SD1	SD 카드에 저장된 미디어
USB	연결된 USB가 ‘USB/’라는 접두사와 함께 목록으로 나타납니다.

해당 미디어를 더블 클릭하면 SD 카드 또는 드라이브에 담긴 콘텐츠가 나타납니다.



‘Upload’ 버튼을 클릭해 파일을 추가하세요.

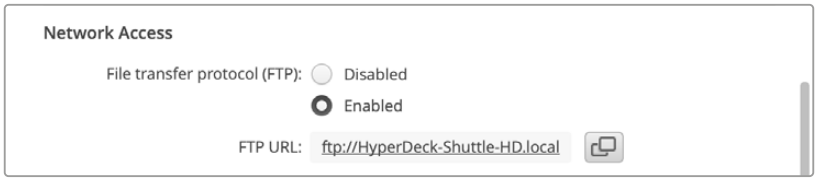
파일을 원격으로 추가해 재생하려면 ‘Upload’ 버튼을 클릭하세요. 파일 브라우저를 사용해 파일을 검색한 다음 ‘Upload’ 버튼을 클릭하세요. 업로드 중에는 상태 창이 나타납니다. ‘Create Folder’ 버튼을 사용해 필요에 따라 폴더를 추가할 수도 있습니다.

파일을 다운로드하려면 오른쪽 끝부분에 있는 화살표 아이콘을 사용하세요. 현재 사용 중인 브라우저에 따라 파일 다운로드를 허용하라는 메시지가 나타날 수 있습니다. ‘Allow’를 클릭하세요. 파일을 삭제하려면 쓰레기통 아이콘을 클릭하세요. 그러면 파일 삭제 창이 나타납니다. ‘Delete’를 클릭하세요.

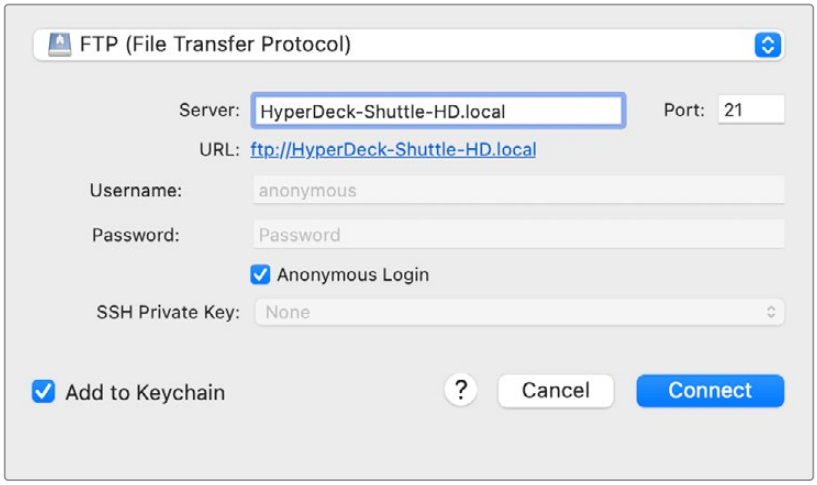
FTP를 통해 파일 전송하기

사용하는 컴퓨터와 HyperDeck Shuttle HD가 동일한 네트워크상에 있는 경우, FTP 클라이언트와 HyperDeck Shuttle HD의 IP 주소나 HyperDeck Setup 유틸리티의 FTP URL만 있으면 연결 가능합니다.

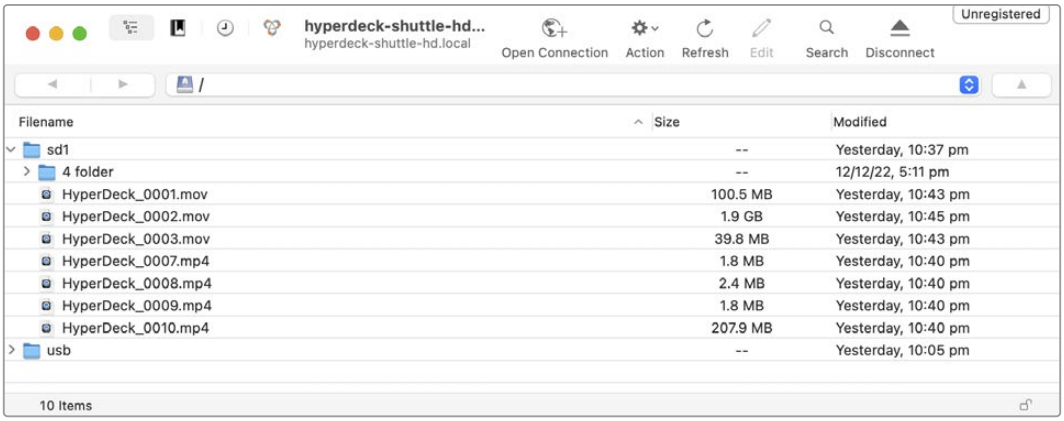
1. HyperDeck Shuttle HD에 연결하려는 컴퓨터에 FTP 클라이언트를 다운로드하여 설치하세요. Cyberduck, FileZilla, Transmit 등의 사용을 추천하지만, 대부분의 FTP 클라이언트 소프트웨어와 호환 가능합니다. Cyberduck과 FileZilla는 무료로 다운로드할 수 있습니다.
2. HyperDeck Shuttle HD를 네트워크에 연결한 상태에서 HyperDeck Setup을 실행한 다음 FTP URL을 누르거나 복사 아이콘을 눌러 주소를 수동으로 붙여 넣으세요. FTP 프로그램을 통해 연결이 실행되지 않을 경우, 링크를 한 번 더 누르세요.



3. FTP 연결을 수동으로 실행할 경우, URL 주소를 ‘Server’ 필드에 붙여 넣으세요. ‘Anonymous Login’ 항목이 활성화된 경우엔 해당란을 체크하세요.



4 SD 카드는 'sd1' 표시를 통해 식별 가능합니다.



이제 FTP 인터페이스를 사용해 파일을 드래그/드롭할 수 있습니다.

Developer Information

Blackmagic HyperDeck Ethernet Protocol

The Blackmagic HyperDeck Ethernet Protocol is a text based protocol accessed by connecting to TCP port 9993 on HyperDeck models that have a built in Ethernet connection. If you are a software developer, you can use the protocol to construct devices that integrate with our products. Here at Blackmagic Design our approach is to open up our protocols and we eagerly look forward to seeing what you come up with!

You can connect to your HyperDeck recorder using the HyperDeck Ethernet Protocol using a command line program on your computer, such as Terminal on a Mac and putty on a Windows computer.

The HyperDeck Ethernet Protocol lets you schedule playlists and recordings. The following is an example of how to play 7 clips from clip number 5 onwards via the HyperDeck Ethernet Protocol.

On a Mac

1. Open the Terminal application which is located with the applications > utilities folder.
2. Type in “nc” and a space followed by the IP address of your HyperDeck disk recorder, another space and “9993” which is the HyperDeck Ethernet Protocol port number. For example type: nc 192.168.1.154 9993. The Protocol preamble will appear.
3. Type “playrange set: clip id: 5 count: 7” and press ‘return’.

   On HyperDeck disk recorders with a timeline view, you will see in and out points marked around clips 5 through the end of clip 11.
4. Type “play”. Clips 5 through 11 will now play back.
5. To clear the playrange, type “playrange clear”
6. To exit from the protocol, type ‘quit’.

Protocol Commands

Command	Command Description
help or ?	Provides help text on all commands and parameters
commands	return commands in XML format
device info	return device information
disk list	query clip list on active disk
disk list: slot id: {n}	query clip list on disk in slot {n}
quit	disconnect ethernet control
ping	check device is responding
preview: enable: {true/false}	switch to preview or output
play	play from current timecode
play: speed: {-5000 to 5000}	play at specific speed
play: loop: {true/false}	play in loops or stop-at-end
play: single clip: {true/false}	play current clip or all clips

Command	Command Description
play: {clip id/clip/timecode/timeline/...}	play from the specified position see “goto” command for description of parameters parameters can be combined with {speed/loop/single clip}
playrange	query playrange setting
playrange set: clip id: {n}	set play range to play clip {n} only
playrange set: clip id: {n} count: {m}	set play range to {m} clips starting from clip {n}
playrange set: in: {inT} out: {outT}	set play range to play between: - timecode {inT} and timecode {outT}
playrange set: timeline in: {in} timeline out: {out}	set play range in units of frames between: - timeline position {in} and position {out}
playrange clear	clear/reset play range setting
play on startup	query unit play on startup state
play on startup: enable: {true/false}	enable or disable play on startup
play on startup: single clip: {true/false}	play single clip or all clips on startup
play option	query play options
play option: stop mode: {lastframe/nextframe/black}	set output frame when playback stops
record	record from current input
record: name: {name}	record named clip
record spill	spill current recording to next slot
record: spill: slot id: {n}	spill current recording to specified slot use current id to spill to same slot
spill order	query the device order used for record spill
stop	stop playback or recording
clips count	query number of clips on timeline
clips get	query all timeline clips
clips get: clip id: {n}	query a timeline clip info
clips get: clip id: {n} count: {m}	query m clips starting from n
clips get: version: {1/2/3}	query clip info using specified output version: version 1: id: name startT duration version 1: id: name startT duration startT depends on “configuration: timecode output: {clip/timeline}” version 2: id: clipInT clipDuration inT outT filename version 3: id: clipInT clipDuration inT outT folder/filename
clips add: name: {name}	append a clip to timeline, name can include subfolders e.g. folder1/HyperDeck_0001.mp4
clips add: clip id: {n} name: {name}	insert clip before existing clip {n}
clips add: in: {inT} out: {outT} name: {name}	append the clip portion between clip timecodes {inT} to {outT}
clips add: frame in: {in} frame out: {out} name: {name}	append the clip portion between clip frame numbers {in} to {out}

Command	Command Description
clips remove: clip id: {n}	remove clip {n} from the timeline (invalidates clip ids following clip {n})
clips clear	empty timeline clip list
clips rebuild	rebuild timeline with default rules
clip info	query clip info for the current playing/recording clip
clip info: clip id: {n}	query clip info for timeline clip id {n}
clip info: name: {name}	query clip info for the clip named {name} on active disk
transport info	query current activity
slot info	query active slot
slot info: slot id: {n}	query slot {n}
slot info: device: {device}	query slot containing device USB/network devices can be queried without being active “device” and “slot id” parameters are mutually exclusive in all commands
slot select: slot id: {n}	switch to specified slot
slot select: device: {device}	switch to slot containing device
slot select: video format: {format}	load clips of specified format
slot unblock	unblock active slot
slot unblock: slot id: {n}	unblock slot {n}
slot unblock: device: {device}	unblock disk device
external drive list	list all available USB/network drives for use in external slot
external drive select: device: {device}	switch external slot to specified external drive
external drive selected	query the currently selected external drive
cache info	query cache status
dynamic range	query dynamic range settings
dynamic range: playback override: {off/Rec709/Rec2020_SDR/HLG/ ST2084_300/ST2084_500/ ST2084_800/ST2084_1000/ ST2084_2000/ST2084_4000/ST2084	set playback dynamic range override
dynamic range: record override: {off/Rec709/Rec2020_SDR/HLG/ ST2084_300/ST2084_500/ ST2084_800/ST2084_1000/ ST2084_2000/ST2084_4000/ST2048}	set record dynamic range override
notify	query notification status
notify: remote: {true/false}	set remote notifications
notify: transport: {true/false}	set transport notifications
notify: slot: {true/false}	set slot notifications
notify: configuration: {true/false}	set configuration notifications

Command	Command Description
notify: dropped frames: {true/false}	set dropped frames notifications (reported dropped frame count is approximate)
notify: display timecode: {true/false}	set display timecode notifications
notify: timeline position: {true/false}	set playback timeline position notifications
notify: playrange: {true/false}	set playrange notifications
notify: cache: {true/false}	set cache notifications
notify: dynamic range: {true/false}	set dynamic range settings notifications
notify: slate: {true/false}	set digital slate notifications
notify: clips: {true/false}	set timeline clips notifications where two types of changes can occur: add: partial update with list of clips and insert positions snapshot: complete update of all clips on timeline
notify: disk: {true/false}	set disk clips notifications where two types of changes can occur: add: partial update with list of clips and insert positions snapshot: complete update of all clips on timeline
notify: device info: {true/false}	set device info notifications
notify: nas: {true/false}	set nas notifications triggered by commands such as “nas add” or “nas remove”
goto: clip id: {start/end}	goto first clip or last clip
goto: clip id: {n}	goto clip id {n}
goto: clip id: +{n}	go forward {n} clips
goto: clip id: -{n}	go backward {n} clips
goto: clip: {start/end}	goto start or end of clip
goto: clip: {n}	goto frame position {n} within current clip
goto: clip: +{n}	go forward {n} frames within current clip
goto: clip: -{n}	go backward {n} frames within current clip
goto: timeline: {start/end}	goto start or end of timeline
goto: timeline: {n}	goto frame position {n} within timeline
goto: timeline: +{n}	go forward {n} frames within timeline
goto: timeline: -{n}	go backward {n} frames within timeline
goto: timecode: {timecode}	goto absolute timecode position in timeline
goto: timecode: +{timecode}	go forward {timecode} duration
goto: timecode: -{timecode}	go backward {timecode} duration
goto: slot id: {n}	goto slot id {n}
goto: clip id: {n} clip: {m}	goto clip id {n} and offset to frame position {m} within that clip
goto: clip id: {n} timeline: {m}	goto clip id {n} and offset to frame position {m} within the timeline

Command	Command Description
goto: clip id: {n} timecode: {timecode}	goto clip id {n} and offset {timecode} duration {clip id/clip/timeline/timecode} support absolute and relative offsets use “play” instead of “goto” to play from seeked position
jog: timecode: {timecode}	jog to timecode
jog: timecode: +{timecode}	jog forward {timecode} duration
jog: timecode: -{timecode}	jog backward {timecode} duration
shuttle: speed: {-5000 to 5000}	shuttle with speed
remote	query unit remote control state
remote: enable: {true/false}	enable or disable remote control
remote: override: {true/false}	session override remote control
configuration	query configuration settings
configuration: video input: {SDI/HDMI/component/composite}	change the video input source
configuration: audio input: {embedded/XLR/RCA}	change the audio input source
configuration: file format: {format}	switch to one of the supported formats: H.265High_422, H.264High, H.264Medium, H.264Low, H.264High10_422, H.265High, H.265Medium, H.265Low, QuickTimeProResHQ, QuickTimeProRes, QuickTimeProResLT, QuickTimeProResProxy DNxHR_HQX, QuickTimeDNxHR_HQX, DNxHR_SQ, QuickTimeDNxHR_SQ, DNxHR_LB, QuickTimeDNxHR_LB, DNxHD220x, QuickTimeDNxHD220x, DNxHD145, QuickTimeDNxHD145, DNxHD45, QuickTimeDNxHD45
configuration: audio codec: {PCM/AAC}	switch to specific audio codec
configuration: timecode input: {external/embedded/internal/preset/clip}	change the timecode input
configuration: timecode output: {clip/timeline}	change the timecode output
configuration: timecode preference: {default/dropframe/nondropframe}	whether or not to use drop frame timecodes when not otherwise specified
configuration: timecode preset: {timecode}	set the timecode preset
configuration: audio input channels: {n}	set the number of audio channels recorded to {n}
configuration: record trigger: {none/recordbit/timecoderun}	change the record trigger
configuration: record prefix: {name}	set the record prefix name (supports UTF-8 name)
configuration: record cache: {true/false}	enable or disable record cache, has no effect if cache is not supported/installed/formatted
configuration: append timestamp: {true/false}	append timestamp to recorded filename
configuration: usb spill: {true/false}	enable or disable spilling between usb disks

Command	Command Description
configuration: reference source: {auto/input/external}	set source for the reference signal
configuration: genlock input resync: {true/false}	enable or disable genlock input resync when enabled set reference source to auto/external
configuration: xlr input id: {n} xlr type: {line/mic}	configure xlr input type multiple xlr inputs can be configured in a single command
uptime	return time since last boot
format: slot id: {n} prepare: {exFAT/HFS+} name: {name}	prepare formatting operation filesystem type with volume name {name} “slot id” can be omitted for the current mounted slot “name” defaults to current volume name if mounted (supports UTF-8)
format: device: {device} prepare: {exFAT/HFS+} name: {name}	prepare formatting operation for {device}
format: confirm: {token}	perform a pre-prepared formatting operation using token
identify: enable: {true/false}	identify the device
watchdog: period: {period in seconds}	client connection timeout
reboot	reboot device
slate clips	slate clips information
slate project	slate project information
slate lens	slate lens information
nas list	list all NAS share bookmarks
nas discovered	list all NAS servers that have been discovered via mDNS
nas selected	currently selected NAS share
nas deselect	unmount the currently selected NAS share
connection protocol: response version: {version}	changes which do not affect other client connections change the output of “clips get”, “disk list” and related responses version 1 205 clips get id: filename startT duration startT depends on “configuration: timecode output: {clip/timeline}” 519 clips info id: clipInT clipDuration inT outT filename 206 disk list id: filename codec format duration 520 disk list info id: filename codec format duration version 2 205 clips get id: clipInT clipDuration inT outT folder/filename 519 clips info id: clipInT clipDuration inT outT folder/filename 206 disk list id: codec format duration folder/filename 520 disk list info id: codec format duration folder/filename

Multiline commands:	Command Description
authenticate:↵	authenticate user for secure access
username: {username}	case sensitive username
password: {password}	case sensitive password
slate clips↵	set slate clips information:
reel: {n}	slate reel number, where {n} is in [1, 999]
scene id: {id}	slate scene id value, where {id} is a string
shot type: {WS/MS/CU/BCU/MCU/ECU/none}	slate shot type
take: {n}	slate take number, where {n} is in [1, 99]
take scenario: {PU/VFX/SER/none}	slate take scenario
take auto inc: {true/false}	slate take auto increment
good take: {true/false}	slate good take
environment: {interior/exterior}	slate environment
day night: {day/night}	slate day or night
slate project:↵	set slate project information:
project name: {name}	project name (can be empty, supports UTF-8)
camera: {index}	set camera index e.g. A
director: {name}	director (can be empty, supports UTF-8)
camera operator: {name}	camera operator (can be empty, supports UTF-8)
slate lens:↵	set lens information:
lens type: {type}	lens type (can be empty, supports UTF-8)
iris: {type}	camera iris (can be empty, supports UTF-8)
focal length: {length}	focal length (can be empty, supports UTF-8)
distance: {distance}	lens distance (can be empty, supports UTF-8)
filter: {filter}	lens filter (can be empty, supports UTF-8)
nas add:↵	add a NAS share to the list of bookmarks
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share
username: {username}	username to connect as (optional, defaults to guest)
password: {password}	password to connect with (optional)
nas remove:↵	remove NAS share bookmark, does not unmount share if mounted
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share
nas select:↵	mount NAS share asynchronously. Uses credentials provided in matching bookmark, otherwise uses guest credentials
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share Use “nas selected” or “notify: slot: true” to determine when share is mounted.

Command Combinations

You can combine the parameters into a single command, for example:

```
play: clip id: 3 speed: 200 loop: true single clip: true
```

Or for configuration:

```
configuration: video input: SDI audio input: XLR
```

Or to switch to the second disk, but only play NTSC clips:

```
slot select: slot id: 2 video format: NTSC
```

Using XML

While you can use the Terminal to talk to HyperDeck, if you are writing software, you can use XML to confirm the existence of a specific command based on the firmware of the HyperDeck you are communicating with. This helps your software user interface adjust to the capabilities of the specific HyperDeck model and software version.

Protocol Details

Connection

The HyperDeck Ethernet server listens on TCP port 9993.

Basic syntax

The HyperDeck protocol is a line oriented text protocol. Lines from the server will be separated by an ascii CR LF sequence. Messages from the client may be separated by LF or CR LF.

New lines are represented in this document as a "↵" symbol.

Single line command syntax

Command parameters are usually optional. A command with no parameters is terminated with a new line:

```
{Command name}↵
```

If parameters are specified, the command name is followed by a colon, then pairs of parameter names and values. Each parameter name is terminated with a colon character:

```
{Command name}: {Parameter}: {Value} {Parameter}: {Value} ...↵
```

Multiline command syntax

The HyperDeck protocol also supports an equivalent multiline syntax where each parameter-value pair is entered on a new line. E.g.

```
{Command name}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
↵
```

Response syntax

Simple responses from the server consist of a three digit response code and descriptive text terminated by a new line:

```
{Response code} {Response text}↵
```

If a response carries parameters, the response text is terminated with a colon, and parameter name and value pairs follow on subsequent lines until a blank line is returned:

```
{Response code} {Response text}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
...
↵
```

Successful response codes

A simple acknowledgement of a command is indicated with a response code of 200:

```
200 ok↵
```

Other successful responses carry parameters and are indicated with response codes in the range of 201 to 299.

Failure response codes

Failure responses to commands are indicated with response codes in the range of 100 to 199:

```
100 syntax error
101 unsupported parameter
102 invalid value
103 unsupported
104 disk full
105 no disk
106 disk error
107 timeline empty
108 internal error
109 out of range
110 no input
111 remote control disabled
112 clip not found
120 connection failed
121 authentication failed
122 authentication required
150 invalid state
151 invalid codec
160 invalid format
161 invalid token
162 format not prepared
163 parameterized single line command not supported
```

Asynchronous response codes

The server may return asynchronous messages at any time. These responses are indicated with response codes in the range of 500 to 599:

```
5xx {Response Text}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
↵
```

Connection response

On connection, an asynchronous message will be delivered:

```
500 connection info:↵
protocol version: {Version}↵
model: {Model Name}↵
↵
```

Connection rejection

A limited number of clients may connect at a time. If too many clients attempt to connect concurrently, they will receive an error and be disconnected:

```
120 connection failed↵
```

Timecode syntax

Timecodes are expressed as non-drop-frame timecode in the format:

```
HH:MM:SS:FF
```

Handling of deck "remote" state

The “remote” command may be used to enable or disable the remote control of the deck. Any attempt to change the deck state over ethernet while remote access is disabled will generate an error:

```
111 remote control disabled↵
```

To enable or disable remote control:

```
remote: enable: {“true”, “false”} ↵
```

The current remote control state may be overridden allowing remote access over ethernet irrespective of the current remote control state:

```
remote: override: {“true”, “false”} ↵
```

The override state is only valid for the currently connected ethernet client and only while the connection remains open.

The “remote” command may be used to query the remote control state of the deck by specifying no parameters:

```
remote↵
```

The deck will return the current remote control state:

```
210 remote info:↵
enabled: {“true”, “false”}↵
override: {“true”, “false”}↵
↵
```

Asynchronous remote control information change notification is disabled by default and may be configured with the “notify” command. When enabled, changes in remote state will generate a “510 remote info:”asynchronous message with the same parameters as the “210 remote info:” message.

Closing connection

The "quit" command instructs the server to cleanly shut down the connection:

```
quit↵
```

Checking connection status

The "ping" command has no function other than to determine if the server is responding:

```
ping↵
```

Getting help

The "help" or "?" commands return human readable help text describing all available commands and parameters:

```
help↵
```

Or:

```
?↵
```

The server will respond with a list of all supported commands:

```
201 help:↵
{Help Text}↵
{Help Text}↵
↵
```

Switching to preview mode

The "preview" command instructs the deck to switch between preview mode and output mode:

```
preview: enable: {"true", "false"}↵
```

Playback will be stopped when the deck is switched to preview mode. Switching to playback is not permitted during record. Use the stop command to stop recording before switching to playback.

Controlling device playback

The “play” command instructs the deck to start playing:

```
play↵
```

The play command accepts a number of parameters which may be used together in most combinations.

By default, the deck will play all remaining clips on the timeline then stop.
The “single clip” parameter may be used to override this behavior:

```
play: single clip: {“true”, “false”}↵
```

By default, the deck will play at normal (100%) speed. An alternate speed may be specified in percentage between -5000 to 5000:

```
play: speed: {% normal speed}↵
```

By default, the deck will stop playing when it reaches to the end of the timeline. The “loop” parameter may be used to override this behavior:

```
play: loop: {“true”, “false”}↵
```

To play from the start of a particular clip:

```
play: clip id: {Clip Id}↵
```

To play from a position offset from the start of particular clip:

```
play: clip id: {Clid Id} timecode: +{timecode}↵
```

The “playrange” command returns the current playrange setting if any:

```
playrange↵
```

To override this behaviour and select a particular clip:

```
playrange set: clip id: {Clip ID}↵
```

To only play a certain number of clips starting at a particular clip:

```
playrange set: clip id: {n} count: {m}↵
```

To only play a certain timecode range:

```
playrange set: in: {in timecode} out: {out timecode}↵
```

To play a certain timeline range:

```
playrange set: timeline in: {in} timeline out: {out}↵
```

To clear a set playrange and return to the default value:

```
playrange clear↵
```

The “play on startup command” instructs the deck on what action to take on startup. By default, the deck will not play. Use the “enable” command to start playback after each power up.

```
play on startup: enable {“true”, “false”}↵
```

By default, the unit will play back all clips on startup. Use the “single clip” command to override.

```
play on startup: single clip: {“true”, “false”}↵
```

The “play option” command queries the output frame for when playback stops:

```
play option↵
```

By default, the deck will display the last frame when playback stops. To override this behaviour, the “stop mode” parameter can be used:

```
play option: stop mode: {“lastframe”, “nextframe”, “black”}↵
```

Stopping deck operation

The "stop" command instructs the deck to stop the current playback or capture:

```
stop↵
```

Changing timeline position

The "goto" command instructs the deck to switch to playback mode and change its position within the timeline.

To go to the start of a specific clip:

```
goto: clip id: {Clip ID}↵
```

To move forward/back {count} clips from the current clip on the current timeline:

```
goto: clip id: +/-{count}↵
```

Note that if the resultant clip id goes beyond the first or last clip on timeline, it will be clamp at the first or last clip.

To go to the start or end of the current clip:

```
goto: clip: {“start”, “end”}↵
```

To go to the start of the first clip or the end of the last clip:

```
goto: timeline: {“start”, “end”}↵
```

To go to a specified timecode:

```
goto: timecode: {timecode}↵
```

To move forward or back a specified duration in timecode:

```
goto: timecode: {“+”, “-”}{duration in timecode}↵
```

To specify between slot 1 and slot 2:

```
goto: slot id: {Slot ID}↵
```

Note that only one parameter/value pair is allowed for each goto command.

Enumerating supported commands and parameters

The "commands" command returns the supported commands:

```
commands↵
```

The command list is returned in a computer readable XML format:

```
212 commands:
<commands>↵
     <command name="…"><parameter name="…"/>…</command>↵
     <command name="…"><parameter name="…"/>…</command>↵
     …
</commands>↵
↵
```

More XML tokens and parameters may be added in later releases.

Controlling asynchronous notifications

The “notify” command may be used to enable or disable asynchronous notifications from the server.
To enable or disable transport notifications:

```
notify: transport: {“true”, “false”}↵
```

To enable or disable slot notifications:

```
notify: slot: {“true”, “false”}↵
```

To enable or disable remote notifications:

```
notify: remote: {“true”, “false”}↵
```

To enable or disable configuration notifications:

```
notify: configuration: {“true”, “false”}↵
```

Multiple parameters may be specified. If no parameters are specified, the server returns the current state of all notifications:

```
209 notify:↵
transport: {“true”, “false”}↵
slot: {“true”, “false”}↵
remote: {“true”, “false”}↵
configuration: {“true”, “false”}↵
dropped frames: {“true”, “false”}↵
display timecode: {“true”, “false”}↵
timeline position: {“true”, “false”}↵
playrange: {“true”, “false”}↵
cache: {“true”, “false”}↵
dynamic range: {“true”, “false”}↵
slate: {“true”, “false”}↵
clips: {“true”, “false”}↵
disk: {“true”, “false”}↵
device info: {“true”, “false”}↵
nas: {“true”, “false”}↵
↵
```

Retrieving device information

The "device info" command returns information about the connected deck device:

```
device info↵
```

The server will respond with:

```
204 device info:↵
protocol version: {Version}↵
model: {Model Name}↵
unique id: {unique alphanumeric identifier}↵
slot count: {number of storage slots}↵
software version: {software version}↵
name: {device name}↵
↵
```

Retrieving slot information

The "slot info" command returns information about a slot. Without parameters, the command returns information for the currently selected slot:

```
slot info↵
```

If a slot id is specified, that slot will be queried:

```
slot info: slot id: {Slot ID}↵
```

The server will respond with slot specific information:

```
202 slot info:↵
slot id: {Slot ID}↵
slot name: {“slot name”}↵
device name: {identifying name for disk device}↵
status: {"empty", "mounting", "error", "mounted"}↵
volume name: {Volume name}↵
recording time: {recording time available in seconds}↵
video format: {disk's default video format}↵
blocked: {“true”, “false”}↵
remaining size: {remaining size in bytes}↵
total size: {total size in bytes}↵
↵
```

A slot can also be specificed by its device. This is particularly useful when there are multiple drives connected via USB. First list the available external drives:

```
external drive list↵
226 external drive info:↵
device: {device}↵
```

Then use slot info with device to query the drive:

```
slot info: device: {device}↵
```

Asynchronous slot information change notification is disabled by default and may be configured with the "notify" command. When enabled, changes in slot state will generate a "502 slot info:" asynchronous message with the same parameters as the "202 slot info:" message.

Retrieving clip information

The “disk list” command returns the information for each playable clip on a given disk. Without parameters, the command returns information for the current active disk:

```
disk list↵
```

If a slot id is specified, the disk in that slot will be queried:

```
disk list: slot id: {Slot ID}↵
```

The server responds with the list of all playable clips on the disk in the format of: Index, name, formats, and duration in timecode:

```
206 disk list:↵
slot id: {Slot ID}↵
{clip index}: {name} {file format} {video format} {Duration timecode}↵
{clip index}: {name} {file format} {video format} {Duration timecode}↵
…
↵
```

Note that the *clip index* starts from 1.

Retrieving clip count

The "clips count" command returns the number of clips on the current timeline:

```
clips count ↵
```

The server responds with the number of clips:

```
214 clips count: ↵
clip count: {Count}↵
```

Retrieving timeline information

The "clips get" command returns information for each available clip on the current timeline. Without parameters, the command returns information for all clips on timeline:

```
clips get↵
```

In version 1, the start timecode reported is either a clip timecode or a timeline timecode depending on the configured output timecode.

The server responds with a list of clip IDs, names and timecodes:

```
205 clips info:↵
clip count: {Count}↵
{Clip ID}: {Name} {Start timecode} {Duration timecode}↵
{Clip ID}: {Name} {Start timecode} {Duration timecode}↵
…
↵
```

The “clips get” command provides a more detailed response when using the “version: 2” parameter:

```
clips get: version: 2↵
```

The server responds with a list of clip IDs, timecodes, in points, out points and names. Clip name is the last field making it simpler to parse when names have embedded spaces.

```
{Clip ID}: {Clip start timecode} {Duration timecode} {inTimecode}
{outTimecode}
{name}↵
{Clip ID}: {Clip start timecode} {Duration timecode} {inTimecode}
{outTimecode}
{name}↵
…
↵
```

For models that support recursive timelines “clips get: version: 3” replaces the {name} field with {path to clip name} where the {path to clip name} can include directories and subdirectories.

Retrieving transport information

The “transport info” command returns the state of the transport:

```
transport info ↵
```

The server responds with transport specific information:

```
208 transport info:

status: {“preview”, “stopped”, “play”, “forward”, “rewind”,
“jog”, “shuttle”,”record”}↵

speed: {Play speed between -5000 and 5000 %}↵

slot id: {Slot ID or “none”}↵

slot name: {“slot name”}↵

device name: {identifying name for disk device}↵

clip id: {Clip ID or “none”}↵

single clip: {“true”, “false”}↵

display timecode: {timecode}↵

timecode: {timecode}↵

video format: {Video format}↵

loop: {“true”, “false”}↵

timeline: {n}↵

input video format: {Video format”}↵

dynamic range: {“off”, “Rec709”, “Rec2020_SDR”, “HLG”,
“ST2084_300”, “ST2084_500”, “ST2084_800”, “ST2084_1000”,
“ST2084_2000”, “ST2084_4000”, “ST2048” or “none”}↵

reference locked: {“false”, “true”}

↵
```

The "timecode" value is the timecode within the current timeline for playback or the clip for record. The "display timecode" is the timecode displayed on the front of the deck. The two timecodes will differ in some deck modes.

Asynchronous transport information change notification is disabled by default and may be configured with the "notify" command. When enabled, changes in transport state will generate a "508 transport info:" asynchronous message with the same parameters as the "208 transport info:" message.

Video Formats

The following video formats are currently supported on HyperDeck Extreme, HyperDeck Studio and HyperDeck Shuttle:

720p50, 720p5994, 720p60

1080p23976, 1080p24, 1080p25, 1080p2997, 1080p30, 1080p60

1080i50, 1080i5994, 1080i60

HyperDeck Extreme HDR models also support the following formats:

NTSC, PAL, NTSCp, PALp

2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p30, 2160p50, 2160p59.94, 2160p60

4Kp23976, 4Kp24, 4Kp25, 4Kp2997, 4Kp30

4Kp50, 4Kp5994, 4Kp60

HyperDeckExtreme 8K HDR adds support for the following 8K formats:

4320p23.98, 4320p24, 4320p25, 4320p29.97, 4320p30, 4320p50, 4320p59.94, 4320p60

8Kp23976, 8Kp24, 8Kp25

HyperDeck Studio Pro and Plus models support these 4k formats:

4Kp23976, 4Kp24, 4Kp25, 4Kp2997, 4Kp30

HyperDeck Studio 4K Pro adds support for the following 4k formats:

4Kp50, 4Kp5994, 4Kp60

Video format support may depend on the file format selected and may vary between models and software releases.

File Formats

All HyperDeck models currently support the following file formats:

H.264High_SDI

H.264High

H.264Medium

H.264Low

QuickTimeProResHQ

QuickTimeProRes

QuickTimeProResLT

QuickTimeProResProxy

QuickTimeDNxHD220x

DNxHD220x

QuickTimeDNxHD145

DNxHD145

QuickTimeDNxHD45

DNxHD45

HyperDeck Studio 4K Pro and HyperDeck Extrme HDR models also support the following file formats:

H.265High_SDI

H.265High

H.265Medium

H.265Low

QuickTimeDNxHR_HQX

DNxHR_HQX

QuickTimeDNxHR_SQ

DNxHR_SQ

QuickTimeDNxHR_LB

DNxHR_LB

Supported file formats may vary between models and software releases.

Querying and updating configuration information

The "configuration" command may be used to query the current configuration of the deck:

```
configuration↵
```

The server returns the configuration of the deck:

```
211 configuration:↵
audio input: {“embedded”, “XLR”, “RCA”}↵
audio mapping: {n}↵
video input: {“SDI”, “HDMI”, “component”, “composite”}↵
file format: {format}↵
audio codec: {“PCM”, “AAC”}↵
timecode input: {“external”, “embedded”, “preset”, “clip”}↵
timecode output: {“clip”, “timeline”}↵
timecode preference: {“default”, “dropframe”, “nondropframe”}↵
timecode preset: {timecode}↵
audio input channels: {n}↵
record trigger: {“none”, “recordbit”, “timecoderun”}↵
record prefix: {name}↵
record cache: {“true”, “false”}↵
append timestamp: {“true”, “false”}↵
genlock input resync: {“true”, “false”}↵
reference source: {“auto”, “input”, “external”}↵
xlr input id: {“n”}↵
xlr type: {”line”, ”mic”}↵
usb spill: {“true”, “false”}↵
↵
```

One or more configuration parameters may be specified to change the configuration of the deck.

To change the current video input:

```
configuration: video input: {“SDI”, “HDMI”, “component”}↵
```

Valid video inputs may vary between models. To configure the current audio input:

```
configuration: audio input: {“embedded”, “XLR”, “RCA”}↵
```

Valid audio inputs may vary between models.

To configure the current file format:

```
configuration: file format: {File format}↵
```

Note that changes to the file format may require the deck to reset, which will cause the client connection to be closed. In such case, response code 213 will be returned (instead of 200) before the client connection is closed:

```
“213 deck rebooting”
```

Asynchronous configuration information change notification is disabled by default and may be configured with the “notify” command. When enabled, changes in configuration will generate a “511 configuration:” asynchronous message with the same parameters as the “211 configuration:” message.

Selecting active slot and video format

The "slot select" command instructs the deck to switch to a specified slot, or/and to select a specified output video format.

To switch to a specified slot:

```
slot select: slot id: {slot ID}↵
```

To switch to a disk device, including USB drives that are not yet made active:

```
slot select: device: {identifying name for disk device}↵
```

To select the output video format:

```
slot select: video format: {video format}↵
```

Either or all slot select parameters may be specified. Note that selecting video format will result in a rescan of the disk to reconstruct the timeline with all clips of the specified video format.

Clearing the current timeline

The "clips clear" command instructs the deck to empty the current timeline:

```
clips clear↵
```

The server responds with

```
200 ok↵
```

Adding a clip to the current timeline

The "clips add:" command instructs the deck to add a clip to the current timeline:

```
clips add: name: {clip name}↵
```

The server responds with

```
200 ok↵
```

or in case of error

```
1xx {error description}↵
```

Configuring the watchdog

The “watchdog” command instructs the deck to monitor the connected client and terminate the connection if the client is inactive for at least a specified period of time.

To configure the watchdog:

```
watchdog: period: {period in seconds}↵
```

To avoid disconnection, the client must send a command to the server at least every {period} seconds.
Note that if the period is set to 0 or less than 0, connection monitoring will be disabled.

Network Area Storage

On networks using multicast DNS the “nas discovered” command will list network servers the HyperDeck has discovered:

```
nas discovered↵
225 nas host info:
CloudStoreMini.local. CloudStoreMini
CloudStore80.local. CloudStore80
CloudStore320.local. CloudStore320
```

A network share can be added as a bookmark to the HyperDeck using ‘nas add’

```
nas add:
url: smb://CloudStore80.local/Studio1
```

For shares that require a username and password consider using the secure mode of the HyperDeck Ethernet protocol to avoid passwords being sent as plaintext.

```
nas add:
url: smb://192.168.1.1/Main
username: user1234
password: Password1234
```

A share can be made available for recording and playback using ‘nas select’. If a bookmark exists for that share, ‘nas select’ will use the credentials stored in the bookmark. Otherwise ‘nas select’ will connect using Guest credentials.

```
nas select:
url: smb://192.168.1.1/Main
```

Only one share can be mounted at a time using ‘nas select’.

You can query the currently selected nas share using the ‘nas selected’ command. If ‘notify: slot: true’ was used an asynchronous notification will be sent when the share is mounted.

HyperDeck Control REST API

소프트웨어 개발자의 경우, 커스텀 응용 프로그램을 만들거나 곧바로 사용 가능한 REST 클라이언트나 Postman 같은 도구를 활용하여 HyperDeck Control REST API를 통해 HyperDeck 디스크 레코더를 매끄럽게 제어 및 소통할 수 있습니다. 이 API를 사용하면 녹화 시작 및 정지, 재생 관리, 디스크 정보 접속 등 다양한 방법의 운영이 가능합니다. 특정 작업에 필요한 커스텀 응용 프로그램을 개발하거나 기존의 도구를 활용하는 경우, 이 API를 활용해 HyperDeck 디스크 레코더에 잠재된 모든 기능을 손쉽게 극대화할 수 있습니다. 저희는 고객들이 새로운 방안을 고안해 낼 수 있기를 기대하고 있습니다!

Transport Control API

API for controlling Transport on Blackmagic Design products.

GET /transports/0

Get device's basic transport status.

Response

200 - Transport status.

The response is a JSON object.

Name	Type	Description
mode	string	Transport mode. Possible values are: InputPreview, InputRecord, Output.

PUT /transports/0

Set device's basic transport status.

Parameters

Name	Type	Description
mode	string	Transport mode. Possible values are: InputPreview, Output.

Response

204 - Transport mode was set.

GET /transports/0/stop

Determine if transport is stopped.

Response

200 - Transport stop response.

The response is a JSON object.

PUT /transports/0/stop

Stop transport. Deprecated, use POST /tranports/0/stop instead.

Response

204 - Transport stopped.

POST /transports/0/stop

Stop transport.

Response

204 - Transport stopped.

GET /transports/0/play

Determine if transport is playing.

Response

200 - Transport play response.
The response is a JSON object.

PUT /transports/0/play

Start playing on transport. Deprecated, use POST /tranports/0/play instead.

Response

204 - Transport playing.

POST /transports/0/play

Start playing on transport.

Response

204 - Transport playing.

GET /transports/0/playback

Get playback state.

Response

200 - OK
The response is a JSON object.

Name	Type	Description
type	string	Possible values are: Play, Jog, Shuttle, Var.
loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
speed	number	Playback Speed, 1.0 for normal forward playback
position	integer	Playback position on the timeline in units of video frames

PUT /transports/0/playback

Set playback state.

Parameters

Name	Type	Description
type	string	Possible values are: Play, Jog, Shuttle, Var.
loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
speed	number	Playback Speed, 1.0 for normal forward playback
position	integer	Playback position on the timeline in units of video frames

Response

204 - No Content

GET /transports/0/record

Get record state.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
recording	boolean	Is transport in Input Record mode

PUT /transports/0/record

Set record state. Deprecated, use POST /transports/0/record instead.

Parameters

Name	Type	Description
recording	boolean	Is transport in Input Record mode
clipName	string	Used to set the requested clipName to record to, when specifying “recording” attribute to True

Response

204 - Recording started.

POST /transports/0/record

Start recording.

Parameters

Name	Type	Description
clipName	string	Specific name of clip to record to.

Response

204 - Recording started.

GET /transports/0/clipIndex

Get the clip index of the currently playing clip on the timeline.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clipIndex	number	The 0-based index of the clip being played on the timeline. null when there is no timeline or an empty timeline.

GET /transports/0/timecode

Get device's timecode.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
display	string	The display timecode serialised as a string.
timeline	string	The timeline timecode serialised as a string.

GET /transports/0/timecode/source

Get timecode source selected on device

Response

200 - OK

The response is a JSON object.

Name	Type	Description
timecode	string	Possible values are: Timeline, Clip.

GET /transports/0/clip

Get clip information about the currently recording (or transferring) clip, if it exists

Response

200 - Information about the clip currently being recorded.

The response is a JSON object.

Name	Type	Description
clip	object	
clip.clipUniqueId	integer	Unique ID used to identify this clip
clip.filePath	string	Path to the file relative to the root of a mount
clip.fileSize	integer	Size of file on disk in bytes
clip.codecFormat	object	
clip.codecFormat.codec	string	Currently selected codec.
clip.codecFormat.container	string	Multimedia container format.
clip.videoFormat (required)	object	Video format configuration.
clip.videoFormat.name	string	Video format serialised as a string.
clip.videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
clip.videoFormat.height	number	Height dimension of video format.
clip.videoFormat.width	number	Width dimension of video format.
clip.videoFormat.interlaced	boolean	Is the display format interlaced?
clip.startTimecode	string	Start timecode of the clip serialised as string
clip.durationTimecode	string	Duration of the clip in timecode format serialised as string
clip.frameCount	integer	Number of frames in clip; duration of the clip in frames

System Control API

API for controlling the System Modes on Blackmagic Design products.

GET /system

Get device system information.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codecFormat	object	
codecFormat.codec	string	Currently selected codec.
codecFormat.container	string	Multimedia container format.
videoFormat (required)	object	Video format configuration.
videoFormat.name	string	Video format serialised as a string.
videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
videoFormat.height	number	Height dimension of video format.
videoFormat.width	number	Width dimension of video format.
videoFormat.interlaced	boolean	Is the display format interlaced?

GET /system/product

Get device product information.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
deviceName	string	Name of device as displayed in Setup
productName	string	Device's product name
softwareVersion	string	Software version running on device

GET /system/supportedCodecFormats

Get the list of supported codecs.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codecs	array	
codecs[i]	object	
codecs[i].codec	string	Currently selected codec.
codecs[i].container	string	Multimedia container format.

GET /system/codecFormat

Get the currently selected codec.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codec	string	Currently selected codec.
container	string	Multimedia container format.

PUT /system/codecFormat

Set the codec.

Parameters

Name	Type	Description
codec	string	Currently selected codec.
container	string	Multimedia container format.

Response

204 - The codec updated successfully.

GET /system/videoFormat

Get the currently selected video format.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
name	string	Video format serialised as a string.
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

PUT /system/videoFormat

Set the timeline video format. Deprecated, use PUT /timelines/0/videoFormat instead.

Parameters

This parameter can be one of the following types:

Name	Type	Description
name	string	Video format serialised as a string.

Name	Type	Description
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

Response

204 - The video format updated successfully.

400 - Invalid request.

409 - Operation unsupported in the current state.

Media Control API

API for controlling media devices in Blackmagic Design products.

GET /media/workingset

Get the list of media devices currently in the working set.

Response

200 - The list of media devices in the working set. Entries are null if there is no media device in that slot.

The response is a JSON object.

Name	Type	Description
size	integer	The fixed size of this device's working set
workingset (required)	array	
workingset[i]	object	
workingset[i].index	integer	Index of this media in the working set
workingset[i].activeDisk	boolean	Is this current item the active disk
workingset[i].volume	string	Volume name
workingset[i].deviceName	string	Internal device name of this media device
workingset[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
workingset[i].totalSpace	integer	Total space on media device in bytes
workingset[i].remainingSpace	integer	Remaining space on media device in bytes
workingset[i].clipCount	integer	Number of clips currently on the device

GET /media/active

Get the currently active media device.

Response

200 - The current active media device.

The response is a JSON object.

Name	Type	Description
workingsetIndex	integer	Working set index of the active media device
deviceName	string	Internal device name of this media device

204 - No media is currently active

PUT /media/active

Set the currently active media device.

Parameters

Name	Type	Description
workingsetIndex	integer	Working set index of the media to become active

Response

204 - The active media device was set successfully.

400 - Setting the currently active media device is not possible in the current state.

GET /media/devices/doformatSupportedFilesystems

Get the list of filesystems available to format the device.

Response

200 - The list of filesystems permitted for formatting.

The response is a JSON object.

GET /media/devices/{deviceName}

Get information about a requested device.

Parameters

Name	Type	Description
{deviceName}	string	

Response

200 - Information about the requested device.

The response is a JSON object.

Name	Type	Description
state	string	The current state of the media device. Possible values are: None, Scanning, Mounted, Uninitialised, Formatting, RaidComponent.

400 - Invalid device name

404 - Device not found

GET /media/devices/{deviceName}/doformat

Get a format key, used to format the device with a PUT request.

Parameters

Name	Type	Description
{deviceName}	string	

Response

200 - Format prepared

The response is a JSON object.

Name	Type	Description
deviceName	string	Internal device name of this media device
key	string	The key used to format this device, it must be fetched with the GET request and then provided back with a PUT request

400 - Cannot format the device

404 - Device not found

PUT /media/devices/{deviceName}/doformat

Perform a format of the media device.

Parameters

Name	Type	Description
{deviceName}	string	

Name	Type	Description
key	string	The key used to format this device, it must be fetched with the GET request and then provided back with a PUT request
filesystem	string	Filesystem to format to. GET doFormatSupportedFilesystems returns list of supported filesystems.
volume	string	Volume name to set for the disk after format

Response

204 - Format successful

400 - Cannot format the device, invalid filesystem or key

404 - Device not found

Timeline Control API

API for controlling playback timeline.

GET /timelines/0

Get the playback timeline.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clips	array	
clips[i]	object	
clips[i].clipUniqueId	integer	Unique identifier used to identify this media clip. If the same media clip is added to the timeline multiple times, each timeline clip has the same clipUniqueId
clips[i].frameCount	integer	Duration of timeline clip in frames, the number of frames in this clip on the timeline
clips[i].durationTimecode	string	Duration of the timeline clip in timecode format serialised as string. This will differ to durationTimecode reported in /clips for this clipUniqueId if clipIn or frameCount was specified when adding this clip to the timeline.
clips[i].clipIn	string	In frame offset for the clip on the timeline, where 0 is the first frame of the on-disk clip
clips[i].inTimecode	string	Clip timecode of the first frame of this timeline clip serialised as string (clip startTimecode + clipIn frames)
clips[i].timelineIn	string	Timeline position of the first frame of this clip, where 0 is the first frame of the timeline
clips[i].timelineInTimecode	string	Timeline timecode of the first frame of this timeline clip serialised as string

Response

404 - No timeline / disk available.

DELETE /timelines/0

Clear the current playback timeline. Deprecated, prefer to use POST /timelines/0/clear

Response

204 - The timeline was cleared.

POST /timelines/0

Add a clip to the timeline.

Parameters

Name	Type	Description
insertBefore	integer	Clip(s) will be inserted before this timeline clip index. If omitted, inserts to the end of the timeline. 0 inserts to the beginning of the timeline.
clips		

Response

204 - The clip was added to the timeline as specified.

POST /timelines/0/add

Add a clip to the end of the timeline. Deprecated, use POST /timelines/0 to add clips within the timeline.

Parameters

This parameter can be one of the following types:

Name	Type	Description
clips	integer	Unique ID (clipUniqueId) of the clip to add to the timeline

Name	Type	Description
clips	array	
clips[i]	integer	Unique ID (clipUniqueId) of the clip to add to the timeline

Response

204 - The clip was added to the end of the timeline.

DELETE /timelines/0/clear

Clear the playback timeline.

Response

204 - The timeline was cleared.

DELETE /timelines/0/clips/{timelineClipIndex}

Remove the specified clip from the timeline.

Parameters

Name	Type	Description
{timelineClipIndex}	integer	

Response

204 - The specified clip was removed from the timeline.

Event Control API

API For working with built-in websocket.

GET /event/list

Get the list of events that can be subscribed to using the websocket API.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
events	array	
events[i]	string	List of events that can be subscribed to using the websocket API

Clips Control API

API for listing clips on disk.

GET /clips

Get the list of clips on the active disk.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clips	array	
clips[i]	object	
clips[i].clipUniqueId	integer	Unique ID used to identify this clip
clips[i].filePath	string	Path to the file relative to the root of a mount
clips[i].fileSize	integer	Size of file on disk in bytes
clips[i].codecFormat	object	
clips[i].codecFormat.codec	string	Currently selected codec.
clips[i].codecFormat.container	string	Multimedia container format.
clips[i].videoFormat (required)	object	Video format configuration.
clips[i].videoFormat.name	string	Video format serialised as a string.
clips[i].videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
clips[i].videoFormat.height	number	Height dimension of video format.
clips[i].videoFormat.width	number	Width dimension of video format.
clips[i].videoFormat.interlaced	boolean	Is the display format interlaced?
clips[i].startTimecode	string	Start timecode of the clip serialised as string
clips[i].durationTimecode	string	Duration of the clip in timecode format serialised as string
clips[i].frameCount	integer	Number of frames in clip; duration of the clip in frames

Response

404 - There is no active disk

HyperDeck Control API

API for controlling HyperDecks.

POST /system/reboot

Reboots the device.

Response

204 - The device will reboot immediately.

409 - Rebooting is not possible in the current state.

GET /system/uptime

Gets the current system uptime.

Response

200 - The current system uptime

The response is a JSON object.

Name	Type	Description
uptimeSeconds	integer	The system uptime in seconds

PUT /system/identify

Sets the identify mode. If set to true, will exit identify mode after 10 seconds.

Parameters

Name	Type	Description
enabled	boolean	Is the device identifying itself?

Response

204 - Identify updated successfully.

GET /transports/0/recordCache

Gets information about the recording cache.

Response

200 - Current information about the recording cache

The response is a JSON object.

Name	Type	Description
status	string	The current status of the cache. “none” means no cache is detected by the device. Possible values are: undetected, unformatted, idle, transferring, queued, recording, disabled.
remainingRecordingTime	integer	The remaining recording time in seconds.
transferringDevice	string	The device name of the disk the cache is currently transferring to.

GET /transports/0/recordCache/enabled

Checks if the record cache is enabled.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
enabled	boolean	Is the record cache enabled?

PUT /transports/0/recordCache/enabled

Enables or disables the record cache. Has no effect if cache is not supported / installed / formatted.

Parameters

Name	Type	Description
enabled	boolean	Is the record cache enabled?

Response

204 - Record cache enabled / disabled was changed.

GET /transports/0/record/spillOrder

Gets media devices in order of which will next be spilled to.

Response

200 - The media device spill order

The response is a JSON object.

Name	Type	Description
devices	array	
devices[i]	object	
devices[i].deviceName	string	Internal device name of the drive.

POST /transports/0/record/spillToNewFile

Spills to a new file.

Response

204 - Spilled to a new file.

POST /transports/0/record/spillToNextDevice

Spills to the next media device

Response

204 - Spilled to the specified drive.

GET /transports/0/inputVideoFormat

Gets the video format of the input video signal.

Response

200 - The video format of the input video signal. “inputVideoFormat” is null when there is no timeline.

The response is a JSON object.

Name	Type	Description
inputVideoFormat (required)	object	Video format configuration.
inputVideoFormat.name	string	Video format serialised as a string.
inputVideoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
inputVideoFormat.height	number	Height dimension of video format.
inputVideoFormat.width	number	Width dimension of video format.
inputVideoFormat.interlaced	boolean	Is the display format interlaced?

GET /transports/0/supportedInputVideoSources

Gets the currently supported input video signal sources.

Response

200 - The supported input video signal sources.

The response is a JSON object.

Name	Type	Description
supportedInputVideoSources	array	
supportedInputVideoSources[i]	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

GET /transports/0/inputVideoSource

Gets the source of the input video signal.

Response

200 - The input video signal source. The source will be one in the list from GET /transports/0/supportedInputVideoSources.

The response is a JSON object.

Name	Type	Description
inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

PUT /transports/0/inputVideoSource

Sets the source of the input video signal.

Parameters

Name	Type	Description
inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

Response

204 - The source of the input video signal was set successfully.

400 - The source specified was invalid or unsupported.

GET /timelines/0/playRange

Gets the current timeline play range. playRange is null if playing the whole timeline, or there is no play range.

Response

200 - The current timeline play range.

The response is a JSON object.

Name	Type	Description
playRange		

PUT /timelines/0/playRange

Sets the timeline play range.

Parameters

Name	Type	Description
playRange		

Response

204 - The timeline play range was set successfully.

POST /timelines/0/playRange/clear

Clears the timeline play range, sets the play range to be the whole timeline.

Response

204 - The timeline play range was cleared successfully.

GET /timelines/0/videoFormat

Gets the video format of the timeline.

Response

200 - The video format of the timeline. “videoFormat” is null when there is no timeline.

The response is a JSON object.

Name	Type	Description
videoFormat (required)	object	Video format configuration.
videoFormat.name	string	Video format serialised as a string.
videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
videoFormat.height	number	Height dimension of video format.
videoFormat.width	number	Width dimension of video format.
videoFormat.interlaced	boolean	Is the display format interlaced?

PUT /timelines/0/videoFormat

Sets the video format of the timeline.

Parameters

This parameter can be one of the following types:

Name	Type	Description
name	string	Video format serialised as a string.

Name	Type	Description
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

Response

204 - The timeline video format was set successfully.

400 - The requested video format was invalid.

409 - The video format cannot be changed at this time.

POST /timelines/0/rebuild

Rebuilds the timeline with default rules in the current timeline format.

Response

204 - The timeline was rebuilt with default rules.

GET /media/external

Gets the list of present external media devices.

Response

200 - The list of present external media devices

The response is a JSON object.

Name	Type	Description
devices	array	
devices[i] (required)	object	
devices[i].volume	string	Volume name
devices[i].deviceName	string	Internal device name of this media device
devices[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
devices[i].totalSpace	integer	Total space on media device in bytes
devices[i].remainingSpace	integer	Remaining space on media device in bytes
devices[i].clipCount	integer	Number of clips currently on the device

GET /media/external/selected

Gets the current selected external media device.

Response

200 - The selected external media device

The response is a JSON object.

Name	Type	Description
selected	object	
selected.deviceName	string	Internal device name of the drive.

404 - No selected external media has been selected

PUT /media/external/selected

Sets the current selected external media device.

Parameters

Name	Type	Description
selected	object	
selected.deviceName	string	Internal device name of the drive.

Response

204 - The selected external media device was set successfully.

GET /media/nas/discovered

Gets the NAS hosts discoverable by the device.

Response

200 - The list of discovered NAS hosts

The response is a JSON object.

Name	Type	Description
hosts	array	
hosts[i]	object	
hosts[i].hostName	string	The hostname of the NAS host
hosts[i].friendlyName	string	The friendly name of the NAS host
hosts[i].ip	string	The IP address of the NAS host

GET /media/nas/bookmarks

Gets all NAS share bookmarks.

Response

200 - The list of NAS share bookmarks

The response is a JSON object.

Name	Type	Description
hosts	array	
hosts[i] (required)	object	
hosts[i].url	string	URL of the NAS share

POST /media/nas/bookmarks

Add a new NAS share bookmarks.

Parameters

Response

204 - The NAS bookmark was added successfully.

400 - The NAS bookmark could not be added.

GET /media/nas/bookmarks/{url}

Get information about a requested network share bookmark.

Parameters

Name	Type	Description
{url}	string	

Response

200 - Information about the requested network share bookmark.

The response is a JSON object.

Name	Type	Description
url	string	URL of the NAS share

404 - Network share bookmark not found

PUT /media/nas/bookmarks/{url}

Adds a bookmark with the requested URL.

Parameters

Name	Type	Description
{url}	string	

Name	Type	Description
username	string	Default value is: guest.
password	string	

Response

204 - The NAS bookmark has been created.

400 - The NAS bookmark could not be created.

DELETE /media/nas/bookmarks/{url}

Deletes a bookmark with the requested URL.

Parameters

Name	Type	Description
{url}	string	

Response

204 - The NAS bookmark has been deleted.

GET /media/nas/selected

Gets the currently selected share bookmark.

Response

200 - Information about the selected network share bookmark.

The response is a JSON object.

Name	Type	Description
selected	object	
selected.url	string	URL of the NAS share

404 - No NAS drive has been selected.

PUT /media/nas/selected

Sets the selected share bookmark to the requested bookmark, or clears the bookmark.

Parameters

Name	Type	Description
selected	object	
selected.url	string	URL of the NAS share

Response

204 - The selected NAS bookmark was set.

400 - The selected NAS bookmark could not be set.

Notification websocket - 1.0.0

Service that notifies subscribers of device state changes.

messages

Subscribe (The messages from the server/device)

Response Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: subscribe, unsubscribe, listSubscriptions, listProperties, websocketOpened .
.data.properties	array	
.data.properties[i]	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.values	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.data.success	boolean	
.type	string	Possible values are: response .
.id	number	Optional parameter that repeats the id in the output for tracking messages

Event Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: propertyValueChanged .
.data.property	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.value	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.type	string	Possible values are: event .

Publish (The messages that user can send to the server/device)

Response Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: subscribe, unsubscribe, listSubscriptions, listProperties, websocketOpened .
.data.properties	array	
.data.properties[i]	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.values	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.data.success	boolean	
.type	string	Possible values are: response .
.id	number	Optional parameter that repeats the id in the output for tracking messages

Device Properties

/media/workingset

The value JSON returned via the eventResponse when the /media/workingset property changes on the device:

Name	Type	Description
size	integer	The fixed size of this device's working set
workingset (required)	array	
workingset[i]	object	
workingset[i].index	integer	Index of this media in the working set
workingset[i].activeDisk	boolean	Is this current item the active disk
workingset[i].volume	string	Volume name
workingset[i].deviceName	string	Internal device name of this media device
workingset[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
workingset[i].totalSpace	integer	Total space on media device in bytes
workingset[i].remainingSpace	integer	Remaining space on media device in bytes
workingset[i].clipCount	integer	Number of clips currently on the device

/media/active

The value JSON returned via the eventResponse when the /media/active property changes on the device:

Name	Type	Description
.workingsetIndex	integer	Working set index of the active media device
.deviceName	string	Internal device name of this media device

/system

The value JSON returned via the eventResponse when the /system property changes on the device:

Name	Type	Description
.codecFormat	object	Currently selected codec
.codecFormat.codec	string	Currently selected codec
.codecFormat.container	string	Multimedia container format
.videoFormat	string	Name of the video format

/system/codecFormat

Currently selected codec

The value JSON returned via the eventResponse when the /system/codecFormat property changes on the device:

Name	Type	Description
.codec	string	Currently selected codec
.container	string	Multimedia container format

/system/videoFormat

Name of the video format

The value JSON returned via the eventResponse when the /system/videoFormat property changes on the device:

Name	Type	Description

/timelines/0

The value JSON returned via the eventResponse when the /timelines/0 property changes on the device:

Name	Type	Description
.clips	array	
.clips[i]	object	
.clips[i].clipUniqueId	integer	Unique identifier used to identify this media clip. If the same media clip is added to the timeline multiple times, each timeline clip has the same clipUniqueId
.clips[i].frameCount	integer	Duration of timeline clip in frames, the number of frames in this clip on the timeline
.clips[i].durationTimecode	string	Duration of the timeline clip in timecode format serialised as string. This will differ to durationTimecode reported in /clips for this clipUniqueId if clipIn or frameCount was specified when adding this clip to the timeline.
.clips[i].clipIn	string	In frame offset for the clip on the timeline, where 0 is the first frame of the on-disk clip
.clips[i].inTimecode	string	Clip timecode of the first frame of this timeline clip serialised as string (clip startTimecode + clipIn frames)
.clips[i].timelineIn	string	Timeline position of the first frame of this clip, where 0 is the first frame of the timeline
.clips[i].timelineInTimecode	string	Timeline timecode of the first frame of this timeline clip serialised as string

/transports/0

The value JSON returned via the eventResponse when the /transports/0 property changes on the device:

Name	Type	Description
.mode	string	Transport mode Possible values are: InputPreview, InputRecord, Output .

/transports/0/stop

true when transport mode is InputPreview or when in Output mode and speed is 0

The value JSON returned via the eventResponse when the /transports/0/stop property changes on the device:

Name	Type	Description

/transports/0/play

True when transport is in Output mode and speed is non-zero

The value JSON returned via the eventResponse when the /transports/0/play property changes on the device:

Name	Type	Description

/transports/0/playback

The value JSON returned via the eventResponse when the /transports/0/playback property changes on the device:

Name	Type	Description
.type	string	Possible values are: Play, Jog, Shuttle, Var .
.loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
.singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
.speed	number	Playback speed, 1.0 for normal forward playback
.position	integer	Playback position on the timeline in units of video frames

/transports/0/record

The value JSON returned via the eventResponse when the /transports/0/record property changes on the device:

Name	Type	Description
.recording	boolean	Is transport in Input Record mode

/transports/0/timecode

The value JSON returned via the eventResponse when the /transports/0/timecode property changes on the device:

Name	Type	Description
display	string	The display timecode serialised as a string.
timeline	string	The timeline timecode serialised as a string.

/transports/0/timecode/source

The value JSON returned via the eventResponse when the /transports/0/timecode/source property changes on the device:

Name	Type	Description
.timecode	string	Possible values are: Timeline, Clip .

/transports/0/clipIndex

The value JSON returned via the eventResponse when the /transports/0/clipIndex property changes on the device:

Name	Type	Description
.clipIndex	number	The 0-based index of the clip being played on the timeline. null when there is no timeline or an empty timeline.

/media/external

The value JSON returned via the eventResponse when the /media/external property changes on the device:

Name	Type	Description
.volume	string	Volume name
.deviceName	string	Name of media device
.remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
.totalSpace	integer	Total space on media device in bytes
.remainingSpace	integer	Remaining space on media device in bytes
.clipCount	integer	Number of clips currently on the device

/media/external/selected

The value JSON returned via the eventResponse when the /media/external/selected property changes on the device:

Name	Type	Description
.deviceName	string	Internal device name of this media device

/transports/0/inputVideoSource

The value JSON returned via the eventResponse when the /transports/0/inputVideoSource property changes on the device:

Name	Type	Description
.inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite .

/transports/0/inputVideoFormat

The value JSON returned via the eventResponse when the /transports/0/inputVideoFormat property changes on the device:

Name	Type	Description
.inputVideoFormat	string	Name of the video format

/timelines/0/videoFormat

The value JSON returned via the eventResponse when the /timelines/0/videoFormat property changes on the device:

Name	Type	Description
.videoFormat	string	Name of the video format

/media/nas/discovered

The value JSON returned via the eventResponse when the /media/nas/discovered property changes on the device:

Name	Type	Description
.hostName	string	Hostname of external network drive
.friendlyName	string	Name of external network drive
.ip	string	IP Address of external network drive

/media/nas/bookmarks

The value JSON returned via the eventResponse when the /media/nas/bookmarks property changes on the device:

Name	Type	Description
.hosts	array	
.hosts[i]	object	
.hosts[i].url	string	URL associated with bookmark

지원

지원 받기

가장 빠르게 지원받을 수 있는 방법은 Blackmagic Design 온라인 고객지원 페이지에 접속하여 해당 Blackmagic HyperDeck 디스크 레코더 관련 최신 지원 정보를 확인하는 것입니다.

Blackmagic Design 온라인 고객 지원 페이지

최신 사용 설명서와 소프트웨어, 지원 노트는 Blackmagic 고객 지원 센터 (www.blackmagicdesign.com/kr/support)에서 확인하실 수 있습니다.

Blackmagic Design 포럼

저희 웹사이트에 있는 Blackmagic Design 포럼은 유용한 정보를 제공하는 곳으로, 방문을 통해 자세한 정보와 창의적인 아이디어를 얻을 수 있습니다. 또한 숙련된 사용자나 Blackmagic Design 직원들이 기존에 올려놓은 해결책을 통해 원하는 해답을 얻을 수도 있으므로 신속하게 도움을 받아 한 단계 성장할 수 있는 방법이기도 합니다. 포럼은 http://forum.blackmagicdesign.com을 방문해 이용할 수 있습니다

Blackmagic Design 고객 지원에 문의하기

고객 지원 페이지나 포럼에서 원하는 정보를 얻지 못한 경우에는 [이메일 보내기] 버튼을 클릭하여 지원 요청 이메일을 보내주세요. 다른 방법으로는, 고객지원 페이지의 [지역별 고객 지원팀 찾기] 버튼을 클릭하여 가장 가까운 Blackmagic Design 고객지원 사무실에 문의하세요.

현재 설치된 소프트웨어 버전 확인하기

컴퓨터에 설치된 Blackmagic HyperDeck 소프트웨어 버전을 확인하려면 [About Blackmagic HyperDeck Setup] 창을 여세요.

- Mac OS에서는 애플리케이션 폴더에 있는 Blackmagic HyperDeck Setup을 실행하세요. 애플리케이션 메뉴에서 [About Blackmagic HyperDeck Setup]을 선택하고 버전을 확인하세요.
- 윈도우에서는 '시작' 메뉴 또는 시작 화면에서 HyperDeck Setup을 실행하세요. 도움말 메뉴를 클릭한 뒤 [About Blackmagic HyperDeck Setup]을 선택해 버전을 확인할 수 있습니다.

최신 버전 소프트웨어로 업데이트하기

컴퓨터에 설치된 Blackmagic Cloud Setup 소프트웨어 버전을 확인한 뒤, Blackmagic Design 고객 지원 센터(www.blackmagicdesign.com/kr/support)에 방문하여 최신 업데이트를 확인하세요. 최신 버전으로 업데이트하는 것을 권장하지만, 중요한 프로젝트를 실행하는 도중에는 소프트웨어 업데이트를 하지 않는 것이 좋습니다.

규제 사항

유럽 연합 국가 내의 전기전자제품 폐기물 처리 기준



제품에 부착된 기호는 해당 제품을 다른 폐기물과는 별도로 처리되어야 함을 나타냅니다. 제품을 폐기하려면 반드시 재활용 지정 수거 장소에 폐기해야 합니다. 폐기물 제품을 분리수거 및 재활용으로 처리하는 것은 자연 자원을 보전하고 인간의 건강과 환경을 보호할 수 있도록 폐기물을 재활용할 수 있는 방법입니다. 재활용을 위한 제품 폐기물 장소에 관한 자세한 정보는 해당 지역 시청의 재활용 센터 혹은 해당 제품을 구입한 상점으로 문의하세요.

본 제품은 테스트 결과 FCC 규정 제15항에 따라 A급 디지털 기기 제한 사항을 준수하는 것으로 확인되었습니다. 해당 제한 사항은 본 제품을 상업적 환경에서 사용할 시 발생할 수 있는 유해 혼선으로부터 적절한 보호를 제공하기 위함입니다. 이 제품은 무선 주파수를 생성 및 사용, 방출할 수 있습니다. 따라서 설명서의 안내에 따라 제품을 설치 및 사용하지 않을 시, 무선 통신을 방해하는 전파 혼선을 일으킬 수 있습니다. 해당 제품을 주거 지역에서 사용할 경우 유해 전파 혼선이 발생할 가능성이 있으며, 이 경우 사용자는 자체 비용으로 전파 혼선 문제를 해결해야 합니다.

제품 작동은 다음 두 가지 조건을 전제로 합니다.

1. 본 기기는 유해 혼신을 일으키지 않습니다.
2. 본 기기는 원치 않는 작동을 일으킬 수 있는 혼신을 포함하여 모든 혼신을 수용합니다.



R-R-BMD-20211410001

ISED 캐나다 성명



본 기기는 캐나다 표준 A급 디지털 장치 규정을 준수합니다.

정해진 사용 목적 이외의 다른 목적의 사용 또는 제품 변경은 표준 규정 위반으로 간주할 수 있습니다.

HDMI 인터페이스 연결 시에는 반드시 고품질의 쉴드 HDMI 케이블을 사용해야 합니다.

이 기기는 업무용 환경에서 사용할 목적으로 적합성 평가를 거쳤습니다. 가정용 환경에서 사용하는 경우 전파간섭의 우려가 있습니다.

안전 정보

본 제품은 주위 온도가 최대 40ºC인 열대 지역에서 사용하기 적합합니다.

공기가 잘 통할 수 있도록 제품을 통풍이 잘되는 곳에 두세요.

제품 내부에는 사용자가 수리 가능한 부품이 없습니다. 제품 수리는 해당 지역 Blackmagic Design 서비스 센터에 문의하세요.



최대 작동 고도는 해수면 기준 2000m입니다.

캘리포니아주 성명

본 제품을 사용하는 사용자는 제품의 플라스틱 내 폴리브롬화 비페닐에 노출될 수 있으며 캘리포니아주에서는 해당 물질이 암, 선천적 결손증, 기타 생식기능의 손상을 유발하는 것으로 알려져 있습니다.

더욱 자세한 정보는 www.P65Warnings.ca.gov을 확인하세요.

유럽 사무실

Blackmagic Design B.V, Amsterdam
Sloterdijk Teleport Towers Office 2.17,
Kingsfordweg 151,
Amsterdam, 1043GR.

보증

12개월 한정 보증

Blackmagic Design은 본 제품의 부품 및 제조에 어떠한 결함도 없음을 제품 구매일로부터 12개월 동안 보증합니다. 보증 기간 내에 결함이 발견될 경우, Blackmagic Design은 당사의 결정에 따라 무상 수리 또는 새로운 제품으로 교환해드립니다.

구매 고객은 반드시 보증 기간이 만료되기 전에 결함 사실을 Blackmagic Design에 통지해야 적절한 보증 서비스를 제공받을 수 있습니다. 구매 고객은 지정된 Blackmagic Design 서비스 센터로 결함 제품을 포장 및 운송할 책임이 있으며, 운송 비용은 선불로 지급되어야 합니다. 구매 고객은 또한 이유를 불문하고 제품 반송에 대한 운송료, 보험, 관세, 세금, 기타 비용을 부담해야 합니다.

이 보증은 부적절한 사용, 관리 및 취급으로 인한 파손, 고장, 결함에는 적용되지 않습니다. Blackmagic Design은 다음과 같은 경우에 보증 서비스를 제공할 의무가 없습니다. a) Blackmagic Design 판매 대리인이 아닌 개인에 의해 발생한 제품 손상. b) 부적절한 사용 및 호환하지 않는 장비와의 연결로 인한 제품 손상. c) Blackmagic Design사의 부품 및 공급품이 아닌 것을 사용하여 발생한 손상 및 고장. d) 제품을 개조하거나 다른 제품과 통합하여 제품 작동 시간 증가 및 기능 저하가 발생한 경우. BLACKMAGIC DESIGN에서 제공하는 제품 보증은 다른 모든 명시적 또는 묵시적 보증을 대신합니다. BLACKMAGIC DESIGN사와 관련 판매 회사는 상품성 및 특정 목적의 적합성과 관련된 모든 묵시적 보증을 부인합니다. 구매 고객에게 제공되는 BLACKMAGIC DESIGN의 결함 제품 수리 및 교환 관련 책임은 BLACKMAGIC DESIGN 또는 판매 회사에서 관련 위험의 가능성에 대한 사전 통보의 여부와 관계없이 모든 간접적, 특별, 우발적, 결과적 손해에 대한 유일한 배상 수단입니다. BLACKMAGIC DESIGN은 장비의 불법적 사용과 관련하여 어떤 법적 책임도 지지 않습니다. Blackmagic Design은 본 제품의 사용으로 인해 발생하는 손해에 대해서는 어떤 법적 책임도 지지 않습니다. 제품 사용으로 인해 발생할 수 있는 위험에 대한 책임은 본인에게 있습니다.

© Copyright 2024 Blackmagic Design. 모든 권리 보유. ‘Blackmagic Design’, ‘DeckLink’, ‘HDLink’, ‘Workgroup Videohub’, ‘Multibridge Pro’, ‘Multibridge Extreme’, ‘Intensity’, ‘Leading the creative video revolution’은 모두 미국 및 기타 국가에 등록된 상표입니다. 다른 회사명 및 제품 이름은 관련 회사의 등록 상표일 수 있습니다.

Июль 2024 г.

Руководство по установке и эксплуатации

Blackmagicdesign

HyperDeck Shuttle HD



HyperDeck Shuttle HD



Уважаемый пользователь!

Благодарим вас за покупку устройства Blackmagic HyperDeck Shuttle HD.

Когда мы разрабатывали первые дисковые рекордеры HyperDeck, то стремились создать доступное для каждого решение, которое позволяет записывать и воспроизводить видео с помощью скоростных SSD-накопителей. Сейчас эта линейка пополнилась новой моделью HyperDeck Shuttle HD.

Она представляет собой небольшой портативный рекордер с HDMI-интерфейсом, предназначенный для размещения на рабочем столе. Знакомые элементы управления и удобный диск для навигации позволяют использовать его одной рукой, что делает устройство идеальным решением для создания контента в реальном времени при работе с микшером ATEM Mini. Кроме того, HyperDeck Shuttle HD может служить как телесуфлер.

Для быстрой записи и воспроизведения материала этот рекордер позволяет вести сохранение как на традиционные SD-карты, так и на внешние накопители в форматах ProRes, DNxHD и H.264.

Последнюю версию руководства и обновления ПО для HyperDeck можно найти в разделе поддержки на веб-сайте www.blackmagicdesign.com/ru. Использование актуальной версии ПО гарантирует доступ ко всем имеющимся функциям. Чтобы своевременно узнавать о выходе релизов, зарегистрируйтесь при загрузке ПО. Мы постоянно работаем над совершенствованием наших продуктов, поэтому ваши отзывы помогут нам сделать их еще лучше.



Грант Петти
Генеральный директор Blackmagic Design

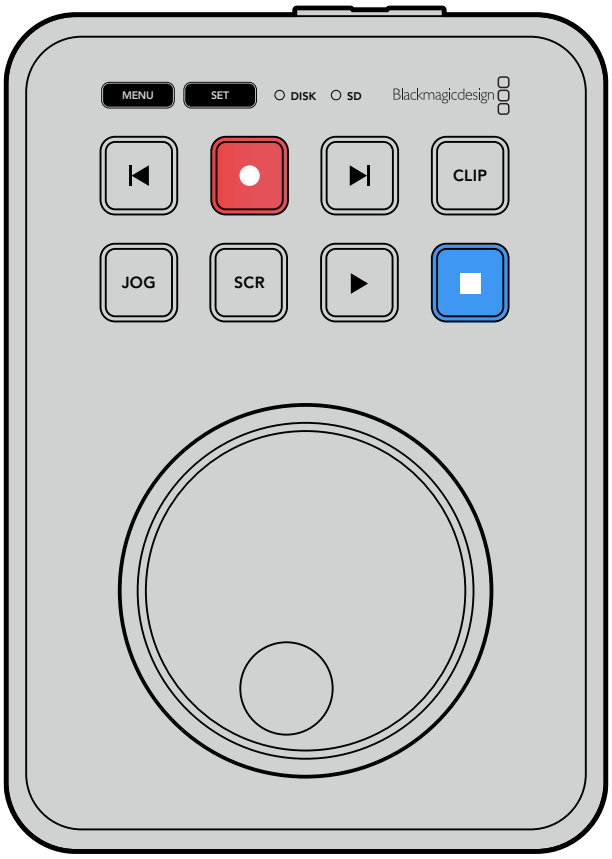
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Подготовка к работе

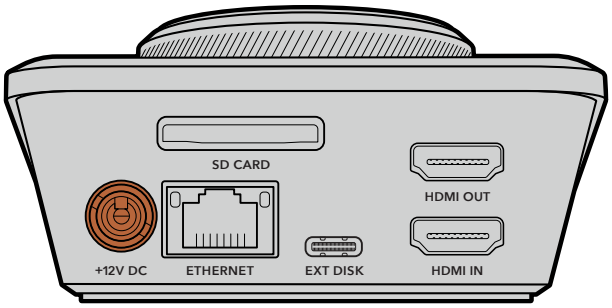
Чтобы начать работу с рекордером HyperDeck Shuttle HD, достаточно подключить питание, подсоединить источник HDMI-сигнала, установить SD-карту или внешний накопитель, а затем нажать кнопку записи.

В этом разделе описан порядок подготовки к началу работы с рекордером HyperDeck Shuttle HD.



Подключение питания

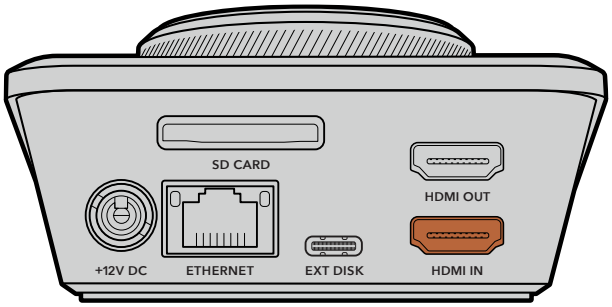
Для подачи электроэнергии подключите прилагаемый сетевой адаптер к гнезду на задней панели рекордера HyperDeck Shuttle HD. Затяните фиксирующее кольцо для предотвращения случайного отсоединения кабеля.



Подключите сетевой адаптер к силовому разъему на HyperDeck Shuttle HD

Подключение источника видео- и аудиосигнала

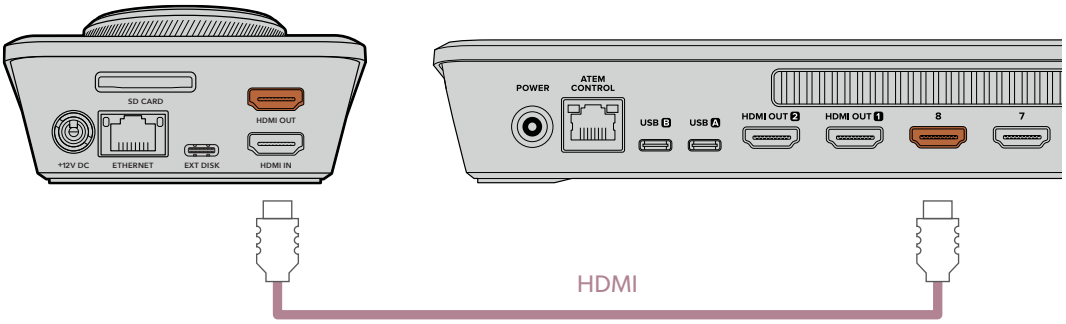
Для подключения источника видеосигнала к HyperDeck Shuttle HD подсоедините HDMI-кабель к соответствующему входу на задней панели устройства.



Подключите оборудование, предназначенное для получения сигнала (например, микшер ATEM Mini или HDMI-телевизор), к HDMI-выходу рекордера.

Данный разъем также предназначен для просмотра выводимого поверх видео меню настроек при изменении параметров устройства. Подробнее см. раздел «Настройки» ниже.

СОВЕТ. Если видеоисточник на подключенном дисплее не отображается, возможно, используется режим воспроизведения. Для начала записи нажмите соответствующую кнопку.



Подключите оборудование, предназначенное для получения сигналов (например, микшер ATEM Mini или HDMI-телевизор), к HDMI-выходу рекордера

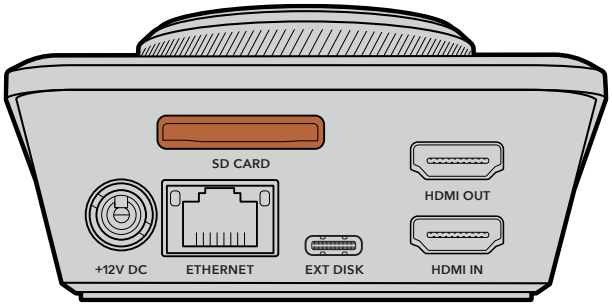
Подключение накопителей

Рекордеры HyperDeck Shuttle HD поставляются готовыми к работе и не требуют дополнительной установки настроек. Все, что нужно, — это отформатированная SD-карта или внешний накопитель.

Носители легко отформатировать с помощью меню настроек. Также это можно сделать на компьютере. Подробнее см. раздел «Форматирование накопителей» ниже. Там же приводится информация о типах носителей, наиболее подходящих для записи видео, а также список рекомендуемых SD-карт и внешних дисков.

Порядок установки SD-карты

1. Возьмите SD-карту так, чтобы позолоченные контакты были направлены вверх, и установите ее в соответствующий слот. Осторожно надавите на карту, чтобы она вошла в него до конца.



2 Рекордер выполнит проверку SD-карты. В это время индикатор SD-слота на верхней панели устройства будет гореть зеленым цветом. После окончания проверки он погаснет.



Теперь рекордер HyperDeck Shuttle HD готов к записи и воспроизведению материала.

Подробнее о записи и воспроизведении видео, установке настроек и работе с рекордером HyperDeck Shuttle HD см. следующие разделы этого руководства.

Запись видео

Прежде всего убедитесь, что к оборудованию, предназначенному для получения HDMI-сигнала, подключен нужный источник. После этого можно приступать к записи контента.

Для ее начала нажмите соответствующую кнопку. При записи материала на SD-карту индикатор слота будет гореть красным цветом, а кнопки записи и воспроизведения — белым. Во время сохранения на внешний накопитель индикатор его слота также будет гореть красным цветом.

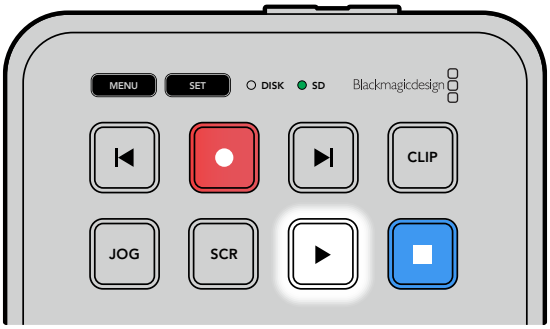


Чтобы прекратить запись, нажмите кнопку остановки.

Воспроизведение

Для воспроизведения нажмите соответствующую кнопку. После этого она загорится белым цветом, а индикаторы внешнего накопителя или SD-карты — зеленым.

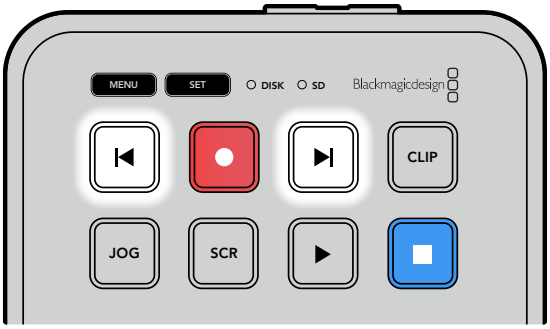
Для перехода между несколькими сохраненными клипами можно использовать кнопки перемотки вперед или назад.



Использование кнопок перемотки

Нажмите кнопку перемотки назад для перехода к началу текущего клипа. Нажатие более одного раза позволит вернуться к ранее записанным видео.

Нажмите кнопку перемотки вперед для перехода к следующим клипам. Обе кнопки перемотки будут мигать, если в настройках утилиты HyperDeck Setup выбрана опция Identify HyperDeck.



Для перехода к началу каждого клипа служат кнопки перемотки вперед и назад

СОВЕТ. Для обеспечения правильного воспроизведения видеофайлов на рекордере HyperDeck требуется выбрать надлежащий кодек. Это можно сделать с помощью меню настроек. Подробнее см. раздел «Изменение настроек» ниже.

Циклическое воспроизведение клипов

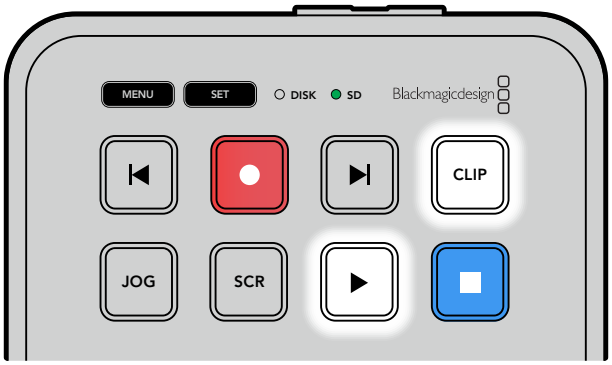
Для перевода воспроизведения в циклический режим при просмотре контента на рекордере HyperDeck Shuttle HD следует еще раз нажать кнопку воспроизведения. Чтобы из него выйти, используйте кнопку остановки.

Для проигрывания текущего видеофайла в циклическом режиме нажмите клавишу CLIP, а затем кнопку воспроизведения еще два раза.

Циклическое воспроизведение всех клипов	Во время воспроизведения контента нажмите соответствующую кнопку еще раз для воспроизведения всех клипов в циклическом режиме.
Циклическое воспроизведение текущего клипа	В режиме CLIP нажмите кнопку воспроизведения еще раз для циклического воспроизведения текущего клипа.

Режим CLIP

Режим CLIP позволяет настраивать воспроизведение в рамках одного клипа. При его активации можно выполнить переход к нужному файлу с помощью соответствующей кнопки или режима перемотки, а затем нажать клавишу воспроизведения. Оно автоматически остановится, когда выбранный клип закончится.



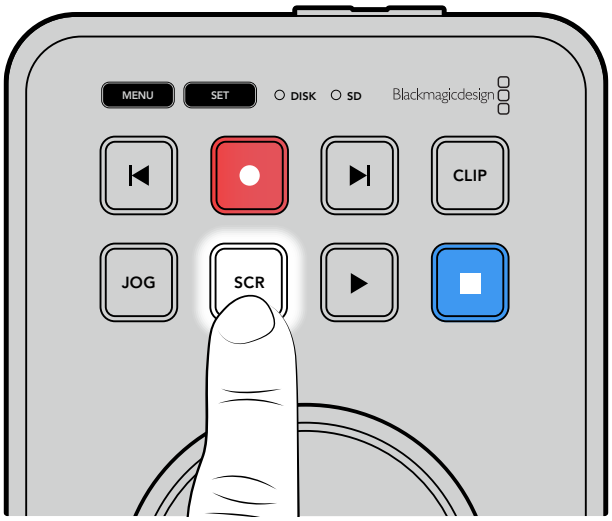
В режиме CLIP нажмите кнопку воспроизведения еще раз для циклического воспроизведения текущего клипа

Круглая ручка поиска

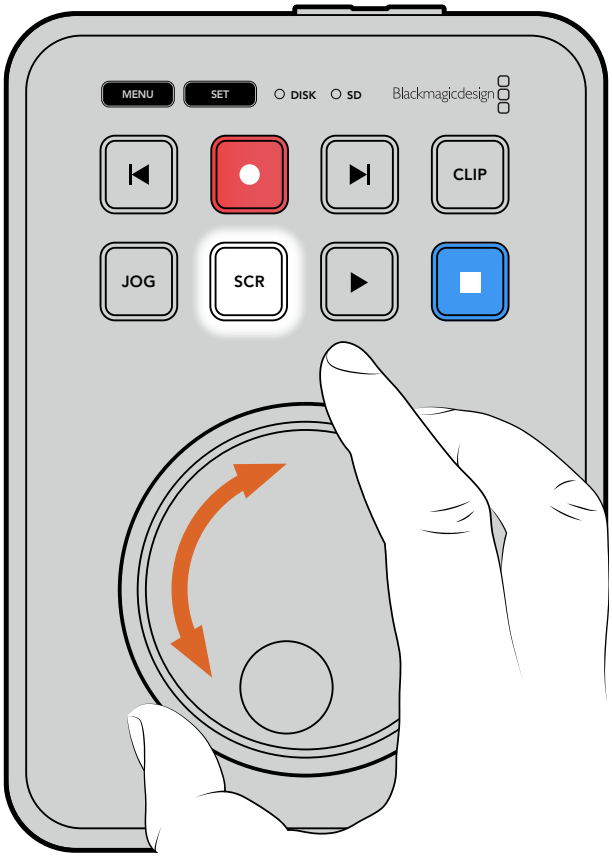
Ручка поиска позволяет быстро переходить от одного клипа к другому, а также выбирать отдельные фрагменты и выполнять покадровый просмотр. Это дает возможность оперативно находить нужный участок визуально и устанавливать точку начала проигрывания клипа для вывода его в эфир при потоковом вещании.

На данном устройстве доступны режимы протяжки, перемотки и прокрутки.

JOG	**Протяжка**	Воспроизведение клипа на покадровом уровне.
SCR	**Прокрутка**	Режим прокрутки позволяет оперативно просматривать ранее записанный материал. Поворот круглой ручки поиска с механизмом фиксации обеспечивает полный контроль и дает возможность перейти к тому месту, с которого нужно начать воспроизведение. Кнопка SCR дополнительно позволяет открыть окно со списком томов, отображающее путь к файлу видеоклипа, который воспроизводится в текущий момент. Подробнее об этом см. соответствующий раздел ниже.
JOG SCR	**Перемотка**	Для перехода к этому режиму нажмите одновременно кнопки JOG и SCR. Поворот круглой ручки поиска вправо или влево позволит выполнить перемотку вперед или назад, а также увеличить ее значение до максимального 50-кратного ускорения. Чтобы уменьшить его вплоть до полного прекращения, верните круглую ручку в исходное положение. Кнопка остановки поможет остановить перемотку, а клавиша воспроизведения — возобновить проигрывание с текущей позиции. Значение максимальной скорости перемотки можно уменьшить с помощью меню настроек. Подробнее см. раздел «Настройки» ниже.



Для выбора режимов протяжки и прокрутки используют соответственно кнопки JOG и SCR

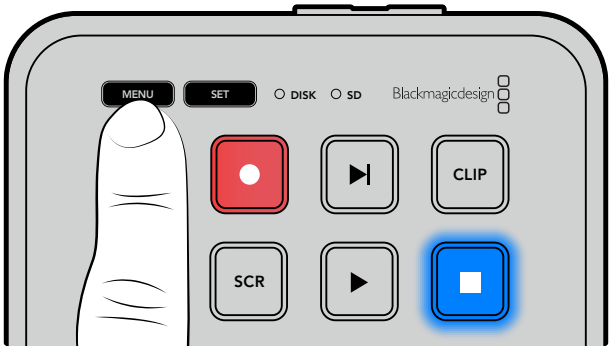


После выбора режима поиска поверните круглую ручку

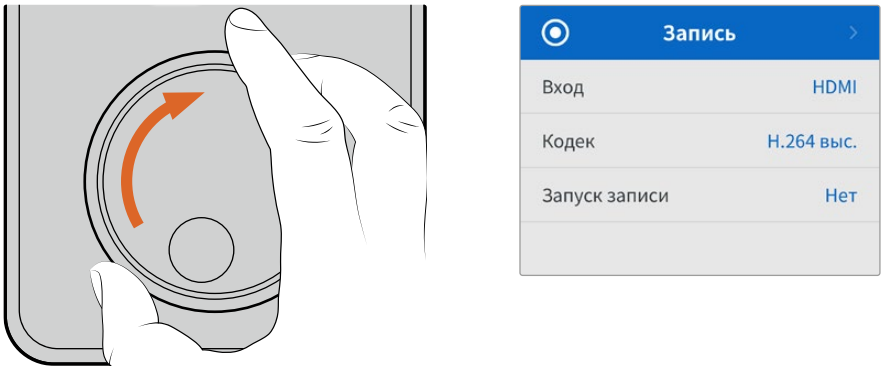
СОВЕТ. Чтобы вернуться в обычный режим воспроизведения, нажмите кнопку воспроизведения или остановки.

Изменение настроек

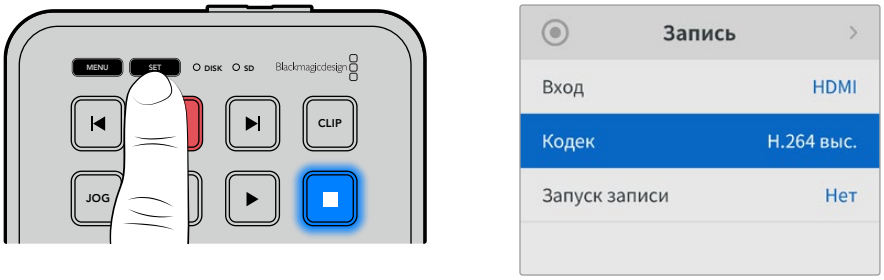
При нажатии кнопки MENU на рекордере в нижнем левом углу подключенного HDMI-монитора поверх изображения откроется меню настроек.



Для перехода к меню настроек нажмите кнопку MENU



Для перехода к подменю или отдельной настройке используйте круглую ручку поиска



Для выбора подменю или изменяемой настройки нажмите кнопку SET

Регулировку настроек выполняют с помощью круглой ручки или кнопок перемотки. Для подтверждения выбора нажмите SET.

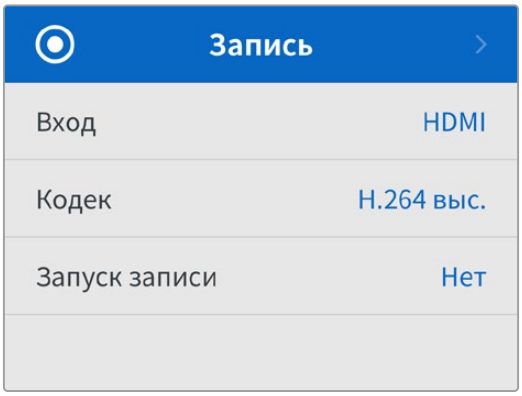
Чтобы выйти из меню и вернуться на один шаг назад вплоть до начальной страницы, используют кнопку MENU.

СОВЕТ. Меню настройки можно расположить в любом углу экрана. После изменения необходимых параметров рекомендуется закрыть меню, чтобы при подключении к HDMI-микшеру, например ATEM Mini Extreme, на HDMI-выход передавался чистый сигнал.

Настройки

Меню настроек состоит из пяти отдельных вкладок: «Запись», «Монитор», «Звук», «Сохранение» и «Настройка». На этих страницах изменяют соответствующие параметры, причем большинство из них можно отрегулировать с панели управления на HyperDeck Shuttle HD. Некоторые настройки отключены и отображены неактивными, например метка в имени файла. В данном случае их можно изменить через утилиту Blackmagic HyperDeck Setup.

Запись



Ввод

Отображает HDMI-вход на HyperDeck Shuttle HD.

Кодек

Модель HyperDeck Shuttle HD позволяет записывать видео с компрессией в форматах H.264, Apple ProRes и DNxHD. Чтобы воспользоваться функцией телесуфлера, выберите соответствующую опцию.

Запуск записи

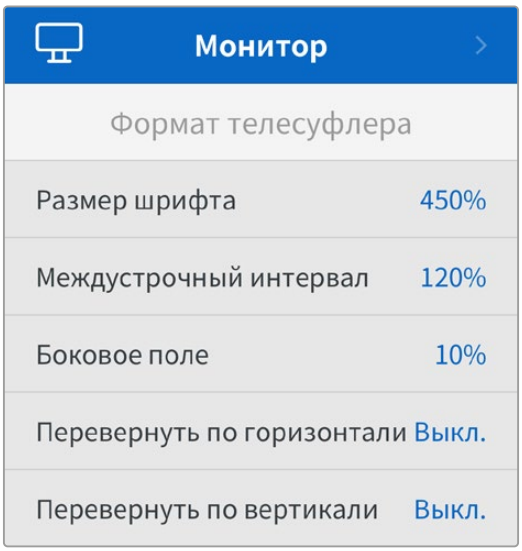
Для этой настройки доступны две опции: «Начало/остановка видео» и «По тайм-коду».

Некоторые камеры (например, Blackmagic Pocket Cinema 4K) используют HDMI-интерфейс для передачи сигнала о запуске и остановке записи на внешних рекордерах. При выборе данной опции сохранение на HyperDeck будет начинаться и прекращаться при соответствующем нажатии кнопки записи на камере.

При выборе второй опции запись на рекордере будет начинаться при поступлении на HDMI-вход действительного тайм-кода. В отсутствие сигнала сохранение остановится. Для отключения данной настройки нужно выбрать «Нет».

ПРИМЕЧАНИЕ. При записи с HDMI-камеры убедитесь в том, что используется чистый сигнал, так как в противном случае вместе с изображением будут записаны выводимые параметры.

Монитор



Формат телесуфлера

При использовании HyperDeck Shuttle HD в качестве телесуфлера все параметры этой функции можно установить в меню «Монитор».

Размер шрифта

Размер шрифта можно установить, выбрав необходимое значение и нажав кнопку SET. Чтобы его увеличить, ручку нужно повернуть по часовой стрелке, а чтобы уменьшить – в обратном направлении.

Междустрочный интервал

Чтобы увеличить или уменьшить междустрочный интервал, нужно повернуть круглую ручку.

Боковое поле

Эта настройка позволяет регулировать ширину бокового поля по обе стороны дисплея телесуфлера.

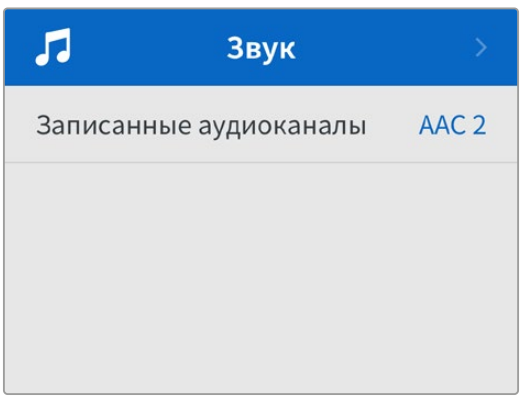
Поворот

Если необходимо зеркально отобразить текст с телесуфлера (например, когда он расположен перед камерой или на сцене для выступающих), можно использовать настройки поворота. Предусмотрены два режима.

Поворот по горизонтали: применяется, когда нижняя часть экрана телесуфлера установлена близко к основанию светоделительного стекла.

Поворот по вертикали: применяется, когда нижняя часть экрана телесуфлера установлена на расстоянии от основания светоделительного стекла.

Звук



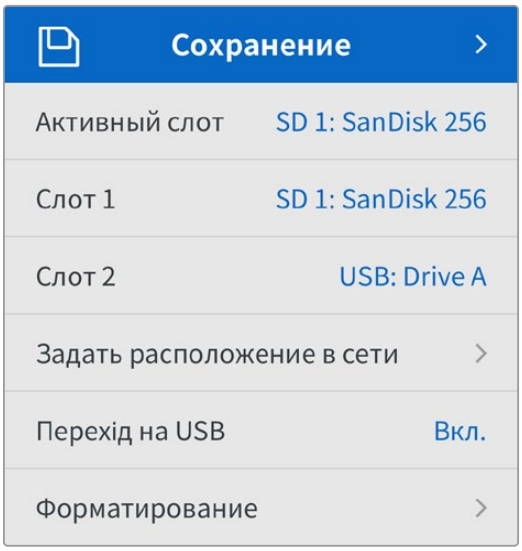
Записанные аудиоканалы

HyperDeck Shuttle HD позволяет одновременно записывать до восьми каналов звука PCM. Чтобы задать количество каналов записи, откройте список данной настройки и выберите значение 2, 4 или 8.

Если используется кодек H.264, можно также выбрать два канала AAC-аудио, что позволит напрямую выгружать записанный материал на платформу YouTube.

Сохранение

В настройках сохранения указываются подключенные накопители. Поля «Слот 1» и «Слот 2» показывают имя подключенной SD-карты и любого флеш-накопителя USB, подсоединенного через разъем EXT DISK, соответственно. При использовании USB-разветвителя, например станции Blackmagic MultiDock 10G, отображается активный носитель.



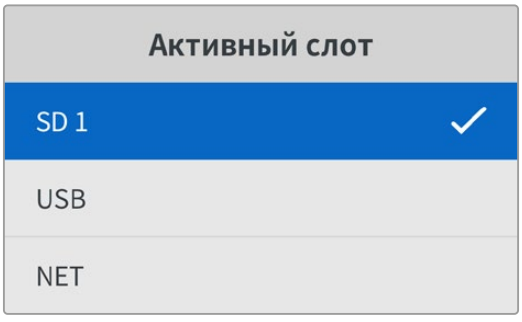
Активный слот

При работе с дисковыми рекордерами HyperDeck Shuttle можно одновременно подключить одну карту SD, несколько внешних накопителей и сетевое хранилище, что позволяет получать доступ к терабайтам пространства для сохранения материала.

Если с устройством используется только один носитель, именно он будет являться активным. При работе с двумя и более накопителями можно выбрать тот, который станет служить для записи и воспроизведения.

Выбор активного носителя

1. С помощью ручки поиска выберите соответствующую опцию в меню сохранения и нажмите мигающую кнопку SET.
2. Появится список подключенных носителей. С помощью ручки поиска задайте для записи материала нужный из них.

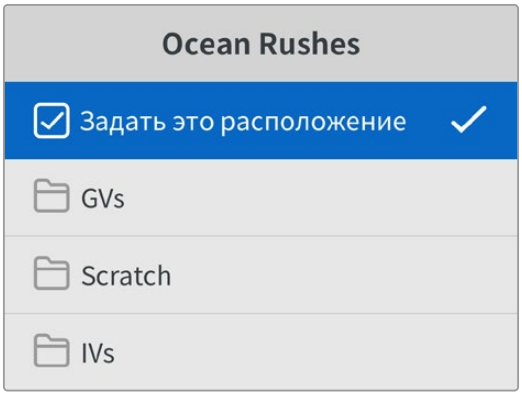


Добавление сетевого адреса

Рекордер HyperDeck Shuttle может воспроизводить HD-материал из хранилища Blackmagic Cloud и других сетевых аналогов через Ethernet-соединение.

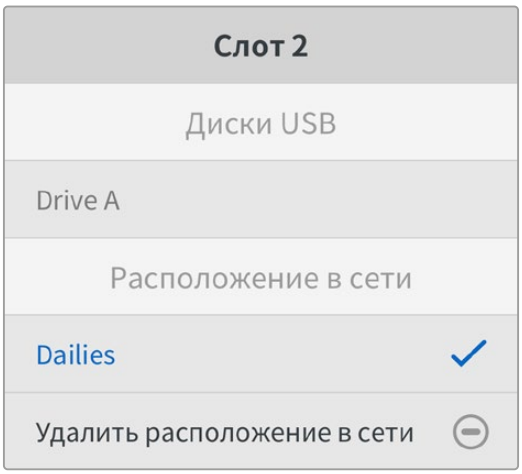
Порядок подключения к папке сетевого хранилища

1. Перейдите к соответствующей настройке, используя круглую ручку поиска и кнопку SET. Появится диалоговое окно поиска.
2. Все серверы, находящиеся в локальной сети, отобразятся в списке. Перейдите к нужному из них с помощью круглой ручки и кнопки SET. На дисплее откроется перечень доступных общих ресурсов. Используя ручку поиска, выберите один из них, нажмите SET и повторяйте действие, пока желаемая папка не появится на экране.
3. Ее имя будет отображаться в верхней части ЖК-дисплея. Чтобы выбрать данную папку для записи и воспроизведения материала, задайте соответствующую опцию с помощью ручки поиска и нажмите SET. Справа появится галочка.



4. После завершения операции добавленное местоположение отобразится в соответствующем списке раздела «Слот 2».

На рекордерах HyperDeck Shuttle он предназначен как для USB-дисков, так и для подключенных сетевых папок. Чтобы выбрать желаемую опцию, перейдите к нему в меню сохранения и нажмите мигающую кнопку SET. Задайте нужный вариант из списка и используйте ту же клавишу еще раз. После этого вы снова окажетесь в меню сохранения. Кроме того, сетевое хранилище можно удалить из перечня, применив соответствующую настройку в нижней части раздела «Слот 2».



ПРИМЕЧАНИЕ. При воспроизведении из сети на рекордере HyperDeck Shuttle HD необходимо выполнить гостевой вход на сервер. Доступ, требующий ввода имени пользователя и пароля, в настоящее время не поддерживается при работе с кнопками MENU и SET, однако можно указать учетные данные с помощью протокола HyperDeck Ethernet.

Переход на USB

Если для подключения нескольких накопителей через USB-разъем EXT DISK используется станция Blackmagic MultiDock 10G или другое аналогичное устройство, то при заполнении одного из носителей активация опции «Переход на USB» обеспечит автоматическое сохранение данных на другом.

Форматирование

SD-карты и накопители, подключенные к разъему EXT DISK на задней панели устройства, можно отформатировать непосредственно на рекордере или компьютере с операционной системой Mac или Windows.

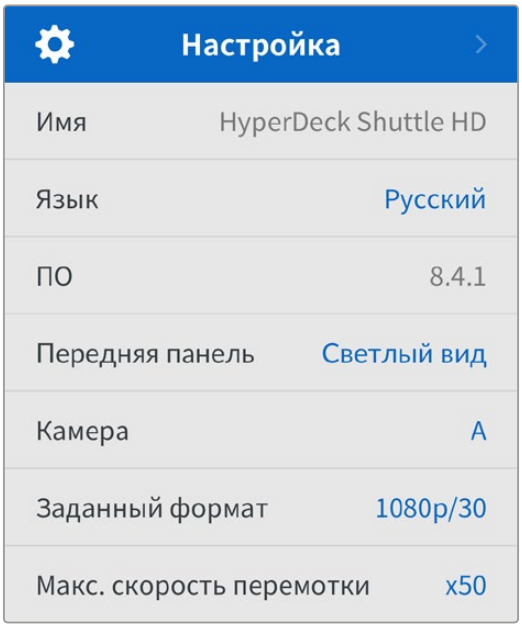
Подготовка накопителя на HyperDeck Shuttle HD

1. Перейдите к настройке «Форматирование» поворотом круглой ручки и выберите ее с помощью кнопки SET.
2. Из списка выберите накопитель для форматирования и нажмите SET.
3. Укажите желаемый формат и нажмите SET.
4. Появится подтверждение, содержащее имя карты и заданный формат. Выберите «Форматировать».
5. После завершения процедуры появится окно форматирования. Выберите «OK».

Формат HFS+ также известен как Mac OS X Extended и является предпочтительным, так как он поддерживает протоколирование. В этом случае при повреждении носителя содержащиеся на нем данные будет проще восстановить. Формат HFS+ совместим с операционной системой Mac, а exFAT можно использовать на платформах Mac и Windows без дополнительного программного обеспечения, однако он не предусматривает протоколирования. Инструкции по форматированию накопителей в ОС Mac и Windows приведены в соответствующем разделе.

Настройка

Вкладка «Настройка» содержит такие параметры, как язык, заданный стандарт, а также опции отображения меню, сетевых параметров и работы с тайм-кодом.



Имя рекордера

Когда к сети подключено несколько рекордеров HyperDeck Shuttle HD, им следует присвоить отдельные имена, чтобы их было легко различать. Для этого можно использовать утилиту Blackmagic HyperDeck Setup или протокол Blackmagic HyperDeck Ethernet. Имя появится в меню «Настройка».

Язык

HyperDeck Shuttle HD имеет пользовательский интерфейс на 13 основных языках, включая английский, китайский, японский, корейский, испанский, немецкий, французский, русский, итальянский, португальский, турецкий, украинский и польский.

Выбор языка

1. Выберите меню «Настройка» и нажмите SET.
2. Перейдите к опции «Язык» поворотом круглой ручки и нажмите SET.
3. Выберите нужный язык с помощью круглой ручки и нажмите SET. После этого на экране снова появится основное меню настроек.

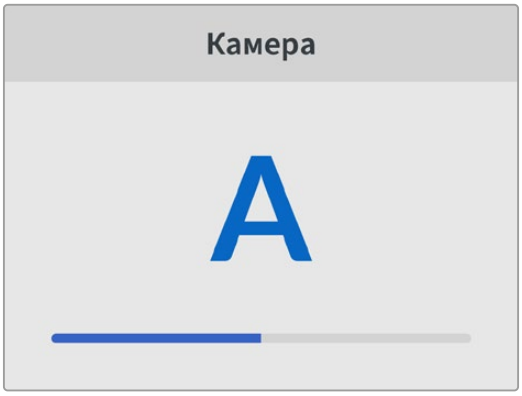
Программное обеспечение

Отображает текущую версию программного обеспечения.

Камера

Данную настройку используют при записи многоракурсного контента в виде отдельных файлов, которые затем редактируют на специальной временной шкале в приложении DaVinci Resolve.

В метаданных файлов каждая из камер будет иметь свое обозначение, что позволит легко определить все доступные ракурсы с помощью синхроящика.



Для наименования камер можно использовать обозначения A-Z или 1-9

Заданный формат

Иногда HyperDeck Shuttle HD не в состоянии определить, какой видеоформат следует использовать. Данная настройка поможет рекордеру выбрать формат, применяемый чаще всего.

В качестве примера возьмем ситуацию, когда при включении HyperDeck Shuttle HD отсутствует источник видео, а на вставленном диске записаны файлы двух форматов. Какой из них следует рекордеру воспроизвести? В данном случае устройство будет использовать формат, заданный по умолчанию.

Эта функция также применяется, когда при первом включении HyperDeck Shuttle HD к нему не подсоединен источник видео и не вставлен диск. В данном случае для вывода сигнала мониторинга рекордер использует формат, заданный по умолчанию.

Тем не менее такой вариант является всего лишь рекомендуемым, а не обязательным. Если на диске содержатся файлы только одного типа, при воспроизведении HyperDeck переключится на их формат. Рекордер не будет использовать заданный формат, так как в данном случае выбор очевиден.

То же происходит и во время сохранения контента. Используемый при записи на HyperDeck формат соответствует формату поступающего на него видеосигнала. Он будет применяться рекордером при воспроизведении этого материала, даже если на диске есть другие файлы, которые имеют формат, заданный по умолчанию. Предполагается, что при записи и воспроизведении форматы должны быть одинаковыми. Если диск извлечь, а затем снова вставить, только тогда для проигрывания устройство переключится на формат по умолчанию.

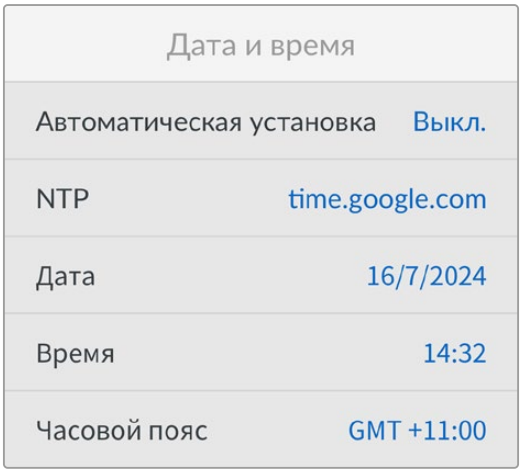
Заданный по умолчанию формат является всего лишь рекомендуемым, а не обязательным, и предназначен только для тех случаев, когда автоматический выбор затруднен.

Максимальная скорость перемотки

Максимальное значение перемотки на HyperDeck Shuttle HD соответствует 50-кратному ускорению. При необходимости можно выбрать другие доступные варианты.

Дата и время

Правильная установка подобной информации обеспечивает совпадение данных записанных файлов и сети, а также позволяет предотвратить ошибки, которые могут возникнуть при работе с некоторыми системами сетевого хранения.



Автоматическая установка даты и времени

Для автоматической установки даты и времени активируйте соответствующую опцию. В этом случае будет применяться протокол сетевого времени, выбранный в поле NTP. Чтобы отменить сделанные изменения, выберите в меню нужную опцию.

NTP

По умолчанию используется сервер Cloudflare (time.cloudflare.com), однако вручную можно указать другую платформу с помощью утилиты HyperDeck Setup. Подробнее см. раздел «Утилита Blackmagic HyperDeck Setup».

Дата

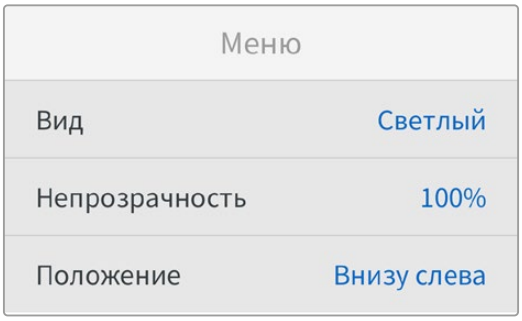
Чтобы изменить дату, выберите соответствующий параметр и нажмите SET. С помощью круглой ручки установите день, месяц и год.

Время

Чтобы изменить время, выберите соответствующий параметр и нажмите SET. С помощью круглой ручки установите часы и минуты. На устройствах используется 24-часовой формат.

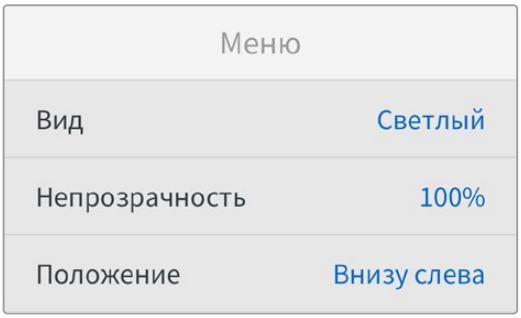
Меню

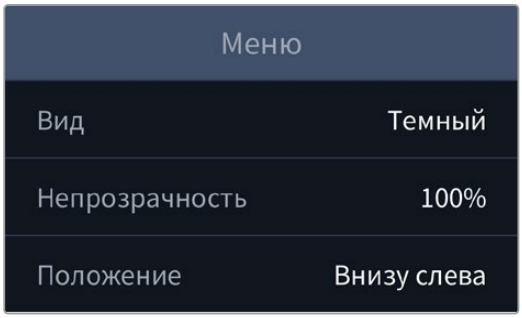
С помощью вкладки «Меню» можно задать положение и вид меню настроек на подключенном через HDMI-интерфейс экране.



Вид

Здесь можно выбрать темный или светлый вариант отображения меню HyperDeck. При светлом варианте повышается контрастность, если изображение является темным или при использовании функции телесуфлера.





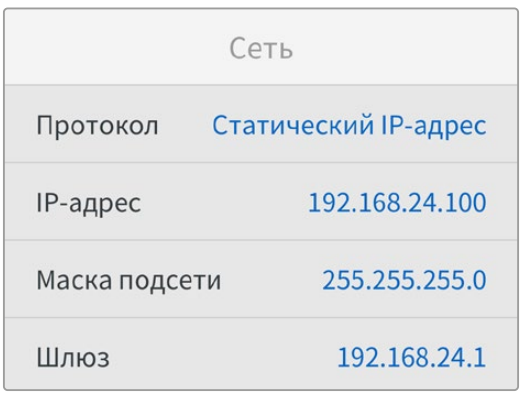
Непрозрачность

Степень непрозрачности выводимого на подключенный экран меню можно отрегулировать с заданных по умолчанию 100% до 20%.

Положение

По умолчанию выводимое меню всплывает в нижнем левом углу экрана. Чтобы перенести его в другое место, нужно выбрать поле «Положение» и нажать кнопку SET. Теперь меню можно разместить в любом углу экрана – верхнем левом, верхнем правом, нижнем левом или нижнем правом.

Сетевые параметры



Протокол

В поставляемых рекордерах Blackmagic HyperDeck по умолчанию используется протокол DHCP. При подключении устройства к сети сервер автоматически присвоит ему IP-адрес, поэтому выполнять дополнительную настройку не требуется. Чтобы внести адрес вручную, следует выбрать «Статический IP-адрес».

Выделите настройку «Протокол» и нажмите кнопку SET. Перейдите к параметру «Статический IP-адрес» и еще раз нажмите SET.

IP-адрес, маска подсети, шлюз, первичный DNS и вторичный DNS

Когда выбран «Статический IP-адрес», сетевые настройки можно задавать вручную.

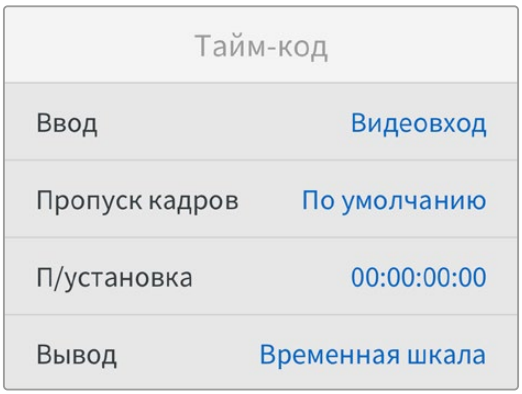
Порядок изменения IP-адреса

1. Выделите настройку «IP-адрес» с помощью круглой ручки и нажмите кнопку SET на контрольной панели рекордера HyperDeck.
2. Внесите изменения в IP-адрес поворотом круглой ручки. Для подтверждения одного сегмента и перехода к следующему нажмите кнопку SET.
3. Чтобы подтвердить изменение и перейти к следующему значению, нажмите SET.

После ввода IP-адреса выполните те же операции для настройки маски подсети и шлюза. Когда установка параметров завершена, нажмите кнопку MENU, чтобы вернуться к начальной странице.

Настройки тайм-кода

Это меню позволяет задать параметры ввода и вывода тайм-кода, в том числе запись с тайм-кодом источника, временем суток или установленным вручную значением.



Ввод

При записи доступны четыре опции использования тайм-кода.

Видеовход	Эта опция позволяет использовать встроенный тайм-код из HDMI-источников с метаданными SMPTE RP 188. Она обеспечивает синхронизацию HDMI-сигнала с файлом, сохраняемым на HyperDeck Studio HD.
Внутренний	Эту опцию используют для записи времени суток, получаемого от встроенного генератора тайм-кода.
Возобновление	При выборе этой опции тайм-код каждого последующего файла будет продолжаться с того значения, на котором закончился предыдущий клип. Например, если первый клип остановился на 10:28:30:10, то второй начнется с 10:28:30:11.
Предустановка	Для ввода тайм-кода вручную выберите опцию «П/установка». Запись контента начнется по тайм-коду, который задан с помощью настройки «П/установка» (см. соответствующий раздел ниже).

Пропуск кадров

При работе с видео в NTSC на частоте 29,97 или 59,94 fps можно использовать опцию «С пропуском кадров» или «Без пропуска кадров». Если параметры источника неизвестны, выберите «По умолчанию». В этом случае сохраняется формат входящего сигнала, а при отсутствии действительного тайм-кода выполняется пропуск кадров.

Предустановка

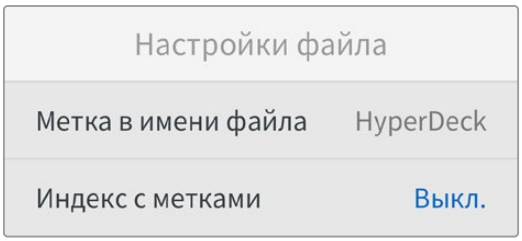
Чтобы ввести тайм-код вручную, нажмите кнопку SET, установите значение с помощью круглой ручки и снова нажмите SET. Убедитесь, что в меню «Ввод» выбрана опция «П/установка».

Вывод

Эта настройка задает вывод тайм-кода.

Временная шкала	Данная настройка позволяет выводить непрерывный тайм-код для всех клипов, записываемых на карту или диск.
Клип	При выборе этой опции выводится тайм-код каждого отдельного клипа.

Настройки файла



Метка в имени файла

После первоначальной настройки рекордера HyperDeck Shuttle HD при записи клипов на SD-карту или флеш-диск USB файлам присваиваются имена по приведенному ниже образцу.

HyperDeck_0001	
HyperDeck_0001	**Метка**
HyperDeck_**0001**	**Номер клипа**

Метку можно изменить программным способом. Подробнее см. раздел «Утилита Blackmagic HyperDeck Setup».

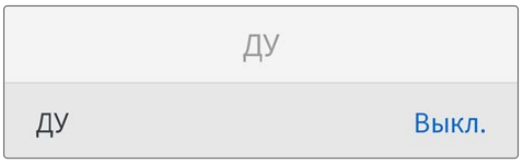
Индекс с метками

По умолчанию индекс с метками времени не добавляется к имени файла. Чтобы активировать эту функцию, ее нужно включить.

HyperDeck_2201061438_0001	
HyperDeck_2201061438_0001	**Метка в имени файла**
HyperDeck_**22**01061438_0001	**Год**
HyperDeck_22**01**061438_0001	**Месяц**
HyperDeck_2201**06**1438_0001	**День**
HyperDeck_220106**14**38_0001	**Часы**
HyperDeck_22010614**38**_0001	**Минуты**
HyperDeck_2201061438_**0001**	**Номер клипа**

Настройки ДУ

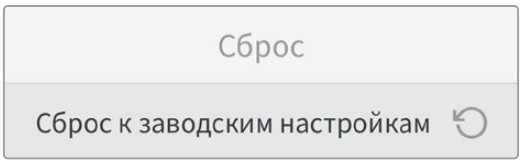
Дистанционное управление позволяет контролировать рекордер HyperDeck с другого оборудования (например, с видеомикшера ATEM Mini Extreme).



ДУ

Для активации удаленного контроля через Ethernet нужно включить функцию «ДУ». Чтобы перейти к обычному способу управления, ее следует отключить.

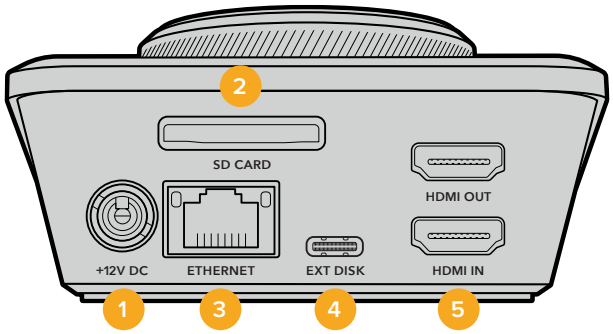
Настройки сброса



Сброс к заводским настройкам

Чтобы восстановить первоначальные параметры, выберите «Сброс к заводским настройкам». После нажатия кнопки SET появится сообщение с просьбой подтвердить действие.

Задняя панель



1 Питание

Для энергоснабжения рекордера HyperDeck Shuttle HD служит блок питания переменного тока. Входящий в комплект поставки силовой кабель имеет фиксирующий разъем, который позволяет предотвратить случайное отсоединение. Также можно также использовать любой другой электрический кабель (мощность 36 Вт, напряжение 12 В).

2 SD CARD

Этот слот позволяет использовать SD-карты для записи и воспроизведения.

3 ETHERNET

Порт Ethernet позволяет подключаться к сети для прямой записи материала в соответствующее хранилище, а также быстрой FTP- или HTTP-передачи файлов через веб-менеджер. Кроме того, можно дистанционно управлять рекордером, используя интерфейс REST API или протокол HyperDeck Ethernet. Подробнее см. раздел «Передача файлов по сети» ниже.

Рекордером HyperDeck также можно управлять с помощью микшера ATEM или пульта ATEM, если они подключены к единой сети.

4 EXT DISK

Через разъем USB-C с пропускной способностью до 5 Гбит/с можно вести запись на внешний носитель. Также допускается подключение к концентраторам USB-C и к станции MultiDock 10G для сохранения материала на один или несколько твердотельных накопителей.

5 HDMI

HDMI-выход позволяет подключать телевизоры и мониторы, а также видеомикшеры, оснащенные соответствующим разъемом (например, ATEM Mini Extreme). Этот интерфейс можно дополнительно использовать для вывода меню.

Работа с накопителями

SD-карта

Для HD-материала высокого качества рекомендуется использовать скоростные SD-карты класса UHS-I. Эти носители способны работать на скорости свыше 220 МБ/с при сохранении Ultra HD-видео в форматах вплоть до 2160p/60.

При записи с более низким битрейтом и высоким сжатием можно работать с другими носителями, однако скоростные накопители обычно обеспечивают наилучший результат.

Эта информация регулярно обновляется, поэтому мы рекомендуем обращаться к самой последней версии данного руководства, которую можно загрузить на сайте Blackmagic Design по адресу www.blackmagicdesign.com/ru/support.

Выбор SD-карт при работе с HyperDeck Shuttle HD

Рекомендуемые карты SD для записи в формате 1080p с частотой до 60 кадров/с

Производитель	Модель	Емкость
Angelbird	AV PRO SD UHS-II 300MB/s V90 SDXC	256 ГБ
Angelbird	AV PRO SD UHS-II 260MB/s V60 SDXC	128 ГБ
Angelbird	AV PRO SD UHS-II 260MB/s V60 SDXC	64 ГБ
SanDisk	Extreme Pro UHS-I 95MB/s SDXC	64 ГБ
Wise	SD2-64U3 UHS-II 285MB/s SDXC	64 ГБ
Lexar	Professional 1000x UHS-II 150MB/s SDXC	128 ГБ
SONY	Tough SF-G128T	128 ГБ
Kingston	CANVAS GO! Plus 170MB/s V30	64 ГБ
Kingston	CANVAS GO! Plus 170MB/s V30	128 ГБ
Kingston	CANVAS GO! Plus 170MB/s V30	512 ГБ
ProGrade Digital	SDXC UHS-II V90 300R	64 ГБ
ProGrade Digital	SDXC UHS-II V90 300R	128 ГБ
SONY	Tough SF-G64T UHS-II SDXC	64 ГБ
Delkin Devices	Black UHS-II V90 SDXC	256 ГБ
Delkin Devices	Power UHS-II V90 SDXC	128 ГБ
Delkin Devices	Power UHS-II V90 SDXC	256 ГБ
Delkin Devices	Black UHS-II V90 SDXC	128 ГБ
Exascend	Essential SDXC UHS-II V90 R 300MB/s	64 ГБ
Exascend	Essential SDXC UHS-II V90 R 300MB/s	128 ГБ
Exascend	Catalyst SDXC UHS-II V90 R 300MB/s	64 ГБ

Внешний диск

Все модели HyperDeck позволяют вести запись непосредственно на флеш-диски USB-C. Эти носители имеют большую емкость и обеспечивают запись в течение долгого времени. Затем можно подключить их к компьютеру и сразу приступить к монтажу.

Чтобы получить еще больше места для хранения видео, можно добавить док-станцию с портом USB-C или внешний жесткий диск. Для подключения станции Blackmagic MultiDock 10G или флеш-диска USB-C используют кабель USB-C, который соединяют с разъемом EXT DISK на задней панели рекордера HyperDeck.

Выбор дисков USB-C при работе с HyperDeck Shuttle HD

Рекомендуемые диски USB-C для записи в формате 1080p ProRes HQ с частотой до 60 кадров/с

Производитель	Модель	Емкость
Wise	PTS-256 Portable SSD 4K	256 ГБ
OWC	Envoy Pro Ex	240 ГБ
BUFFALO	SSD-PHE500U3-BA	500 ГБ

Рекомендуемые диски USB-C для записи в формате 1080p DNxHD 220x с частотой до 60 кадров/с

Производитель	Модель	Емкость
OWC	Envoy Pro Ex	240 ГБ

Рекомендуемые диски USB-C для записи в формате 1080p H.264 с частотой до 60 кадров/с

Производитель	Модель	Емкость
OWC	Envoy Pro Ex	240 ГБ

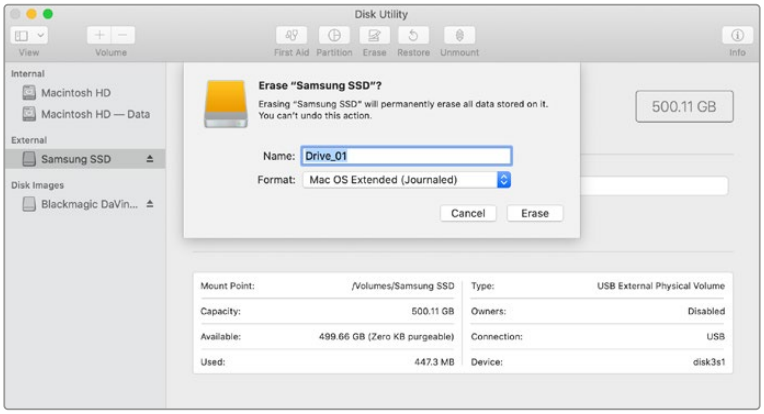
Форматирование накопителя

Форматирование накопителя на Mac

Для форматирования диска под систему HFS+ или exFAT воспользуйтесь дисковой утилитой, которая входит в пакет Mac.

Выполните резервное копирование всех важных данных, потому что при форматировании носителя они будут удалены.

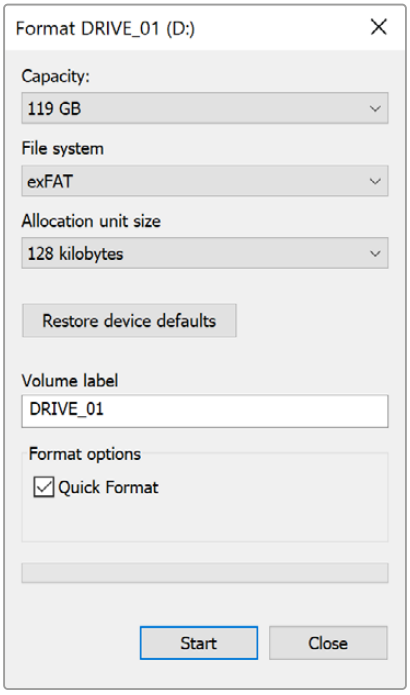
1. Подключите USB-диск к компьютеру при помощи внешней док-станции или переходного кабеля и пропустите сообщение, предлагающее использовать диск для создания резервной копии Time Machine. При работе с SD-картой подключите накопитель к компьютеру через внешний картридер.
2. Выберите «Программы» > «Утилиты» и запустите приложение «Дисковая утилита».
3. Щелкните кнопкой мыши по значку SD-карты или USB-диска и выберите вкладку «Стереть».
4. Выберите формат Mac OS Extended (журналируемый) или exFAT.
5. Введите название нового тома и выберите «Стереть». По окончании форматирования носитель будет готов к использованию на HyperDeck.



Форматирование накопителя на Windows

На компьютере под управлением Windows форматирование диска под систему exFAT выполняется с помощью диалогового окна «Форматировать». Выполните резервное копирование всех важных данных, потому что при форматировании SSD-диска или SD-карты они будут удалены.

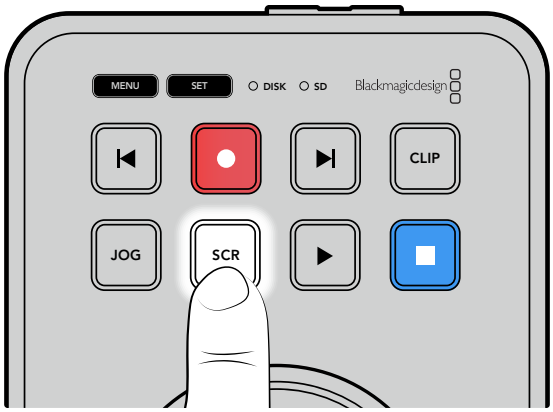
1. Подключите USB-диск к компьютеру с помощью внешней док-станции или переходного кабеля. При работе с SD-картой подключите накопитель к компьютеру через внешний картридер.
2. Откройте меню или экран «Пуск» и выберите «Компьютер». Щелкните правой кнопкой мыши по значку USB-диска или SD-карты.
3. В контекстном меню выберите «Форматировать».
4. Выберите файловую систему exFAT и установите размер кластера, равный 128 Кб.
5. Укажите метку тома, выберите «Быстрое форматирование» и нажмите «Начать».
6. По окончании форматирования носитель будет готов к использованию на HyperDeck.

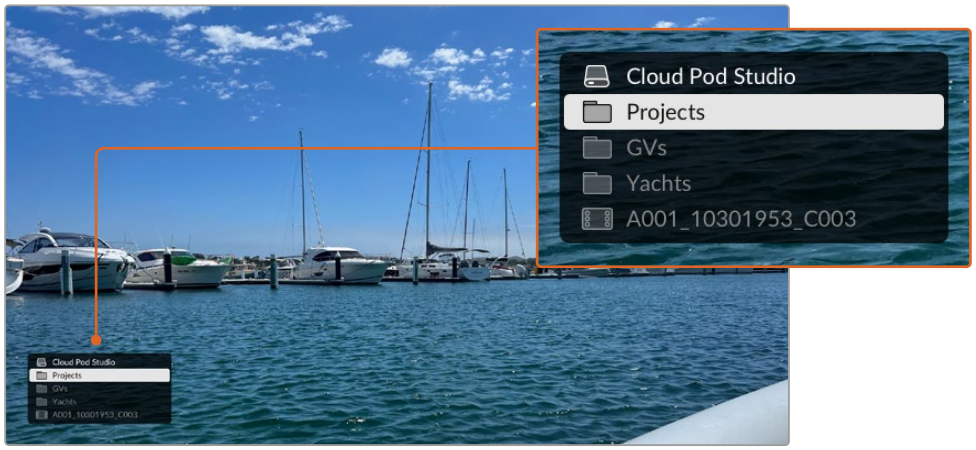


Навигация по томам

Навигация по томам позволяет отобразить путь к файлу поверх экрана, чтобы быстрее найти нужные клипы на картах памяти, накопителях и сетевых дисках. Когда функция включена, информацию легко вывести через HDMI-выход, а перемещаться по списку можно с помощью кнопок SCR и CLIP, а также ручки прокрутки.

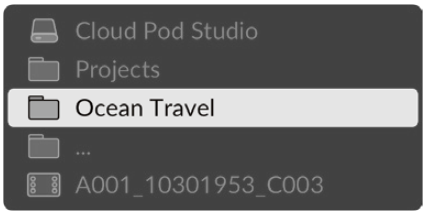
1 Откройте окно навигации по томам, нажав кнопку SCR.





Нажмите кнопку SCR, чтобы вывести окно навигации по томам через HDMI-выход

2 Применяя функцию перемотки или перехода, просмотрите записанный материал на экране и найдите клип из нужной папки.



3 Используйте кнопки SCR и CLIP для перемещения по списку томов вниз или вверх соответственно.

Чтобы закрыть окно навигации, нажмите STOP. Кнопка PLAY вместе с этим позволит сразу же начать воспроизведение материала.

ПРИМЕЧАНИЕ. Для просмотра клипов, записанных с использованием другого формата, разрешения или частоты кадров, задайте соответствующие кодек и стандарт на HyperDeck.

Использование функции телесуфлера

Рекордер Blackmagic HyperDeck Shuttle HD позволяет использовать функцию телесуфлера. Для этого достаточно создать файл .rtf или .txt в приложении TextEdit или WordPad и сохранить его в любом из 13 поддерживаемых языков. Когда такой файл открыт на HyperDeck Shuttle HD, для текста можно изменить размер шрифта и междустрочный интервал.

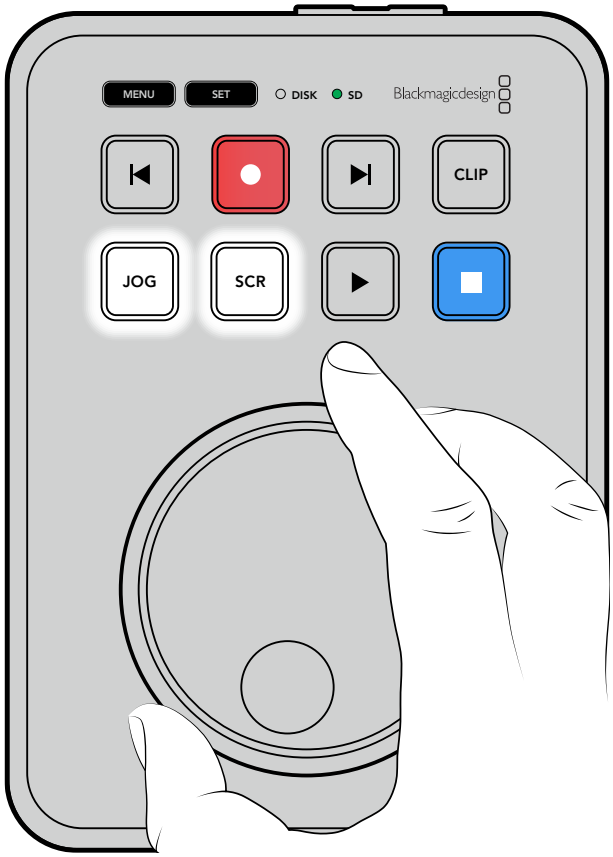
Порядок использования телесуфлера

1. Подключите HDMI-выход рекордера HyperDeck Shuttle HD к HDMI-дисплею.
2. Установите SD-карту или подключите внешний USB-диск с текстом сценария.
3. В меню «Запись» выберите опцию «Кодек». Перейдите к настройке «Телесуфлер» и нажмите SET.

Сценарий будет отображаться на дисплее. Для автоматического запуска нажмите кнопку воспроизведения, а для дополнительного управления выводом используйте круглую ручку.

Скорость телесуфлера при воспроизведении

Круглая ручка на рекордере HyperDeck Shuttle HD позволяет регулировать скорость телесуфлера так же, как при воспроизведении медиаконтента. Когда сценарий загружен, нажмите одновременно кнопки JOG и SCR, чтобы активировать вывод с изменяемым значением данного параметра. Затем поверните ручку. Скорость ее движения определяет, как быстро будет сменяться текст на экране: чем она интенсивнее, тем выше этот темп.



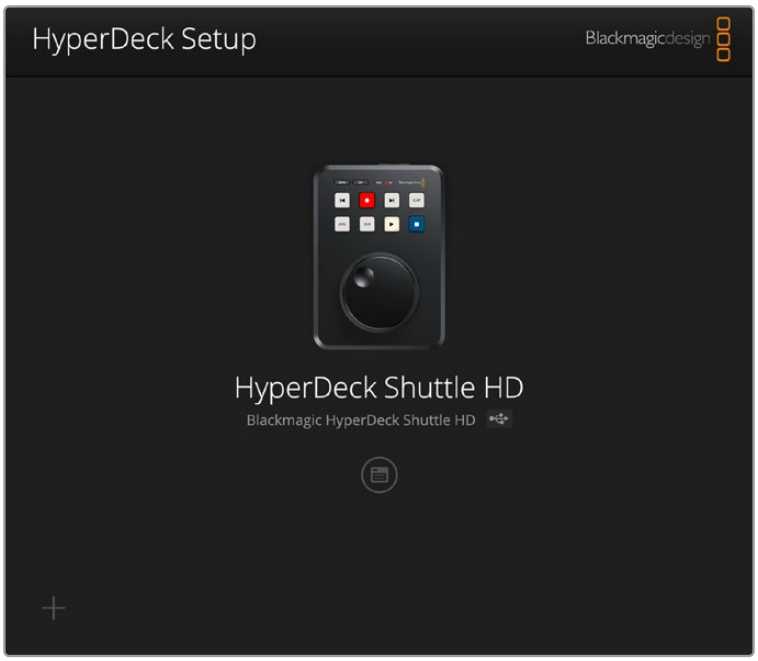
Если нужно использовать постоянную скорость, с кнопками JOG и SCR работают по отдельности. После нажатия одной из них при повороте круглой ручки выполняется медленная (в первом случае) или быстрая (во втором) смена текста на экране.

Для навигации по файлам на SD-карте или внешнем диске используют кнопки перехода вперед и назад.

При выводе на телесуфлер учитываются такие параметры, как шрифт, цвет и выделение полужирным. Дополнительно можно настроить размер текста, междустрочный интервал, поля и поворот по горизонтали или вертикали, когда проецирование на светоделительное стекло выполняют с помощью меню «Монитор». Подробнее см. раздел «Меню настроек».

Blackmagic HyperDeck Setup

Blackmagic HyperDeck Setup представляет собой программную утилиту, которая позволяет изменять настройки и обновлять прошивку рекордера.

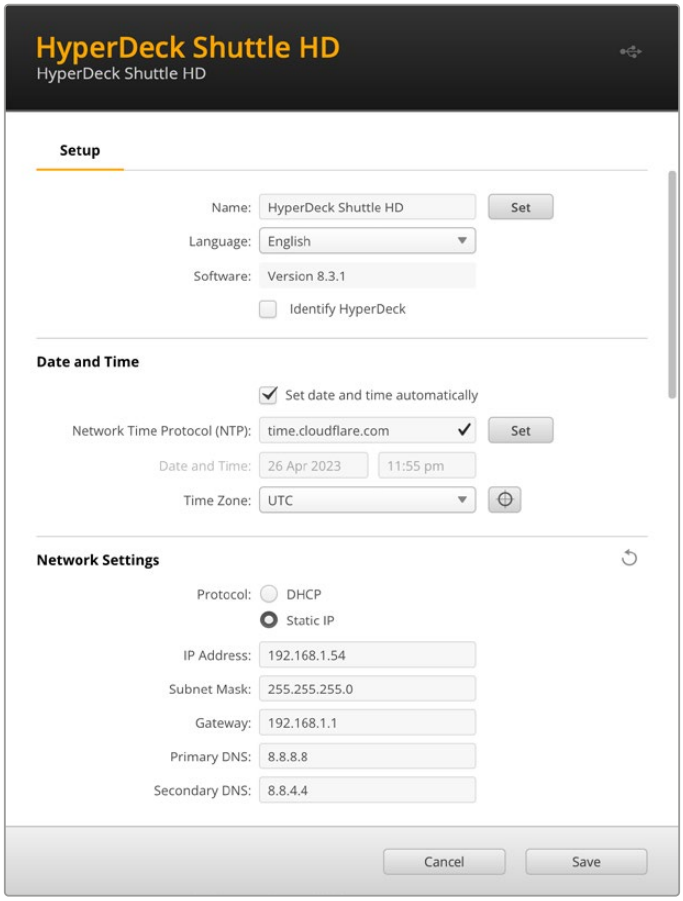


Порядок установки программного обеспечения

1. Загрузите последнюю версию Blackmagic HyperDeck Setup в разделе поддержки по адресу www.blackmagicdesign.com/ru/support.
2. Запустите установщик Blackmagic HyperDeck Setup и следуйте инструкциям на экране.
3. После установки подключите HyperDeck Shuttle HD к компьютеру через порт USB или разъем Ethernet на задней панели устройства.
4. Для обновления программного обеспечения запустите Blackmagic HyperDeck Setup и следуйте инструкциям на экране. Если они не появятся, используемая версия является актуальной.

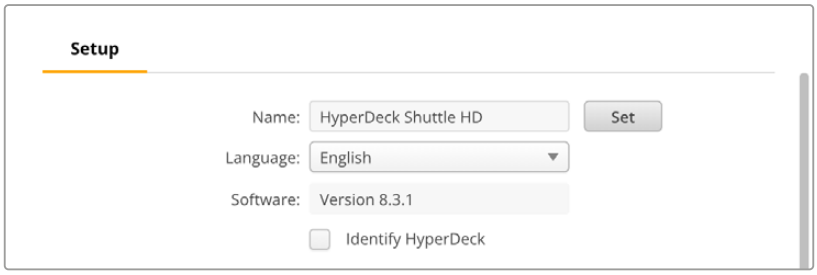
Щелкните кнопкой мыши по изображению HyperDeck или значку настроек, чтобы получить доступ к меню.

На начальной странице будет показан рекордер HyperDeck Shuttle HD со своим именем. Это облегчает идентификацию устройства, если к компьютеру подключено несколько единиц такой техники. Имя можно задать с помощью меню настроек в утилите.



Настройка

При наличии нескольких рекордеров HyperDeck с ними будет легче работать по присвоенным идентификаторам. Введите новое имя в соответствующем поле, а затем нажмите кнопку Set для подтверждения операции. Стоит отметить, что изменение идентификатора рекордера HyperDeck приведет к аннулированию всех используемых цифровых сертификатов, поэтому следует присвоить его перед созданием запроса на удостоверение или самоподписанной версии.



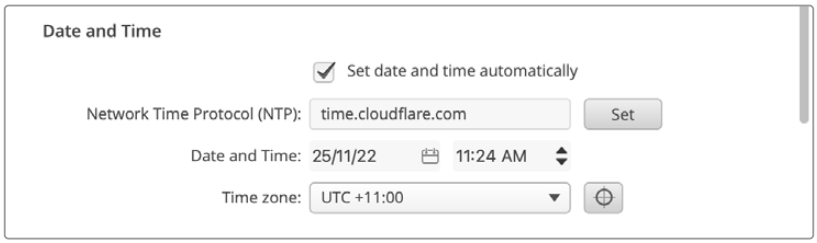
Идентификация рекордера HyperDeck

При выборе данной опции кнопки перемотки на верхней панели рекордера HyperDeck Shuttle будут мигать. Это полезно, когда при работе с несколькими устройствами нужно определить, к какому из них в данный момент выполняется подключение с помощью утилиты HyperDeck Setup.

Дата и время

Чтобы установить дату и время автоматически, поставьте флажок для соответствующей настройки. В этом случае будет применяться протокол сетевого времени, выбранный в поле NTP. По умолчанию используется сервер Cloudflare (time.cloudflare.com), однако вручную можно указать другую платформу, а затем нажать кнопку Set.

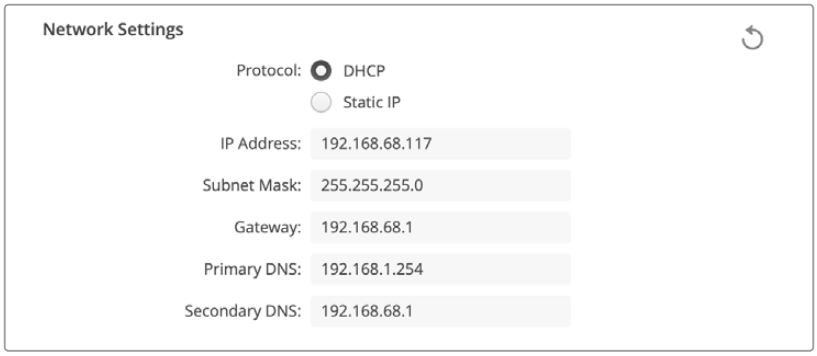
Если настройки выбирают вручную, следует указать дату, время и часовой пояс в соответствующих полях. Правильная установка подобной информации обеспечивает совпадение данных записанных файлов и сети, а также позволяет предотвратить ошибки, которые могут возникнуть при работе с некоторыми системами сетевого хранения.



Сетевые параметры

Протокол

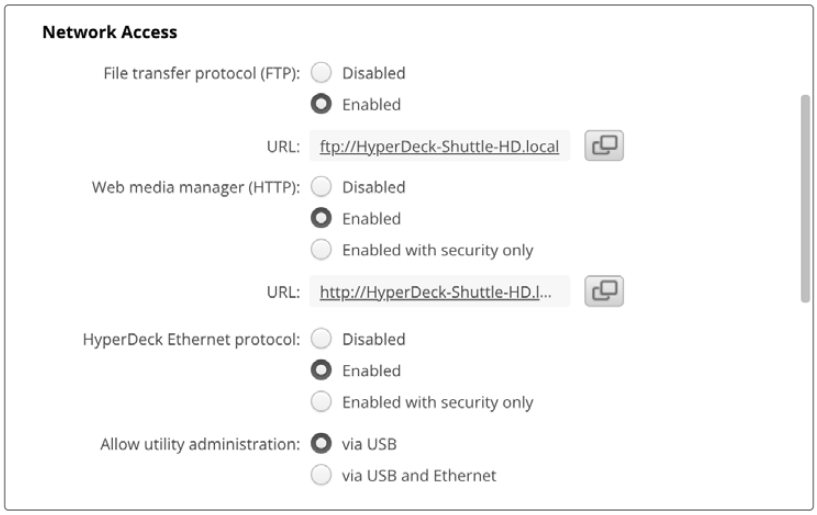
Чтобы использовать рекордер HyperDeck Shuttle HD с видеомикшерами ATEM или дистанционно управлять им по протоколу HyperDeck Ethernet, устройство нужно подключить к локальной сети с применением протокола DHCP или фиксированного IP-адреса.



Протокол DHCP	Рекордеры HyperDeck Shuttle HD по умолчанию используют протокол DHCP. DHCP — это протокол динамической настройки узла, используемый сетевыми серверами для автоматического обнаружения устройства HyperDeck и присвоения ему IP-адреса. Данная функция, которая поддерживается большинством компьютеров и сетевых маршрутизаторов, значительно облегчает подключение оборудования через Ethernet и не допускает конфликта IP-адресов.
Статический IP-адрес	Когда выбран статический IP-адрес, сетевые настройки можно задавать вручную. Чтобы между устройствами существовал канал связи, они должны иметь одинаковые настройки маски подсети и шлюза.

Сетевой доступ

Рекордер HyperDeck Shuttle HD доступен в сети для передачи файлов и удаленного управления по протоколу HyperDeck Ethernet. Эта опция активирована по умолчанию, однако ее можно отключить или включить с использованием имени пользователя и пароля для повышения уровня безопасности при работе с веб-менеджером или упомянутым протоколом.



Протокол передачи файлов (FTP)

Включите или отключите доступ по FTP, выбрав соответствующую опцию (Enabled или Disabled). При использовании FTP-приложения (например, CyberDuck) щелкните на значке для копирования FTP-адреса. Подробнее см. раздел «Передача файлов по сети».

Веб-менеджер

Материал, записанный на карты SD или внешние диски, доступен посредством веб-менеджера. Если щелкнуть по ссылке либо скопировать и вставить ее в веб-браузер, откроется базовый интерфейс для выгрузки или загрузки файлов непосредственно на накопители SD по компьютерной сети.

По умолчанию активирован доступ по HTTP, но его можно отключить. Кроме того, есть опция Enabled with security only, которая позволит запрашивать для аутентификации сертификат безопасности. При использовании цифрового сертификата соединения с веб-менеджером шифруются по протоколу HTTPS. Подробнее об. этом см. соответствующий раздел.

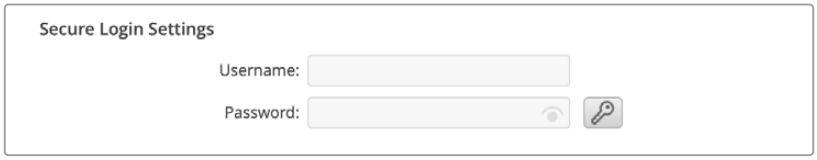
HyperDeck Ethernet Protocol

Подключение к рекордеру HyperDeck можно выполнить с помощью протокола HyperDeck Ethernet и программы командной строки (например, «Терминал» на Mac или PuTTY на Windows). Доступ предоставляют с именем пользователя и паролем или без них либо полностью запрещают. При работе с такой утилитой, как netcat, для шифрования своей сессии можно применять программу SSL. Подробнее см. раздел с информацией для разработчиков.

Допуск к управлению утилитой

Утилита Blackmagic HyperDeck Setup доступна в тот момент, когда рекордер подключен через компьютерную сеть или USB. Чтобы запретить работу с ней по сети, выберите опцию с разрешением только для USB.

Настройки безопасного входа



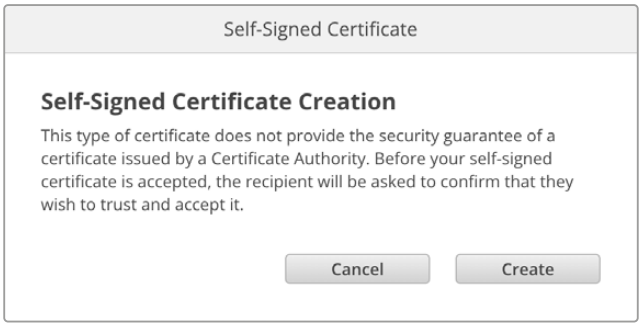
Если для доступа через веб-менеджер или по протоколу HyperDeck Ethernet выбрана опция Enabled with security only, потребуется указать имя пользователя и пароль. Введите нужную информацию и щелкните Save. После заполнения пароля соответствующее поле будет отображаться пустым. Если для доступа через веб-менеджер выбрана опция Enabled with security only, необходимо каждый раз вводить заранее установленные имя пользователя и пароль.

Сертификат безопасности

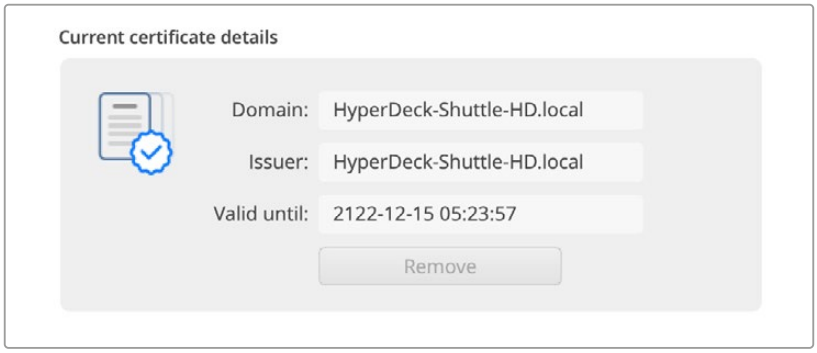
Для предоставления доступа к веб-менеджеру через протоколы HTTPS или HyperDeck Ethernet при выборе соответствующей опции необходим сертификат безопасности. Он позволяет идентифицировать рекордер HyperDeck Shuttle HD для корректного приема входящих сигналов. Кроме того, его применение гарантирует, что данные, передаваемые между HyperDeck и компьютером или сервером, будут зашифрованы. При активированных настройках безопасного входа соединение не только является зашифрованным, но и требует прохождения дополнительной аутентификации.

Существует два типа сертификатов, которые можно использовать при работе с рекордером HyperDeck Shuttle: подписанный удостоверяющим центром или собственным ИТ-отделом. Второй из них обеспечивает достаточную безопасность для некоторых процессов, включая предоставление доступа к HyperDeck Shuttle HD только через локальную сеть.

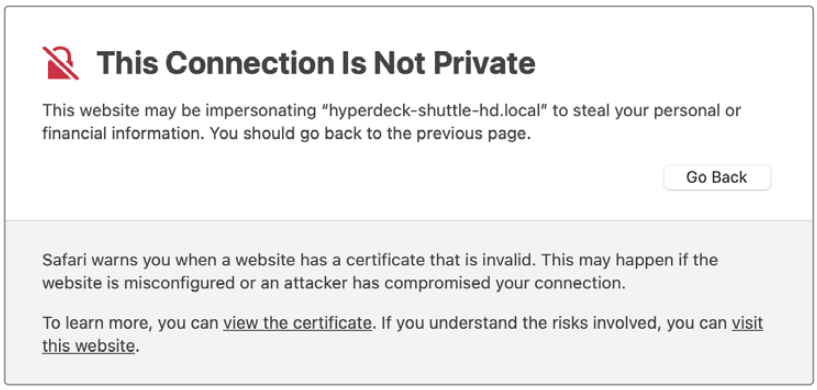
Чтобы сгенерировать самоподписанную версию, нажмите Create Certificate («Создать сертификат»). Система предложит подтвердить, что вы осознаете риски, связанные с его использованием. После нажатия Create («Создать») предусмотрено автоматическое заполнение информации о таком сертификате в полях Domain («Домен»), Issuer («Издатель») и Valid until («Действителен до») в утилите HyperDeck Setup.



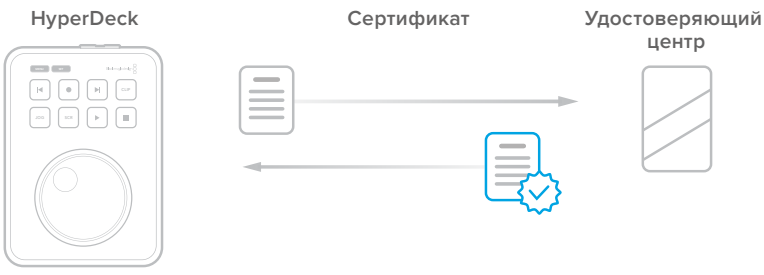
После сброса к заводским настройкам текущий сертификат будет удален, однако его также можно заменить новым в любое время, нажав кнопку Remove («Удалить») и следуя дальнейшим подсказкам.



При использовании самоподписанного сертификата для доступа к медиафайлам по протоколу HTTPS браузер предупредит о том, что подключение не защищено, и либо позволит получить доступ к сайту после соответствующего подтверждения, либо нет.



Чтобы обеспечить доступ при работе с любым веб-браузером, необходимо использовать подписанный сертификат. С этой целью сначала нужно создать соответствующий запрос на подпись (CSR) с помощью утилиты Blackmagic HyperDeck Setup. Затем его направляют в удостоверяющий центр или ИТ-отдел для подписания. После завершения процедуры такой сертификат будет возвращен с расширением файла .cert, .crt или .pem, и его можно импортировать на HyperDeck Shuttle HD.



Порядок создания запроса на подпись сертификата

1 Чтобы сгенерировать запрос на подпись сертификата, щелкните Generate Signing Request.



2 Появится окно с предложением ввести имя и его альтернативную версию для рекордера HyperDeck. При необходимости можно отредактировать любые другие данные, используя приведенную ниже таблицу.

Информация	Описание	Пример
Имя	Доменное имя, которое будет использовано	hyperdeck.melbourne.com
Альтернативное имя субъекта	Альтернативное доменное имя	hyperdeck.melbourne.net
Страна	Страна организации	Австралия (AU)
Штат	Провинция, регион или другая административно-территориальная единица	Виктория
Локация	Населенный пункт	Порт-Мельбурн
Название организации	Название организации, запрашивающей сертификат	Blackmagic Design

3 После того, как вы заполнили данные сертификата, нажмите Generate.

Вместе с файлом .csr одновременно создаются публичный и приватный ключи. Публичный ключ включается в запрос на подпись, а приватный — хранится на устройстве. После того, как удостоверяющий центр или ИТ-отдел проверит предоставленную информацию об организации, будет сгенерирован подписанный сертификат с указанными выше данными и публичным ключом.

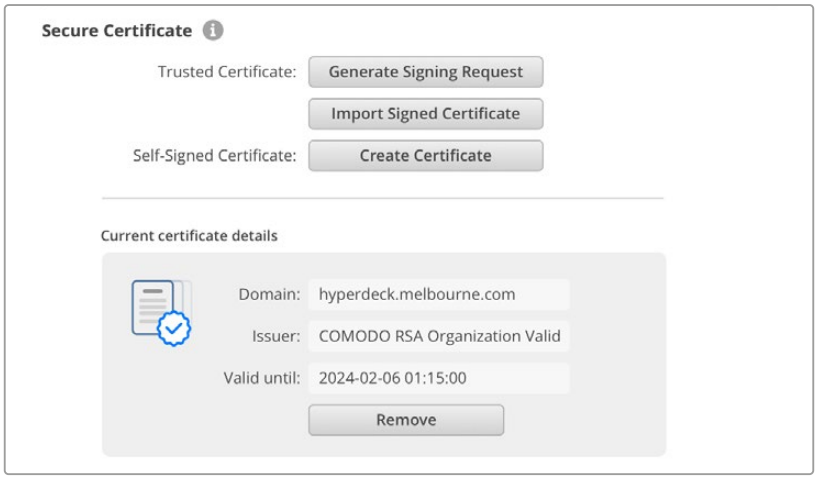
После импорта HyperDeck Shuttle HD станет применять публичный и приватный ключи для подтверждения идентификации устройства, а также для шифрования и дешифрования общих данных через протоколы HTTPS или HyperDeck Ethernet при использовании программы SSL.

Импорт подписанного сертификата

1 Нажмите кнопку Import Signed Certificate.

2 Перейдите к местоположению подписанного сертификата с помощью соответствующего браузера и после выбора файла нажмите Open.

Данные в полях Domain, Issuer и Valid until будут обновлены в соответствии с информацией из удостоверяющего центра. Как правило, подписанный сертификат действителен около года, поэтому процесс необходимо повторить по истечении срока действия.

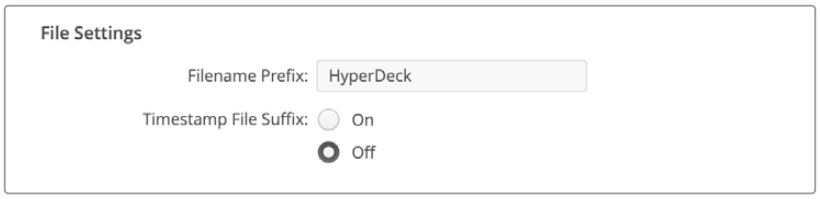


Поскольку доменное имя было выбрано, необходимо обратиться за помощью к ИТ-отделу с целью настройки значения DNS для рекордера HyperDeck Shuttle HD. Таким образом, все данные для IP-адреса HyperDeck будут направлены на адрес домена, указанный в запросе на подпись.

Он также станет адресом HTTPS, который используют для доступа к файлам через веб-менеджер, например https://hyperdeck.melbourne.com.

Следует помнить, что при сбросе к заводским настройкам сертификат становится недействительным, поэтому потребуется заново создать и подписать его.

Настройки файла



После первоначальной настройки рекордера HyperDeck Shuttle HD при записи клипов на SD-карту или флеш-диск USB файлы будут содержать метку «HyperDeck». Если ее нужно изменить, введите новое имя файла.

По умолчанию индекс с метками не добавляется к имени файла. Чтобы активировать эту функцию (Timestamp File Suffix), ее нужно включить. Задать метки для имени и времени можно с помощью соответствующих настроек в меню на HyperDeck Shuttle HD.

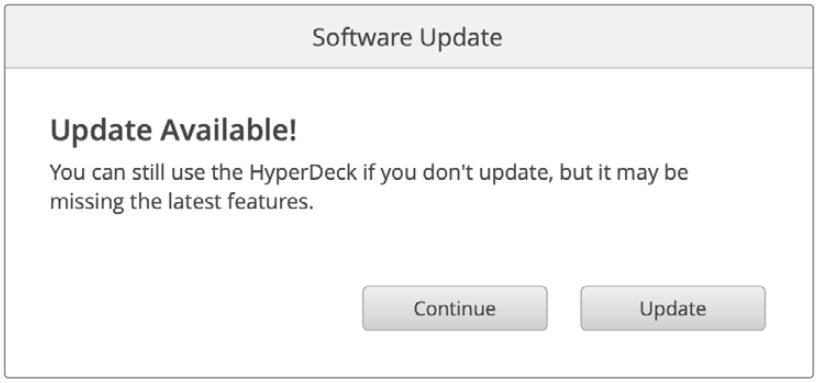
Сброс

Чтобы восстановить первоначальные параметры, выберите «Сброс к заводским настройкам». Эта операция сделает текущий сертификат недействительным. После завершения этой операции сертификат безопасности станет недействительным, и его нужно будет создать снова для подписания удостоверяющим центром или отделом ИТ.

Обновление встроенного программного обеспечения

Порядок обновления внутреннего ПО

1. Загрузите последнюю версию Blackmagic HyperDeck Setup в разделе поддержки по адресу www.blackmagicdesign.com/ru/support.
2. Запустите установщик Blackmagic HyperDeck Setup и следуйте инструкциям на экране.
3. После установки подключите HyperDeck Shuttle HD к компьютеру через порт USB или разъем Ethernet на задней панели устройства.
4. Для обновления программного обеспечения запустите Blackmagic HyperDeck Setup и следуйте инструкциям на экране. Если они не появятся, используемая версия является актуальной.



Передача файлов по сети

HyperDeck Shuttle HD поддерживает передачу файлов по двум протоколам: HTTPS и FTP. Это позволяет быстро копировать материалы с компьютера непосредственно на устройство по локальной сети. Например, можно перенести изображение на рекордер HyperDeck, который используется для вывода на видеостены и цифровые рекламно-информационные панели.

HyperDeck Shuttle HD позволяет импортировать и экспортировать любые файлы, однако их воспроизведение возможно только в том случае, если рекордер поддерживает используемые кодек и разрешение.

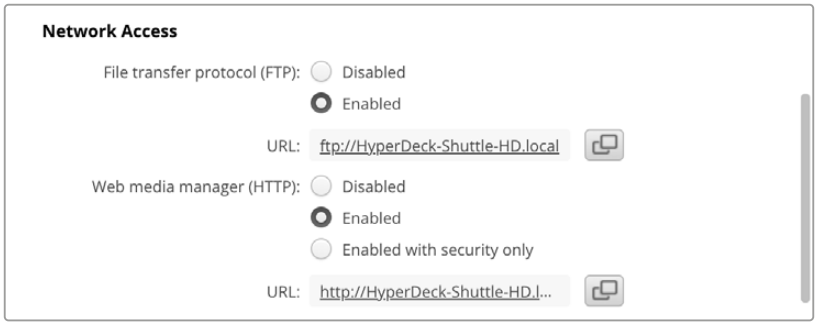
СОВЕТ. Передавать файлы по сети можно в то время, когда HyperDeck ведет запись. В этом случае скорость обмена данными корректируется автоматически.

Чтобы включить или отключить доступ к HyperDeck Shuttle HD по одному из этих протоколов, нужна утилита HyperDeck Setup. Например, можно одновременно заблокировать опцию FTP и активировать — HTTPS.

Подключение к HyperDeck Shuttle HD по протоколу HTTPS

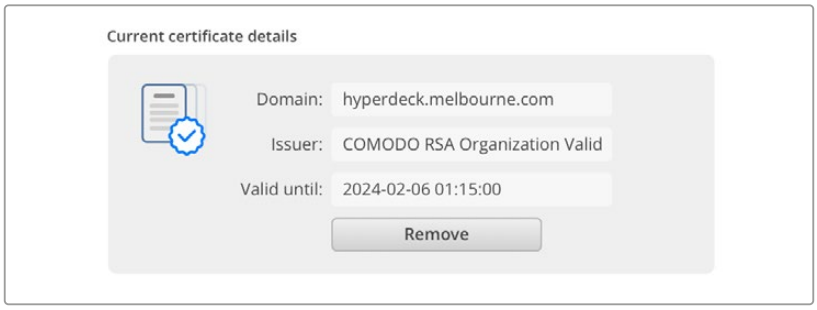
Чтобы получить доступ к HyperDeck Shuttle HD через веб-менеджер, потребуется URL-адрес, который можно найти в сетевых настройках. Он отображается в утилите HyperDeck Setup при подключении компьютера через USB или Ethernet, но будет деактивирован, если используется только Ethernet.

1. Используя кабель USB-C, подключите компьютер к рекордеру HyperDeck Shuttle HD через порт USB на задней панели и откройте утилиту HyperDeck Setup. Рядом с именем устройства появится обозначение USB-соединения. Чтобы открыть настройки, щелкните на круглом значке или в любой области изображения устройства.
2. При использовании самоподписанного сертификата перейдите к настройкам сетевого доступа и щелкните на значке копирования рядом с URL. В основе URL-адреса лежит имя рекордера HyperDeck. Чтобы изменить его, задайте другое имя устройства.



При использовании самоподписанного сертификата щелкните на ссылке

3 После импорта сертификата, подписанного удостоверяющим центром или ИТ-отделом, скопируйте и вставьте адрес в поле Domain для текущего сертификата.



Скопируйте адрес домена и вставьте в браузер

4 Откройте веб-браузер и вставьте адрес в новое окно. Когда выбрана опция безопасного доступа Enabled with security only, в утилите HyperDeck Setup потребуется ввести имя пользователя и пароль.

Если появится предупреждение о незащищенности соединения, подписанный сертификат не был импортирован с помощью утилиты HyperDeck Setup.

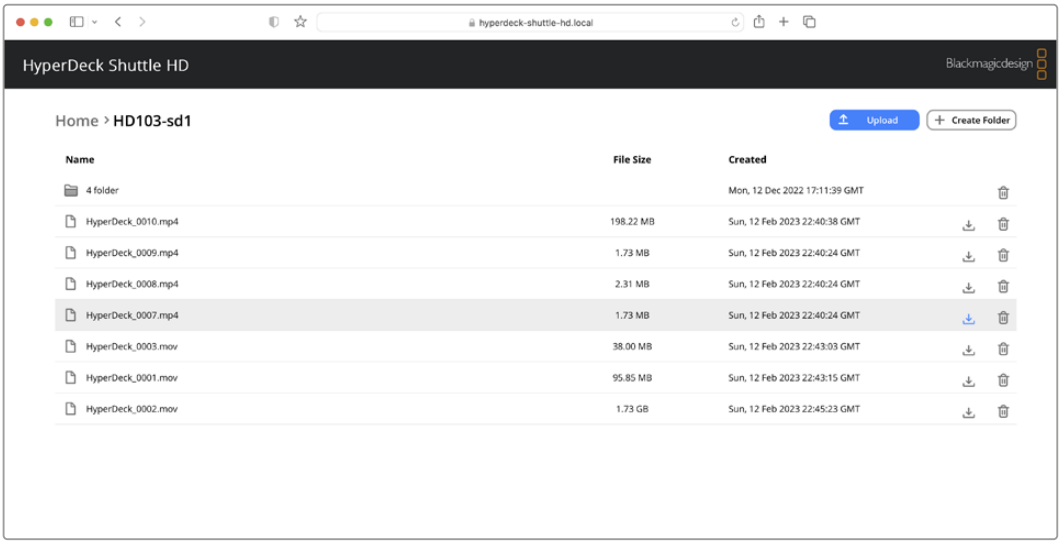
Чтобы продолжить работу без действительного и доверенного сертификата, примите связанные с этим риски и перейдите к веб-сайту.

Передача файлов с помощью веб-менеджера

При первом открытии веб-менеджера можно увидеть, что файлы в нем сгруппированы по соответствующим слотам накопителей.

sd1	Файлы, сохраненные на картах SD.
USB	Подключенные USB-диски указаны с меткой USB/.

Дважды щелкните на носителе, чтобы открыть содержимое карты SD или накопителя.



Нажмите кнопку Upload, чтобы добавить файлы

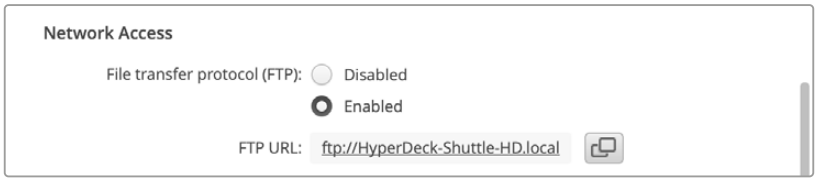
Чтобы добавить файлы для воспроизведения в удаленном режиме, нажмите кнопку Upload. Используя соответствующий браузер, перейдите к файлу и нажмите Upload. Во время загрузки появится окно статуса. В случае необходимости можно добавить папки с помощью кнопки Create Folder.

Чтобы скачать файл, используйте значок стрелки, расположенный справа от его имени. Браузер может предложить дополнительно разрешить загрузку с сайта. Нажмите Allow. Чтобы удалить файл, щелкните на значке корзины, после чего появится соответствующее окно. Нажмите Delete, чтобы продолжить.

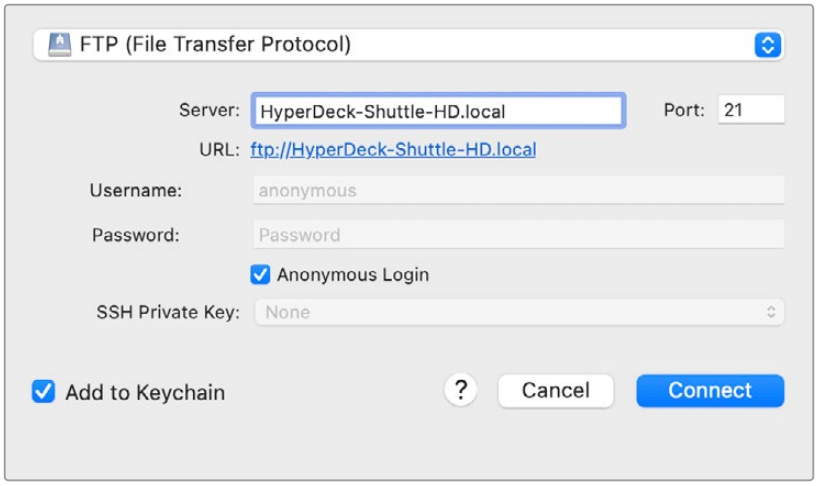
Передача файлов через FTP-протокол

Для обмена файлами между компьютером и HyperDeck Shuttle HD в одной локальной сети потребуются приложение для работы с FTP-протоколом и IP-адрес рекордера либо адрес FTP URL из утилиты HyperDeck Setup.

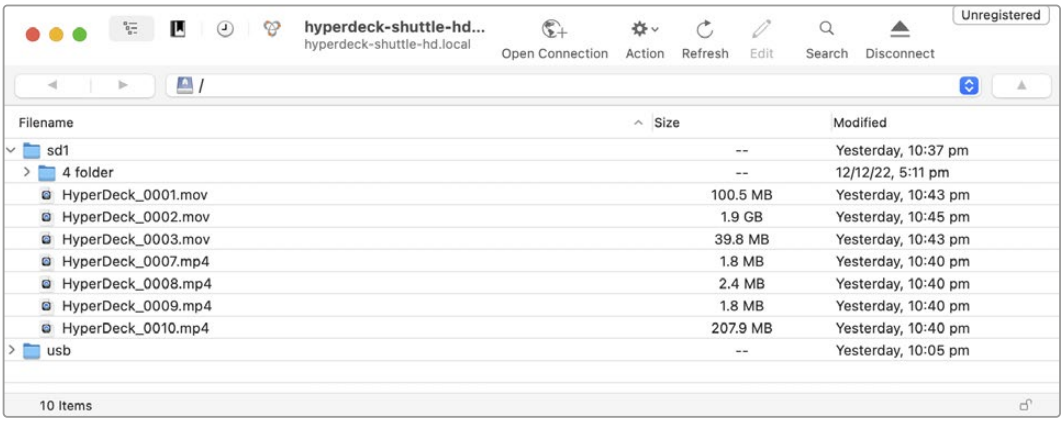
1. Загрузите и установите приложение для работы с FTP-протоколом на компьютер, который будет подключен к рекордеру. Рекомендуется использовать Cyberduck, FileZilla или Transmit, однако подойдут и другие аналогичные программы. Cyberduck и FileZilla предлагаются бесплатно.
2. Когда рекордер HyperDeck Shuttle HD подключен к локальной сети, откройте утилиту HyperDeck Setup и щелкните на адресе FTP URL или значке копирования, чтобы вставить его вручную. Возможно, потребуется нажать на ссылку еще раз, если программа FTP не начала выполнять соединение.



3. Если FTP-соединение выполняется вручную, вставьте URL-адрес в поле Server. Выберите анонимный вход, если эта опция доступна.



4 Карты SD будут идентифицированы по метке sd1.



Теперь файлы можно перетаскивать с помощью FTP-интерфейса.

Developer Information

Blackmagic HyperDeck Ethernet Protocol

The Blackmagic HyperDeck Ethernet Protocol is a text based protocol accessed by connecting to TCP port 9993 on HyperDeck models that have a built in Ethernet connection. If you are a software developer, you can use the protocol to construct devices that integrate with our products. Here at Blackmagic Design our approach is to open up our protocols and we eagerly look forward to seeing what you come up with!

You can connect to your HyperDeck recorder using the HyperDeck Ethernet Protocol using a command line program on your computer, such as Terminal on a Mac and putty on a Windows computer.

The HyperDeck Ethernet Protocol lets you schedule playlists and recordings. The following is an example of how to play 7 clips from clip number 5 onwards via the HyperDeck Ethernet Protocol.

On a Mac

1. Open the Terminal application which is located with the applications > utilities folder.
2. Type in “nc” and a space followed by the IP address of your HyperDeck disk recorder, another space and “9993” which is the HyperDeck Ethernet Protocol port number. For example type: nc 192.168.1.154 9993. The Protocol preamble will appear.
3. Type “playrange set: clip id: 5 count: 7” and press ‘return’.

   On HyperDeck disk recorders with a timeline view, you will see in and out points marked around clips 5 through the end of clip 11.
4. Type “play”. Clips 5 through 11 will now play back.
5. To clear the playrange, type “playrange clear”
6. To exit from the protocol, type ‘quit’.

Protocol Commands

Command	Command Description
help or ?	Provides help text on all commands and parameters
commands	return commands in XML format
device info	return device information
disk list	query clip list on active disk
disk list: slot id: {n}	query clip list on disk in slot {n}
quit	disconnect ethernet control
ping	check device is responding
preview: enable: {true/false}	switch to preview or output
play	play from current timecode
play: speed: {-5000 to 5000}	play at specific speed
play: loop: {true/false}	play in loops or stop-at-end
play: single clip: {true/false}	play current clip or all clips

Command	Command Description
play: {clip id/clip/timecode/timeline/...}	play from the specified position see “goto” command for description of parameters parameters can be combined with {speed/loop/single clip}
playrange	query playrange setting
playrange set: clip id: {n}	set play range to play clip {n} only
playrange set: clip id: {n} count: {m}	set play range to {m} clips starting from clip {n}
playrange set: in: {inT} out: {outT}	set play range to play between: - timecode {inT} and timecode {outT}
playrange set: timeline in: {in} timeline out: {out}	set play range in units of frames between: - timeline position {in} and position {out}
playrange clear	clear/reset play range setting
play on startup	query unit play on startup state
play on startup: enable: {true/false}	enable or disable play on startup
play on startup: single clip: {true/false}	play single clip or all clips on startup
play option	query play options
play option: stop mode: {lastframe/nextframe/black}	set output frame when playback stops
record	record from current input
record: name: {name}	record named clip
record spill	spill current recording to next slot
record: spill: slot id: {n}	spill current recording to specified slot use current id to spill to same slot
spill order	query the device order used for record spill
stop	stop playback or recording
clips count	query number of clips on timeline
clips get	query all timeline clips
clips get: clip id: {n}	query a timeline clip info
clips get: clip id: {n} count: {m}	query m clips starting from n
clips get: version: {1/2/3}	query clip info using specified output version: version 1: id: name startT duration version 1: id: name startT duration startT depends on “configuration: timecode output: {clip/timeline}” version 2: id: clipInT clipDuration inT outT filename version 3: id: clipInT clipDuration inT outT folder/filename
clips add: name: {name}	append a clip to timeline, name can include subfolders e.g. folder1/HyperDeck_0001.mp4
clips add: clip id: {n} name: {name}	insert clip before existing clip {n}
clips add: in: {inT} out: {outT} name: {name}	append the clip portion between clip timecodes {inT} to {outT}
clips add: frame in: {in} frame out: {out} name: {name}	append the clip portion between clip frame numbers {in} to {out}

Command	Command Description
clips remove: clip id: {n}	remove clip {n} from the timeline (invalidates clip ids following clip {n})
clips clear	empty timeline clip list
clips rebuild	rebuild timeline with default rules
clip info	query clip info for the current playing/recording clip
clip info: clip id: {n}	query clip info for timeline clip id {n}
clip info: name: {name}	query clip info for the clip named {name} on active disk
transport info	query current activity
slot info	query active slot
slot info: slot id: {n}	query slot {n}
slot info: device: {device}	query slot containing device USB/network devices can be queried without being active “device” and “slot id” parameters are mutually exclusive in all commands
slot select: slot id: {n}	switch to specified slot
slot select: device: {device}	switch to slot containing device
slot select: video format: {format}	load clips of specified format
slot unblock	unblock active slot
slot unblock: slot id: {n}	unblock slot {n}
slot unblock: device: {device}	unblock disk device
external drive list	list all available USB/network drives for use in external slot
external drive select: device: {device}	switch external slot to specified external drive
external drive selected	query the currently selected external drive
cache info	query cache status
dynamic range	query dynamic range settings
dynamic range: playback override: {off/Rec709/Rec2020_SDR/HLG/ ST2084_300/ST2084_500/ ST2084_800/ST2084_1000/ ST2084_2000/ST2084_4000/ST2084	set playback dynamic range override
dynamic range: record override: {off/Rec709/Rec2020_SDR/HLG/ ST2084_300/ST2084_500/ ST2084_800/ST2084_1000/ ST2084_2000/ST2084_4000/ST2048}	set record dynamic range override
notify	query notification status
notify: remote: {true/false}	set remote notifications
notify: transport: {true/false}	set transport notifications
notify: slot: {true/false}	set slot notifications
notify: configuration: {true/false}	set configuration notifications

Command	Command Description
notify: dropped frames: {true/false}	set dropped frames notifications (reported dropped frame count is approximate)
notify: display timecode: {true/false}	set display timecode notifications
notify: timeline position: {true/false}	set playback timeline position notifications
notify: playrange: {true/false}	set playrange notifications
notify: cache: {true/false}	set cache notifications
notify: dynamic range: {true/false}	set dynamic range settings notifications
notify: slate: {true/false}	set digital slate notifications
notify: clips: {true/false}	set timeline clips notifications where two types of changes can occur: add: partial update with list of clips and insert positions snapshot: complete update of all clips on timeline
notify: disk: {true/false}	set disk clips notifications where two types of changes can occur: add: partial update with list of clips and insert positions snapshot: complete update of all clips on timeline
notify: device info: {true/false}	set device info notifications
notify: nas: {true/false}	set nas notifications triggered by commands such as “nas add” or “nas remove”
goto: clip id: {start/end}	goto first clip or last clip
goto: clip id: {n}	goto clip id {n}
goto: clip id: +{n}	go forward {n} clips
goto: clip id: -{n}	go backward {n} clips
goto: clip: {start/end}	goto start or end of clip
goto: clip: {n}	goto frame position {n} within current clip
goto: clip: +{n}	go forward {n} frames within current clip
goto: clip: -{n}	go backward {n} frames within current clip
goto: timeline: {start/end}	goto start or end of timeline
goto: timeline: {n}	goto frame position {n} within timeline
goto: timeline: +{n}	go forward {n} frames within timeline
goto: timeline: -{n}	go backward {n} frames within timeline
goto: timecode: {timecode}	goto absolute timecode position in timeline
goto: timecode: +{timecode}	go forward {timecode} duration
goto: timecode: -{timecode}	go backward {timecode} duration
goto: slot id: {n}	goto slot id {n}
goto: clip id: {n} clip: {m}	goto clip id {n} and offset to frame position {m} within that clip
goto: clip id: {n} timeline: {m}	goto clip id {n} and offset to frame position {m} within the timeline

Command	Command Description
goto: clip id: {n} timecode: {timecode}	goto clip id {n} and offset {timecode} duration {clip id/clip/timeline/timecode} support absolute and relative offsets use “play” instead of “goto” to play from seeked position
jog: timecode: {timecode}	jog to timecode
jog: timecode: +{timecode}	jog forward {timecode} duration
jog: timecode: -{timecode}	jog backward {timecode} duration
shuttle: speed: {-5000 to 5000}	shuttle with speed
remote	query unit remote control state
remote: enable: {true/false}	enable or disable remote control
remote: override: {true/false}	session override remote control
configuration	query configuration settings
configuration: video input: {SDI/HDMI/component/composite}	change the video input source
configuration: audio input: {embedded/XLR/RCA}	change the audio input source
configuration: file format: {format}	switch to one of the supported formats: H.265High_422, H.264High, H.264Medium, H.264Low, H.264High10_422, H.265High, H.265Medium, H.265Low, QuickTimeProResHQ, QuickTimeProRes, QuickTimeProResLT, QuickTimeProResProxy DNxHR_HQX, QuickTimeDNxHR_HQX, DNxHR_SQ, QuickTimeDNxHR_SQ, DNxHR_LB, QuickTimeDNxHR_LB, DNxHD220x, QuickTimeDNxHD220x, DNxHD145, QuickTimeDNxHD145, DNxHD45, QuickTimeDNxHD45
configuration: audio codec: {PCM/AAC}	switch to specific audio codec
configuration: timecode input: {external/embedded/internal/preset/clip}	change the timecode input
configuration: timecode output: {clip/timeline}	change the timecode output
configuration: timecode preference: {default/dropframe/nondropframe}	whether or not to use drop frame timecodes when not otherwise specified
configuration: timecode preset: {timecode}	set the timecode preset
configuration: audio input channels: {n}	set the number of audio channels recorded to {n}
configuration: record trigger: {none/recordbit/timecoderun}	change the record trigger
configuration: record prefix: {name}	set the record prefix name (supports UTF-8 name)
configuration: record cache: {true/false}	enable or disable record cache, has no effect if cache is not supported/installed/formatted
configuration: append timestamp: {true/false}	append timestamp to recorded filename
configuration: usb spill: {true/false}	enable or disable spilling between usb disks

Command	Command Description
configuration: reference source: {auto/input/external}	set source for the reference signal
configuration: genlock input resync: {true/false}	enable or disable genlock input resync when enabled set reference source to auto/external
configuration: xlr input id: {n} xlr type: {line/mic}	configure xlr input type multiple xlr inputs can be configured in a single command
uptime	return time since last boot
format: slot id: {n} prepare: {exFAT/HFS+} name: {name}	prepare formatting operation filesystem type with volume name {name} “slot id” can be omitted for the current mounted slot “name” defaults to current volume name if mounted (supports UTF-8)
format: device: {device} prepare: {exFAT/HFS+} name: {name}	prepare formatting operation for {device}
format: confirm: {token}	perform a pre-prepared formatting operation using token
identify: enable: {true/false}	identify the device
watchdog: period: {period in seconds}	client connection timeout
reboot	reboot device
slate clips	slate clips information
slate project	slate project information
slate lens	slate lens information
nas list	list all NAS share bookmarks
nas discovered	list all NAS servers that have been discovered via mDNS
nas selected	currently selected NAS share
nas deselect	unmount the currently selected NAS share
connection protocol: response version: {version}	changes which do not affect other client connections change the output of “clips get”, “disk list” and related responses version 1 205 clips get id: filename startT duration startT depends on “configuration: timecode output: {clip/timeline}” 519 clips info id: clipInT clipDuration inT outT filename 206 disk list id: filename codec format duration 520 disk list info id: filename codec format duration version 2 205 clips get id: clipInT clipDuration inT outT folder/filename 519 clips info id: clipInT clipDuration inT outT folder/filename 206 disk list id: codec format duration folder/filename 520 disk list info id: codec format duration folder/filename

Multiline commands:	Command Description
authenticate:↵	authenticate user for secure access
username: {username}	case sensitive username
password: {password}	case sensitive password
slate clips↵	set slate clips information:
reel: {n}	slate reel number, where {n} is in [1, 999]
scene id: {id}	slate scene id value, where {id} is a string
shot type: {WS/MS/CU/BCU/MCU/ECU/none}	slate shot type
take: {n}	slate take number, where {n} is in [1, 99]
take scenario: {PU/VFX/SER/none}	slate take scenario
take auto inc: {true/false}	slate take auto increment
good take: {true/false}	slate good take
environment: {interior/exterior}	slate environment
day night: {day/night}	slate day or night
slate project:↵	set slate project information:
project name: {name}	project name (can be empty, supports UTF-8)
camera: {index}	set camera index e.g. A
director: {name}	director (can be empty, supports UTF-8)
camera operator: {name}	camera operator (can be empty, supports UTF-8)
slate lens:↵	set lens information:
lens type: {type}	lens type (can be empty, supports UTF-8)
iris: {type}	camera iris (can be empty, supports UTF-8)
focal length: {length}	focal length (can be empty, supports UTF-8)
distance: {distance}	lens distance (can be empty, supports UTF-8)
filter: {filter}	lens filter (can be empty, supports UTF-8)
nas add:↵	add a NAS share to the list of bookmarks
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share
username: {username}	username to connect as (optional, defaults to guest)
password: {password}	password to connect with (optional)
nas remove:↵	remove NAS share bookmark, does not unmount share if mounted
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share
nas select:↵	mount NAS share asynchronously. Uses credentials provided in matching bookmark, otherwise uses guest credentials
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share Use “nas selected” or “notify: slot: true” to determine when share is mounted.

Command Combinations

You can combine the parameters into a single command, for example:

```
play: clip id: 3 speed: 200 loop: true single clip: true
```

Or for configuration:

```
configuration: video input: SDI audio input: XLR
```

Or to switch to the second disk, but only play NTSC clips:

```
slot select: slot id: 2 video format: NTSC
```

Using XML

While you can use the Terminal to talk to HyperDeck, if you are writing software, you can use XML to confirm the existence of a specific command based on the firmware of the HyperDeck you are communicating with. This helps your software user interface adjust to the capabilities of the specific HyperDeck model and software version.

Protocol Details

Connection

The HyperDeck Ethernet server listens on TCP port 9993.

Basic syntax

The HyperDeck protocol is a line oriented text protocol. Lines from the server will be separated by an ascii CR LF sequence. Messages from the client may be separated by LF or CR LF.

New lines are represented in this document as a "↵" symbol.

Single line command syntax

Command parameters are usually optional. A command with no parameters is terminated with a new line:

```
{Command name}↵
```

If parameters are specified, the command name is followed by a colon, then pairs of parameter names and values. Each parameter name is terminated with a colon character:

```
{Command name}: {Parameter}: {Value} {Parameter}: {Value} ...↵
```

Multiline command syntax

The HyperDeck protocol also supports an equivalent multiline syntax where each parameter-value pair is entered on a new line. E.g.

```
{Command name}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
↵
```

Response syntax

Simple responses from the server consist of a three digit response code and descriptive text terminated by a new line:

```
{Response code} {Response text}↵
```

If a response carries parameters, the response text is terminated with a colon, and parameter name and value pairs follow on subsequent lines until a blank line is returned:

```
{Response code} {Response text}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
...
↵
```

Successful response codes

A simple acknowledgement of a command is indicated with a response code of 200:

```
200 ok↵
```

Other successful responses carry parameters and are indicated with response codes in the range of 201 to 299.

Failure response codes

Failure responses to commands are indicated with response codes in the range of 100 to 199:

```
100 syntax error
101 unsupported parameter
102 invalid value
103 unsupported
104 disk full
105 no disk
106 disk error
107 timeline empty
108 internal error
109 out of range
110 no input
111 remote control disabled
112 clip not found
120 connection failed
121 authentication failed
122 authentication required
150 invalid state
151 invalid codec
160 invalid format
161 invalid token
162 format not prepared
163 parameterized single line command not supported
```

Asynchronous response codes

The server may return asynchronous messages at any time. These responses are indicated with response codes in the range of 500 to 599:

```
5xx {Response Text}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
↵
```

Connection response

On connection, an asynchronous message will be delivered:

```
500 connection info:↵
protocol version: {Version}↵
model: {Model Name}↵
↵
```

Connection rejection

A limited number of clients may connect at a time. If too many clients attempt to connect concurrently, they will receive an error and be disconnected:

```
120 connection failed↵
```

Timecode syntax

Timecodes are expressed as non-drop-frame timecode in the format:

```
HH:MM:SS:FF
```

Handling of deck "remote" state

The “remote” command may be used to enable or disable the remote control of the deck. Any attempt to change the deck state over ethernet while remote access is disabled will generate an error:

```
111 remote control disabled↵
```

To enable or disable remote control:

```
remote: enable: {“true”, “false”} ↵
```

The current remote control state may be overridden allowing remote access over ethernet irrespective of the current remote control state:

```
remote: override: {“true”, “false”} ↵
```

The override state is only valid for the currently connected ethernet client and only while the connection remains open.

The “remote” command may be used to query the remote control state of the deck by specifying no parameters:

```
remote↵
```

The deck will return the current remote control state:

```
210 remote info:↵
enabled: {“true”, “false”}↵
override: {“true”, “false”}↵
↵
```

Asynchronous remote control information change notification is disabled by default and may be configured with the “notify” command. When enabled, changes in remote state will generate a “510 remote info:”asynchronous message with the same parameters as the “210 remote info:” message.

Closing connection

The "quit" command instructs the server to cleanly shut down the connection:

```
quit↵
```

Checking connection status

The "ping" command has no function other than to determine if the server is responding:

```
ping↵
```

Getting help

The "help" or "?" commands return human readable help text describing all available commands and parameters:

```
help↵
```

Or:

```
?↵
```

The server will respond with a list of all supported commands:

```
201 help:↵
{Help Text}↵
{Help Text}↵
↵
```

Switching to preview mode

The "preview" command instructs the deck to switch between preview mode and output mode:

```
preview: enable: {"true", "false"}↵
```

Playback will be stopped when the deck is switched to preview mode. Switching to playback is not permitted during record. Use the stop command to stop recording before switching to playback.

Controlling device playback

The “play” command instructs the deck to start playing:

```
play↵
```

The play command accepts a number of parameters which may be used together in most combinations.

By default, the deck will play all remaining clips on the timeline then stop.
The “single clip” parameter may be used to override this behavior:

```
play: single clip: {“true”, “false”}↵
```

By default, the deck will play at normal (100%) speed. An alternate speed may be specified in percentage between -5000 to 5000:

```
play: speed: {% normal speed}↵
```

By default, the deck will stop playing when it reaches to the end of the timeline. The “loop” parameter may be used to override this behavior:

```
play: loop: {“true”, “false”}↵
```

To play from the start of a particular clip:

```
play: clip id: {Clip Id}↵
```

To play from a position offset from the start of particular clip:

```
play: clip id: {Clid Id} timecode: +{timecode}↵
```

The “playrange” command returns the current playrange setting if any:

```
playrange↵
```

To override this behaviour and select a particular clip:

```
playrange set: clip id: {Clip ID}↵
```

To only play a certain number of clips starting at a particular clip:

```
playrange set: clip id: {n} count: {m}↵
```

To only play a certain timecode range:

```
playrange set: in: {in timecode} out: {out timecode}↵
```

To play a certain timeline range:

```
playrange set: timeline in: {in} timeline out: {out}↵
```

To clear a set playrange and return to the default value:

```
playrange clear↵
```

The “play on startup command” instructs the deck on what action to take on startup. By default, the deck will not play. Use the “enable” command to start playback after each power up.

```
play on startup: enable {“true”, “false”}↵
```

By default, the unit will play back all clips on startup. Use the “single clip” command to override.

```
play on startup: single clip: {“true”, “false”}↵
```

The “play option” command queries the output frame for when playback stops:

```
play option↵
```

By default, the deck will display the last frame when playback stops. To override this behaviour, the “stop mode” parameter can be used:

```
play option: stop mode: {“lastframe”, “nextframe”, “black”}↵
```

Stopping deck operation

The "stop" command instructs the deck to stop the current playback or capture:

```
stop↵
```

Changing timeline position

The "goto" command instructs the deck to switch to playback mode and change its position within the timeline.

To go to the start of a specific clip:

```
goto: clip id: {Clip ID}↵
```

To move forward/back {count} clips from the current clip on the current timeline:

```
goto: clip id: +/-{count}↵
```

Note that if the resultant clip id goes beyond the first or last clip on timeline, it will be clamp at the first or last clip.

To go to the start or end of the current clip:

```
goto: clip: {“start”, “end”}↵
```

To go to the start of the first clip or the end of the last clip:

```
goto: timeline: {“start”, “end”}↵
```

To go to a specified timecode:

```
goto: timecode: {timecode}↵
```

To move forward or back a specified duration in timecode:

```
goto: timecode: {“+”, “-”}{duration in timecode}↵
```

To specify between slot 1 and slot 2:

```
goto: slot id: {Slot ID}↵
```

Note that only one parameter/value pair is allowed for each goto command.

Enumerating supported commands and parameters

The "commands" command returns the supported commands:

```
commands↵
```

The command list is returned in a computer readable XML format:

```
212 commands:
<commands>↵
     <command name="…"><parameter name="…"/>…</command>↵
     <command name="…"><parameter name="…"/>…</command>↵
     …
</commands>↵
↵
```

More XML tokens and parameters may be added in later releases.

Controlling asynchronous notifications

The “notify” command may be used to enable or disable asynchronous notifications from the server.
To enable or disable transport notifications:

```
notify: transport: {“true”, “false”}↵
```

To enable or disable slot notifications:

```
notify: slot: {“true”, “false”}↵
```

To enable or disable remote notifications:

```
notify: remote: {“true”, “false”}↵
```

To enable or disable configuration notifications:

```
notify: configuration: {“true”, “false”}↵
```

Multiple parameters may be specified. If no parameters are specified, the server returns the current state of all notifications:

```
209 notify:↵
transport: {“true”, “false”}↵
slot: {“true”, “false”}↵
remote: {“true”, “false”}↵
configuration: {“true”, “false”}↵
dropped frames: {“true”, “false”}↵
display timecode: {“true”, “false”}↵
timeline position: {“true”, “false”}↵
playrange: {“true”, “false”}↵
cache: {“true”, “false”}↵
dynamic range: {“true”, “false”}↵
slate: {“true”, “false”}↵
clips: {“true”, “false”}↵
disk: {“true”, “false”}↵
device info: {“true”, “false”}↵
nas: {“true”, “false”}↵
↵
```

Retrieving device information

The "device info" command returns information about the connected deck device:

```
device info↵
```

The server will respond with:

```
204 device info:↵
protocol version: {Version}↵
model: {Model Name}↵
unique id: {unique alphanumeric identifier}↵
slot count: {number of storage slots}↵
software version: {software version}↵
name: {device name}↵
↵
```

Retrieving slot information

The "slot info" command returns information about a slot. Without parameters, the command returns information for the currently selected slot:

```
slot info↵
```

If a slot id is specified, that slot will be queried:

```
slot info: slot id: {Slot ID}↵
```

The server will respond with slot specific information:

```
202 slot info:↵
slot id: {Slot ID}↵
slot name: {“slot name”}↵
device name: {identifying name for disk device}↵
status: {"empty", "mounting", "error", "mounted"}↵
volume name: {Volume name}↵
recording time: {recording time available in seconds}↵
video format: {disk's default video format}↵
blocked: {“true”, “false”}↵
remaining size: {remaining size in bytes}↵
total size: {total size in bytes}↵
↵
```

A slot can also be specificed by its device. This is particularly useful when there are multiple drives connected via USB. First list the available external drives:

```
external drive list↵
226 external drive info:↵
device: {device}↵
```

Then use slot info with device to query the drive:

```
slot info: device: {device}↵
```

Asynchronous slot information change notification is disabled by default and may be configured with the "notify" command. When enabled, changes in slot state will generate a "502 slot info:" asynchronous message with the same parameters as the "202 slot info:" message.

Retrieving clip information

The “disk list” command returns the information for each playable clip on a given disk. Without parameters, the command returns information for the current active disk:

```
disk list↵
```

If a slot id is specified, the disk in that slot will be queried:

```
disk list: slot id: {Slot ID}↵
```

The server responds with the list of all playable clips on the disk in the format of: Index, name, formats, and duration in timecode:

```
206 disk list:↵
slot id: {Slot ID}↵
{clip index}: {name} {file format} {video format} {Duration timecode}↵
{clip index}: {name} {file format} {video format} {Duration timecode}↵
…
↵
```

Note that the *clip index* starts from 1.

Retrieving clip count

The "clips count" command returns the number of clips on the current timeline:

```
clips count ↵
```

The server responds with the number of clips:

```
214 clips count: ↵
clip count: {Count}↵
```

Retrieving timeline information

The "clips get" command returns information for each available clip on the current timeline. Without parameters, the command returns information for all clips on timeline:

```
clips get↵
```

In version 1, the start timecode reported is either a clip timecode or a timeline timecode depending on the configured output timecode.

The server responds with a list of clip IDs, names and timecodes:

```
205 clips info:↵
clip count: {Count}↵
{Clip ID}: {Name} {Start timecode} {Duration timecode}↵
{Clip ID}: {Name} {Start timecode} {Duration timecode}↵
…
↵
```

The “clips get” command provides a more detailed response when using the “version: 2” parameter:

```
clips get: version: 2↵
```

The server responds with a list of clip IDs, timecodes, in points, out points and names. Clip name is the last field making it simpler to parse when names have embedded spaces.

```
{Clip ID}: {Clip start timecode} {Duration timecode} {inTimecode}
{outTimecode}
{name}↵
{Clip ID}: {Clip start timecode} {Duration timecode} {inTimecode}
{outTimecode}
{name}↵
…
↵
```

For models that support recursive timelines “clips get: version: 3” replaces the {name} field with {path to clip name} where the {path to clip name} can include directories and subdirectories.

Retrieving transport information

The “transport info” command returns the state of the transport:

```
transport info ↵
```

The server responds with transport specific information:

```
208 transport info:

status: {“preview”, “stopped”, “play”, “forward”, “rewind”,
“jog”, “shuttle”,”record”}↵

speed: {Play speed between -5000 and 5000 %}↵

slot id: {Slot ID or “none”}↵

slot name: {“slot name”}↵

device name: {identifying name for disk device}↵

clip id: {Clip ID or “none”}↵

single clip: {“true”, “false”}↵

display timecode: {timecode}↵

timecode: {timecode}↵

video format: {Video format}↵

loop: {“true”, “false”}↵

timeline: {n}↵

input video format: {Video format”}↵

dynamic range: {“off”, “Rec709”, “Rec2020_SDR”, “HLG”,
“ST2084_300”, “ST2084_500”, “ST2084_800”, “ST2084_1000”,
“ST2084_2000”, “ST2084_4000”, “ST2048” or “none”}↵

reference locked: {“false”, “true”}

↵
```

The "timecode" value is the timecode within the current timeline for playback or the clip for record. The "display timecode" is the timecode displayed on the front of the deck. The two timecodes will differ in some deck modes.

Asynchronous transport information change notification is disabled by default and may be configured with the "notify" command. When enabled, changes in transport state will generate a "508 transport info:" asynchronous message with the same parameters as the "208 transport info:" message.

Video Formats

The following video formats are currently supported on HyperDeck Extreme, HyperDeck Studio and HyperDeck Shuttle:

720p50, 720p5994, 720p60

1080p23976, 1080p24, 1080p25, 1080p2997, 1080p30, 1080p60

1080i50, 1080i5994, 1080i60

HyperDeck Extreme HDR models also support the following formats:

NTSC, PAL, NTSCp, PALp

2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p30, 2160p50, 2160p59.94, 2160p60

4Kp23976, 4Kp24, 4Kp25, 4Kp2997, 4Kp30

4Kp50, 4Kp5994, 4Kp60

HyperDeckExtreme 8K HDR adds support for the following 8K formats:

4320p23.98, 4320p24, 4320p25, 4320p29.97, 4320p30, 4320p50, 4320p59.94, 4320p60

8Kp23976, 8Kp24, 8Kp25

HyperDeck Studio Pro and Plus models support these 4k formats:

4Kp23976, 4Kp24, 4Kp25, 4Kp2997, 4Kp30

HyperDeck Studio 4K Pro adds support for the following 4k formats:

4Kp50, 4Kp5994, 4Kp60

Video format support may depend on the file format selected and may vary between models and software releases.

File Formats

All HyperDeck models currently support the following file formats:

H.264High_SDI

H.264High

H.264Medium

H.264Low

QuickTimeProResHQ

QuickTimeProRes

QuickTimeProResLT

QuickTimeProResProxy

QuickTimeDNxHD220x

DNxHD220x

QuickTimeDNxHD145

DNxHD145

QuickTimeDNxHD45

DNxHD45

HyperDeck Studio 4K Pro and HyperDeck Extrme HDR models also support the following file formats:

H.265High_SDI

H.265High

H.265Medium

H.265Low

QuickTimeDNxHR_HQX

DNxHR_HQX

QuickTimeDNxHR_SQ

DNxHR_SQ

QuickTimeDNxHR_LB

DNxHR_LB

Supported file formats may vary between models and software releases.

Querying and updating configuration information

The "configuration" command may be used to query the current configuration of the deck:

```
configuration↵
```

The server returns the configuration of the deck:

```
211 configuration:↵
audio input: {“embedded”, “XLR”, “RCA”}↵
audio mapping: {n}↵
video input: {“SDI”, “HDMI”, “component”, “composite”}↵
file format: {format}↵
audio codec: {“PCM”, “AAC”}↵
timecode input: {“external”, “embedded”, “preset”, “clip”}↵
timecode output: {“clip”, “timeline”}↵
timecode preference: {“default”, “dropframe”, “nondropframe”}↵
timecode preset: {timecode}↵
audio input channels: {n}↵
record trigger: {“none”, “recordbit”, “timecoderun”}↵
record prefix: {name}↵
record cache: {“true”, “false”}↵
append timestamp: {“true”, “false”}↵
genlock input resync: {“true”, “false”}↵
reference source: {“auto”, “input”, “external”}↵
xlr input id: {“n”}↵
xlr type: {”line”, ”mic”}↵
usb spill: {“true”, “false”}↵
↵
```

One or more configuration parameters may be specified to change the configuration of the deck.

To change the current video input:

```
configuration: video input: {“SDI”, “HDMI”, “component”}↵
```

Valid video inputs may vary between models. To configure the current audio input:

```
configuration: audio input: {“embedded”, “XLR”, “RCA”}↵
```

Valid audio inputs may vary between models.

To configure the current file format:

```
configuration: file format: {File format}↵
```

Note that changes to the file format may require the deck to reset, which will cause the client connection to be closed. In such case, response code 213 will be returned (instead of 200) before the client connection is closed:

```
“213 deck rebooting”
```

Asynchronous configuration information change notification is disabled by default and may be configured with the “notify” command. When enabled, changes in configuration will generate a “511 configuration:” asynchronous message with the same parameters as the “211 configuration:” message.

Selecting active slot and video format

The "slot select" command instructs the deck to switch to a specified slot, or/and to select a specified output video format.

To switch to a specified slot:

```
slot select: slot id: {slot ID}↵
```

To switch to a disk device, including USB drives that are not yet made active:

```
slot select: device: {identifying name for disk device}↵
```

To select the output video format:

```
slot select: video format: {video format}↵
```

Either or all slot select parameters may be specified. Note that selecting video format will result in a rescan of the disk to reconstruct the timeline with all clips of the specified video format.

Clearing the current timeline

The "clips clear" command instructs the deck to empty the current timeline:

```
clips clear↵
```

The server responds with

```
200 ok↵
```

Adding a clip to the current timeline

The "clips add:" command instructs the deck to add a clip to the current timeline:

```
clips add: name: {clip name}↵
```

The server responds with

```
200 ok↵
```

or in case of error

```
1xx {error description}↵
```

Configuring the watchdog

The “watchdog” command instructs the deck to monitor the connected client and terminate the connection if the client is inactive for at least a specified period of time.

To configure the watchdog:

```
watchdog: period: {period in seconds}↵
```

To avoid disconnection, the client must send a command to the server at least every {period} seconds.
Note that if the period is set to 0 or less than 0, connection monitoring will be disabled.

Network Area Storage

On networks using multicast DNS the “nas discovered” command will list network servers the HyperDeck has discovered:

```
nas discovered↵
225 nas host info:
CloudStoreMini.local. CloudStoreMini
CloudStore80.local. CloudStore80
CloudStore320.local. CloudStore320
```

A network share can be added as a bookmark to the HyperDeck using ‘nas add’

```
nas add:
url: smb://CloudStore80.local/Studio1
```

For shares that require a username and password consider using the secure mode of the HyperDeck Ethernet protocol to avoid passwords being sent as plaintext.

```
nas add:
url: smb://192.168.1.1/Main
username: user1234
password: Password1234
```

A share can be made available for recording and playback using ‘nas select’. If a bookmark exists for that share, ‘nas select’ will use the credentials stored in the bookmark. Otherwise ‘nas select’ will connect using Guest credentials.

```
nas select:
url: smb://192.168.1.1/Main
```

Only one share can be mounted at a time using ‘nas select’.

You can query the currently selected nas share using the ‘nas selected’ command. If ‘notify: slot: true’ was used an asynchronous notification will be sent when the share is mounted.

HyperDeck Control REST API

При наличии навыков самостоятельной разработки программного обеспечения можно создавать собственные приложения или использовать готовые инструменты, такие как клиент REST или сервис Postman, для контроля рекордеров HyperDeck посредством интерфейса HyperDeck Control REST API. Он обеспечивает выполнение широкого спектра операций, включая запуск и остановку записи материала, управление воспроизведением, а также получение доступа к информации о диске. Независимо от выбранной стратегии этот функционал позволит профессионалам с легкостью раскрыть весь потенциал решений HyperDeck, а творческие горизонты станут еще шире!

Transport Control API

API for controlling Transport on Blackmagic Design products.

GET /transports/0

Get device's basic transport status.

Response

200 - Transport status.

The response is a JSON object.

Name	Type	Description
mode	string	Transport mode. Possible values are: InputPreview, InputRecord, Output.

PUT /transports/0

Set device's basic transport status.

Parameters

Name	Type	Description
mode	string	Transport mode. Possible values are: InputPreview, Output.

Response

204 - Transport mode was set.

GET /transports/0/stop

Determine if transport is stopped.

Response

200 - Transport stop response.

The response is a JSON object.

PUT /transports/0/stop

Stop transport. Deprecated, use POST /tranports/0/stop instead.

Response

204 - Transport stopped.

POST /transports/0/stop

Stop transport.

Response

204 - Transport stopped.

GET /transports/0/play

Determine if transport is playing.

Response

200 - Transport play response.
The response is a JSON object.

PUT /transports/0/play

Start playing on transport. Deprecated, use POST /tranports/0/play instead.

Response

204 - Transport playing.

POST /transports/0/play

Start playing on transport.

Response

204 - Transport playing.

GET /transports/0/playback

Get playback state.

Response

200 - OK
The response is a JSON object.

Name	Type	Description
type	string	Possible values are: Play, Jog, Shuttle, Var.
loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
speed	number	Playback Speed, 1.0 for normal forward playback
position	integer	Playback position on the timeline in units of video frames

PUT /transports/0/playback

Set playback state.

Parameters

Name	Type	Description
type	string	Possible values are: Play, Jog, Shuttle, Var.
loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
speed	number	Playback Speed, 1.0 for normal forward playback
position	integer	Playback position on the timeline in units of video frames

Response

204 - No Content

GET /transports/0/record

Get record state.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
recording	boolean	Is transport in Input Record mode

PUT /transports/0/record

Set record state. Deprecated, use POST /transports/0/record instead.

Parameters

Name	Type	Description
recording	boolean	Is transport in Input Record mode
clipName	string	Used to set the requested clipName to record to, when specifying “recording” attribute to True

Response

204 - Recording started.

POST /transports/0/record

Start recording.

Parameters

Name	Type	Description
clipName	string	Specific name of clip to record to.

Response

204 - Recording started.

GET /transports/0/clipIndex

Get the clip index of the currently playing clip on the timeline.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clipIndex	number	The 0-based index of the clip being played on the timeline. null when there is no timeline or an empty timeline.

GET /transports/0/timecode

Get device's timecode.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
display	string	The display timecode serialised as a string.
timeline	string	The timeline timecode serialised as a string.

GET /transports/0/timecode/source

Get timecode source selected on device

Response

200 - OK

The response is a JSON object.

Name	Type	Description
timecode	string	Possible values are: Timeline, Clip.

GET /transports/0/clip

Get clip information about the currently recording (or transferring) clip, if it exists

Response

200 - Information about the clip currently being recorded.

The response is a JSON object.

Name	Type	Description
clip	object	
clip.clipUniqueId	integer	Unique ID used to identify this clip
clip.filePath	string	Path to the file relative to the root of a mount
clip.fileSize	integer	Size of file on disk in bytes
clip.codecFormat	object	
clip.codecFormat.codec	string	Currently selected codec.
clip.codecFormat.container	string	Multimedia container format.
clip.videoFormat (required)	object	Video format configuration.
clip.videoFormat.name	string	Video format serialised as a string.
clip.videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
clip.videoFormat.height	number	Height dimension of video format.
clip.videoFormat.width	number	Width dimension of video format.
clip.videoFormat.interlaced	boolean	Is the display format interlaced?
clip.startTimecode	string	Start timecode of the clip serialised as string
clip.durationTimecode	string	Duration of the clip in timecode format serialised as string
clip.frameCount	integer	Number of frames in clip; duration of the clip in frames

System Control API

API for controlling the System Modes on Blackmagic Design products.

GET /system

Get device system information.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codecFormat	object	
codecFormat.codec	string	Currently selected codec.
codecFormat.container	string	Multimedia container format.
videoFormat (required)	object	Video format configuration.
videoFormat.name	string	Video format serialised as a string.
videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
videoFormat.height	number	Height dimension of video format.
videoFormat.width	number	Width dimension of video format.
videoFormat.interlaced	boolean	Is the display format interlaced?

GET /system/product

Get device product information.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
deviceName	string	Name of device as displayed in Setup
productName	string	Device's product name
softwareVersion	string	Software version running on device

GET /system/supportedCodecFormats

Get the list of supported codecs.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codecs	array	
codecs[i]	object	
codecs[i].codec	string	Currently selected codec.
codecs[i].container	string	Multimedia container format.

GET /system/codecFormat

Get the currently selected codec.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codec	string	Currently selected codec.
container	string	Multimedia container format.

PUT /system/codecFormat

Set the codec.

Parameters

Name	Type	Description
codec	string	Currently selected codec.
container	string	Multimedia container format.

Response

204 - The codec updated successfully.

GET /system/videoFormat

Get the currently selected video format.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
name	string	Video format serialised as a string.
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

PUT /system/videoFormat

Set the timeline video format. Deprecated, use PUT /timelines/0/videoFormat instead.

Parameters

This parameter can be one of the following types:

Name	Type	Description
name	string	Video format serialised as a string.

Name	Type	Description
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

Response

204 - The video format updated successfully.

400 - Invalid request.

409 - Operation unsupported in the current state.

Media Control API

API for controlling media devices in Blackmagic Design products.

GET /media/workingset

Get the list of media devices currently in the working set.

Response

200 - The list of media devices in the working set. Entries are null if there is no media device in that slot.

The response is a JSON object.

Name	Type	Description
size	integer	The fixed size of this device's working set
workingset (required)	array	
workingset[i]	object	
workingset[i].index	integer	Index of this media in the working set
workingset[i].activeDisk	boolean	Is this current item the active disk
workingset[i].volume	string	Volume name
workingset[i].deviceName	string	Internal device name of this media device
workingset[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
workingset[i].totalSpace	integer	Total space on media device in bytes
workingset[i].remainingSpace	integer	Remaining space on media device in bytes
workingset[i].clipCount	integer	Number of clips currently on the device

GET /media/active

Get the currently active media device.

Response

200 - The current active media device.

The response is a JSON object.

Name	Type	Description
workingsetIndex	integer	Working set index of the active media device
deviceName	string	Internal device name of this media device

204 - No media is currently active

PUT /media/active

Set the currently active media device.

Parameters

Name	Type	Description
workingsetIndex	integer	Working set index of the media to become active

Response

204 - The active media device was set successfully.

400 - Setting the currently active media device is not possible in the current state.

GET /media/devices/doformatSupportedFilesystems

Get the list of filesystems available to format the device.

Response

200 - The list of filesystems permitted for formatting.

The response is a JSON object.

GET /media/devices/{deviceName}

Get information about a requested device.

Parameters

Name	Type	Description
{deviceName}	string	

Response

200 - Information about the requested device.

The response is a JSON object.

Name	Type	Description
state	string	The current state of the media device. Possible values are: None, Scanning, Mounted, Uninitialised, Formatting, RaidComponent.

400 - Invalid device name

404 - Device not found

GET /media/devices/{deviceName}/doformat

Get a format key, used to format the device with a PUT request.

Parameters

Name	Type	Description
{deviceName}	string	

Response

200 - Format prepared

The response is a JSON object.

Name	Type	Description
deviceName	string	Internal device name of this media device
key	string	The key used to format this device, it must be fetched with the GET request and then provided back with a PUT request

400 - Cannot format the device

404 - Device not found

PUT /media/devices/{deviceName}/doformat

Perform a format of the media device.

Parameters

Name	Type	Description
{deviceName}	string	

Name	Type	Description
key	string	The key used to format this device, it must be fetched with the GET request and then provided back with a PUT request
filesystem	string	Filesystem to format to. GET doFormatSupportedFilesystems returns list of supported filesystems.
volume	string	Volume name to set for the disk after format

Response

204 - Format successful

400 - Cannot format the device, invalid filesystem or key

404 - Device not found

Timeline Control API

API for controlling playback timeline.

GET /timelines/0

Get the playback timeline.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clips	array	
clips[i]	object	
clips[i].clipUniqueId	integer	Unique identifier used to identify this media clip. If the same media clip is added to the timeline multiple times, each timeline clip has the same clipUniqueId
clips[i].frameCount	integer	Duration of timeline clip in frames, the number of frames in this clip on the timeline
clips[i].durationTimecode	string	Duration of the timeline clip in timecode format serialised as string. This will differ to durationTimecode reported in /clips for this clipUniqueId if clipIn or frameCount was specified when adding this clip to the timeline.
clips[i].clipIn	string	In frame offset for the clip on the timeline, where 0 is the first frame of the on-disk clip
clips[i].inTimecode	string	Clip timecode of the first frame of this timeline clip serialised as string (clip startTimecode + clipIn frames)
clips[i].timelineIn	string	Timeline position of the first frame of this clip, where 0 is the first frame of the timeline
clips[i].timelineInTimecode	string	Timeline timecode of the first frame of this timeline clip serialised as string

Response

404 - No timeline / disk available.

DELETE /timelines/0

Clear the current playback timeline. Deprecated, prefer to use POST /timelines/0/clear

Response

204 - The timeline was cleared.

POST /timelines/0

Add a clip to the timeline.

Parameters

Name	Type	Description
insertBefore	integer	Clip(s) will be inserted before this timeline clip index. If omitted, inserts to the end of the timeline. 0 inserts to the beginning of the timeline.
clips		

Response

204 - The clip was added to the timeline as specified.

POST /timelines/0/add

Add a clip to the end of the timeline. Deprecated, use POST /timelines/0 to add clips within the timeline.

Parameters

This parameter can be one of the following types:

Name	Type	Description
clips	integer	Unique ID (clipUniqueId) of the clip to add to the timeline

Name	Type	Description
clips	array	
clips[i]	integer	Unique ID (clipUniqueId) of the clip to add to the timeline

Response

204 - The clip was added to the end of the timeline.

DELETE /timelines/0/clear

Clear the playback timeline.

Response

204 - The timeline was cleared.

DELETE /timelines/0/clips/{timelineClipIndex}

Remove the specified clip from the timeline.

Parameters

Name	Type	Description
{timelineClipIndex}	integer	

Response

204 - The specified clip was removed from the timeline.

Event Control API

API For working with built-in websocket.

GET /event/list

Get the list of events that can be subscribed to using the websocket API.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
events	array	
events[i]	string	List of events that can be subscribed to using the websocket API

Clips Control API

API for listing clips on disk.

GET /clips

Get the list of clips on the active disk.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clips	array	
clips[i]	object	
clips[i].clipUniqueId	integer	Unique ID used to identify this clip
clips[i].filePath	string	Path to the file relative to the root of a mount
clips[i].fileSize	integer	Size of file on disk in bytes
clips[i].codecFormat	object	
clips[i].codecFormat.codec	string	Currently selected codec.
clips[i].codecFormat.container	string	Multimedia container format.
clips[i].videoFormat (required)	object	Video format configuration.
clips[i].videoFormat.name	string	Video format serialised as a string.
clips[i].videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
clips[i].videoFormat.height	number	Height dimension of video format.
clips[i].videoFormat.width	number	Width dimension of video format.
clips[i].videoFormat.interlaced	boolean	Is the display format interlaced?
clips[i].startTimecode	string	Start timecode of the clip serialised as string
clips[i].durationTimecode	string	Duration of the clip in timecode format serialised as string
clips[i].frameCount	integer	Number of frames in clip; duration of the clip in frames

Response

404 - There is no active disk

HyperDeck Control API

API for controlling HyperDecks.

POST /system/reboot

Reboots the device.

Response

204 - The device will reboot immediately.

409 - Rebooting is not possible in the current state.

GET /system/uptime

Gets the current system uptime.

Response

200 - The current system uptime

The response is a JSON object.

Name	Type	Description
uptimeSeconds	integer	The system uptime in seconds

PUT /system/identify

Sets the identify mode. If set to true, will exit identify mode after 10 seconds.

Parameters

Name	Type	Description
enabled	boolean	Is the device identifying itself?

Response

204 - Identify updated successfully.

GET /transports/0/recordCache

Gets information about the recording cache.

Response

200 - Current information about the recording cache

The response is a JSON object.

Name	Type	Description
status	string	The current status of the cache. “none” means no cache is detected by the device. Possible values are: undetected, unformatted, idle, transferring, queued, recording, disabled.
remainingRecordingTime	integer	The remaining recording time in seconds.
transferringDevice	string	The device name of the disk the cache is currently transferring to.

GET /transports/0/recordCache/enabled

Checks if the record cache is enabled.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
enabled	boolean	Is the record cache enabled?

PUT /transports/0/recordCache/enabled

Enables or disables the record cache. Has no effect if cache is not supported / installed / formatted.

Parameters

Name	Type	Description
enabled	boolean	Is the record cache enabled?

Response

204 - Record cache enabled / disabled was changed.

GET /transports/0/record/spillOrder

Gets media devices in order of which will next be spilled to.

Response

200 - The media device spill order

The response is a JSON object.

Name	Type	Description
devices	array	
devices[i]	object	
devices[i].deviceName	string	Internal device name of the drive.

POST /transports/0/record/spillToNewFile

Spills to a new file.

Response

204 - Spilled to a new file.

POST /transports/0/record/spillToNextDevice

Spills to the next media device

Response

204 - Spilled to the specified drive.

GET /transports/0/inputVideoFormat

Gets the video format of the input video signal.

Response

200 - The video format of the input video signal. “inputVideoFormat” is null when there is no timeline.

The response is a JSON object.

Name	Type	Description
inputVideoFormat (required)	object	Video format configuration.
inputVideoFormat.name	string	Video format serialised as a string.
inputVideoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
inputVideoFormat.height	number	Height dimension of video format.
inputVideoFormat.width	number	Width dimension of video format.
inputVideoFormat.interlaced	boolean	Is the display format interlaced?

GET /transports/0/supportedInputVideoSources

Gets the currently supported input video signal sources.

Response

200 - The supported input video signal sources.

The response is a JSON object.

Name	Type	Description
supportedInputVideoSources	array	
supportedInputVideoSources[i]	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

GET /transports/0/inputVideoSource

Gets the source of the input video signal.

Response

200 - The input video signal source. The source will be one in the list from GET /transports/0/supportedInputVideoSources.

The response is a JSON object.

Name	Type	Description
inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

PUT /transports/0/inputVideoSource

Sets the source of the input video signal.

Parameters

Name	Type	Description
inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

Response

204 - The source of the input video signal was set successfully.

400 - The source specified was invalid or unsupported.

GET /timelines/0/playRange

Gets the current timeline play range. playRange is null if playing the whole timeline, or there is no play range.

Response

200 - The current timeline play range.

The response is a JSON object.

Name	Type	Description
playRange		

PUT /timelines/0/playRange

Sets the timeline play range.

Parameters

Name	Type	Description
playRange		

Response

204 - The timeline play range was set successfully.

POST /timelines/0/playRange/clear

Clears the timeline play range, sets the play range to be the whole timeline.

Response

204 - The timeline play range was cleared successfully.

GET /timelines/0/videoFormat

Gets the video format of the timeline.

Response

200 - The video format of the timeline. “videoFormat” is null when there is no timeline.

The response is a JSON object.

Name	Type	Description
videoFormat (required)	object	Video format configuration.
videoFormat.name	string	Video format serialised as a string.
videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
videoFormat.height	number	Height dimension of video format.
videoFormat.width	number	Width dimension of video format.
videoFormat.interlaced	boolean	Is the display format interlaced?

PUT /timelines/0/videoFormat

Sets the video format of the timeline.

Parameters

This parameter can be one of the following types:

Name	Type	Description
name	string	Video format serialised as a string.

Name	Type	Description
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

Response

204 - The timeline video format was set successfully.

400 - The requested video format was invalid.

409 - The video format cannot be changed at this time.

POST /timelines/0/rebuild

Rebuilds the timeline with default rules in the current timeline format.

Response

204 - The timeline was rebuilt with default rules.

GET /media/external

Gets the list of present external media devices.

Response

200 - The list of present external media devices

The response is a JSON object.

Name	Type	Description
devices	array	
devices[i] (required)	object	
devices[i].volume	string	Volume name
devices[i].deviceName	string	Internal device name of this media device
devices[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
devices[i].totalSpace	integer	Total space on media device in bytes
devices[i].remainingSpace	integer	Remaining space on media device in bytes
devices[i].clipCount	integer	Number of clips currently on the device

GET /media/external/selected

Gets the current selected external media device.

Response

200 - The selected external media device

The response is a JSON object.

Name	Type	Description
selected	object	
selected.deviceName	string	Internal device name of the drive.

404 - No selected external media has been selected

PUT /media/external/selected

Sets the current selected external media device.

Parameters

Name	Type	Description
selected	object	
selected.deviceName	string	Internal device name of the drive.

Response

204 - The selected external media device was set successfully.

GET /media/nas/discovered

Gets the NAS hosts discoverable by the device.

Response

200 - The list of discovered NAS hosts

The response is a JSON object.

Name	Type	Description
hosts	array	
hosts[i]	object	
hosts[i].hostName	string	The hostname of the NAS host
hosts[i].friendlyName	string	The friendly name of the NAS host
hosts[i].ip	string	The IP address of the NAS host

GET /media/nas/bookmarks

Gets all NAS share bookmarks.

Response

200 - The list of NAS share bookmarks

The response is a JSON object.

Name	Type	Description
hosts	array	
hosts[i] (required)	object	
hosts[i].url	string	URL of the NAS share

POST /media/nas/bookmarks

Add a new NAS share bookmarks.

Parameters

Response

204 - The NAS bookmark was added successfully.

400 - The NAS bookmark could not be added.

GET /media/nas/bookmarks/{url}

Get information about a requested network share bookmark.

Parameters

Name	Type	Description
{url}	string	

Response

200 - Information about the requested network share bookmark.

The response is a JSON object.

Name	Type	Description
url	string	URL of the NAS share

404 - Network share bookmark not found

PUT /media/nas/bookmarks/{url}

Adds a bookmark with the requested URL.

Parameters

Name	Type	Description
{url}	string	

Name	Type	Description
username	string	Default value is: guest.
password	string	

Response

204 - The NAS bookmark has been created.

400 - The NAS bookmark could not be created.

DELETE /media/nas/bookmarks/{url}

Deletes a bookmark with the requested URL.

Parameters

Name	Type	Description
{url}	string	

Response

204 - The NAS bookmark has been deleted.

GET /media/nas/selected

Gets the currently selected share bookmark.

Response

200 - Information about the selected network share bookmark.

The response is a JSON object.

Name	Type	Description
selected	object	
selected.url	string	URL of the NAS share

404 - No NAS drive has been selected.

PUT /media/nas/selected

Sets the selected share bookmark to the requested bookmark, or clears the bookmark.

Parameters

Name	Type	Description
selected	object	
selected.url	string	URL of the NAS share

Response

204 - The selected NAS bookmark was set.

400 - The selected NAS bookmark could not be set.

Notification websocket - 1.0.0

Service that notifies subscribers of device state changes.

messages

Subscribe (The messages from the server/device)

Response Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: subscribe, unsubscribe, listSubscriptions, listProperties, websocketOpened .
.data.properties	array	
.data.properties[i]	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.values	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.data.success	boolean	
.type	string	Possible values are: response .
.id	number	Optional parameter that repeats the id in the output for tracking messages

Event Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: propertyValueChanged .
.data.property	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.value	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.type	string	Possible values are: event .

Publish (The messages that user can send to the server/device)

Response Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: subscribe, unsubscribe, listSubscriptions, listProperties, websocketOpened .
.data.properties	array	
.data.properties[i]	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.values	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.data.success	boolean	
.type	string	Possible values are: response .
.id	number	Optional parameter that repeats the id in the output for tracking messages

Device Properties

/media/workingset

The value JSON returned via the eventResponse when the /media/workingset property changes on the device:

Name	Type	Description
size	integer	The fixed size of this device's working set
workingset (required)	array	
workingset[i]	object	
workingset[i].index	integer	Index of this media in the working set
workingset[i].activeDisk	boolean	Is this current item the active disk
workingset[i].volume	string	Volume name
workingset[i].deviceName	string	Internal device name of this media device
workingset[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
workingset[i].totalSpace	integer	Total space on media device in bytes
workingset[i].remainingSpace	integer	Remaining space on media device in bytes
workingset[i].clipCount	integer	Number of clips currently on the device

/media/active

The value JSON returned via the eventResponse when the /media/active property changes on the device:

Name	Type	Description
.workingsetIndex	integer	Working set index of the active media device
.deviceName	string	Internal device name of this media device

/system

The value JSON returned via the eventResponse when the /system property changes on the device:

Name	Type	Description
.codecFormat	object	Currently selected codec
.codecFormat.codec	string	Currently selected codec
.codecFormat.container	string	Multimedia container format
.videoFormat	string	Name of the video format

/system/codecFormat

Currently selected codec

The value JSON returned via the eventResponse when the /system/codecFormat property changes on the device:

Name	Type	Description
.codec	string	Currently selected codec
.container	string	Multimedia container format

/system/videoFormat

Name of the video format

The value JSON returned via the eventResponse when the /system/videoFormat property changes on the device:

Name	Type	Description

/timelines/0

The value JSON returned via the eventResponse when the /timelines/0 property changes on the device:

Name	Type	Description
.clips	array	
.clips[i]	object	
.clips[i].clipUniqueId	integer	Unique identifier used to identify this media clip. If the same media clip is added to the timeline multiple times, each timeline clip has the same clipUniqueId
.clips[i].frameCount	integer	Duration of timeline clip in frames, the number of frames in this clip on the timeline
.clips[i].durationTimecode	string	Duration of the timeline clip in timecode format serialised as string. This will differ to durationTimecode reported in /clips for this clipUniqueId if clipIn or frameCount was specified when adding this clip to the timeline.
.clips[i].clipIn	string	In frame offset for the clip on the timeline, where 0 is the first frame of the on-disk clip
.clips[i].inTimecode	string	Clip timecode of the first frame of this timeline clip serialised as string (clip startTimecode + clipIn frames)
.clips[i].timelineIn	string	Timeline position of the first frame of this clip, where 0 is the first frame of the timeline
.clips[i].timelineInTimecode	string	Timeline timecode of the first frame of this timeline clip serialised as string

/transports/0

The value JSON returned via the eventResponse when the /transports/0 property changes on the device:

Name	Type	Description
.mode	string	Transport mode Possible values are: InputPreview, InputRecord, Output .

/transports/0/stop

true when transport mode is InputPreview or when in Output mode and speed is 0

The value JSON returned via the eventResponse when the /transports/0/stop property changes on the device:

Name	Type	Description

/transports/0/play

True when transport is in Output mode and speed is non-zero

The value JSON returned via the eventResponse when the /transports/0/play property changes on the device:

Name	Type	Description

/transports/0/playback

The value JSON returned via the eventResponse when the /transports/0/playback property changes on the device:

Name	Type	Description
.type	string	Possible values are: Play, Jog, Shuttle, Var .
.loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
.singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
.speed	number	Playback speed, 1.0 for normal forward playback
.position	integer	Playback position on the timeline in units of video frames

/transports/0/record

The value JSON returned via the eventResponse when the /transports/0/record property changes on the device:

Name	Type	Description
.recording	boolean	Is transport in Input Record mode

/transports/0/timecode

The value JSON returned via the eventResponse when the /transports/0/timecode property changes on the device:

Name	Type	Description
display	string	The display timecode serialised as a string.
timeline	string	The timeline timecode serialised as a string.

/transports/0/timecode/source

The value JSON returned via the eventResponse when the /transports/0/timecode/source property changes on the device:

Name	Type	Description
.timecode	string	Possible values are: Timeline, Clip .

/transports/0/clipIndex

The value JSON returned via the eventResponse when the /transports/0/clipIndex property changes on the device:

Name	Type	Description
.clipIndex	number	The 0-based index of the clip being played on the timeline. null when there is no timeline or an empty timeline.

/media/external

The value JSON returned via the eventResponse when the /media/external property changes on the device:

Name	Type	Description
.volume	string	Volume name
.deviceName	string	Name of media device
.remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
.totalSpace	integer	Total space on media device in bytes
.remainingSpace	integer	Remaining space on media device in bytes
.clipCount	integer	Number of clips currently on the device

/media/external/selected

The value JSON returned via the eventResponse when the /media/external/selected property changes on the device:

Name	Type	Description
.deviceName	string	Internal device name of this media device

/transports/0/inputVideoSource

The value JSON returned via the eventResponse when the /transports/0/inputVideoSource property changes on the device:

Name	Type	Description
.inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite .

/transports/0/inputVideoFormat

The value JSON returned via the eventResponse when the /transports/0/inputVideoFormat property changes on the device:

Name	Type	Description
.inputVideoFormat	string	Name of the video format

/timelines/0/videoFormat

The value JSON returned via the eventResponse when the /timelines/0/videoFormat property changes on the device:

Name	Type	Description
.videoFormat	string	Name of the video format

/media/nas/discovered

The value JSON returned via the eventResponse when the /media/nas/discovered property changes on the device:

Name	Type	Description
.hostName	string	Hostname of external network drive
.friendlyName	string	Name of external network drive
.ip	string	IP Address of external network drive

/media/nas/bookmarks

The value JSON returned via the eventResponse when the /media/nas/bookmarks property changes on the device:

Name	Type	Description
.hosts	array	
.hosts[i]	object	
.hosts[i].url	string	URL associated with bookmark

Помощь

Как получить помощь

Самый быстрый способ получить помощь — обратиться к страницам поддержки на сайте Blackmagic Design и проверить наличие последних справочных материалов по рекордерам HyperDeck.

Раздел поддержки на сайте Blackmagic Design

Последние версии руководства по эксплуатации, программного обеспечения и дополнительную информацию можно найти в центре поддержки Blackmagic Design на странице www.blackmagicdesign.com/ru/support.

Форум Blackmagic Design

Посетите форум сообщества Blackmagic Design на нашем веб-сайте, чтобы получить дополнительную информацию и узнать об интересных творческих идеях. На нем можно поделиться своими идеями, а также получить помощь от персонала поддержки и других пользователей. Адрес форума https://forum.blackmagicdesign.com.

Обращение в службу поддержки Blackmagic Design

Если с помощью доступных справочных материалов решить проблему не удалось, воспользуйтесь формой «Отправить нам сообщение» на странице поддержки. Можно также позвонить в ближайшее представительство Blackmagic Design, телефон которого вы найдете на нашем веб-сайте.

Проверка используемой версии программного обеспечения

Чтобы узнать версию утилиты Blackmagic HyperDeck Setup, установленной на вашем компьютере, откройте окно About Blackmagic HyperDeck Setup.

- На компьютере с операционной системой Mac OS откройте Blackmagic HyperDeck Setup в папке «Программы». В меню выберите About Blackmagic HyperDeck Setup, чтобы узнать номер версии.
- На компьютере с операционной системой Windows откройте Blackmagic HyperDeck Setup в меню «Пуск» или выберите на начальном экране. В меню «Справка» выберите About Blackmagic HyperDeck Setup, чтобы узнать номер версии.

Загрузка последних версий программного обеспечения

Узнав установленную версию Blackmagic HyperDeck Setup, перейдите в центр поддержки Blackmagic на странице www.blackmagicdesign.com/ru/support, чтобы проверить наличие обновлений. Рекомендуется всегда использовать последнюю версию программного обеспечения, однако обновление лучше всего выполнять после завершения текущего проекта.

Соблюдение нормативных требований

Утилизация электрооборудования и электронной аппаратуры в Европейском Союзе



Изделие содержит маркировку, в соответствии с которой его запрещается утилизировать вместе с бытовыми отходами. Непригодное для эксплуатации оборудование необходимо передать в пункт вторичной переработки. Раздельный сбор отходов и их повторное использование позволяют беречь природные ресурсы, охранять окружающую среду и защищать здоровье человека. Чтобы получить подробную информацию о порядке утилизации, обратитесь в местные муниципальные органы или к дилеру, у которого вы приобрели это изделие.



Данное оборудование протестировано по требованиям для цифровых устройств класса A (раздел 15 спецификаций FCC) и признано соответствующим всем предъявляемым критериям. Соблюдение упомянутых нормативов обеспечивает достаточную защиту от вредного излучения при работе оборудования в нежилых помещениях. Так как это изделие генерирует и излучает радиоволны, при неправильной установке оно может становиться источником радиопомех. Если оборудование эксплуатируется в жилых помещениях, высока вероятность возникновения помех, влияние которых в этом случае пользователь должен устранить самостоятельно.

До эксплуатации допускаются устройства, соответствующие двум главным требованиям.

1. Оборудование не должно быть источником вредных помех.
2. Оборудование должно быть устойчивым к помехам, включая те, которые могут вызвать сбой в работе.



R-R-BMD-20211410001

Соответствие требованиям ISED (Канада)



Данное оборудование соответствует канадским стандартам для цифровых устройств класса A.

Любая модификация или использование изделия не по назначению могут повлечь за собой аннулирование заявления о соответствии этим стандартам.

Подключение к HDMI-интерфейсу должно выполняться с помощью качественного экранированного кабеля.

Данное оборудование протестировано по требованиям, предъявляемым к устройствам при работе в нежилых помещениях. При использовании в бытовых условиях оно может становиться источником помех для радиосигнала.

Правила безопасности

Допускается его эксплуатация в условиях тропического климата с температурой окружающей среды до 40° C.

Для работы устройства необходимо обеспечить достаточную вентиляцию.

Внутри корпуса не содержатся детали, подлежащие обслуживанию. Для выполнения ремонтных работ обратитесь в местный сервисный центр Blackmagic Design.



Допускается эксплуатация в местах не выше 2000 метров над уровнем моря.

Уведомление для жителей штата Калифорния

При работе с этим оборудованием существует возможность контакта с содержащимися в пластмассе микропримесями многобромистого бифенила, который в штате Калифорния признан канцерогеном и увеличивает риск врожденных дефектов и пороков репродуктивной системы.

Подробнее см. информацию на сайте www.P65Warnings.ca.gov.

Европейское представительство

Blackmagic Design B.V, Amsterdam
Sloterdijk Teleport Towers Office 2.17,
Kingsfordweg 151,
Amsterdam, 1043GR.

Гарантия

Ограниченная гарантия сроком 12 месяцев

Компания Blackmagic Design гарантирует отсутствие в данном изделии дефектов материала и производственного брака в течение 12 месяцев с даты продажи. Если во время гарантийного срока будут выявлены дефекты, Blackmagic Design по своему усмотрению выполнит ремонт неисправного изделия без оплаты стоимости запчастей и трудозатрат или заменит такое изделие новым.

Чтобы воспользоваться настоящей гарантией, потребитель обязан уведомить компанию Blackmagic Design о дефекте до окончания гарантийного срока и обеспечить условия для предоставления необходимых услуг. Потребитель несет ответственность за упаковку и доставку неисправного изделия в соответствующий сервисный центр Blackmagic Design с оплатой почтовых расходов. Потребитель обязан оплатить все расходы по доставке и страхованию, пошлины, налоги и иные сборы в связи с возвратом изделия вне зависимости от причины возврата.

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Luglio 2024

Manuale di istruzioni

Blackmagicdesign

HyperDeck Shuttle HD



HyperDeck Shuttle HD



Gentile utente

Grazie per aver acquistato il registratore su disco Blackmagic HyperDeck Shuttle HD!

Abbiamo sviluppato i primi HyperDeck per semplificare la registrazione e la riproduzione del video usando supporti di memoria SSD veloci. Ora siamo felici di presentare HyperDeck Shuttle HD!

HyperDeck Shuttle HD è un registratore video HDMI piccolo e portatile pensato per la scrivania. La grande manopola di ricerca e i comuni controlli di trasporto permettono di operarlo con una mano, ideale in congiunzione allo switcher ATEM Mini nella produzione dal vivo. Puoi usare HyperDeck Shuttle HD anche come teleprompter!

HyperDeck Shuttle HD registra sulle schede SD e sui flash disk esterni nei codec ProRes, DNxHD o H.264, offrendo registrazione e riproduzione fulminee.

La versione più recente del manuale e gli aggiornamenti del software HyperDeck sono disponibili alla pagina www.blackmagicdesign.com/it. Consigliamo di aggiornare regolarmente il dispositivo per accedere alle ultime funzioni. Quando scarichi il software, registra i tuoi dati personali per stare al passo con gli aggiornamenti che rilasciamo. Siamo sempre al lavoro per mettere a disposizione nuove funzioni e miglioramenti, e ti invitiamo a condividere i tuoi preziosi suggerimenti!



Grant Petty
CEO Blackmagic Design

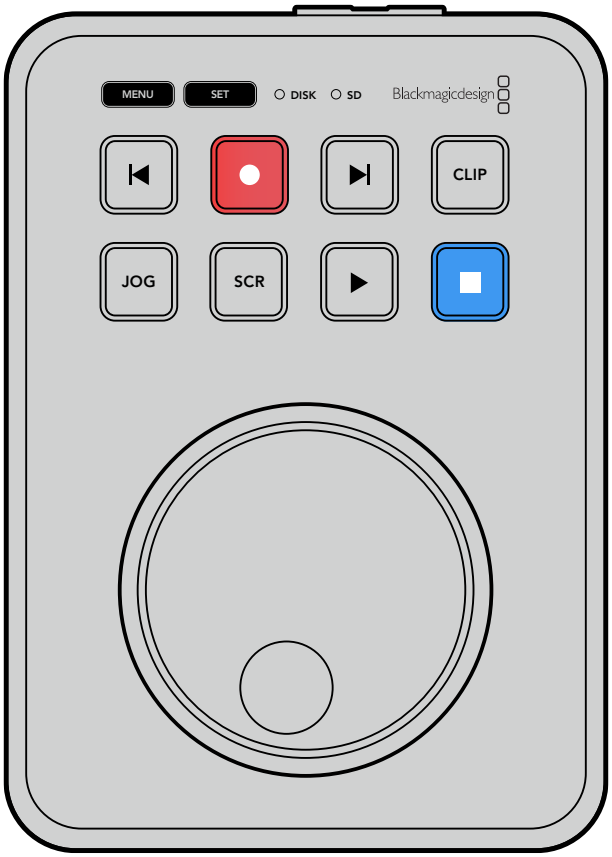
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Operazioni preliminari

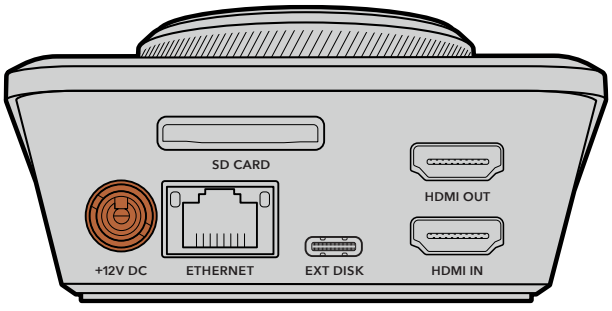
Per preparare HyperDeck Shuttle HD all'utilizzo basta collegare l'alimentazione e una sorgente video HDMI, inserire una scheda SD o un supporto di memoria esterno e premere REC.

Questa parte del manuale illustra come mettere in pratica queste operazioni.



Collegare l'alimentazione

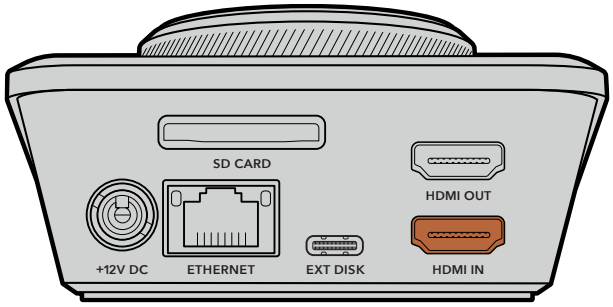
Inserisci l'adattatore in dotazione nell'ingresso di alimentazione sul retro di HyperDeck Shuttle HD, avvitando l'anello di bloccaggio per evitare che il cavo si scolleghi.



Inserisci e blocca l'adattatore nell'ingresso di alimentazione

Collegare video e audio

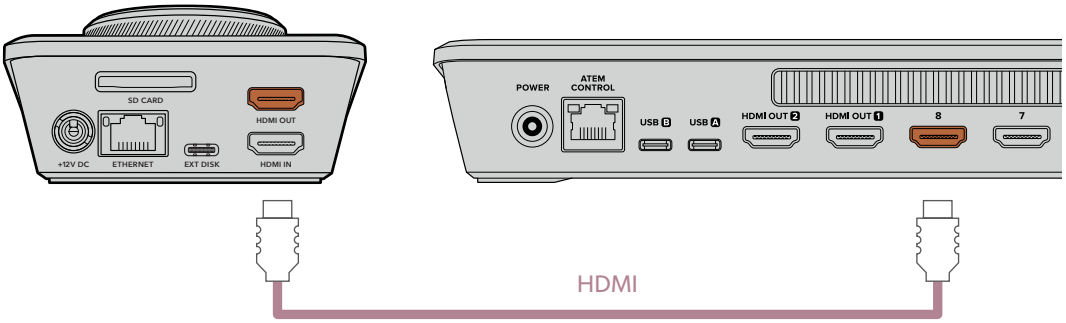
Collega una sorgente video nell'ingresso HDMI sul retro di HyperDeck Shuttle HD.



Collega un dispositivo di destinazione all'uscita HDMI, per esempio uno switcher ATEM Mini o una televisione HDMI.

Mentre cambi le impostazioni di HyperDeck, l'uscita HDMI consente di visualizzare il menù in sovraimpressione sul video. Le informazioni sui menù sono fornite nella sezione "Cambiare le impostazioni".

SUGGERIMENTO Se il display connesso non visualizza la sorgente video in entrata, è probabile che HyperDeck sia in modalità di riproduzione. Premi il tasto REC per abilitare la modalità di registrazione.



Collega l'uscita HDMI a un dispositivo di destinazione, ad esempio una televisione HDMI o uno switcher ATEM Mini

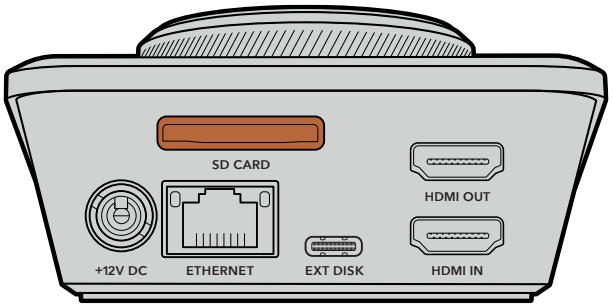
Collegare i supporti di memoria

I registratori HyperDeck Shuttle HD sono già pronti per registrare e non richiedono una configurazione preliminare. Basta inserire una scheda SD o un disco esterno formattati.

I supporti di memoria si possono formattare dal menù o su un computer. La sezione "Formattare i supporti di memoria" contiene tutte le informazioni necessarie, compresi i supporti migliori per registrare il video e la lista delle schede SD e dei dischi esterni consigliati.

Inserire una scheda SD

1 Accosta la scheda allo slot con i connettori dorati rivolti verso l'alto. Spingi delicatamente la scheda nello slot fino a bloccarla in posizione.



2 HyperDeck verificherà la scheda. Durante questa fase, la spia SD frontale è illuminata di verde. La spia si spegne a verifica effettuata.



Ora HyperDeck Shuttle HD è pronto per registrare e riprodurre.

Continua a leggere il manuale per scoprire come registrare e riprodurre le clip e cambiare le impostazioni.

Registrazione

Dopo aver verificato la sorgente video sul dispositivo HDMI di destinazione, puoi iniziare a registrare.

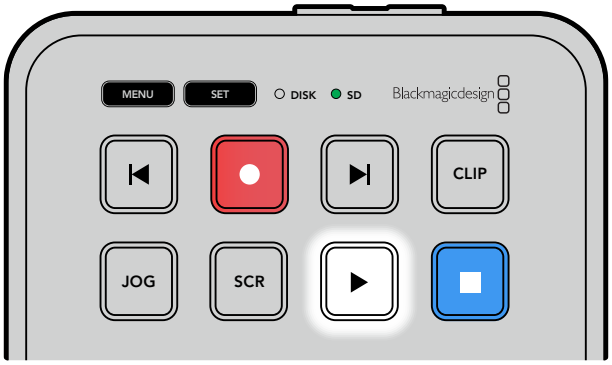
Premi REC per avviare la registrazione. Se registri su una scheda SD, la spia SD diventa rossa e i tasti REC e PLAY si illuminano. Se registri su un disco esterno, la spia DISK diventa rossa.



Premi STOP per interrompere la registrazione.

Riproduzione

Premi PLAY per avviare la riproduzione. Il tasto PLAY si illumina e la spia SD o DISK diventa verde. Se la registrazione contiene diverse clip, puoi scorrere con i tasti SKIP Avanti e Indietro.



Usare i tasti SKIP

Premi SKIP Indietro per raggiungere l'inizio della clip; premilo più di una volta per indietreggiare tra le clip registrate.

Premi SKIP Avanti per avanzare tra le clip registrate. I tasti lampeggiano quando è spuntata la casella "Identify HyperDeck" nell'utility HyperDeck Setup.



Premi SKIP Avanti e Indietro per raggiungere l'inizio di ogni clip

SUGGERIMENTO Per riprodurre i file video è necessario che il codec coincida con quello usato per registrarli. Questa impostazione è disponibile nel menù. Consulta la sezione "Cambiare le impostazioni" per tutti i dettagli.

Riproduzione continua

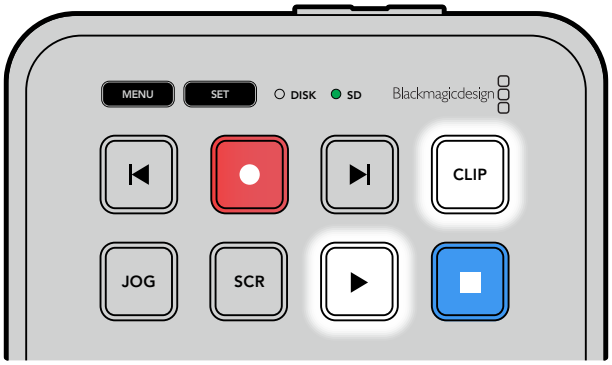
Durante la riproduzione, premi di nuovo PLAY per abilitare la riproduzione continua di tutte le clip; premi STOP per disabilitarla.

Per riprodurre continuamente una sola clip è necessario impostare HyperDeck sulla modalità Clip, ovvero selezionare CLIP e poi premere due volte PLAY.

Tutte le clip	Durante la riproduzione, premi due volte PLAY per riprodurre continuamente tutte le clip.
Una clip	In modalità Clip, premi due volte PLAY per riprodurre continuamente la clip corrente.

Modalità Clip

Limita la riproduzione a una sola clip. Quando è abilitata, puoi scorrere o spostarti su una clip con shuttle o SKIP e riprodurla. La riproduzione terminerà dove termina la clip.



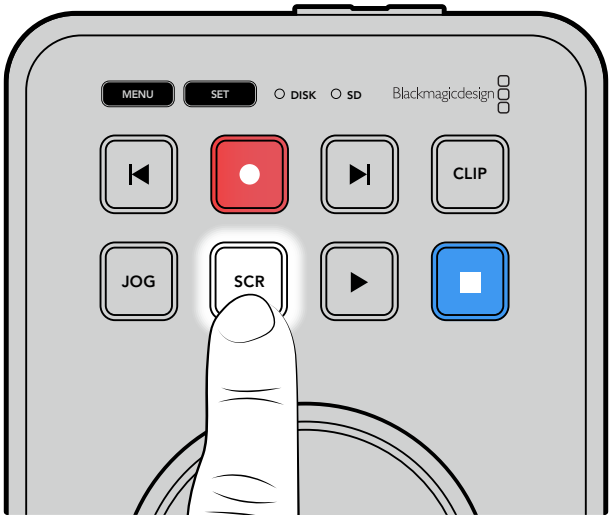
Premi CLIP e poi due volte PLAY per riprodurre continuamente la clip corrente in modalità Clip

Usare la manopola

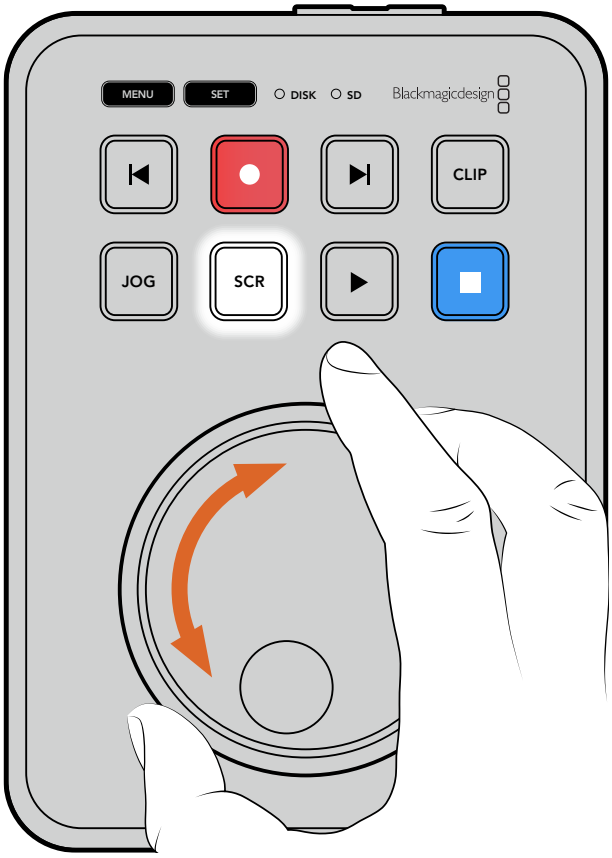
La manopola consente di scorrere con rapidità le clip e trovare parti specifiche da riprodurre, o rivedere fotogramma per fotogramma. È utile per cercare un momento specifico della clip osservando le immagini, e per posizionare con precisione la playhead nel punto da mandare in onda durante la trasmissione.

La manopola funziona in modalità jog, shuttle o scroll.

JOG	**Jog**	Riproduci fotogramma per fotogramma con precisione.
SCR	**Scroll**	Spostati velocemente in avanti e indietro tra i file registrati. La manopola risponde ai tuoi movimenti con esattezza, per un controllo preciso del posizionamento ai fini del playback. Questo tasto serve anche per aprire la finestra di navigazione dei volumi, che mostra il percorso del video correntemente riprodotto. Consulta “Navigare tra i volumi” per maggiori informazioni su questa funzione.
JOG SCR	**Shuttle**	Premi insieme i tasti JOG e SCR per passare alla modalità shuttle. In questa modalità, ruota la manopola verso destra o sinistra per spostarti avanti o indietro veloce tra tutti i file multimediali, a una velocità massima di x50. Per diminuire la velocità fino a un punto di arresto, ruota la manopola verso la posizione di partenza. Durante lo shuttle, premi STOP per interrompere la riproduzione in un punto esatto e premi PLAY per farla ripartire da quel punto. Puoi cambiare la velocità massima della funzione di shuttle nel menù Configurazione. Consulta la sezione “Impostazioni” per tutti i dettagli.



Abilita la modalità jog, scroll o shuttle
premendo i tasti corrispondenti



Ruota la manopola per scorrere nella modalità selezionata

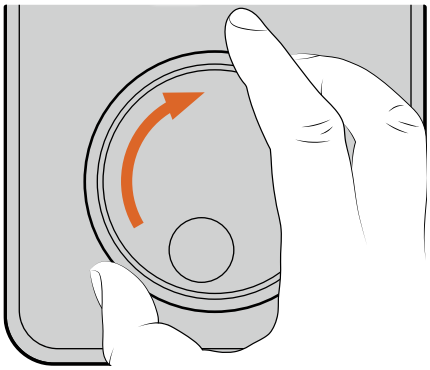
SUGGERIMENTO Premi PLAY o STOP per tornare alla modalità di riproduzione normale.

Cambiare le impostazioni

Premi il tasto MENU per vedere il menù in sovraimpressione in basso a sinistra del video visualizzato sul display HDMI connesso.

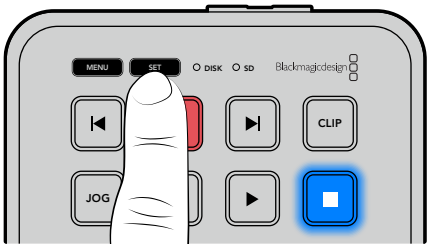


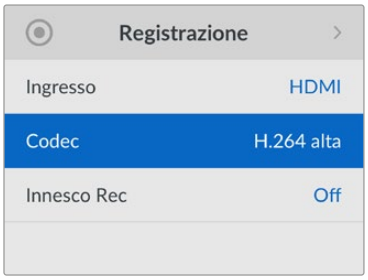
Premi MENU per visualizzare il menù





Ruota la manopola per navigare i sottomenù e le impostazioni





Premi SET per selezionare un sottomenù o un'impostazione

Puoi cambiare le impostazioni usando la manopola o i tasti SKIP Avanti e Indietro. Premi SET per confermare le selezioni.

Premi MENU per indietreggiare nelle impostazioni fino a tornare alla schermata principale.

SUGGERIMENTO Puoi posizionare il menù in uno qualsiasi dei quattro angoli del display. Dopo aver cambiato le impostazioni, consigliamo di nascondere il menù sull'uscita HDMI per vedere solo il clean feed dello switcher HDMI connesso, ad esempio ATEM Mini Extreme.

Impostazioni

Le impostazioni sono organizzate in 5 menù: Registrazione, Monitoraggio, Audio, Archiviazione e Configurazione. La maggior parte delle impostazioni si può modificare dal pannello di controllo di HyperDeck Shuttle HD. Le impostazioni non selezionabili, per esempio il prefisso del nome del file, si possono modificare solo dall'utility HyperDeck Setup.

Registrazione



Ingresso

Indica l'ingresso HDMI di HyperDeck Shuttle HD.

Codec

HyperDeck Shuttle HD può registrare video compresso nel codec H.264, Apple ProRes o DNxHD. Seleziona **Teleprompter** per usare questa funzione.

Innesco Rec

La funzione di innesco della registrazione è disponibile in due modalità: Video Start/Stop e Timecode.

Alcune camere, per esempio Blackmagic Pocket Cinema Camera 4K, inviano un segnale tramite HDMI per avviare e interrompere la registrazione sui registratori esterni. Scegli **Video Start/Stop** per far sì che HyperDeck avvii e interrompa la registrazione quando viene premuto Rec sulla telecamera.

Scegli **Timecode** per far sì che HyperDeck avvii la registrazione quando riceve un segnale di timecode valido dall'ingresso HDMI. Se il segnale si disconnette, la registrazione si interrompe. Scegli **Off** per disabilitare la funzione di innesco della registrazione.

NOTA Se la telecamera è HDMI, controlla che il segnale in uscita non mostri informazioni in sovraimpressione per evitare di registrarle con l'immagine.

Monitoraggio



Layout teleprompter

Queste impostazioni servono per gestire il teleprompter di HyperDeck Shuttle HD.

Dimensione carattere

Regola la dimensione del testo e premi SET per confermare. Ruota la manopola per incrementare o ridurre la percentuale.

Spaziatura

Ruota la manopola per incrementare o ridurre la spaziatura tra le righe.

Margine laterale

Regola la larghezza dei due margini laterali del teleprompter.

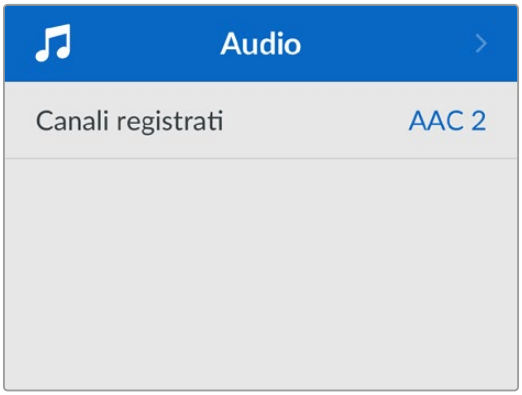
Gira

Se il monitor del tuo teleprompter è impostato per riflettere su vetro, ad esempio davanti a una telecamera o su un podio, gira il testo per consentirne la lettura. Sono disponibili due opzioni:

Gira in orizzontale - Quando la parte inferiore del teleprompter è montata vicino alla base del vetro riflettente.

Gira in verticale - Quando la parte inferiore del teleprompter è montata lontano dalla base del vetro riflettente.

Audio

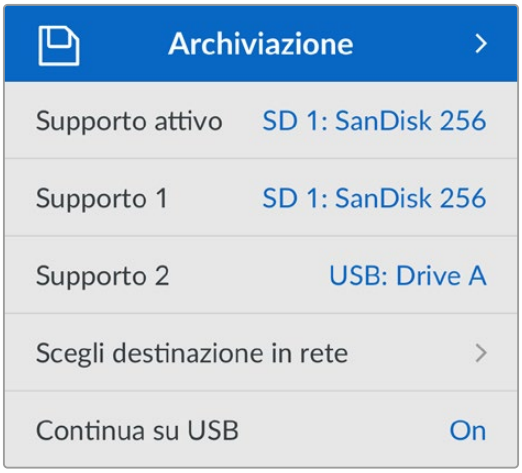


Canali registrati

Il deck consente di registrare fino a 8 canali di audio PCM alla volta. Apri questa impostazione e scegli **2**, **4** o **8** canali dalla lista.

Se il codec è H.264, puoi selezionare 2 canali di audio AAC per caricare le registrazioni direttamente su YouTube.

Archiviazione



Queste impostazioni si riferiscono ai supporti di memoria collegati. **Supporto 1** mostra il nome della scheda SD inserita. **Supporto 2** indica il flash disk USB collegato al connettore EXT DISK; nel caso di un hub USB, come Blackmagic MultiDock 10G, indica il disco attivo.

Supporto attivo

HyperDeck Shuttle consente di collegare contemporaneamente una scheda SD, vari drive esterni e un archivio in rete, offrendo molti terabyte di spazio di registrazione in un solo dispositivo.

Se è inserito un solo supporto di archiviazione, il dispositivo lo utilizza di default per la registrazione e la riproduzione. Se sono inseriti più supporti, puoi scegliere quale usare.

Per scegliere il supporto di memoria:

1. Con la manopola, evidenzia **Supporto attivo** nel menù **Archiviazione** e premi il pulsante lampeggiante SET.
2. I supporti connessi appariranno nella lista. Con la manopola seleziona il supporto su cui registrare.



Scegli destinazione in rete

HyperDeck Shuttle è in grado di riprodurre file in HD da Blackmagic Cloud e da altri archivi in rete accessibili tramite ethernet.

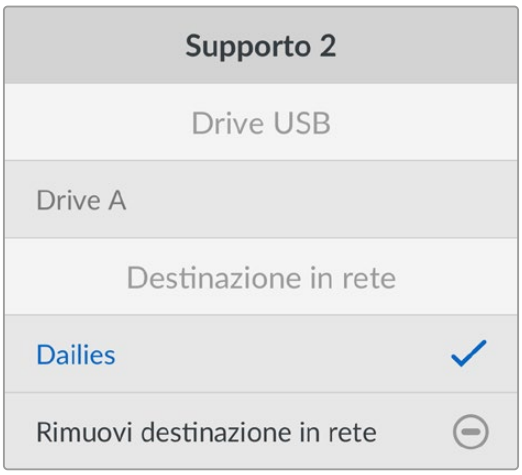
Per connetterti a una cartella di un archivio in rete:

1. Con la manopola e il pulsante SET seleziona **Connetti drive in rete**. Apparirà una finestra di ricerca della rete locale.
2. I server trovati nella rete locale compariranno in una lista. Ruota la manopola fino al drive desiderato e premi SET per selezionarlo. Apparirà la lista delle cartelle condivisibili nel server. Sempre con la manopola evidenzia quella che ti interessa, premi SET e continua finché la cartella desiderata non viene visualizzata in alto sullo schermo.
3. Il nome della cartella appare in alto sullo schermo LCD. Per selezionare la cartella per la registrazione e la riproduzione usa la manopola e seleziona **Scegli questa destinazione**, poi premi SET. Apparirà una spunta sulla destra.



4. Una volta connessa, la destinazione apparirà nella lista del Supporto 2, sotto **Destinazione in rete**.

Il secondo slot sugli HyperDeck Shuttle è dedicato sia ai supporti USB che alle cartelle in rete collegate. Per selezionare i drive USB o l'archivio in rete collegati, seleziona **Supporto 2** dal menù **Archiviazione** e premi il pulsante lampeggiante SET. Dalla lista del Supporto 2 seleziona il supporto / archivio desiderato e premi SET. Ritornerai al menù Archiviazione. È anche possibile rimuovere un archivio in rete utilizzando il menù per il Supporto 2 e selezionando **Rimuovi destinazione in rete**.



NOTA Per riprodurre materiale da un volume in rete, HyperDeck Shuttle HD richiede un login come ospite sul server. Al momento non è consentito l'accesso al server che richiede il login con la password tramite il menù e il pulsante SET, ma puoi inserire le credenziali utilizzando HyperDeck Ethernet Protocol.

Continua su USB

Se usi Blackmagic MultiDock 10G o un dispositivo simile per collegare diversi drive tramite il connettore EXT DISK, abilita questa impostazione per far sì che la registrazione prosegua da un disco esterno all'altro.

Formatta

Le schede SD e i supporti di memoria collegati al connettore EXT DISK si possono formattare su HyperDeck o su un computer Mac o Windows.

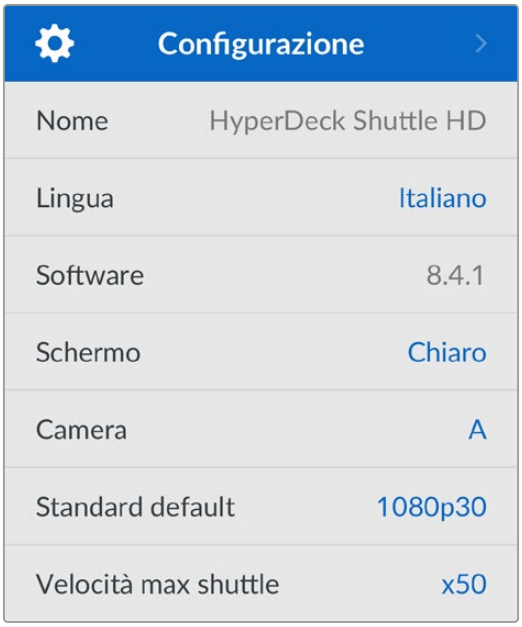
Formattare su HyperDeck Shuttle HD

1. Ruota la manopola fino all'impostazione **Formatta** e premi SET.
2. Seleziona il supporto da formattare dalla lista e premi SET.
3. Seleziona il formato e premi SET.
4. Nella finestra che conferma il supporto e il formato selezionati, procedi con **Formatta**.
5. Nella finestra che conferma la formattazione effettuata, procedi con **OK**.

HFS+ è conosciuto come Mac OS X Extended ed è il formato consigliato poiché supporta il journaling, che facilita il recupero dei dati in caso di danneggiamento del supporto di memoria. HFS+ è supportato nativamente da Mac; exFAT è supportato nativamente da Mac e Windows senza richiedere altri software ma non supporta il journaling. Leggi la sezione "Formattare i supporti di memoria" per formattare su Windows o su Mac.

Configurazione

Queste impostazioni permettono di gestire la lingua del software, lo standard di default, l'aspetto del menù, le opzioni di rete e il timecode.



Nome

Se in rete ci sono vari HyperDeck Shuttle HD, conviene dare un nome a ciascuno per distinguerli. Puoi farlo nell'utility Blackmagic HyperDeck Setup o mediante Blackmagic HyperDeck Ethernet Protocol con una applicazione terminale. Il nome inserito compare in questa voce.

Lingua

HyperDeck Shuttle HD si può usare in 13 lingue: inglese, cinese, giapponese, coreano, spagnolo, tedesco, francese, russo, italiano, portoghese, turco, ucraino e polacco.

Selezionare la lingua

1. Seleziona il menù **Configurazione** e premi SET.
2. Ruota la manopola fino alla voce **Lingua** e premi SET.
3. Ruota la manopola fino alla lingua desiderata e premi SET. La schermata tornerà automaticamente al menù Configurazione.

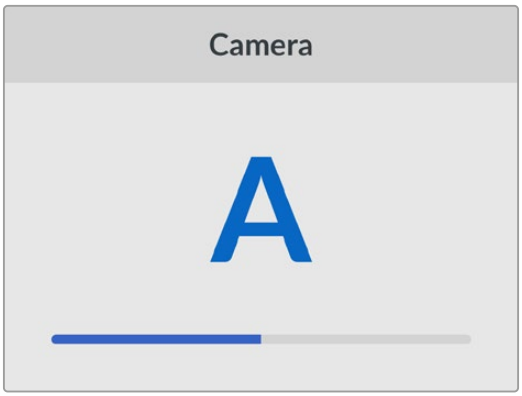
Software

Indica la versione attuale del software.

Camera

Questa impostazione è utile se usi HyperDeck per registrare i file di ciascuna camera separatamente e montarli nella timeline multicamera di DaVinci Resolve.

La lettera identificativa comparirà nei metadati del file, consentendo a DaVinci Resolve di identificare le inquadrature sfruttando la funzione del Sync Bin.



Assegna alla camera una lettera A-Z o un numero 1-9

Standard default

Questa impostazione è utile quando HyperDeck non è in grado di determinare quale standard video usare.

Per esempio se al deck non è connesso nessun ingresso video e colleghi un disco contenente file di due standard video differenti, quale dei due verrà riprodotto? Abilitando questa impostazione, il deck seleziona lo standard più adatto e riproduce i file pertinenti.

L'impostazione dello standard video di default è utile anche alla prima accensione di HyperDeck Shuttle HD, in assenza di un ingresso video e di un supporto di memoria. Non essendo in grado di determinare quale standard video usare sull'uscita di monitoraggio, il deck si basa su quello suggerito da questa impostazione.

Lo standard di default è solo una guida e non prevarica sulle altre funzioni. Ad esempio se colleghi un disco contenente file video dello stesso standard e premi PLAY, HyperDeck passa a quello standard per riprodurre i file, tralasciando lo standard di default.

Lo stesso si verifica nella registrazione. Se premi REC, HyperDeck registra lo standard video dell'ingresso video collegato. Terminata la registrazione, riprodurrà i file in questo stesso standard video, anche se il disco contiene altri file il cui standard video combacia con quello di default. Dà per scontato che voglia riprodurre i file nello stesso standard video con cui sono stati registrati. Solo se scolleghi e ricolleghi il disco, il deck adotterà lo standard video di default e riprodurrà i file pertinenti.

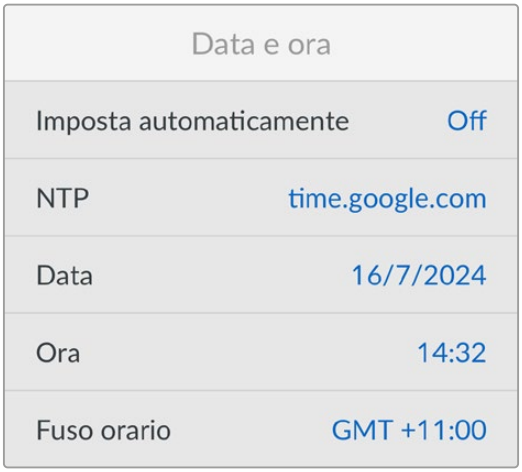
Lo standard video di default è un ausilio che consente ad HyperDeck Shuttle HD di effettuare la selezione più adatta nelle circostanze menzionate, senza comprometterne il funzionamento consueto.

Velocità max shuttle

La velocità massima della funzione di shuttle è x50. Scegli una delle opzioni disponibili per ridurla.

Data e ora

Impostando la data e l'ora esatte, il tuo HyperDeck Shuttle avrà le stesse informazioni di data e ora della tua rete, evitando possibili conflitti con altri sistemi di archiviazione in rete.



Data e ora automatiche

Seleziona **Automatiche** > **On** per impostare automaticamente la data e l'ora. Il dispositivo adotterà il server del Network Time Protocol indicato alla voce NTP. Seleziona **Off** per impostare la data e l'ora manualmente.

NTP

Il server NTP di default è time.cloudflare.com, ma puoi inserirne manualmente un altro da HyperDeck Setup. Consulta la sezione "Blackmagic HyperDeck Setup" per maggiori informazioni.

Data

Seleziona questa voce e premi SET. Ruota la manopola per impostare il giorno, il mese e l'anno.

Ora

Seleziona questa voce e premi SET. Ruota la manopola per impostare l'ora e i minuti. L'orologio interno utilizza il formato 24 ore.

Menù

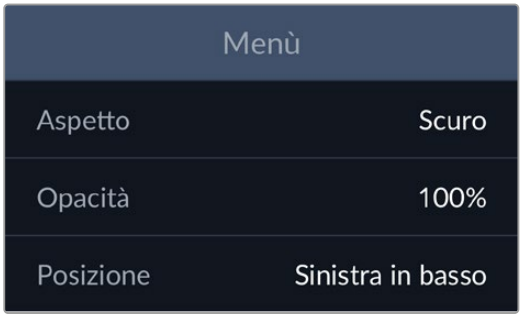
Queste impostazioni permettono di modificare la posizione e l'aspetto del menù in sovraimpressione sul display HDMI collegato.



Aspetto

Scegli se visualizzare il menù con uno sfondo chiaro o scuro. Lo sfondo chiaro è più adatto se il materiale multimediale è scuro o se usi il teleprompter.





Opacità

Regola l'opacità del menù in sovraimpressione sul display collegato tra il 100% di default e il 20%.

Posizione

Di default, il menù in sovraimpressione compare in basso a sinistra sul display collegato. Apri questa impostazione e scegli un'altra opzione per riposizionarlo in alto a sinistra, in alto a destra o in basso a destra.

Rete



Protocollo

HyperDeck è impostato su DHCP di default: una volta connesso, il server di rete gli assegna automaticamente un indirizzo IP e non c'è bisogno di configurare nessun'altra impostazione. Per impostare manualmente l'indirizzo è necessario un IP statico.

Seleziona **Protocollo** e premi SET; seleziona **IP statico** dalla lista e premi SET.

Indirizzo IP, Sottorete, Gateway, DNS primario e DNS secondario

Dopo aver selezionato l'opzione di IP statico, puoi inserire i valori manualmente.

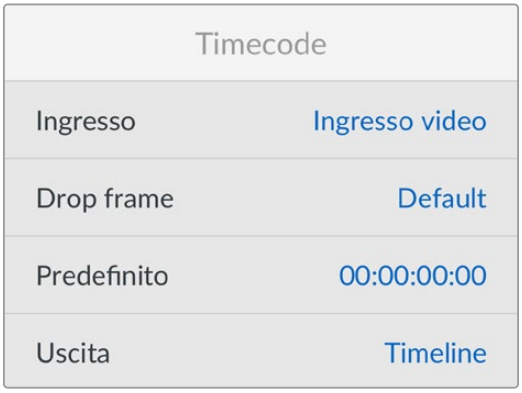
Cambiare indirizzo IP

1. Ruota la manopola fino all'impostazione **Indirizzo IP** e premi SET.
2. Ruota la manopola per cambiare i campi dell'indirizzo IP.
3. Premi SET per confermare un campo e passare al successivo.

Segui lo stesso procedimento per modificare Sottorete e Gateway. Premi MENU per tornare alla schermata principale.

Timecode

Queste impostazioni servono per definire il timecode in entrata e uscita, e scegliere di registrare il timecode sorgente, ora del giorno o predefinito.



Ingresso

Sono disponibili quattro opzioni per il timecode in entrata.

Ingresso video	Utilizza il timecode integrato nelle sorgenti HDMI con metadati SMPTE RP 188. Questa opzione rispetta la sincronizzazione tra la sorgente HDMI e il file registrato dal deck.
Interno	Registra l'ora del giorno attraverso il generatore interno di timecode.
Ultima clip	Fa partire ogni file un fotogramma dopo l'ultimo fotogramma della clip precedente. Per esempio se la prima clip finisce a 10:28:30:10, il timecode della clip successiva inizia a 10:28:30:11.
Predefinito	Utilizza il timecode da te impostato. Le clip registrate partono dal timecode definito nell'impostazione Predefinito descritta più avanti.

Drop frame

Scegli **Drop frame** o **Senza drop frame** per le sorgenti NTSC con frame rate di 29.97 o 59.94. Scegli **Default** se la sorgente è sconosciuta. Questa opzione mantiene lo standard dell'ingresso, o passa a Drop frame in assenza di un timecode valido.

Predefinito

Ruota la manopola per impostare il timecode di inizio e premi SET per confermare. Scegli questa opzione nell'impostazione Ingresso per usare il timecode predefinito.

Uscita

Scegli come usare il timecode per le uscite.

Timeline	Trasmette un timecode continuo per tutte le clip registrate su una scheda o su un drive.
Clip	Trasmette il timecode di ciascuna clip.

Impostazioni file



Prefisso

Inizialmente, HyperDeck Shuttle HD registra le clip sulla scheda SD o sul flash disk USB con la denominazione riportata di seguito.

HyperDeck_0001	
HyperDeck_0001	**Prefisso**
HyperDeck_**0001**	**Numero clip**

È necessario aprire l'utility HyperDeck Setup per modificare il prefisso del nome del file. Consulta la sezione "Blackmagic HyperDeck Setup" per tutti i dettagli.

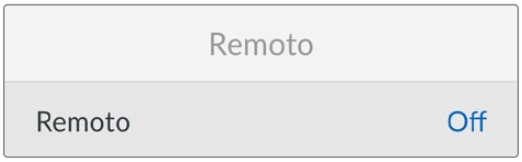
Suffisso timestamp

L'impostazione della marca temporale del nome del file è disabilitata di default. Abilitala per integrare la data e l'ora registrate nel nome del file.

HyperDeck_2201061438_0001	
HyperDeck_2201061438_0001	**Prefisso**
HyperDeck_**22**01061438_0001	**Anno**
HyperDeck_22**01**061438_0001	**Mese**
HyperDeck_2201**06**1438_0001	**Giorno**
HyperDeck_220106**14**38_0001	**Ora**
HyperDeck_2201061**38**_0001	**Minuti**
HyperDeck_2201061438_**0001**	**Numero clip**

Remoto

HyperDeck si può controllare da un dispositivo video remoto, ad esempio da uno switcher ATEM Mini Extreme.



Remoto

Abilita questa impostazione per attivare il controllo remoto tramite ethernet; disabilitala per controllare il deck a livello locale.

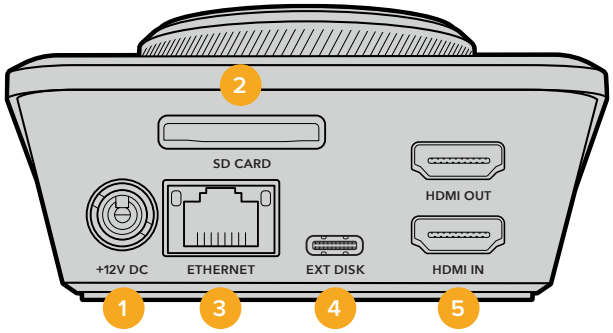
Reset



Impostazioni di fabbrica

Ripristina le impostazioni di fabbrica di HyperDeck. Un messaggio ti chiederà di procedere o annullare l'operazione.

Lato posteriore



1 Alimentazione

Collega l'adattatore AC in dotazione per alimentare il deck. Il connettore dell'adattatore dispone di un anello di bloccaggio per evitare che si scolleghi. Sono compatibili anche i cavi 12V 36W.

2 Slot SD

Inserisci una scheda SD per registrare e riprodurre.

3 Ethernet

Tramite la porta ethernet puoi connetterti alla tua rete per registrare in un archivio in rete e trasferire file con FTP e HTTP tramite il web media manager. Inoltre puoi controllare il dispositivo in remoto con le API REST o mediante HyperDeck Ethernet Protocol. I dettagli sul trasferimento dei file tramite il web media manager o un client FTP si trovano nella sezione "Trasferire i file in rete".

Se HyperDeck è connesso alla stessa rete di uno switcher ATEM, è possibile controllarlo da quest'ultimo o da un pannello ATEM.

4 Disco esterno

Il connettore USB-C permette di collegare e registrare su un flash disk esterno fino a 5Gb/s. Puoi anche collegare gli hub USB-C o Blackmagic MultiDock 10G per usare uno o più SSD.

5 HDMI

L'uscita HDMI permette di collegare televisioni HDMI, monitor e persino switcher, per esempio ATEM Mini Extreme. Serve anche per visualizzare il menù in sovraimpressione.

Supporti di memoria

Schede SD

Consigliamo di usare schede SD UHS-I veloci per registrare in HD ad alta qualità. Hanno una velocità di scrittura superiore a 220MB/s ideale per l'Ultra HD 2160p60.

Per registrare a bit rate più bassi con una compressione maggiore potrebbero essere sufficienti schede più lente, ma in generale è preferibile scegliere schede veloci.

Consigliamo di visitare regolarmente la pagina www.blackmagicdesign.com/it/support per scaricare l'ultima versione del manuale con le informazioni aggiornate.

Quali schede SD usare con HyperDeck Shuttle HD?

Queste schede SD sono consigliate per registrare a 1080p fino a 60 fps

Marca	Modello	Capienza
Angelbird	AV PRO SD UHS-II 300MB/s V90 SDXC	256GB
Angelbird	AV PRO SD UHS-II 260MB/s V60 SDXC	128GB
Angelbird	AV PRO SD UHS-II 260MB/s V60 SDXC	64GB
SanDisk	Extreme Pro UHS-I 95MB/s SDXC	64GB
Wise	SD2-64U3 UHS-II 285MB/s SDXC	64GB
Lexar	Professional 1000x UHS-II 150MB/s SDXC	128GB
SONY	Tough SF-G128T	128GB
Kingston	CANVAS GO! Plus 170MB/s V30	64GB
Kingston	CANVAS GO! Plus 170MB/s V30	128GB
Kingston	CANVAS GO! Plus 170MB/s V30	512GB
ProGrade Digital	SDXC UHS-II V90 300R	64GB
ProGrade Digital	SDXC UHS-II V90 300R	128GB
SONY	Tough SF-G64T UHS-II SDXC	64GB
Delkin Devices	Black UHS-II V90 SDXC	256GB
Delkin Devices	Power UHS-II V90 SDXC	128GB
Delkin Devices	Power UHS-II V90 SDXC	256GB
Delkin Devices	Black UHS-II V90 SDXC	128GB
Exascend	Essential SDXC UHS-II V90 R 300MB/s	64GB
Exascend	Essential SDXC UHS-II V90 R 300MB/s	128GB
Exascend	Catalyst SDXC UHS-II V90 R 300MB/s	64GB

Dischi esterni

Tutti i modelli HyperDeck sono in grado di registrare sui flash disk USB-C, drive veloci e ad alta capacità che consentono registrazioni di lunga durata. Poi basta collegare i drive al computer per montare il materiale direttamente da lì.

Per una capienza maggiore puoi collegare un dock USB-C o un hard drive esterno. Per usare Blackmagic MultiDock 10G o un flash disk USB-C, collega un cavo USB-C dal dispositivo alla porta EXT DISK di HyperDeck.

Quali drive USB-C usare con HyperDeck Shuttle HD?

Questi drive USB-C sono consigliati per registrare in ProRes HQ 1080p fino a 60 fps

Marca	Modello	Capienza
Wise	PTS-256 Portable SSD 4K	256GB
OWC	Envoy Pro Ex	240GB
BUFFALO	SSD-PHE500U3-BA	500GB

Questi drive USB-C sono consigliati per registrare in DNxHR HQX 1080p fino a 60 fps

Marca	Modello	Capienza
OWC	Envoy Pro Ex	240GB

Questi drive USB-C sono consigliati per registrare in H.264 1080p fino a 60 fps

Marca	Modello	Capienza
OWC	Envoy Pro Ex	240GB

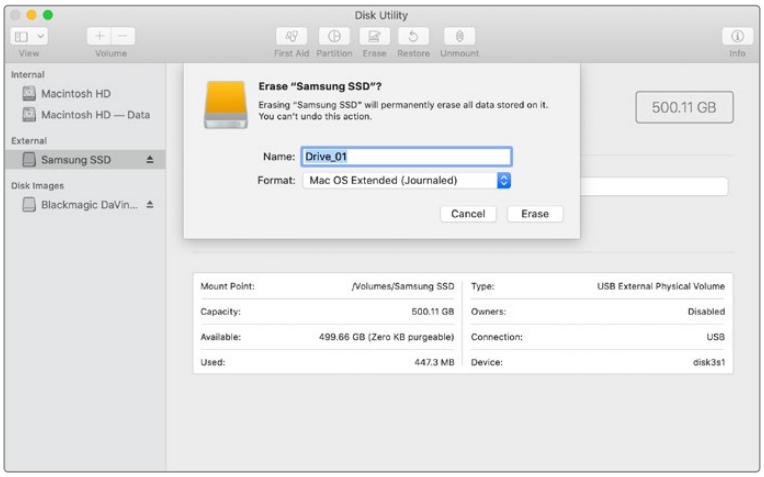
Formattare i supporti di memoria

Formattare su Mac

L'applicazione Utility Disco del Mac consente di formattare i drive in HFS+ o exFAT.

Ricorda di fare il backup dei contenuti importanti archiviati sul disco perché la formattazione li elimina permanentemente.

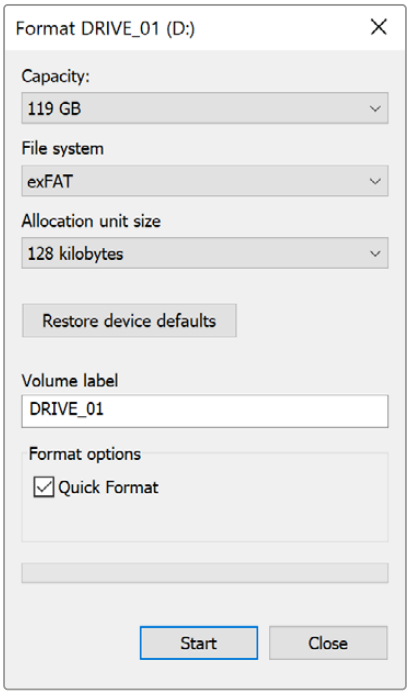
1. Nel caso di un flash disk USB, collegalo al computer tramite un dock esterno o un cavo adattatore e ignora il messaggio che suggerisce di usare l'SSD per i backup della Time Machine. Nel caso di una scheda SD, collegala al computer tramite un lettore esterno di schede.
2. Vai su **Applicazioni** > **Utility Disco**.
3. Clicca sull'icona del disco della scheda SD o del flash disk USB e clicca sulla tab **Inizializza**.
4. Seleziona il formato **Mac OS Extended (Journaled)** o **exFAT**.
5. Dai un **Nome** al nuovo volume e poi clicca su **Elimina**. La formattazione durerà pochi istanti e il supporto di archiviazione sarà pronto all'uso.



Formattare su Windows

Usa la finestra di dialogo Formatta su Windows per formattare i drive in exFAT. Ricorda di fare il backup dei contenuti importanti archiviati sulla scheda SD o sull'SSD perché la formattazione li elimina permanentemente.

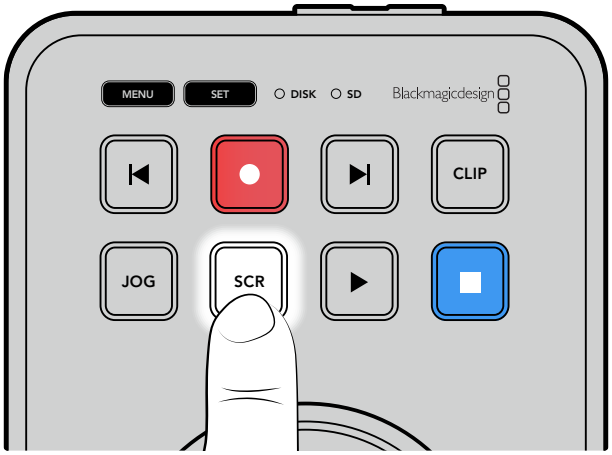
1. Nel caso di un flash disk USB, collegalo al computer tramite un dock esterno o un cavo adattatore. Nel caso di una scheda SD, collegala al computer tramite un lettore esterno di schede.
2. Seleziona **Computer** dal menù **Start** o dalla schermata iniziale. Fai clic destro sul flash disk USB o sulla scheda SD.
3. Seleziona **Inizializza** dal menù contestuale.
4. Imposta **File system** su **exFAT** e **Dimensioni unità di allocazione** su **128 kilobyte**.
5. Dai un nome al volume, seleziona **Formattazione veloce** e clicca su **Esegui**.
6. La formattazione durerà pochi istanti e il supporto di archiviazione sarà pronto all'uso.

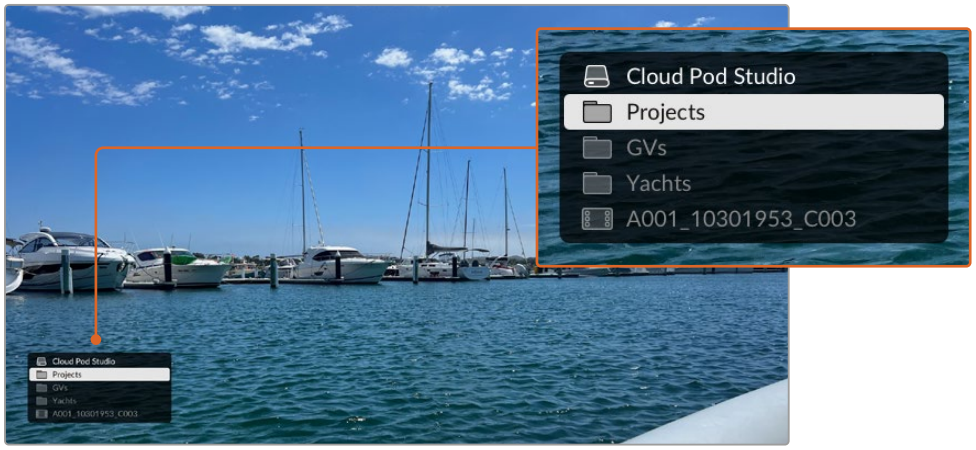


Navigare tra i volumi

Il percorso di file delle clip salvate nelle schede, nei dischi o nei drive in rete compare in sovraimpressione sull'uscita HDMI e si può navigare usando i tasti SCR e CLIP e la manopola.

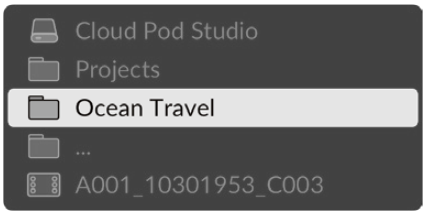
1 Premi il tasto SCR per aprire la finestra di navigazione dei volumi.





Premi il tasto SCR per aprire la finestra di navigazione dei volumi sull'uscita HDMI

2 Scorri o salta all'interno del filmato visualizzato per trovare le clip e le cartelle che ti interessano.



3 Premi i tasti SCR e CLIP per scorrere rispettivamente verso il basso e verso l'alto.

Premi il tasto STOP per chiudere la finestra di navigazione; premi il tasto PLAY per chiudere la finestra di navigazione e avviare la riproduzione all'istante.

NOTA Per visualizzare le clip registrate con codec, risoluzione o frame rate differenti è necessario cambiare il codec e lo standard di default di HyperDeck.

Usare la funzione Teleprompter

Blackmagic HyperDeck Shuttle HD si può usare come teleprompter con file RTF standard o TXT di solo testo. Basta creare un file su TextEdit o su WordPad e salvarlo in RTF o TXT in una delle 13 lingue compatibili. Dopo aver aperto il file con HyperDeck Shuttle HD, puoi modificare le dimensioni del carattere e la spaziatura del testo.

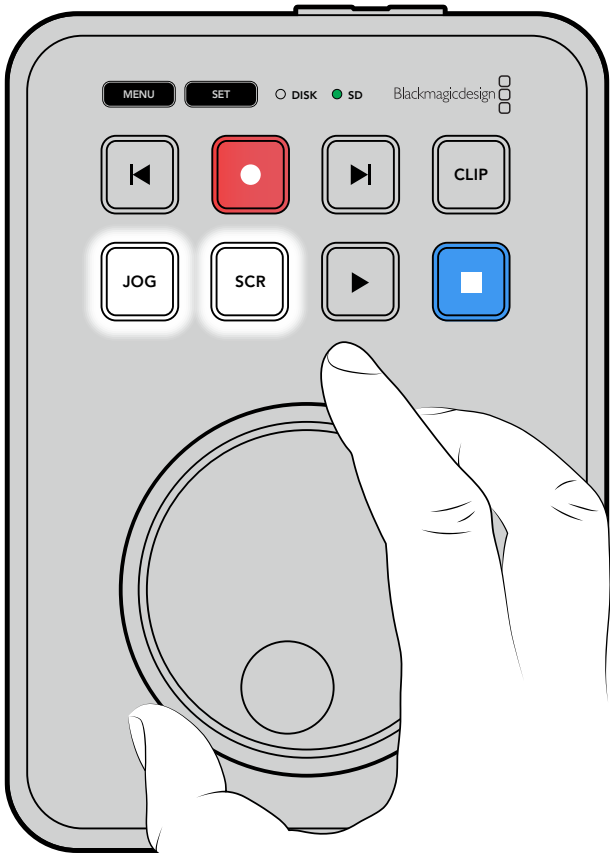
Usare il teleprompter

1. Collega l'uscita HDMI di HyperDeck Shuttle HD al display HDMI desiderato.
2. Inserisci la scheda SD o collega il flash disk USB esterno su cui è salvato il testo.
3. Scegli un codec nel menù **Registrazione**. Vai all'impostazione **Teleprompter** e premi SET.

Il testo comparirà sul display. A questo punto puoi avviare la riproduzione premendo PLAY e gestirla con la manopola.

Velocità di scorrimento del testo

Come la riproduzione dei file multimediali, anche lo scorrimento del testo del teleprompter si può controllare con la manopola di HyperDeck Shuttle HD. Dopo aver caricato un testo, premi insieme i tasti JOG e SCR per abilitare la modalità di scorrimento variabile. Il testo scorrerà alla stessa velocità con cui ruoti la manopola.



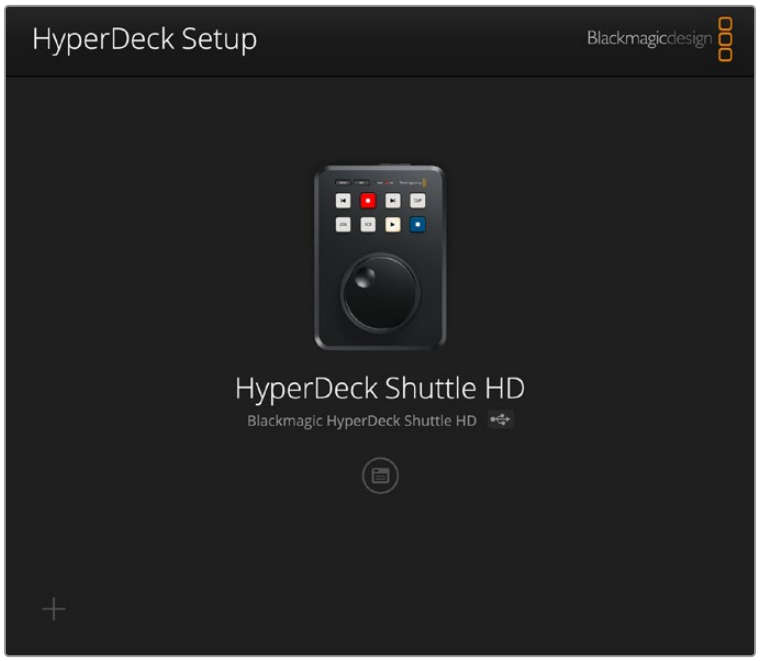
Se invece premi singolarmente i tasti JOG o SCR, ruotando la manopola il testo scorrerà a una velocità bassa e costante (jog) o a una velocità alta e costante (scroll).

Premi i tasti SKIP Avanti e Indietro per navigare tra i file sulla scheda SD o sul disco esterno.

Il teleprompter rileva le dimensioni, il colore e il grassetto del testo. Nel menù **Monitoraggio** puoi modificare le dimensioni del carattere, la spaziatura, i margini e la posizione verticale/orizzontale del testo per lavorare con un vetro riflettente. Leggi la sezione “Impostazioni” per tutti i dettagli.

Blackmagic HyperDeck Setup

L’utility Blackmagic HyperDeck Setup consente di modificare le impotazioni e di aggiornare il software interno di HyperDeck.

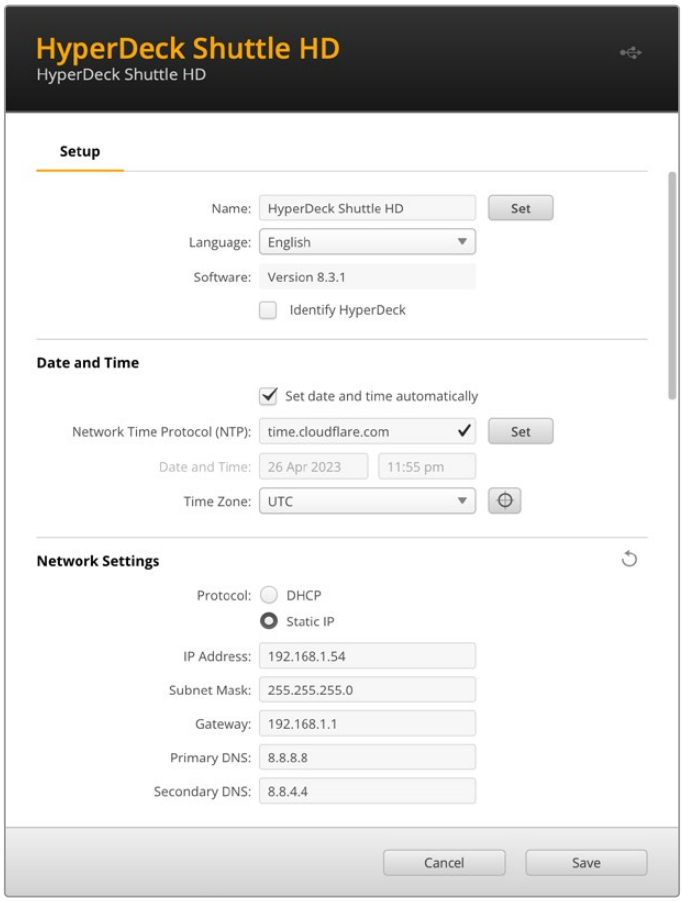


Installare l’utility

1. Scarica l’installer Blackmagic HyperDeck Setup più recente da www.blackmagicdesign.com/it/support
2. Apri l’installer e segui le istruzioni a schermo per installare l’utility sul computer.
3. Completata l’installazione, collega HyperDeck Shuttle HD al computer tramite i connettori USB o ethernet sul retro del dispositivo.
4. Lancia Blackmagic HyperDeck Setup e segui le istruzioni nella finestra che compare per aggiornare il software interno. Se la finestra non compare, il software interno è già aggiornato e non dovrai fare nient’altro.

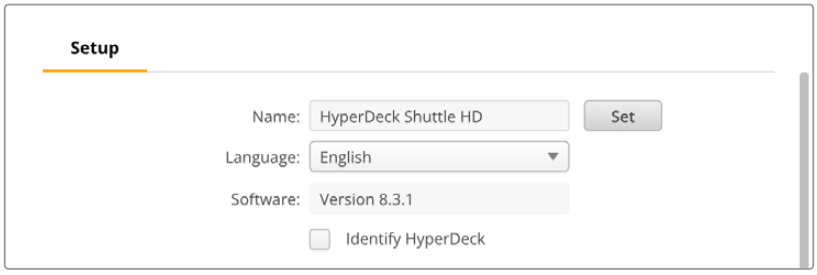
Clicca sull'icona circolare sotto l’immagine di HyperDeck per accedere alle impostazioni.

La schermata principale mostra HyperDeck Shuttle HD e il suo nome. Il nome è utile per distinguere i deck collegati al computer e si può inserire dall’utility.



Setup

Se lavori con più registratori su disco HyperDeck, assegna un nome a ciascuno per identificarli con facilità. Digita il nome nel campo **Name** e conferma con il pulsante **Set**. Nota che cambiando il nome si invalida il certificato di sicurezza. Consigliamo di cambiare il nome prima di generare una richiesta di firma del certificato (CSR) o un certificato auto-firmato.



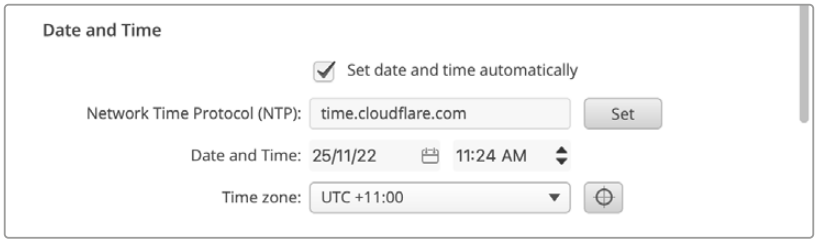
Identify HyperDeck

Spunta questa casella per far lampeggiare i tasti SKIP sulla parte in alto dell'HyperDeck Shuttle. È utile per identificare l'unità collegata all'utilità HyperDeck Setup in presenza di vari HyperDeck Shuttle.

Date and Time

Spuntando la casella **Set date and time automatically** si attiva il rilevamento automatico di data e ora, per la quale HyperDeck Shuttle HD si avvale del protocollo NTP. Il server NTP di default è time.cloudflare.com, ma puoi inserirne manualmente un altro e poi cliccare su **Set**.

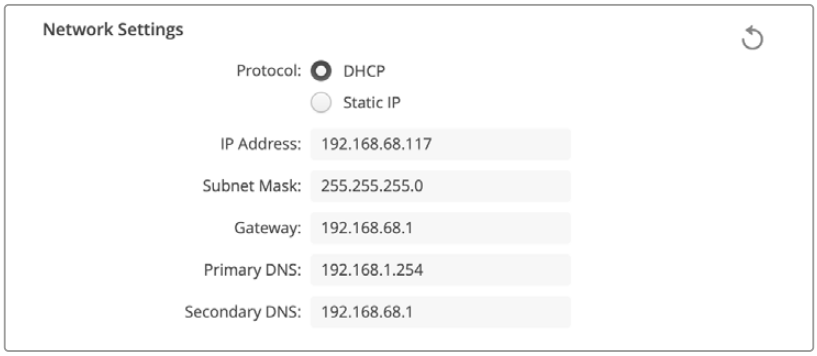
Se inserisci data e ora manualmente, utilizza i campi **Date and Time** e **Time zone**. Impostare data e ora correttamente fa sì che le registrazioni abbiano le stesse informazioni di data e ora della tua rete, evitando conflitti con alcuni sistemi di archiviazione in rete.



Network Settings

Protocol

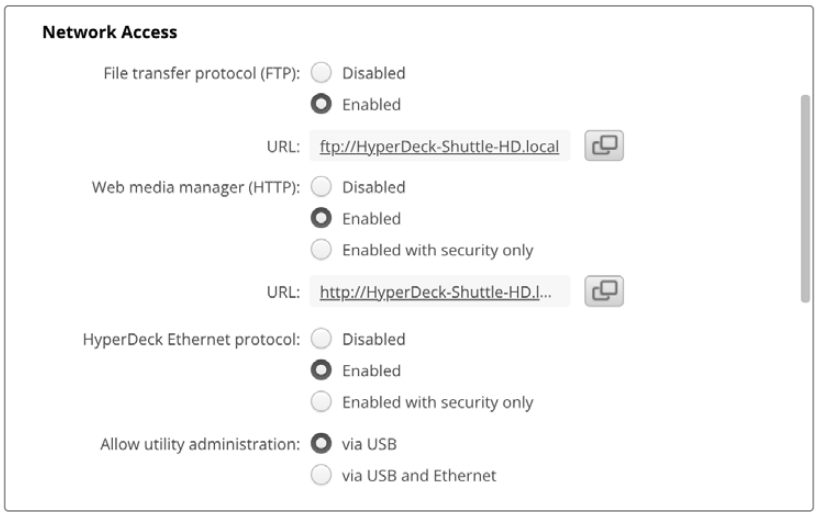
Per controllare HyperDeck Shuttle HD da uno switcher ATEM o in remoto con HyperDeck Ethernet Protocol, i dispositivi devono trovarsi sulla stessa rete sfruttando il DHCP o configurando manualmente un indirizzo IP fisso.



DHCP	HyperDeck Shuttle HD è impostato su DHCP di default. Il protocollo di configurazione IP dinamica (DHCP) è un servizio sui server di rete che trova e assegna automaticamente un indirizzo IP all'HyperDeck. Questo servizio facilita la connessione dei dispositivi tramite ethernet, evitando che gli indirizzi IP entrino in conflitto tra loro. Gran parte dei computer e degli interruttori di rete è compatibile con il DHCP.
Static IP	Seleziona questa opzione per inserire manualmente le impostazioni di rete. Per poter comunicare, tutte le unità devono avere le stesse impostazioni di maschera di sottorete e gateway.

Network Access

HyperDeck Shuttle HD è accessibile tramite rete per il trasferimento dei file e per il controllo remoto tramite HyperDeck Ethernet Protocol. L'accesso è abilitato di default, ma è possibile disabilitarlo a piacimento, o abilitarlo con un livello di sicurezza più alto fornendo username e password per usare il web media manager o HyperDeck Ethernet Protocol.



File Transfer Protocol

Abilita o disabilita l'accesso tramite FTP con le opzioni **Enabled** e **Disabled**. Se fai l'accesso tramite un client FTP come CyberDuck, clicca sull'icona a lato dell'indirizzo FTP per copiarlo. Per maggiori informazioni, vai alla sezione "Trasferire i file in rete".

Web media manager

I file registrati sulle schede SD o sui drive esterni sono accessibili da un browser tramite il web media manager. Quando clicchi sul link o lo copi su un browser, si apre un'interfaccia. Qui puoi caricare e scaricare i file direttamente sulle schede SD attraverso la rete.

L'accesso è abilitato tramite HTTP di default, ma potrai disabilitare l'accesso o richiedere un certificato di sicurezza selezionando l'opzione **Enabled with security only**. Se utilizzi un certificato digitale, la connessione al web media manager è criptata tramite HTTPS. Consulta la sezione "Secure Certificate" per maggiori informazioni sui certificati digitali.

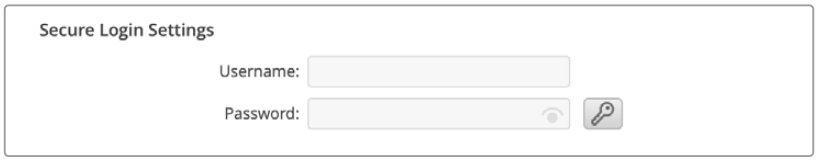
HyperDeck Ethernet Protocol

Accedi al tuo HyperDeck mediante HyperDeck Ethernet Protocol e un programma con linee di comando sul tuo computer, per esempio Terminal su Mac o PuTTY su Windows. Si può optare di accedere con username e password, o senza. Puoi avvalerti di un programma SSL per criptare la tua sessione se utilizzi una utility come netcat. Consulta la sezione per gli sviluppatori (in inglese) per maggiori informazioni sui comandi disponibili.

Allow Utility Administration

Blackmagic HyperDeck Setup è accessibile quando il tuo registratore su disco è connesso tramite rete o USB. Per evitare che altri utenti possano accedervi in rete, seleziona **via USB**.

Secure Login Settings



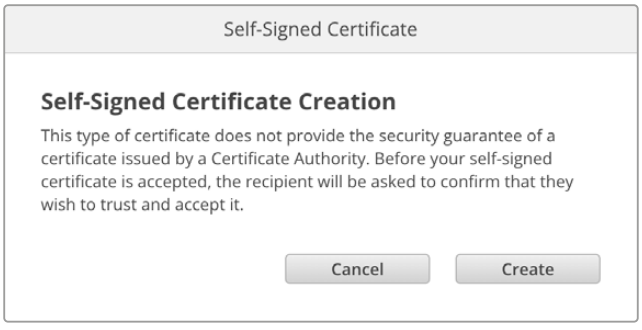
Se selezioni l'opzione di sicurezza **Enabled with security only** alla voce **HyperDeck Ethernet Protocol**, è necessario inserire username e password. Digita username e password e clicca **Save**. Il campo della password apparirà vuoto una volta inserita. Dopo aver salvato username e password, dovrai inserirli per accedere al web media manager quando è selezionata l'opzione **Enabled with security only**.

Secure Certificate

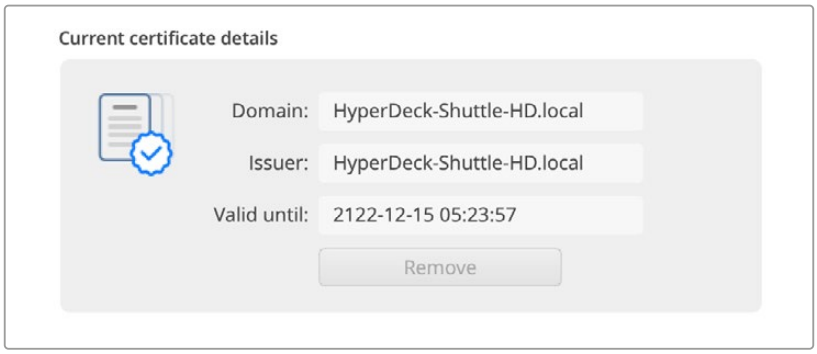
Per abilitare l'accesso al web media manager tramite HTTPS, o con l'accesso sicuro di HyperDeck Ethernet Protocol, è necessario un certificato di sicurezza. Questo certificato digitale funge da carta d'identità per il tuo HyperDeck Shuttle HD, in modo che ogni connessione in entrata abbia conferma di essere collegata all'unità giusta. Oltre a confermare l'identità del dispositivo, il certificato digitale garantisce anche che i dati trasmessi tra HyperDeck Shuttle HD e un computer o un server vengano criptati. Quando si usano le impostazioni di login sicuro, oltre ad essere criptata la connessione richiederà l'autenticazione per l'accesso.

Ci sono due tipi di certificato utilizzabili con HyperDeck Shuttle: un certificato di sicurezza firmato da una Certificate Authority, o uno auto-firmato. Quest'ultimo tipo di certificato può essere abbastanza sicuro per alcuni flussi di lavoro, per esempio quando si accede a HyperDeck Shuttle HD solo tramite una rete locale.

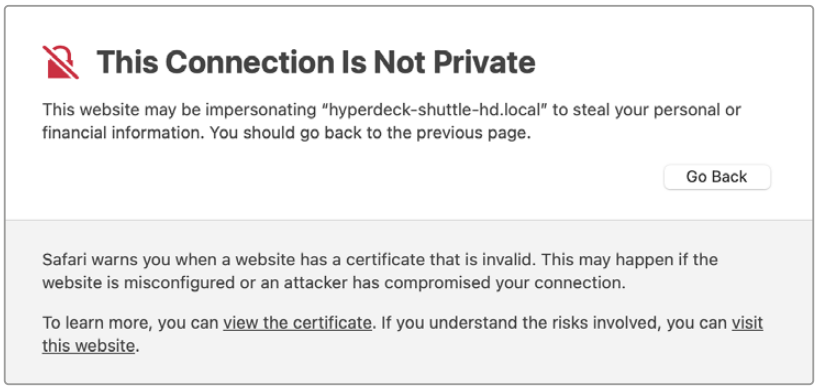
Per generare un certificato auto-firmato clicca **Create certificate**. Ti verrà chiesto di accettare i rischi derivanti dall'uso di un certificato auto-firmato. Una volta selezionato **Create**, i campi **domain**, **issuer** e **valid until** verranno automaticamente compilati nell'utility HyperDeck Setup con i dati del certificato.



Ricorda che a seguito del ripristino delle impostazioni di fabbrica qualsiasi certificato viene eliminato. È inoltre possibile rimuoverlo in qualsiasi momento cliccando **Remove** e seguendo le istruzioni su schermo.



Quando si utilizza il certificato auto-firmato per l'accesso ai file multimediali tramite HTTPS, comparirà un avviso sui potenziali rischi di accedere al sito. Alcuni browser ti consentono di procedere una volta accettati i rischi, altri potrebbero impedirti di proseguire.



Per consentire l'accesso da qualsiasi browser, dovrai usare un certificato digitale firmato. Per ottenerlo è necessario generare una richiesta di firma del certificato, detta CSR, con l'utility Blackmagic HyperDeck Setup. Tale richiesta viene poi inviata a una Certificate Authority (CA), o al tuo reparto IT per la firma. Una volta completata, riceverai un certificato firmato con un'estensione di file .cert, .crt o .pem, che potrai importare su HyperDeck Shuttle HD.



Per generare una richiesta di firma del certificato (CSR):

1 Clicca il pulsante **Generate Signing Request**.



2 Apparirà una finestra dove inserire il nome del dominio che userai e del dominio alternativo per HyperDeck. La tabella qui sotto offre alcuni esempi per i vari dati da compilare.

Informazione	Descrizione	Esempio
Common Name	Il nome del dominio che userai	hyperdeck.melbourne.com
Subject Alternative Name	Il nome di un dominio alternativo	hyperdeck.melbourne.net
Country	Il paese della tua organizzazione	AU
State	La tua provincia, regione, o territorio	Victoria
Location	Il tuo comune, città, frazione, ecc.	Port Melbourne
Organization Name	Il nome della tua organizzazione	Blackmagic Design

3 Una volta compilati i dati del certificato, clicca **Generate**.

Quando generi un .csr vengono create sia una chiave pubblica che una privata. La chiave pubblica viene inclusa nella richiesta di firma, mentre quella privata rimane nell'unità. Una volta verificate le informazioni nel CSR con la tua organizzazione, la CA o il reparto IT generano un certificato digitale firmato con questi dettagli identificativi e una chiave pubblica.

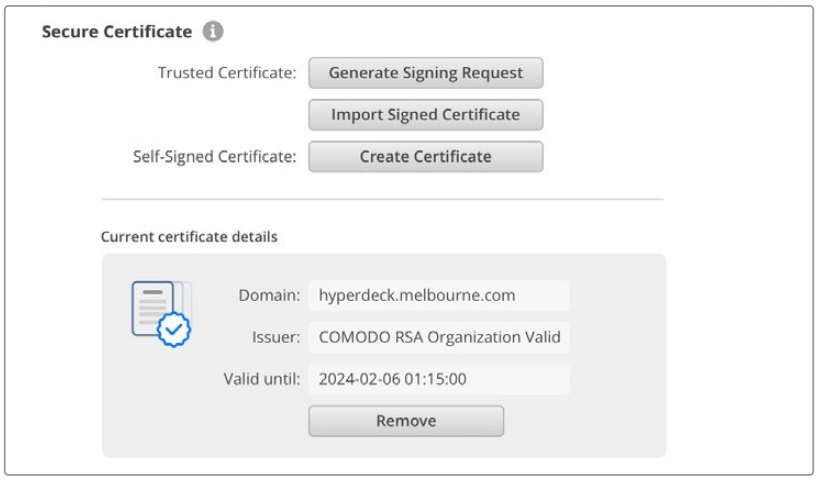
Il certificato viene poi importato su HyperDeck Shuttle HD, che usa la chiave privata per confermare l'identità dell'HyperDeck e per criptare e decriptare i dati condivisi tramite HTTPS o mediante HyperDeck Ethernet Protocol quando si usa un programma SSL.

Per importare un certificato firmato:

1 Clicca il pulsante **Import Signed Certificate**.

2 Cerca sul browser il file del certificato firmato, selezionalo e aprilo con **Open**.

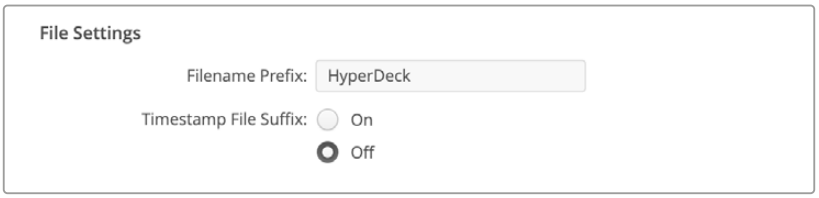
I campi **domain**, **issuer**, e **valid until** si aggiorneranno con le informazioni fornite dalla CA. Solitamente un certificato firmato è valido per circa un anno, quindi è necessario ripetere questo processo in prossimità della scadenza.



Dopo aver selezionato il nome del dominio, sarà necessario contattare il reparto IT per individuare il DNS da assegnare all'unità HyperDeck Shuttle HD. In questo modo tutto il traffico diretto all'indirizzo IP di HyperDeck Shuttle HD verrà instradato all'indirizzo del dominio selezionato in fase di richiesta di firma. È lo stesso indirizzo HTTPS che userai per accedere ai file tramite il web media manager, per esempio https://hyperdeckextreme.melbourne

Ricorda che a seguito del ripristino delle impostazioni di fabbrica il certificato non sarà più valido. Sarà quindi necessario generare e far firmare un nuovo certificato.

File Settings



HyperDeck Shuttle HD registra le clip sulla scheda CFast o sul disco USB esterno usando "HyperDeck" come prefisso nel nome del file. Per cambiarlo, scrivi un altro prefisso nel campo **Filename Prefix**.

L'impostazione della marca temporale **Timestamp File Suffix** è disabilitata di default. Seleziona **On** per aggiungere al nome del file la data e l'ora registrate. Le impostazioni del prefisso e della marca temporale sono disponibili anche nel menù touch di HyperDeck Shuttle HD.

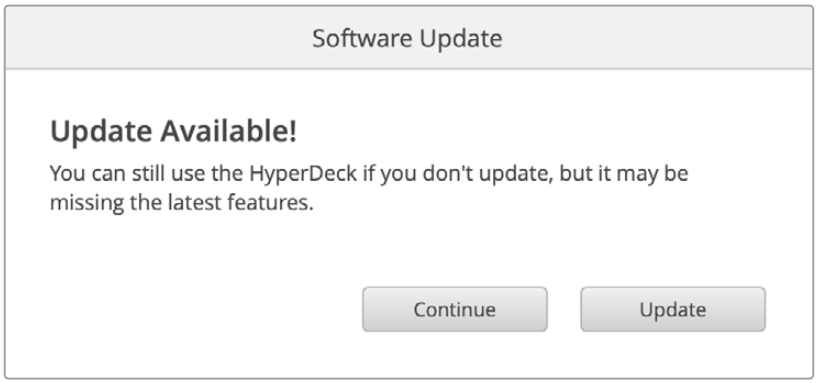
Reset

Seleziona **Impostazioni di fabbrica** per resettare HyperDeck. Il reset invalida il certificato di sicurezza, e sarà necessario generare e far firmare un nuovo certificato a una Certificate Authority o al reparto IT.

Aggiornare il software interno

Per aggiornare il software interno:

1. Scarica l'installer Blackmagic HyperDeck Setup più recente da www.blackmagicdesign.com/it/support
2. Apri l'installer Blackmagic HyperDeck Setup sul computer e segui le istruzioni a schermo.
3. Al termine dell'installazione, collega il computer ad HyperDeck Shuttle HD tramite le porte USB o ethernet sul pannello posteriore.
4. Apri Blackmagic HyperDeck Setup e aggiorna il software interno come suggerito dalla finestra che compare. Se la finestra non compare, il software interno è già aggiornato.



Trasferire i file in rete

HyperDeck Shuttle HD supporta il trasferimento dei file sia tramite il protocollo per la comunicazione sicura (HTTPS) che tramite il protocollo di trasferimento file (FTP). Grazie a questa funzione è possibile copiare i file dal computer direttamente su HyperDeck all'interno di una rete, alla velocità offerta dalla rete locale. Per esempio puoi copiare nuovi file sull'HyperDeck da usare per riprodurre video sui video wall o sulle insegne digitali.

Puoi trasferire qualsiasi file da e su HyperDeck, ma ricorda che i file che intendi riprodurre con HyperDeck Shuttle HD devono essere compatibili con le risoluzioni e con i codec supportati dal dispositivo.

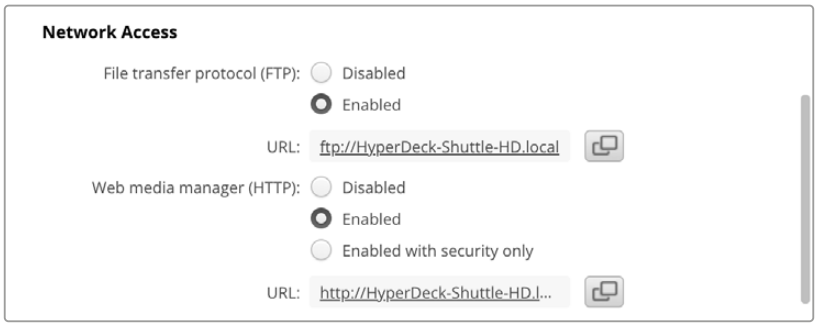
SUGGERIMENTO Puoi trasferire file in rete mentre il deck sta registrando. HyperDeck regolerà automaticamente la velocità di trasferimento per non compromettere la registrazione.

Puoi abilitare o disabilitare l'accesso ad HyperDeck Shuttle HD tramite questi protocolli con l'utility HyperDeck Setup. Per esempio, puoi disabilitare l'accesso FTP e abilitare quello tramite HTTPS contemporaneamente.

Connettere HyperDeck Shuttle HD tramite HTTPS

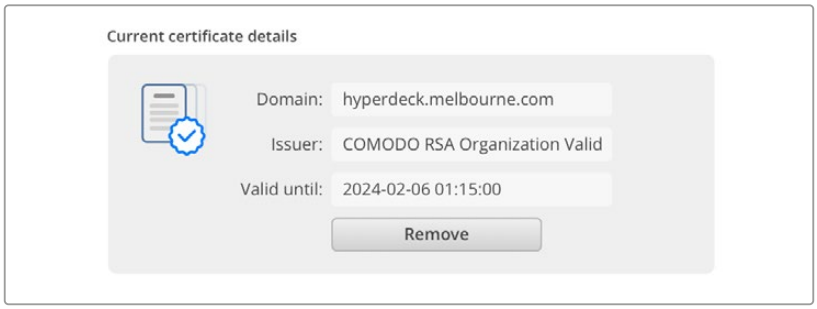
Per accedere ad HyperDeck Shuttle HD tramite il web media manager bisogna inserire l'URL disponibile nelle impostazioni alla voce *Network Access*, che apparirà nell'utility HyperDeck Setup una volta connesso il dispositivo al computer tramite USB o ethernet. Queste impostazioni non sono abilitate se l'unità è connessa solo tramite ethernet.

1. Con un cavo USB-C, connetti il computer alla porta USB sul retro di HyperDeck Shuttle HD, poi apri HyperDeck Setup. L'icona dell'USB comparirà a lato del nome dell'unità. Clicca sull'icona circolare o su qualsiasi parte dell'immagine del prodotto per aprire le impostazioni.
2. Se usi un certificato auto-firmato, vai alla voce **Network Access** e clicca sull'icona di copia a destra dell'URL. L'URL si basa sul nome del tuo HyperDeck. Per modificarlo, cambia il nome dell'unità.



Se usi un certificato auto-firmato, clicca sul link

3 Se hai importato un certificato firmato da una CA o dal reparto IT, copia e incolla l'indirizzo nel campo **Domain** del certificato.



Copia l'indirizzo del dominio e incollalo su un browser

4 Apri il browser e incolla l'indirizzo in una nuova finestra. Se hai abilitato l'accesso sicuro ti verrà chiesto di inserire l'username e la password impostati nell'utilità HyperDeck Setup.

Se quando si utilizza un certificato auto-firmato appare un avviso sulla privacy della connessione significa che non è stato importato un certificato digitale firmato sicuro tramite l'utilità HyperDeck Setup.

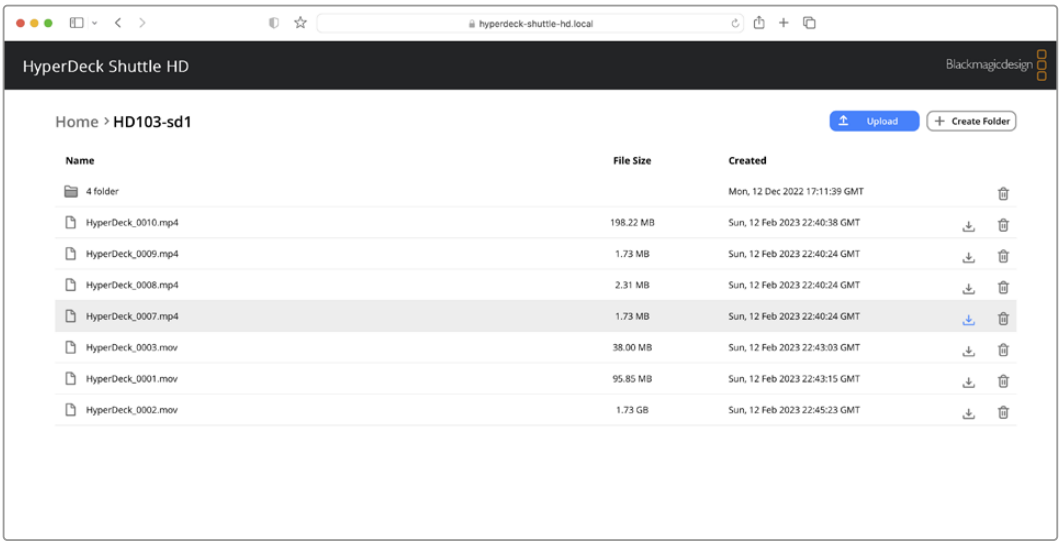
Per procedere senza un certificato valido sicuro, segui le istruzioni del browser e conferma che desideri accedere al sito accettandone i rischi.

Trasferire i file con il web media manager

Quando apri il browser del web media manager per la prima volta, troverai i file organizzati in base agli slot per supporti di memoria utilizzati.

SD1	File presenti nelle schede SD.
USB	I drive USB connessi sono elencati con il prefisso USB/.

Clicca due volte sul supporto per visualizzare i contenuti.



Clicca il pulsante Upload per aggiungere i file

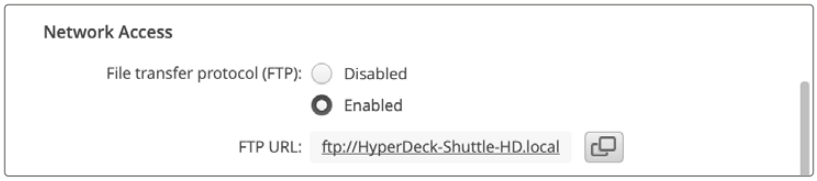
Per aggiungere i file in remoto per la riproduzione, clicca il pulsante **Upload**. Usa il browser per selezionarli e clicca il pulsante **Upload**. Apparirà una finestra di stato del caricamento. È anche possibile aggiungere cartelle con il pulsante **Create folder**.

Per scaricare i file, usa l'icona del download sulla destra. Se il browser chiede il tuo permesso per scaricare dal sito, conferma con **Allow**. Per eliminare un file, clicca l'icona del cestino sulla destra. Apparirà una finestra di conferma, clicca **Delete** per procedere.

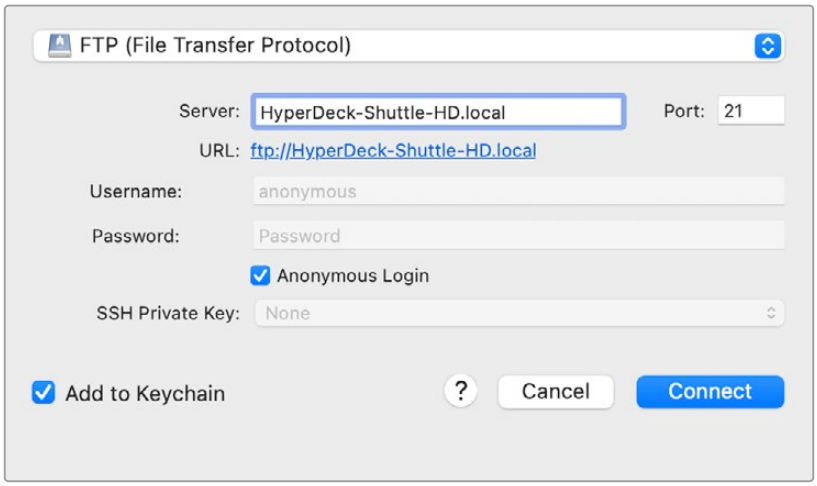
Trasferire i file tramite FTP

Assicurati che HyperDeck Shuttle HD e il computer siano sulla stessa rete. Per procedere sono necessari un client FTP e l'indirizzo IP del deck o l'URL FTP salvato nell'utility HyperDeck Setup.

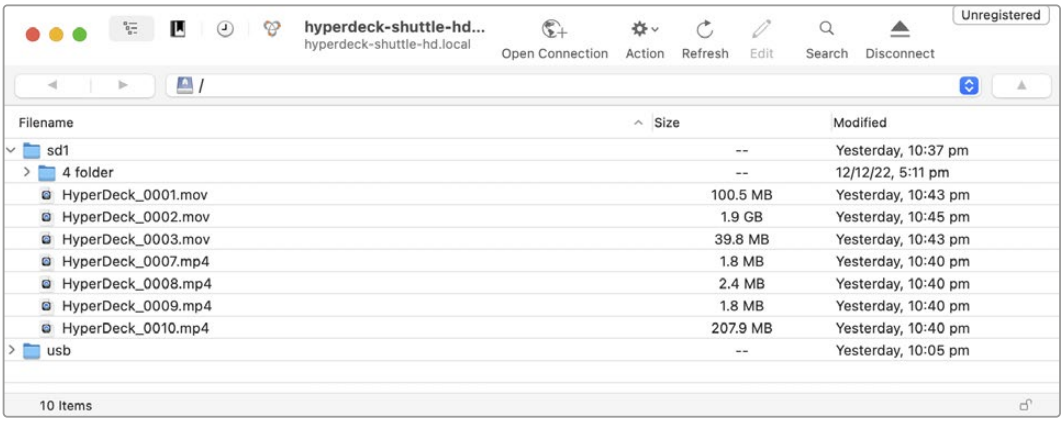
1. Scarica e installa un client FTP sul computer a cui vuoi connettere HyperDeck Shuttle HD. Consigliamo Cyberduck, FileZilla o Transmit, ma la maggior parte delle applicazioni FTP è compatibile. Cyberduck e FileZilla sono gratuiti.
2. Ora che HyperDeck Shuttle HD è connesso alla tua rete, apri HyperDeck Setup e clicca sull'URL FTP o sull'icona di copia per incollarlo manualmente. A volte è necessario cliccare il link una seconda volta se con la prima il programma FTP non apre la connessione.



3. Per aprire manualmente una connessione FTP, copia l'URL nel campo **Server**. Spunta **Anonymous login** se disponibile.



4 Le schede SD vengono identificate con sd1.



Ora puoi trascinare i file con l'interfaccia FTP.

Informazioni per gli sviluppatori (inglese)

Blackmagic HyperDeck Ethernet Protocol

The Blackmagic HyperDeck Ethernet Protocol is a text based protocol accessed by connecting to TCP port 9993 on HyperDeck models that have a built in Ethernet connection. If you are a software developer, you can use the protocol to construct devices that integrate with our products. Here at Blackmagic Design our approach is to open up our protocols and we eagerly look forward to seeing what you come up with!

You can connect to your HyperDeck recorder using the HyperDeck Ethernet Protocol using a command line program on your computer, such as Terminal on a Mac and putty on a Windows computer.

The HyperDeck Ethernet Protocol lets you schedule playlists and recordings. The following is an example of how to play 7 clips from clip number 5 onwards via the HyperDeck Ethernet Protocol.

On a Mac

1. Open the Terminal application which is located with the applications > utilities folder.
2. Type in “nc” and a space followed by the IP address of your HyperDeck disk recorder, another space and “9993” which is the HyperDeck Ethernet Protocol port number. For example type: nc 192.168.1.154 9993. The Protocol preamble will appear.
3. Type “playrange set: clip id: 5 count: 7” and press ‘return’.

   On HyperDeck disk recorders with a timeline view, you will see in and out points marked around clips 5 through the end of clip 11.
4. Type “play”. Clips 5 through 11 will now play back.
5. To clear the playrange, type “playrange clear”
6. To exit from the protocol, type ‘quit’.

Protocol Commands

Command	Command Description
help or ?	Provides help text on all commands and parameters
commands	return commands in XML format
device info	return device information
disk list	query clip list on active disk
disk list: slot id: {n}	query clip list on disk in slot {n}
quit	disconnect ethernet control
ping	check device is responding
preview: enable: {true/false}	switch to preview or output
play	play from current timecode
play: speed: {-5000 to 5000}	play at specific speed
play: loop: {true/false}	play in loops or stop-at-end
play: single clip: {true/false}	play current clip or all clips

Command	Command Description
play: {clip id/clip/timecode/timeline/...}	play from the specified position see “goto” command for description of parameters parameters can be combined with {speed/loop/single clip}
playrange	query playrange setting
playrange set: clip id: {n}	set play range to play clip {n} only
playrange set: clip id: {n} count: {m}	set play range to {m} clips starting from clip {n}
playrange set: in: {inT} out: {outT}	set play range to play between: - timecode {inT} and timecode {outT}
playrange set: timeline in: {in} timeline out: {out}	set play range in units of frames between: - timeline position {in} and position {out}
playrange clear	clear/reset play range setting
play on startup	query unit play on startup state
play on startup: enable: {true/false}	enable or disable play on startup
play on startup: single clip: {true/false}	play single clip or all clips on startup
play option	query play options
play option: stop mode: {lastframe/nextframe/black}	set output frame when playback stops
record	record from current input
record: name: {name}	record named clip
record spill	spill current recording to next slot
record: spill: slot id: {n}	spill current recording to specified slot use current id to spill to same slot
spill order	query the device order used for record spill
stop	stop playback or recording
clips count	query number of clips on timeline
clips get	query all timeline clips
clips get: clip id: {n}	query a timeline clip info
clips get: clip id: {n} count: {m}	query m clips starting from n
clips get: version: {1/2/3}	query clip info using specified output version: version 1: id: name startT duration version 1: id: name startT duration startT depends on “configuration: timecode output: {clip/timeline}” version 2: id: clipInT clipDuration inT outT filename version 3: id: clipInT clipDuration inT outT folder/filename
clips add: name: {name}	append a clip to timeline, name can include subfolders e.g. folder1/HyperDeck_0001.mp4
clips add: clip id: {n} name: {name}	insert clip before existing clip {n}
clips add: in: {inT} out: {outT} name: {name}	append the clip portion between clip timecodes {inT} to {outT}
clips add: frame in: {in} frame out: {out} name: {name}	append the clip portion between clip frame numbers {in} to {out}

Command	Command Description
clips remove: clip id: {n}	remove clip {n} from the timeline (invalidates clip ids following clip {n})
clips clear	empty timeline clip list
clips rebuild	rebuild timeline with default rules
clip info	query clip info for the current playing/recording clip
clip info: clip id: {n}	query clip info for timeline clip id {n}
clip info: name: {name}	query clip info for the clip named {name} on active disk
transport info	query current activity
slot info	query active slot
slot info: slot id: {n}	query slot {n}
slot info: device: {device}	query slot containing device USB/network devices can be queried without being active “device” and “slot id” parameters are mutually exclusive in all commands
slot select: slot id: {n}	switch to specified slot
slot select: device: {device}	switch to slot containing device
slot select: video format: {format}	load clips of specified format
slot unblock	unblock active slot
slot unblock: slot id: {n}	unblock slot {n}
slot unblock: device: {device}	unblock disk device
external drive list	list all available USB/network drives for use in external slot
external drive select: device: {device}	switch external slot to specified external drive
external drive selected	query the currently selected external drive
cache info	query cache status
dynamic range	query dynamic range settings
dynamic range: playback override: {off/Rec709/Rec2020_SDR/HLG/ ST2084_300/ST2084_500/ ST2084_800/ST2084_1000/ ST2084_2000/ST2084_4000/ST2084	set playback dynamic range override
dynamic range: record override: {off/Rec709/Rec2020_SDR/HLG/ ST2084_300/ST2084_500/ ST2084_800/ST2084_1000/ ST2084_2000/ST2084_4000/ST2048}	set record dynamic range override
notify	query notification status
notify: remote: {true/false}	set remote notifications
notify: transport: {true/false}	set transport notifications
notify: slot: {true/false}	set slot notifications
notify: configuration: {true/false}	set configuration notifications

Command	Command Description
notify: dropped frames: {true/false}	set dropped frames notifications (reported dropped frame count is approximate)
notify: display timecode: {true/false}	set display timecode notifications
notify: timeline position: {true/false}	set playback timeline position notifications
notify: playrange: {true/false}	set playrange notifications
notify: cache: {true/false}	set cache notifications
notify: dynamic range: {true/false}	set dynamic range settings notifications
notify: slate: {true/false}	set digital slate notifications
notify: clips: {true/false}	set timeline clips notifications where two types of changes can occur: add: partial update with list of clips and insert positions snapshot: complete update of all clips on timeline
notify: disk: {true/false}	set disk clips notifications where two types of changes can occur: add: partial update with list of clips and insert positions snapshot: complete update of all clips on timeline
notify: device info: {true/false}	set device info notifications
notify: nas: {true/false}	set nas notifications triggered by commands such as “nas add” or “nas remove”
goto: clip id: {start/end}	goto first clip or last clip
goto: clip id: {n}	goto clip id {n}
goto: clip id: +{n}	go forward {n} clips
goto: clip id: -{n}	go backward {n} clips
goto: clip: {start/end}	goto start or end of clip
goto: clip: {n}	goto frame position {n} within current clip
goto: clip: +{n}	go forward {n} frames within current clip
goto: clip: -{n}	go backward {n} frames within current clip
goto: timeline: {start/end}	goto start or end of timeline
goto: timeline: {n}	goto frame position {n} within timeline
goto: timeline: +{n}	go forward {n} frames within timeline
goto: timeline: -{n}	go backward {n} frames within timeline
goto: timecode: {timecode}	goto absolute timecode position in timeline
goto: timecode: +{timecode}	go forward {timecode} duration
goto: timecode: -{timecode}	go backward {timecode} duration
goto: slot id: {n}	goto slot id {n}
goto: clip id: {n} clip: {m}	goto clip id {n} and offset to frame position {m} within that clip
goto: clip id: {n} timeline: {m}	goto clip id {n} and offset to frame position {m} within the timeline

Command	Command Description
goto: clip id: {n} timecode: {timecode}	goto clip id {n} and offset {timecode} duration {clip id/clip/timeline/timecode} support absolute and relative offsets use “play” instead of “goto” to play from seeked position
jog: timecode: {timecode}	jog to timecode
jog: timecode: +{timecode}	jog forward {timecode} duration
jog: timecode: -{timecode}	jog backward {timecode} duration
shuttle: speed: {-5000 to 5000}	shuttle with speed
remote	query unit remote control state
remote: enable: {true/false}	enable or disable remote control
remote: override: {true/false}	session override remote control
configuration	query configuration settings
configuration: video input: {SDI/HDMI/component/composite}	change the video input source
configuration: audio input: {embedded/XLR/RCA}	change the audio input source
configuration: file format: {format}	switch to one of the supported formats: H.265High_422, H.264High, H.264Medium, H.264Low, H.264High10_422, H.265High, H.265Medium, H.265Low, QuickTimeProResHQ, QuickTimeProRes, QuickTimeProResLT, QuickTimeProResProxy DNxHR_HQX, QuickTimeDNxHR_HQX, DNxHR_SQ, QuickTimeDNxHR_SQ, DNxHR_LB, QuickTimeDNxHR_LB, DNxHD220x, QuickTimeDNxHD220x, DNxHD145, QuickTimeDNxHD145, DNxHD45, QuickTimeDNxHD45
configuration: audio codec: {PCM/AAC}	switch to specific audio codec
configuration: timecode input: {external/embedded/internal/preset/clip}	change the timecode input
configuration: timecode output: {clip/timeline}	change the timecode output
configuration: timecode preference: {default/dropframe/nondropframe}	whether or not to use drop frame timecodes when not otherwise specified
configuration: timecode preset: {timecode}	set the timecode preset
configuration: audio input channels: {n}	set the number of audio channels recorded to {n}
configuration: record trigger: {none/recordbit/timecoderun}	change the record trigger
configuration: record prefix: {name}	set the record prefix name (supports UTF-8 name)
configuration: record cache: {true/false}	enable or disable record cache, has no effect if cache is not supported/installed/formatted
configuration: append timestamp: {true/false}	append timestamp to recorded filename
configuration: usb spill: {true/false}	enable or disable spilling between usb disks

Command	Command Description
configuration: reference source: {auto/input/external}	set source for the reference signal
configuration: genlock input resync: {true/false}	enable or disable genlock input resync when enabled set reference source to auto/external
configuration: xlr input id: {n} xlr type: {line/mic}	configure xlr input type multiple xlr inputs can be configured in a single command
uptime	return time since last boot
format: slot id: {n} prepare: {exFAT/HFS+} name: {name}	prepare formatting operation filesystem type with volume name {name} “slot id” can be omitted for the current mounted slot “name” defaults to current volume name if mounted (supports UTF-8)
format: device: {device} prepare: {exFAT/HFS+} name: {name}	prepare formatting operation for {device}
format: confirm: {token}	perform a pre-prepared formatting operation using token
identify: enable: {true/false}	identify the device
watchdog: period: {period in seconds}	client connection timeout
reboot	reboot device
slate clips	slate clips information
slate project	slate project information
slate lens	slate lens information
nas list	list all NAS share bookmarks
nas discovered	list all NAS servers that have been discovered via mDNS
nas selected	currently selected NAS share
nas deselect	unmount the currently selected NAS share
connection protocol: response version: {version}	changes which do not affect other client connections change the output of “clips get”, “disk list” and related responses version 1 205 clips get id: filename startT duration startT depends on “configuration: timecode output: {clip/timeline}” 519 clips info id: clipInT clipDuration inT outT filename 206 disk list id: filename codec format duration 520 disk list info id: filename codec format duration version 2 205 clips get id: clipInT clipDuration inT outT folder/filename 519 clips info id: clipInT clipDuration inT outT folder/filename 206 disk list id: codec format duration folder/filename 520 disk list info id: codec format duration folder/filename

Multiline commands:	Command Description
authenticate:↵	authenticate user for secure access
username: {username}	case sensitive username
password: {password}	case sensitive password
slate clips↵	set slate clips information:
reel: {n}	slate reel number, where {n} is in [1, 999]
scene id: {id}	slate scene id value, where {id} is a string
shot type: {WS/MS/CU/BCU/MCU/ECU/none}	slate shot type
take: {n}	slate take number, where {n} is in [1, 99]
take scenario: {PU/VFX/SER/none}	slate take scenario
take auto inc: {true/false}	slate take auto increment
good take: {true/false}	slate good take
environment: {interior/exterior}	slate environment
day night: {day/night}	slate day or night
slate project:↵	set slate project information:
project name: {name}	project name (can be empty, supports UTF-8)
camera: {index}	set camera index e.g. A
director: {name}	director (can be empty, supports UTF-8)
camera operator: {name}	camera operator (can be empty, supports UTF-8)
slate lens:↵	set lens information:
lens type: {type}	lens type (can be empty, supports UTF-8)
iris: {type}	camera iris (can be empty, supports UTF-8)
focal length: {length}	focal length (can be empty, supports UTF-8)
distance: {distance}	lens distance (can be empty, supports UTF-8)
filter: {filter}	lens filter (can be empty, supports UTF-8)
nas add:↵	add a NAS share to the list of bookmarks
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share
username: {username}	username to connect as (optional, defaults to guest)
password: {password}	password to connect with (optional)
nas remove:↵	remove NAS share bookmark, does not unmount share if mounted
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share
nas select:↵	mount NAS share asynchronously. Uses credentials provided in matching bookmark, otherwise uses guest credentials
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share Use “nas selected” or “notify: slot: true” to determine when share is mounted.

Command Combinations

You can combine the parameters into a single command, for example:

```
play: clip id: 3 speed: 200 loop: true single clip: true
```

Or for configuration:

```
configuration: video input: SDI audio input: XLR
```

Or to switch to the second disk, but only play NTSC clips:

```
slot select: slot id: 2 video format: NTSC
```

Using XML

While you can use the Terminal to talk to HyperDeck, if you are writing software, you can use XML to confirm the existence of a specific command based on the firmware of the HyperDeck you are communicating with. This helps your software user interface adjust to the capabilities of the specific HyperDeck model and software version.

Protocol Details

Connection

The HyperDeck Ethernet server listens on TCP port 9993.

Basic syntax

The HyperDeck protocol is a line oriented text protocol. Lines from the server will be separated by an ascii CR LF sequence. Messages from the client may be separated by LF or CR LF.

New lines are represented in this document as a "↵" symbol.

Single line command syntax

Command parameters are usually optional. A command with no parameters is terminated with a new line:

```
{Command name}↵
```

If parameters are specified, the command name is followed by a colon, then pairs of parameter names and values. Each parameter name is terminated with a colon character:

```
{Command name}: {Parameter}: {Value} {Parameter}: {Value} ...↵
```

Multiline command syntax

The HyperDeck protocol also supports an equivalent multiline syntax where each parameter-value pair is entered on a new line. E.g.

```
{Command name}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
↵
```

Response syntax

Simple responses from the server consist of a three digit response code and descriptive text terminated by a new line:

```
{Response code} {Response text}↵
```

If a response carries parameters, the response text is terminated with a colon, and parameter name and value pairs follow on subsequent lines until a blank line is returned:

```
{Response code} {Response text}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
...
↵
```

Successful response codes

A simple acknowledgement of a command is indicated with a response code of 200:

```
200 ok↵
```

Other successful responses carry parameters and are indicated with response codes in the range of 201 to 299.

Failure response codes

Failure responses to commands are indicated with response codes in the range of 100 to 199:

```
100 syntax error
101 unsupported parameter
102 invalid value
103 unsupported
104 disk full
105 no disk
106 disk error
107 timeline empty
108 internal error
109 out of range
110 no input
111 remote control disabled
112 clip not found
120 connection failed
121 authentication failed
122 authentication required
150 invalid state
151 invalid codec
160 invalid format
161 invalid token
162 format not prepared
163 parameterized single line command not supported
```

Asynchronous response codes

The server may return asynchronous messages at any time. These responses are indicated with response codes in the range of 500 to 599:

```
5xx {Response Text}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
↵
```

Connection response

On connection, an asynchronous message will be delivered:

```
500 connection info:↵
protocol version: {Version}↵
model: {Model Name}↵
↵
```

Connection rejection

A limited number of clients may connect at a time. If too many clients attempt to connect concurrently, they will receive an error and be disconnected:

```
120 connection failed↵
```

Timecode syntax

Timecodes are expressed as non-drop-frame timecode in the format:

```
HH:MM:SS:FF
```

Handling of deck "remote" state

The “remote” command may be used to enable or disable the remote control of the deck. Any attempt to change the deck state over ethernet while remote access is disabled will generate an error:

```
111 remote control disabled↵
```

To enable or disable remote control:

```
remote: enable: {“true”, “false”} ↵
```

The current remote control state may be overridden allowing remote access over ethernet irrespective of the current remote control state:

```
remote: override: {“true”, “false”} ↵
```

The override state is only valid for the currently connected ethernet client and only while the connection remains open.

The “remote” command may be used to query the remote control state of the deck by specifying no parameters:

```
remote↵
```

The deck will return the current remote control state:

```
210 remote info:↵
enabled: {“true”, “false”}↵
override: {“true”, “false”}↵
↵
```

Asynchronous remote control information change notification is disabled by default and may be configured with the “notify” command. When enabled, changes in remote state will generate a “510 remote info:”asynchronous message with the same parameters as the “210 remote info:” message.

Closing connection

The "quit" command instructs the server to cleanly shut down the connection:

```
quit↵
```

Checking connection status

The "ping" command has no function other than to determine if the server is responding:

```
ping↵
```

Getting help

The "help" or "?" commands return human readable help text describing all available commands and parameters:

```
help↵
```

Or:

```
?↵
```

The server will respond with a list of all supported commands:

```
201 help:↵
{Help Text}↵
{Help Text}↵
↵
```

Switching to preview mode

The "preview" command instructs the deck to switch between preview mode and output mode:

```
preview: enable: {"true", "false"}↵
```

Playback will be stopped when the deck is switched to preview mode. Switching to playback is not permitted during record. Use the stop command to stop recording before switching to playback.

Controlling device playback

The “play” command instructs the deck to start playing:

```
play↵
```

The play command accepts a number of parameters which may be used together in most combinations.

By default, the deck will play all remaining clips on the timeline then stop.
The “single clip” parameter may be used to override this behavior:

```
play: single clip: {“true”, “false”}↵
```

By default, the deck will play at normal (100%) speed. An alternate speed may be specified in percentage between -5000 to 5000:

```
play: speed: {% normal speed}↵
```

By default, the deck will stop playing when it reaches to the end of the timeline. The “loop” parameter may be used to override this behavior:

```
play: loop: {“true”, “false”}↵
```

To play from the start of a particular clip:

```
play: clip id: {Clip Id}↵
```

To play from a position offset from the start of particular clip:

```
play: clip id: {Clid Id} timecode: +{timecode}↵
```

The “playrange” command returns the current playrange setting if any:

```
playrange↵
```

To override this behaviour and select a particular clip:

```
playrange set: clip id: {Clip ID}↵
```

To only play a certain number of clips starting at a particular clip:

```
playrange set: clip id: {n} count: {m}↵
```

To only play a certain timecode range:

```
playrange set: in: {in timecode} out: {out timecode}↵
```

To play a certain timeline range:

```
playrange set: timeline in: {in} timeline out: {out}↵
```

To clear a set playrange and return to the default value:

```
playrange clear↵
```

The “play on startup command” instructs the deck on what action to take on startup. By default, the deck will not play. Use the “enable” command to start playback after each power up.

```
play on startup: enable {“true”, “false”}↵
```

By default, the unit will play back all clips on startup. Use the “single clip” command to override.

```
play on startup: single clip: {“true”, “false”}↵
```

The “play option” command queries the output frame for when playback stops:

```
play option↵
```

By default, the deck will display the last frame when playback stops. To override this behaviour, the “stop mode” parameter can be used:

```
play option: stop mode: {“lastframe”, “nextframe”, “black”}↵
```

Stopping deck operation

The "stop" command instructs the deck to stop the current playback or capture:

```
stop↵
```

Changing timeline position

The "goto" command instructs the deck to switch to playback mode and change its position within the timeline.

To go to the start of a specific clip:

```
goto: clip id: {Clip ID}↵
```

To move forward/back {count} clips from the current clip on the current timeline:

```
goto: clip id: +/-{count}↵
```

Note that if the resultant clip id goes beyond the first or last clip on timeline, it will be clamp at the first or last clip.

To go to the start or end of the current clip:

```
goto: clip: {“start”, “end”}↵
```

To go to the start of the first clip or the end of the last clip:

```
goto: timeline: {“start”, “end”}↵
```

To go to a specified timecode:

```
goto: timecode: {timecode}↵
```

To move forward or back a specified duration in timecode:

```
goto: timecode: {“+”, “-”}{duration in timecode}↵
```

To specify between slot 1 and slot 2:

```
goto: slot id: {Slot ID}↵
```

Note that only one parameter/value pair is allowed for each goto command.

Enumerating supported commands and parameters

The "commands" command returns the supported commands:

```
commands↵
```

The command list is returned in a computer readable XML format:

```
212 commands:
<commands>↵
     <command name="…"><parameter name="…"/>…</command>↵
     <command name="…"><parameter name="…"/>…</command>↵
     …
</commands>↵
↵
```

More XML tokens and parameters may be added in later releases.

Controlling asynchronous notifications

The “notify” command may be used to enable or disable asynchronous notifications from the server.
To enable or disable transport notifications:

```
notify: transport: {“true”, “false”}↵
```

To enable or disable slot notifications:

```
notify: slot: {“true”, “false”}↵
```

To enable or disable remote notifications:

```
notify: remote: {“true”, “false”}↵
```

To enable or disable configuration notifications:

```
notify: configuration: {“true”, “false”}↵
```

Multiple parameters may be specified. If no parameters are specified, the server returns the current state of all notifications:

```
209 notify:↵
transport: {“true”, “false”}↵
slot: {“true”, “false”}↵
remote: {“true”, “false”}↵
configuration: {“true”, “false”}↵
dropped frames: {“true”, “false”}↵
display timecode: {“true”, “false”}↵
timeline position: {“true”, “false”}↵
playrange: {“true”, “false”}↵
cache: {“true”, “false”}↵
dynamic range: {“true”, “false”}↵
slate: {“true”, “false”}↵
clips: {“true”, “false”}↵
disk: {“true”, “false”}↵
device info: {“true”, “false”}↵
nas: {“true”, “false”}↵
↵
```

Retrieving device information

The "device info" command returns information about the connected deck device:

```
device info↵
```

The server will respond with:

```
204 device info:↵
protocol version: {Version}↵
model: {Model Name}↵
unique id: {unique alphanumeric identifier}↵
slot count: {number of storage slots}↵
software version: {software version}↵
name: {device name}↵
↵
```

Retrieving slot information

The "slot info" command returns information about a slot. Without parameters, the command returns information for the currently selected slot:

```
slot info↵
```

If a slot id is specified, that slot will be queried:

```
slot info: slot id: {Slot ID}↵
```

The server will respond with slot specific information:

```
202 slot info:↵
slot id: {Slot ID}↵
slot name: {“slot name”}↵
device name: {identifying name for disk device}↵
status: {"empty", "mounting", "error", "mounted"}↵
volume name: {Volume name}↵
recording time: {recording time available in seconds}↵
video format: {disk's default video format}↵
blocked: {“true”, “false”}↵
remaining size: {remaining size in bytes}↵
total size: {total size in bytes}↵
↵
```

A slot can also be specificed by its device. This is particularly useful when there are multiple drives connected via USB. First list the available external drives:

```
external drive list↵
226 external drive info:↵
device: {device}↵
```

Then use slot info with device to query the drive:

```
slot info: device: {device}↵
```

Asynchronous slot information change notification is disabled by default and may be configured with the "notify" command. When enabled, changes in slot state will generate a "502 slot info:" asynchronous message with the same parameters as the "202 slot info:" message.

Retrieving clip information

The “disk list” command returns the information for each playable clip on a given disk. Without parameters, the command returns information for the current active disk:

```
disk list↵
```

If a slot id is specified, the disk in that slot will be queried:

```
disk list: slot id: {Slot ID}↵
```

The server responds with the list of all playable clips on the disk in the format of: Index, name, formats, and duration in timecode:

```
206 disk list:↵
slot id: {Slot ID}↵
{clip index}: {name} {file format} {video format} {Duration timecode}↵
{clip index}: {name} {file format} {video format} {Duration timecode}↵
…
↵
```

Note that the *clip index* starts from 1.

Retrieving clip count

The "clips count" command returns the number of clips on the current timeline:

```
clips count ↵
```

The server responds with the number of clips:

```
214 clips count: ↵
clip count: {Count}↵
```

Retrieving timeline information

The "clips get" command returns information for each available clip on the current timeline. Without parameters, the command returns information for all clips on timeline:

```
clips get↵
```

In version 1, the start timecode reported is either a clip timecode or a timeline timecode depending on the configured output timecode.

The server responds with a list of clip IDs, names and timecodes:

```
205 clips info:↵
clip count: {Count}↵
{Clip ID}: {Name} {Start timecode} {Duration timecode}↵
{Clip ID}: {Name} {Start timecode} {Duration timecode}↵
…
↵
```

The “clips get” command provides a more detailed response when using the “version: 2” parameter:

```
clips get: version: 2↵
```

The server responds with a list of clip IDs, timecodes, in points, out points and names. Clip name is the last field making it simpler to parse when names have embedded spaces.

```
{Clip ID}: {Clip start timecode} {Duration timecode} {inTimecode}
{outTimecode}
{name}↵
{Clip ID}: {Clip start timecode} {Duration timecode} {inTimecode}
{outTimecode}
{name}↵
…
↵
```

For models that support recursive timelines “clips get: version: 3” replaces the {name} field with {path to clip name} where the {path to clip name} can include directories and subdirectories.

Retrieving transport information

The “transport info” command returns the state of the transport:

```
transport info ↵
```

The server responds with transport specific information:

```
208 transport info:

status: {“preview”, “stopped”, “play”, “forward”, “rewind”,
“jog”, “shuttle”,”record”}↵

speed: {Play speed between -5000 and 5000 %}↵

slot id: {Slot ID or “none”}↵

slot name: {“slot name”}↵

device name: {identifying name for disk device}↵

clip id: {Clip ID or “none”}↵

single clip: {“true”, “false”}↵

display timecode: {timecode}↵

timecode: {timecode}↵

video format: {Video format}↵

loop: {“true”, “false”}↵

timeline: {n}↵

input video format: {Video format”}↵

dynamic range: {“off”, “Rec709”, “Rec2020_SDR”, “HLG”,
“ST2084_300”, “ST2084_500”, “ST2084_800”, “ST2084_1000”,
“ST2084_2000”, “ST2084_4000”, “ST2048” or “none”}↵

reference locked: {“false”, “true”}

↵
```

The "timecode" value is the timecode within the current timeline for playback or the clip for record. The "display timecode" is the timecode displayed on the front of the deck. The two timecodes will differ in some deck modes.

Asynchronous transport information change notification is disabled by default and may be configured with the "notify" command. When enabled, changes in transport state will generate a "508 transport info:" asynchronous message with the same parameters as the "208 transport info:" message.

Video Formats

The following video formats are currently supported on HyperDeck Extreme, HyperDeck Studio and HyperDeck Shuttle:

720p50, 720p5994, 720p60

1080p23976, 1080p24, 1080p25, 1080p2997, 1080p30, 1080p60

1080i50, 1080i5994, 1080i60

HyperDeck Extreme HDR models also support the following formats:

NTSC, PAL, NTSCp, PALp

2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p30, 2160p50, 2160p59.94, 2160p60

4Kp23976, 4Kp24, 4Kp25, 4Kp2997, 4Kp30

4Kp50, 4Kp5994, 4Kp60

HyperDeckExtreme 8K HDR adds support for the following 8K formats:

4320p23.98, 4320p24, 4320p25, 4320p29.97, 4320p30, 4320p50, 4320p59.94, 4320p60

8Kp23976, 8Kp24, 8Kp25

HyperDeck Studio Pro and Plus models support these 4k formats:

4Kp23976, 4Kp24, 4Kp25, 4Kp2997, 4Kp30

HyperDeck Studio 4K Pro adds support for the following 4k formats:

4Kp50, 4Kp5994, 4Kp60

Video format support may depend on the file format selected and may vary between models and software releases.

File Formats

All HyperDeck models currently support the following file formats:

H.264High_SDI

H.264High

H.264Medium

H.264Low

QuickTimeProResHQ

QuickTimeProRes

QuickTimeProResLT

QuickTimeProResProxy

QuickTimeDNxHD220x

DNxHD220x

QuickTimeDNxHD145

DNxHD145

QuickTimeDNxHD45

DNxHD45

HyperDeck Studio 4K Pro and HyperDeck Extrme HDR models also support the following file formats:

H.265High_SDI

H.265High

H.265Medium

H.265Low

QuickTimeDNxHR_HQX

DNxHR_HQX

QuickTimeDNxHR_SQ

DNxHR_SQ

QuickTimeDNxHR_LB

DNxHR_LB

Supported file formats may vary between models and software releases.

Querying and updating configuration information

The "configuration" command may be used to query the current configuration of the deck:

```
configuration↵
```

The server returns the configuration of the deck:

```
211 configuration:↵
audio input: {“embedded”, “XLR”, “RCA”}↵
audio mapping: {n}↵
video input: {“SDI”, “HDMI”, “component”, “composite”}↵
file format: {format}↵
audio codec: {“PCM”, “AAC”}↵
timecode input: {“external”, “embedded”, “preset”, “clip”}↵
timecode output: {“clip”, “timeline”}↵
timecode preference: {“default”, “dropframe”, “nondropframe”}↵
timecode preset: {timecode}↵
audio input channels: {n}↵
record trigger: {“none”, “recordbit”, “timecoderun”}↵
record prefix: {name}↵
record cache: {“true”, “false”}↵
append timestamp: {“true”, “false”}↵
genlock input resync: {“true”, “false”}↵
reference source: {“auto”, “input”, “external”}↵
xlr input id: {“n”}↵
xlr type: {”line”, ”mic”}↵
usb spill: {“true”, “false”}↵
↵
```

One or more configuration parameters may be specified to change the configuration of the deck.

To change the current video input:

```
configuration: video input: {“SDI”, “HDMI”, “component”}↵
```

Valid video inputs may vary between models. To configure the current audio input:

```
configuration: audio input: {“embedded”, “XLR”, “RCA”}↵
```

Valid audio inputs may vary between models.

To configure the current file format:

```
configuration: file format: {File format}↵
```

Note that changes to the file format may require the deck to reset, which will cause the client connection to be closed. In such case, response code 213 will be returned (instead of 200) before the client connection is closed:

```
“213 deck rebooting”
```

Asynchronous configuration information change notification is disabled by default and may be configured with the “notify” command. When enabled, changes in configuration will generate a “511 configuration:” asynchronous message with the same parameters as the “211 configuration:” message.

Selecting active slot and video format

The "slot select" command instructs the deck to switch to a specified slot, or/and to select a specified output video format.

To switch to a specified slot:

```
slot select: slot id: {slot ID}↵
```

To switch to a disk device, including USB drives that are not yet made active:

```
slot select: device: {identifying name for disk device}↵
```

To select the output video format:

```
slot select: video format: {video format}↵
```

Either or all slot select parameters may be specified. Note that selecting video format will result in a rescan of the disk to reconstruct the timeline with all clips of the specified video format.

Clearing the current timeline

The "clips clear" command instructs the deck to empty the current timeline:

```
clips clear↵
```

The server responds with

```
200 ok↵
```

Adding a clip to the current timeline

The "clips add:" command instructs the deck to add a clip to the current timeline:

```
clips add: name: {clip name}↵
```

The server responds with

```
200 ok↵
```

or in case of error

```
1xx {error description}↵
```

Configuring the watchdog

The “watchdog” command instructs the deck to monitor the connected client and terminate the connection if the client is inactive for at least a specified period of time.

To configure the watchdog:

```
watchdog: period: {period in seconds}↵
```

To avoid disconnection, the client must send a command to the server at least every {period} seconds.
Note that if the period is set to 0 or less than 0, connection monitoring will be disabled.

Network Area Storage

On networks using multicast DNS the “nas discovered” command will list network servers the HyperDeck has discovered:

```
nas discovered↵
225 nas host info:
CloudStoreMini.local. CloudStoreMini
CloudStore80.local. CloudStore80
CloudStore320.local. CloudStore320
```

A network share can be added as a bookmark to the HyperDeck using ‘nas add’

```
nas add:
url: smb://CloudStore80.local/Studio1
```

For shares that require a username and password consider using the secure mode of the HyperDeck Ethernet protocol to avoid passwords being sent as plaintext.

```
nas add:
url: smb://192.168.1.1/Main
username: user1234
password: Password1234
```

A share can be made available for recording and playback using ‘nas select’. If a bookmark exists for that share, ‘nas select’ will use the credentials stored in the bookmark. Otherwise ‘nas select’ will connect using Guest credentials.

```
nas select:
url: smb://192.168.1.1/Main
```

Only one share can be mounted at a time using ‘nas select’.

You can query the currently selected nas share using the ‘nas selected’ command. If ‘notify: slot: true’ was used an asynchronous notification will be sent when the share is mounted.

HyperDeck Control REST API

Gli sviluppatori potranno creare applicazioni su misura o servirsi di strumenti esistenti come un client REST o Postman per controllare e interagire liberamente con i registratori HyperDeck tramite HyperDeck Control REST API. Questa API permette di eseguire svariate operazioni, tra cui avviare o interrompere la registrazione, riprodurre contenuti, accedere ai dati del disco e molto altro. L'API consente di accedere all'enorme potenziale dei registratori HyperDeck con facilità, ed è utile sia a chi sviluppa un'applicazione su misura sia a chi si affida a strumenti esistenti. Non vediamo l'ora di scoprire che uso ne farai!

Transport Control API

API for controlling Transport on Blackmagic Design products.

GET /transports/0

Get device's basic transport status.

Response

200 - Transport status.

The response is a JSON object.

Name	Type	Description
mode	string	Transport mode. Possible values are: InputPreview, InputRecord, Output.

PUT /transports/0

Set device's basic transport status.

Parameters

Name	Type	Description
mode	string	Transport mode. Possible values are: InputPreview, Output.

Response

204 - Transport mode was set.

GET /transports/0/stop

Determine if transport is stopped.

Response

200 - Transport stop response.

The response is a JSON object.

PUT /transports/0/stop

Stop transport. Deprecated, use POST /tranports/0/stop instead.

Response

204 - Transport stopped.

POST /transports/0/stop

Stop transport.

Response

204 - Transport stopped.

GET /transports/0/play

Determine if transport is playing.

Response

200 - Transport play response.
The response is a JSON object.

PUT /transports/0/play

Start playing on transport. Deprecated, use POST /tranports/0/play instead.

Response

204 - Transport playing.

POST /transports/0/play

Start playing on transport.

Response

204 - Transport playing.

GET /transports/0/playback

Get playback state.

Response

200 - OK
The response is a JSON object.

Name	Type	Description
type	string	Possible values are: Play, Jog, Shuttle, Var.
loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
speed	number	Playback Speed, 1.0 for normal forward playback
position	integer	Playback position on the timeline in units of video frames

PUT /transports/0/playback

Set playback state.

Parameters

Name	Type	Description
type	string	Possible values are: Play, Jog, Shuttle, Var.
loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
speed	number	Playback Speed, 1.0 for normal forward playback
position	integer	Playback position on the timeline in units of video frames

Response

204 - No Content

GET /transports/0/record

Get record state.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
recording	boolean	Is transport in Input Record mode

PUT /transports/0/record

Set record state. Deprecated, use POST /transports/0/record instead.

Parameters

Name	Type	Description
recording	boolean	Is transport in Input Record mode
clipName	string	Used to set the requested clipName to record to, when specifying “recording” attribute to True

Response

204 - Recording started.

POST /transports/0/record

Start recording.

Parameters

Name	Type	Description
clipName	string	Specific name of clip to record to.

Response

204 - Recording started.

GET /transports/0/clipIndex

Get the clip index of the currently playing clip on the timeline.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clipIndex	number	The 0-based index of the clip being played on the timeline. null when there is no timeline or an empty timeline.

GET /transports/0/timecode

Get device's timecode.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
display	string	The display timecode serialised as a string.
timeline	string	The timeline timecode serialised as a string.

GET /transports/0/timecode/source

Get timecode source selected on device

Response

200 - OK

The response is a JSON object.

Name	Type	Description
timecode	string	Possible values are: Timeline, Clip.

GET /transports/0/clip

Get clip information about the currently recording (or transferring) clip, if it exists

Response

200 - Information about the clip currently being recorded.

The response is a JSON object.

Name	Type	Description
clip	object	
clip.clipUniqueId	integer	Unique ID used to identify this clip
clip.filePath	string	Path to the file relative to the root of a mount
clip.fileSize	integer	Size of file on disk in bytes
clip.codecFormat	object	
clip.codecFormat.codec	string	Currently selected codec.
clip.codecFormat.container	string	Multimedia container format.
clip.videoFormat (required)	object	Video format configuration.
clip.videoFormat.name	string	Video format serialised as a string.
clip.videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
clip.videoFormat.height	number	Height dimension of video format.
clip.videoFormat.width	number	Width dimension of video format.
clip.videoFormat.interlaced	boolean	Is the display format interlaced?
clip.startTimecode	string	Start timecode of the clip serialised as string
clip.durationTimecode	string	Duration of the clip in timecode format serialised as string
clip.frameCount	integer	Number of frames in clip; duration of the clip in frames

System Control API

API for controlling the System Modes on Blackmagic Design products.

GET /system

Get device system information.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codecFormat	object	
codecFormat.codec	string	Currently selected codec.
codecFormat.container	string	Multimedia container format.
videoFormat (required)	object	Video format configuration.
videoFormat.name	string	Video format serialised as a string.
videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
videoFormat.height	number	Height dimension of video format.
videoFormat.width	number	Width dimension of video format.
videoFormat.interlaced	boolean	Is the display format interlaced?

GET /system/product

Get device product information.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
deviceName	string	Name of device as displayed in Setup
productName	string	Device's product name
softwareVersion	string	Software version running on device

GET /system/supportedCodecFormats

Get the list of supported codecs.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codecs	array	
codecs[i]	object	
codecs[i].codec	string	Currently selected codec.
codecs[i].container	string	Multimedia container format.

GET /system/codecFormat

Get the currently selected codec.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codec	string	Currently selected codec.
container	string	Multimedia container format.

PUT /system/codecFormat

Set the codec.

Parameters

Name	Type	Description
codec	string	Currently selected codec.
container	string	Multimedia container format.

Response

204 - The codec updated successfully.

GET /system/videoFormat

Get the currently selected video format.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
name	string	Video format serialised as a string.
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

PUT /system/videoFormat

Set the timeline video format. Deprecated, use PUT /timelines/0/videoFormat instead.

Parameters

This parameter can be one of the following types:

Name	Type	Description
name	string	Video format serialised as a string.

Name	Type	Description
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

Response

204 - The video format updated successfully.

400 - Invalid request.

409 - Operation unsupported in the current state.

Media Control API

API for controlling media devices in Blackmagic Design products.

GET /media/workingset

Get the list of media devices currently in the working set.

Response

200 - The list of media devices in the working set. Entries are null if there is no media device in that slot.

The response is a JSON object.

Name	Type	Description
size	integer	The fixed size of this device's working set
workingset (required)	array	
workingset[i]	object	
workingset[i].index	integer	Index of this media in the working set
workingset[i].activeDisk	boolean	Is this current item the active disk
workingset[i].volume	string	Volume name
workingset[i].deviceName	string	Internal device name of this media device
workingset[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
workingset[i].totalSpace	integer	Total space on media device in bytes
workingset[i].remainingSpace	integer	Remaining space on media device in bytes
workingset[i].clipCount	integer	Number of clips currently on the device

GET /media/active

Get the currently active media device.

Response

200 - The current active media device.

The response is a JSON object.

Name	Type	Description
workingsetIndex	integer	Working set index of the active media device
deviceName	string	Internal device name of this media device

204 - No media is currently active

PUT /media/active

Set the currently active media device.

Parameters

Name	Type	Description
workingsetIndex	integer	Working set index of the media to become active

Response

204 - The active media device was set successfully.

400 - Setting the currently active media device is not possible in the current state.

GET /media/devices/doformatSupportedFilesystems

Get the list of filesystems available to format the device.

Response

200 - The list of filesystems permitted for formatting.

The response is a JSON object.

GET /media/devices/{deviceName}

Get information about a requested device.

Parameters

Name	Type	Description
{deviceName}	string	

Response

200 - Information about the requested device.

The response is a JSON object.

Name	Type	Description
state	string	The current state of the media device. Possible values are: None, Scanning, Mounted, Uninitialised, Formatting, RaidComponent.

400 - Invalid device name

404 - Device not found

GET /media/devices/{deviceName}/doformat

Get a format key, used to format the device with a PUT request.

Parameters

Name	Type	Description
{deviceName}	string	

Response

200 - Format prepared

The response is a JSON object.

Name	Type	Description
deviceName	string	Internal device name of this media device
key	string	The key used to format this device, it must be fetched with the GET request and then provided back with a PUT request

400 - Cannot format the device

404 - Device not found

PUT /media/devices/{deviceName}/doformat

Perform a format of the media device.

Parameters

Name	Type	Description
{deviceName}	string	

Name	Type	Description
key	string	The key used to format this device, it must be fetched with the GET request and then provided back with a PUT request
filesystem	string	Filesystem to format to. GET doFormatSupportedFilesystems returns list of supported filesystems.
volume	string	Volume name to set for the disk after format

Response

204 - Format successful

400 - Cannot format the device, invalid filesystem or key

404 - Device not found

Timeline Control API

API for controlling playback timeline.

GET /timelines/0

Get the playback timeline.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clips	array	
clips[i]	object	
clips[i].clipUniqueId	integer	Unique identifier used to identify this media clip. If the same media clip is added to the timeline multiple times, each timeline clip has the same clipUniqueId
clips[i].frameCount	integer	Duration of timeline clip in frames, the number of frames in this clip on the timeline
clips[i].durationTimecode	string	Duration of the timeline clip in timecode format serialised as string. This will differ to durationTimecode reported in /clips for this clipUniqueId if clipIn or frameCount was specified when adding this clip to the timeline.
clips[i].clipIn	string	In frame offset for the clip on the timeline, where 0 is the first frame of the on-disk clip
clips[i].inTimecode	string	Clip timecode of the first frame of this timeline clip serialised as string (clip startTimecode + clipIn frames)
clips[i].timelineIn	string	Timeline position of the first frame of this clip, where 0 is the first frame of the timeline
clips[i].timelineInTimecode	string	Timeline timecode of the first frame of this timeline clip serialised as string

Response

404 - No timeline / disk available.

DELETE /timelines/0

Clear the current playback timeline. Deprecated, prefer to use POST /timelines/0/clear

Response

204 - The timeline was cleared.

POST /timelines/0

Add a clip to the timeline.

Parameters

Name	Type	Description
insertBefore	integer	Clip(s) will be inserted before this timeline clip index. If omitted, inserts to the end of the timeline. 0 inserts to the beginning of the timeline.
clips		

Response

204 - The clip was added to the timeline as specified.

POST /timelines/0/add

Add a clip to the end of the timeline. Deprecated, use POST /timelines/0 to add clips within the timeline.

Parameters

This parameter can be one of the following types:

Name	Type	Description
clips	integer	Unique ID (clipUniqueId) of the clip to add to the timeline

Name	Type	Description
clips	array	
clips[i]	integer	Unique ID (clipUniqueId) of the clip to add to the timeline

Response

204 - The clip was added to the end of the timeline.

DELETE /timelines/0/clear

Clear the playback timeline.

Response

204 - The timeline was cleared.

DELETE /timelines/0/clips/{timelineClipIndex}

Remove the specified clip from the timeline.

Parameters

Name	Type	Description
{timelineClipIndex}	integer	

Response

204 - The specified clip was removed from the timeline.

Event Control API

API For working with built-in websocket.

GET /event/list

Get the list of events that can be subscribed to using the websocket API.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
events	array	
events[i]	string	List of events that can be subscribed to using the websocket API

Clips Control API

API for listing clips on disk.

GET /clips

Get the list of clips on the active disk.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clips	array	
clips[i]	object	
clips[i].clipUniqueId	integer	Unique ID used to identify this clip
clips[i].filePath	string	Path to the file relative to the root of a mount
clips[i].fileSize	integer	Size of file on disk in bytes
clips[i].codecFormat	object	
clips[i].codecFormat.codec	string	Currently selected codec.
clips[i].codecFormat.container	string	Multimedia container format.
clips[i].videoFormat (required)	object	Video format configuration.
clips[i].videoFormat.name	string	Video format serialised as a string.
clips[i].videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
clips[i].videoFormat.height	number	Height dimension of video format.
clips[i].videoFormat.width	number	Width dimension of video format.
clips[i].videoFormat.interlaced	boolean	Is the display format interlaced?
clips[i].startTimecode	string	Start timecode of the clip serialised as string
clips[i].durationTimecode	string	Duration of the clip in timecode format serialised as string
clips[i].frameCount	integer	Number of frames in clip; duration of the clip in frames

Response

404 - There is no active disk

HyperDeck Control API

API for controlling HyperDecks.

POST /system/reboot

Reboots the device.

Response

204 - The device will reboot immediately.

409 - Rebooting is not possible in the current state.

GET /system/uptime

Gets the current system uptime.

Response

200 - The current system uptime

The response is a JSON object.

Name	Type	Description
uptimeSeconds	integer	The system uptime in seconds

PUT /system/identify

Sets the identify mode. If set to true, will exit identify mode after 10 seconds.

Parameters

Name	Type	Description
enabled	boolean	Is the device identifying itself?

Response

204 - Identify updated successfully.

GET /transports/0/recordCache

Gets information about the recording cache.

Response

200 - Current information about the recording cache

The response is a JSON object.

Name	Type	Description
status	string	The current status of the cache. “none” means no cache is detected by the device. Possible values are: undetected, unformatted, idle, transferring, queued, recording, disabled.
remainingRecordingTime	integer	The remaining recording time in seconds.
transferringDevice	string	The device name of the disk the cache is currently transferring to.

GET /transports/0/recordCache/enabled

Checks if the record cache is enabled.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
enabled	boolean	Is the record cache enabled?

PUT /transports/0/recordCache/enabled

Enables or disables the record cache. Has no effect if cache is not supported / installed / formatted.

Parameters

Name	Type	Description
enabled	boolean	Is the record cache enabled?

Response

204 - Record cache enabled / disabled was changed.

GET /transports/0/record/spillOrder

Gets media devices in order of which will next be spilled to.

Response

200 - The media device spill order

The response is a JSON object.

Name	Type	Description
devices	array	
devices[i]	object	
devices[i].deviceName	string	Internal device name of the drive.

POST /transports/0/record/spillToNewFile

Spills to a new file.

Response

204 - Spilled to a new file.

POST /transports/0/record/spillToNextDevice

Spills to the next media device

Response

204 - Spilled to the specified drive.

GET /transports/0/inputVideoFormat

Gets the video format of the input video signal.

Response

200 - The video format of the input video signal. “inputVideoFormat” is null when there is no timeline.

The response is a JSON object.

Name	Type	Description
inputVideoFormat (required)	object	Video format configuration.
inputVideoFormat.name	string	Video format serialised as a string.
inputVideoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
inputVideoFormat.height	number	Height dimension of video format.
inputVideoFormat.width	number	Width dimension of video format.
inputVideoFormat.interlaced	boolean	Is the display format interlaced?

GET /transports/0/supportedInputVideoSources

Gets the currently supported input video signal sources.

Response

200 - The supported input video signal sources.

The response is a JSON object.

Name	Type	Description
supportedInputVideoSources	array	
supportedInputVideoSources[i]	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

GET /transports/0/inputVideoSource

Gets the source of the input video signal.

Response

200 - The input video signal source. The source will be one in the list from GET /transports/0/supportedInputVideoSources.

The response is a JSON object.

Name	Type	Description
inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

PUT /transports/0/inputVideoSource

Sets the source of the input video signal.

Parameters

Name	Type	Description
inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

Response

204 - The source of the input video signal was set successfully.

400 - The source specified was invalid or unsupported.

GET /timelines/0/playRange

Gets the current timeline play range. playRange is null if playing the whole timeline, or there is no play range.

Response

200 - The current timeline play range.

The response is a JSON object.

Name	Type	Description
playRange		

PUT /timelines/0/playRange

Sets the timeline play range.

Parameters

Name	Type	Description
playRange		

Response

204 - The timeline play range was set successfully.

POST /timelines/0/playRange/clear

Clears the timeline play range, sets the play range to be the whole timeline.

Response

204 - The timeline play range was cleared successfully.

GET /timelines/0/videoFormat

Gets the video format of the timeline.

Response

200 - The video format of the timeline. “videoFormat” is null when there is no timeline.

The response is a JSON object.

Name	Type	Description
videoFormat (required)	object	Video format configuration.
videoFormat.name	string	Video format serialised as a string.
videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
videoFormat.height	number	Height dimension of video format.
videoFormat.width	number	Width dimension of video format.
videoFormat.interlaced	boolean	Is the display format interlaced?

PUT /timelines/0/videoFormat

Sets the video format of the timeline.

Parameters

This parameter can be one of the following types:

Name	Type	Description
name	string	Video format serialised as a string.

Name	Type	Description
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

Response

204 - The timeline video format was set successfully.

400 - The requested video format was invalid.

409 - The video format cannot be changed at this time.

POST /timelines/0/rebuild

Rebuilds the timeline with default rules in the current timeline format.

Response

204 - The timeline was rebuilt with default rules.

GET /media/external

Gets the list of present external media devices.

Response

200 - The list of present external media devices

The response is a JSON object.

Name	Type	Description
devices	array	
devices[i] (required)	object	
devices[i].volume	string	Volume name
devices[i].deviceName	string	Internal device name of this media device
devices[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
devices[i].totalSpace	integer	Total space on media device in bytes
devices[i].remainingSpace	integer	Remaining space on media device in bytes
devices[i].clipCount	integer	Number of clips currently on the device

GET /media/external/selected

Gets the current selected external media device.

Response

200 - The selected external media device

The response is a JSON object.

Name	Type	Description
selected	object	
selected.deviceName	string	Internal device name of the drive.

404 - No selected external media has been selected

PUT /media/external/selected

Sets the current selected external media device.

Parameters

Name	Type	Description
selected	object	
selected.deviceName	string	Internal device name of the drive.

Response

204 - The selected external media device was set successfully.

GET /media/nas/discovered

Gets the NAS hosts discoverable by the device.

Response

200 - The list of discovered NAS hosts

The response is a JSON object.

Name	Type	Description
hosts	array	
hosts[i]	object	
hosts[i].hostName	string	The hostname of the NAS host
hosts[i].friendlyName	string	The friendly name of the NAS host
hosts[i].ip	string	The IP address of the NAS host

GET /media/nas/bookmarks

Gets all NAS share bookmarks.

Response

200 - The list of NAS share bookmarks

The response is a JSON object.

Name	Type	Description
hosts	array	
hosts[i] (required)	object	
hosts[i].url	string	URL of the NAS share

POST /media/nas/bookmarks

Add a new NAS share bookmarks.

Parameters

Response

204 - The NAS bookmark was added successfully.

400 - The NAS bookmark could not be added.

GET /media/nas/bookmarks/{url}

Get information about a requested network share bookmark.

Parameters

Name	Type	Description
{url}	string	

Response

200 - Information about the requested network share bookmark.

The response is a JSON object.

Name	Type	Description
url	string	URL of the NAS share

404 - Network share bookmark not found

PUT /media/nas/bookmarks/{url}

Adds a bookmark with the requested URL.

Parameters

Name	Type	Description
{url}	string	

Name	Type	Description
username	string	Default value is: guest.
password	string	

Response

204 - The NAS bookmark has been created.

400 - The NAS bookmark could not be created.

DELETE /media/nas/bookmarks/{url}

Deletes a bookmark with the requested URL.

Parameters

Name	Type	Description
{url}	string	

Response

204 - The NAS bookmark has been deleted.

GET /media/nas/selected

Gets the currently selected share bookmark.

Response

200 - Information about the selected network share bookmark.

The response is a JSON object.

Name	Type	Description
selected	object	
selected.url	string	URL of the NAS share

404 - No NAS drive has been selected.

PUT /media/nas/selected

Sets the selected share bookmark to the requested bookmark, or clears the bookmark.

Parameters

Name	Type	Description
selected	object	
selected.url	string	URL of the NAS share

Response

204 - The selected NAS bookmark was set.

400 - The selected NAS bookmark could not be set.

Notification websocket - 1.0.0

Service that notifies subscribers of device state changes.

messages

Subscribe (The messages from the server/device)

Response Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: subscribe, unsubscribe, listSubscriptions, listProperties, websocketOpened .
.data.properties	array	
.data.properties[i]	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.values	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.data.success	boolean	
.type	string	Possible values are: response .
.id	number	Optional parameter that repeats the id in the output for tracking messages

Event Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: propertyValueChanged .
.data.property	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.value	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.type	string	Possible values are: event .

Publish (The messages that user can send to the server/device)

Response Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: subscribe, unsubscribe, listSubscriptions, listProperties, websocketOpened .
.data.properties	array	
.data.properties[i]	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.values	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.data.success	boolean	
.type	string	Possible values are: response .
.id	number	Optional parameter that repeats the id in the output for tracking messages

Device Properties

/media/workingset

The value JSON returned via the eventResponse when the /media/workingset property changes on the device:

Name	Type	Description
size	integer	The fixed size of this device's working set
workingset (required)	array	
workingset[i]	object	
workingset[i].index	integer	Index of this media in the working set
workingset[i].activeDisk	boolean	Is this current item the active disk
workingset[i].volume	string	Volume name
workingset[i].deviceName	string	Internal device name of this media device
workingset[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
workingset[i].totalSpace	integer	Total space on media device in bytes
workingset[i].remainingSpace	integer	Remaining space on media device in bytes
workingset[i].clipCount	integer	Number of clips currently on the device

/media/active

The value JSON returned via the eventResponse when the /media/active property changes on the device:

Name	Type	Description
.workingsetIndex	integer	Working set index of the active media device
.deviceName	string	Internal device name of this media device

/system

The value JSON returned via the eventResponse when the /system property changes on the device:

Name	Type	Description
.codecFormat	object	Currently selected codec
.codecFormat.codec	string	Currently selected codec
.codecFormat.container	string	Multimedia container format
.videoFormat	string	Name of the video format

/system/codecFormat

Currently selected codec

The value JSON returned via the eventResponse when the /system/codecFormat property changes on the device:

Name	Type	Description
.codec	string	Currently selected codec
.container	string	Multimedia container format

/system/videoFormat

Name of the video format

The value JSON returned via the eventResponse when the /system/videoFormat property changes on the device:

Name	Type	Description

/timelines/0

The value JSON returned via the eventResponse when the /timelines/0 property changes on the device:

Name	Type	Description
.clips	array	
.clips[i]	object	
.clips[i].clipUniqueId	integer	Unique identifier used to identify this media clip. If the same media clip is added to the timeline multiple times, each timeline clip has the same clipUniqueId
.clips[i].frameCount	integer	Duration of timeline clip in frames, the number of frames in this clip on the timeline
.clips[i].durationTimecode	string	Duration of the timeline clip in timecode format serialised as string. This will differ to durationTimecode reported in /clips for this clipUniqueId if clipIn or frameCount was specified when adding this clip to the timeline.
.clips[i].clipIn	string	In frame offset for the clip on the timeline, where 0 is the first frame of the on-disk clip
.clips[i].inTimecode	string	Clip timecode of the first frame of this timeline clip serialised as string (clip startTimecode + clipIn frames)
.clips[i].timelineIn	string	Timeline position of the first frame of this clip, where 0 is the first frame of the timeline
.clips[i].timelineInTimecode	string	Timeline timecode of the first frame of this timeline clip serialised as string

/transports/0

The value JSON returned via the eventResponse when the /transports/0 property changes on the device:

Name	Type	Description
.mode	string	Transport mode Possible values are: InputPreview, InputRecord, Output .

/transports/0/stop

true when transport mode is InputPreview or when in Output mode and speed is 0

The value JSON returned via the eventResponse when the /transports/0/stop property changes on the device:

Name	Type	Description

/transports/0/play

True when transport is in Output mode and speed is non-zero

The value JSON returned via the eventResponse when the /transports/0/play property changes on the device:

Name	Type	Description

/transports/0/playback

The value JSON returned via the eventResponse when the /transports/0/playback property changes on the device:

Name	Type	Description
.type	string	Possible values are: Play, Jog, Shuttle, Var .
.loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
.singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
.speed	number	Playback speed, 1.0 for normal forward playback
.position	integer	Playback position on the timeline in units of video frames

/transports/0/record

The value JSON returned via the eventResponse when the /transports/0/record property changes on the device:

Name	Type	Description
.recording	boolean	Is transport in Input Record mode

/transports/0/timecode

The value JSON returned via the eventResponse when the /transports/0/timecode property changes on the device:

Name	Type	Description
display	string	The display timecode serialised as a string.
timeline	string	The timeline timecode serialised as a string.

/transports/0/timecode/source

The value JSON returned via the eventResponse when the /transports/0/timecode/source property changes on the device:

Name	Type	Description
.timecode	string	Possible values are: Timeline, Clip .

/transports/0/clipIndex

The value JSON returned via the eventResponse when the /transports/0/clipIndex property changes on the device:

Name	Type	Description
.clipIndex	number	The 0-based index of the clip being played on the timeline. null when there is no timeline or an empty timeline.

/media/external

The value JSON returned via the eventResponse when the /media/external property changes on the device:

Name	Type	Description
.volume	string	Volume name
.deviceName	string	Name of media device
.remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
.totalSpace	integer	Total space on media device in bytes
.remainingSpace	integer	Remaining space on media device in bytes
.clipCount	integer	Number of clips currently on the device

/media/external/selected

The value JSON returned via the eventResponse when the /media/external/selected property changes on the device:

Name	Type	Description
.deviceName	string	Internal device name of this media device

/transports/0/inputVideoSource

The value JSON returned via the eventResponse when the /transports/0/inputVideoSource property changes on the device:

Name	Type	Description
.inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite .

/transports/0/inputVideoFormat

The value JSON returned via the eventResponse when the /transports/0/inputVideoFormat property changes on the device:

Name	Type	Description
.inputVideoFormat	string	Name of the video format

/timelines/0/videoFormat

The value JSON returned via the eventResponse when the /timelines/0/videoFormat property changes on the device:

Name	Type	Description
.videoFormat	string	Name of the video format

/media/nas/discovered

The value JSON returned via the eventResponse when the /media/nas/discovered property changes on the device:

Name	Type	Description
.hostName	string	Hostname of external network drive
.friendlyName	string	Name of external network drive
.ip	string	IP Address of external network drive

/media/nas/bookmarks

The value JSON returned via the eventResponse when the /media/nas/bookmarks property changes on the device:

Name	Type	Description
.hosts	array	
.hosts[i]	object	
.hosts[i].url	string	URL associated with bookmark

Assistenza

Ottenere assistenza

Il modo più veloce per ottenere assistenza è consultare il materiale di riferimento più recente alla pagina Supporto del sito di Blackmagic Design.

Supporto online Blackmagic Design

Il manuale, il software e le note di supporto più recenti sono disponibili alla pagina www.blackmagicdesign.com/it/support

Blackmagic Forum

Il Blackmagic Forum sul nostro sito web è un'ottima risorsa per ottenere informazioni utili e condividere idee creative. Qui trovi le risposte alle domande più frequenti, oltre ai consigli forniti da utenti esperti e dal team Blackmagic Design. Visita il Forum alla pagina https://forum.blackmagicdesign.com

Contattare Blackmagic Design

Se il materiale di supporto disponibile e il Blackmagic Forum non rispondono alle tue domande, clicca su **Invia una email** o su **Trova un team di supporto** per contattare direttamente il team di Blackmagic Design più vicino a te.

Verificare la versione del software

Per verificare quale versione del software HyperDeck è installata sul tuo computer, lancia Blackmagic HyperDeck Setup.

- Su Mac OS, apri la cartella **Applicazioni** e seleziona **Blackmagic HyperDeck Setup**. Il numero della versione del software è indicato nel menù **About Blackmagic HyperDeck Setup**.
- Su Windows, seleziona **Blackmagic HyperDeck Setup** dal menù **Start** o dalla schermata iniziale. Clicca su **Help** e seleziona **About Blackmagic HyperDeck Setup** per leggere il numero della versione del software.

Scaricare gli aggiornamenti software

Dopo aver verificato quale versione del software HyperDeck è installata sul tuo computer, visita il Centro assistenza di Blackmagic Design su www.blackmagicdesign.com/it/support per scaricare gli ultimi aggiornamenti. Consigliamo di non aggiornare il software in pieno svolgimento di un progetto importante.

Normative

Smaltimento di apparecchiature elettriche ed elettroniche nell'Unione Europea



Questo simbolo indica che il dispositivo non deve essere scartato insieme agli altri rifiuti, ma consegnato a uno degli appositi centri di raccolta e riciclaggio. La raccolta e lo smaltimento differenziato corretto di questo tipo di apparecchiatura evita lo spreco di risorse e contribuisce alla sostenibilità ambientale e umana. Per tutte le informazioni sui centri di raccolta e riciclaggio, contatta gli uffici del tuo comune di residenza o il punto vendita presso cui hai acquistato il prodotto.



Questo dispositivo è stato testato e dichiarato conforme ai limiti relativi ai dispositivi digitali di Classe A, ai sensi dell'articolo 15 del regolamento FCC. Tali limiti sono stati stabiliti con lo scopo di fornire protezione ragionevole da interferenze dannose in ambienti commerciali. Questo dispositivo genera, usa e può irradiare energia a radiofrequenza e, se non è installato o usato in conformità alle istruzioni, può causare interferenze dannose che compromettono le comunicazioni radio. Operare questo dispositivo in ambienti residenziali può causare interferenze dannose, nella cui evenienza l'utente dovrà porvi rimedio a proprie spese.

Il funzionamento è soggetto alle due condizioni seguenti:

1. Questo dispositivo non deve causare interferenze dannose.
2. Questo dispositivo deve accettare eventuali interferenze ricevute, incluse le interferenze che possono causare un funzionamento indesiderato.



R-R-BMD-20211410001

Dichiarazione ISED (Canada)



Questo dispositivo è conforme agli standard canadesi sui dispositivi digitali di Classe A.

Qualsiasi modifica o utilizzo del dispositivo al di fuori di quello previsto potrebbero invalidare la conformità a tali standard.

Connettere le interfacce HDMI usando cavi schermati HDMI di alta qualità.

Questo dispositivo è stato testato per l'uso in ambienti commerciali. Se utilizzato in ambienti domestici, può causare interferenze radio.

Sicurezza

Questo dispositivo è adatto all'uso nei luoghi tropicali con una temperatura ambiente non superiore ai 40°C.

Lasciare uno spazio adeguato intorno al dispositivo per consentire sufficiente ventilazione.

Le parti all'interno del dispositivo non sono riparabili dall'utente. Contattare un centro assistenza Blackmagic Design per le operazioni di manutenzione.



Usare il dispositivo a un'altitudine non superiore a 2000 m sopra il livello del mare.

Dichiarazione dello Stato della California

Questo dispositivo può esporre l'utente a sostanze chimiche, per esempio tracce di bifenili polibromurati nelle parti in plastica, che nello Stato della California sono considerati causa di cancro e difetti congeniti o altri danni riproduttivi.

Per maggiori informazioni, visitare www.P65Warnings.ca.gov

European Office

Blackmagic Design B.V, Amsterdam
Sloterdijk Teleport Towers Office 2.17,
Kingsfordweg 151,
Amsterdam, 1043GR.

Garanzia

Garanzia limitata di 12 mesi

Blackmagic Design garantisce che questo prodotto è fornito privo di difetti nei materiali e nella manifattura per un periodo di 12 mesi a partire dalla data d'acquisto. Durante il periodo di garanzia, Blackmagic Design, a sua scelta, riparerà il prodotto difettoso senza alcun costo per le parti o la manodopera, o sostituirà il prodotto purché questo venga restituito dal/la Cliente.

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Julho 2024

Manual de Instalação e Operação

Blackmagicdesign

HyperDeck Shuttle HD



HyperDeck Shuttle HD



Prezado cliente,

Obrigado por adquirir um gravador de disco Blackmagic HyperDeck Shuttle HD.

Quando criamos os gravadores de disco Blackmagic HyperDeck originais, nossa intenção era facilitar a gravação e reprodução de vídeos utilizando mídias SSD rápidas. Agora, temos o orgulho de apresentar o HyperDeck Shuttle HD.

O HyperDeck Shuttle HD é um gravador de vídeo HDMI compacto e portátil, desenvolvido para uso em mesa. O seletor de busca grande e os controles de transporte familiares permitem que você opere o gravador com uma mão só, o que torna o HyperDeck Shuttle HD a companhia perfeita para produção ao vivo com um switcher ATEM Mini. Você pode inclusive utilizar o HyperDeck Shuttle HD como um teleprômpter.

O HyperDeck Shuttle HD grava em cartões SD ou discos flash externos usando codecs ProRes, DNxHD ou H.264 para gravação e reprodução ultrarrápidas.

Consulte a página de suporte em www.blackmagicdesign.com/br para obter a versão mais recente deste manual e das atualizações do software HyperDeck. Para garantir que você receba todos os recursos mais recentes, mantenha o seu programa atualizado. Ao baixar o software, registre suas informações para que possamos mantê-lo atualizado quando novos programas forem lançados. Estamos sempre trabalhando com novos recursos e aprimoramentos, então adoraríamos ouvir a sua opinião.



Grant Petty
Diretor-Executivo da Blackmagic Design

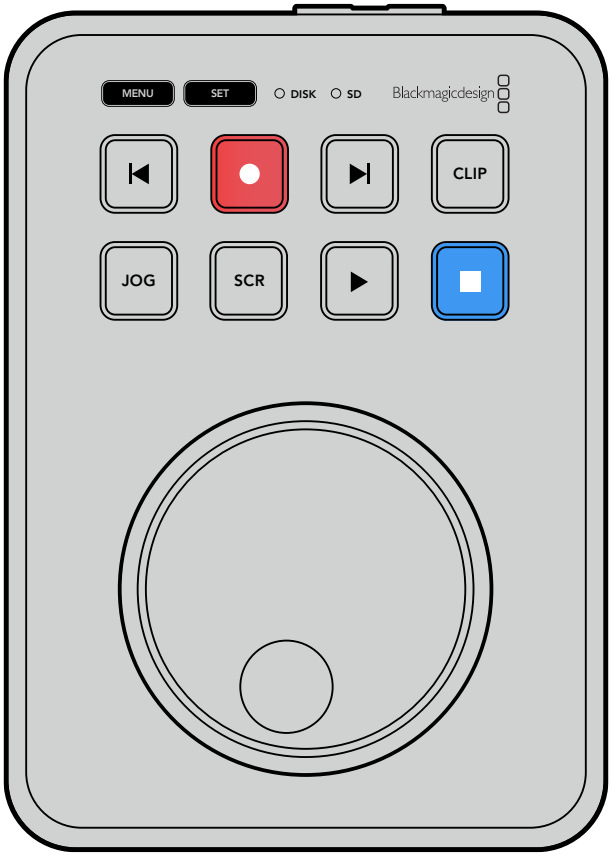
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Primeiros Passos

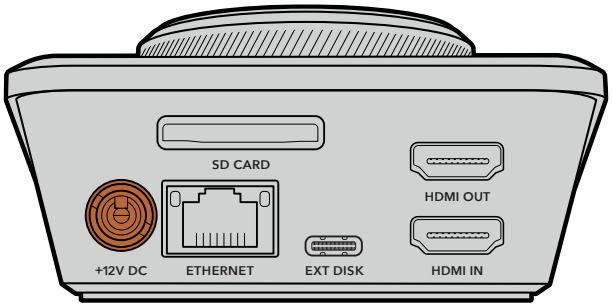
Para começar a usar o seu HyperDeck Shuttle HD, basta conectar a alimentação, plugar uma fonte de vídeo HDMI, inserir um cartão SD ou mídia externa e pressionar o botão de gravação.

Esta seção do manual mostra como começar a usar o seu HyperDeck Shuttle HD.



Conexão de alimentação

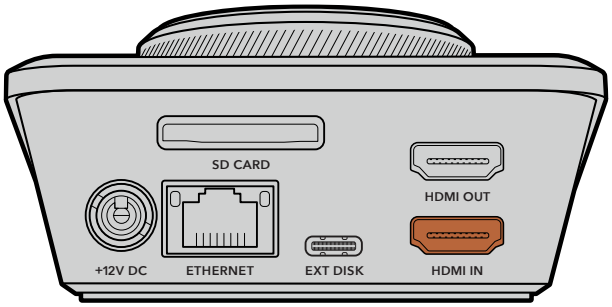
Para alimentar o HyperDeck Shuttle HD, conecte a fonte de alimentação fornecida à entrada de alimentação no painel traseiro. É recomendável utilizar o anel de travamento para fixar o cabo de alimentação e prevenir desconexões acidentais.



Prenda o adaptador de alimentação na entrada de alimentação do HyperDeck Shuttle HD.

Conexão de vídeo e áudio

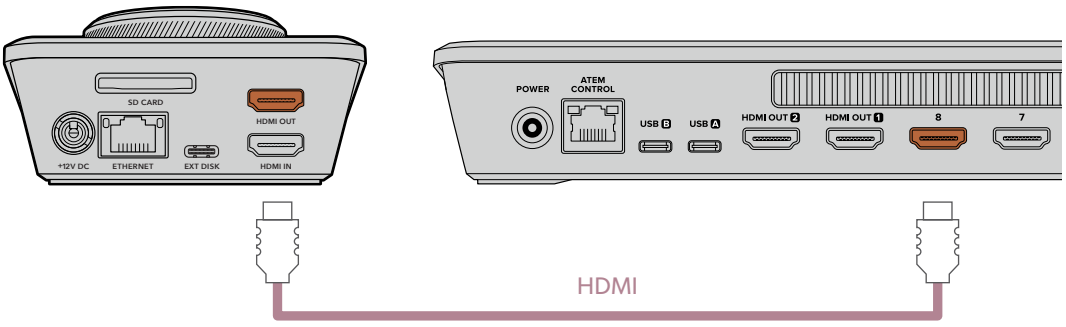
Para conectar vídeo ao HyperDeck Shuttle HD, plugue uma fonte de vídeo HDMI na entrada HDMI no painel traseiro.



Conecte o seu equipamento de destino na saída HDMI. Por exemplo, um switcher ATEM Mini ou uma televisão HDMI.

A saída HDMI também é usada para visualizar o menu de configurações ao alterar definições no seu HyperDeck. Isso ocorre porque o menu de configurações é visualizado através de uma sobreposição de vídeo na saída HDMI. Para mais informações sobre o menu de configurações, consulte a seção “Alterar Configurações” deste manual.

DICA Caso não consiga visualizar sua fonte de entrada de vídeo na tela conectada, é possível que você esteja no modo de reprodução. Pressione o botão de gravação para habilitar o modo de gravação.



Conecte a saída HDMI ao equipamento de destino, como uma televisão HDMI ou um switcher ATEM Mini.

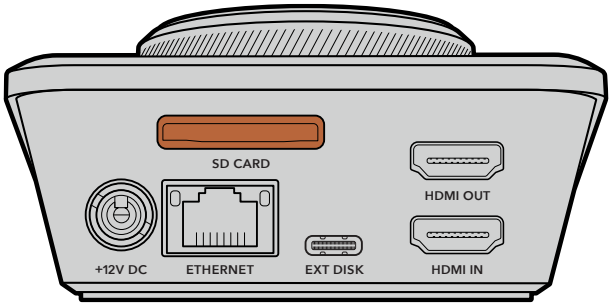
Conexão de mídias

Todos os gravadores de disco HyperDeck Shuttle HD são comercializados prontos para gravar imediatamente sem precisar ajustar nenhuma configuração. Tudo que você precisa é de um cartão SD ou disco externo formatado.

Você pode formatar mídias facilmente através das configurações do menu. Você também pode formatar usando um computador. Para mais informações, consulte a seção ‘Formatar Mídias’ neste manual. Você também pode encontrar informações sobre os tipos de mídia mais indicados para gravar vídeos e uma lista de cartões SD e discos externos recomendados.

Para plugar um cartão SD:

1. Segure o cartão SD com os conectores dourados voltados para cima e alinhe-o com o compartimento de mídia. Agora, insira o cartão no compartimento cuidadosamente até que ele se encaixe firmemente no lugar.



2 O HyperDeck verificará o cartão SD. O indicador verde “SD” acenderá na parte superior do HyperDeck Shuttle HD. Após a verificação, o indicador desligará.



Seu HyperDeck Shuttle HD está pronto para gravar e reproduzir!

Continue lendo este manual para obter informações detalhadas sobre como gravar e reproduzir clipes, alterar configurações e muito mais.

Gravação de Vídeo

Depois de confirmar que sua fonte de vídeo está sendo exibida no equipamento HDMI de destino, você pode começar a gravar imediatamente.

Para iniciar a gravação, pressione o botão de gravação. Ao gravar em um cartão SD, o indicador SD acenderá em vermelho. Os botões de gravação e reprodução também acenderão. Ao gravar em um disco externo, o indicador de disco acenderá em vermelho.

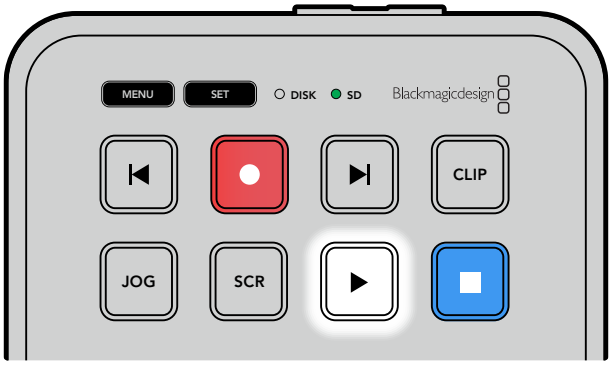


Pressione o botão “Stop” para finalizar a gravação.

Reprodução

Pressione o botão “Play” para iniciar a reprodução. Durante a reprodução, o botão “Play” acenderá e o indicador de compartimento de mídia “Disk” ou “SD” acenderá em verde.

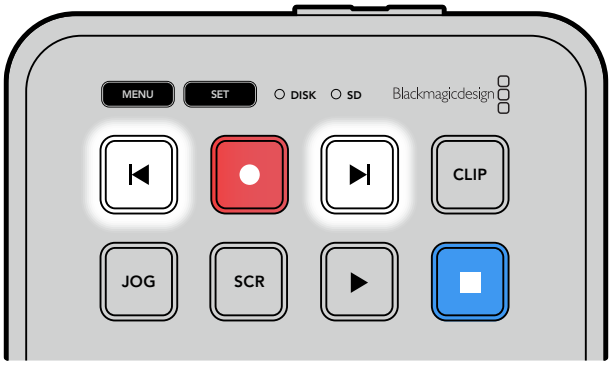
Se houver vários clipes gravados, você pode alternar entre eles pressionando os botões de avanço e retrocesso.



Usar os botões Skip

Pressione o botão de retrocesso para saltar ao início do clipe. Pressionar mais de uma vez navegará pelos clipes gravados anteriormente.

Pressione o botão de avanço para navegar pelos clipes em avanço. Os botões de avanço e retrocesso também piscarão quando a caixa de seleção “Identify HyperDeck” estiver selecionada no utilitário HyperDeck Setup.



Use os botões de avanço e retrocesso para saltar ao início de cada clipe.

DICA Para reprodução de arquivos de vídeo no seu HyperDeck, você precisará corresponder o codec usado para gravar os arquivos. Isso pode ser feito no menu. Consulte a seção “Alterar Configurações” neste manual para mais informações.

Repetição de clipes

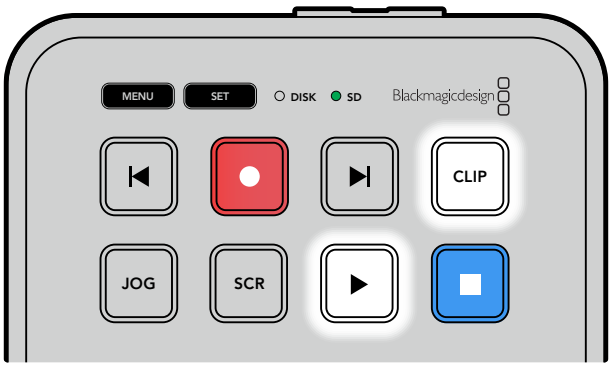
Durante a reprodução, pressionar o botão “Play” novamente configurará o seu HyperDeck Shuttle HD para repetir todos os clipes até que você pressione o botão “Stop”.

Caso deseje repetir um único clipe, configure o seu HyperDeck no modo “Clipe” e pressione o botão “Play” uma vez para reproduzir e novamente para repetir.

Repetir todos	Durante a reprodução, pressione o botão “Play” uma segunda vez para repetir todos os clipes gravados.
Repetir atual	No modo clipe, pressione o botão “Play” uma segunda vez para repetir o clipe atual.

Modo clipe

No modo clipe, é possível restringir a reprodução a um único clipe apenas. Por exemplo, com o modo clipe habilitado, você pode navegar ou pular para um clipe e, em seguida, pressionar “Play” sabendo que a reprodução cessará quando o clipe terminar.



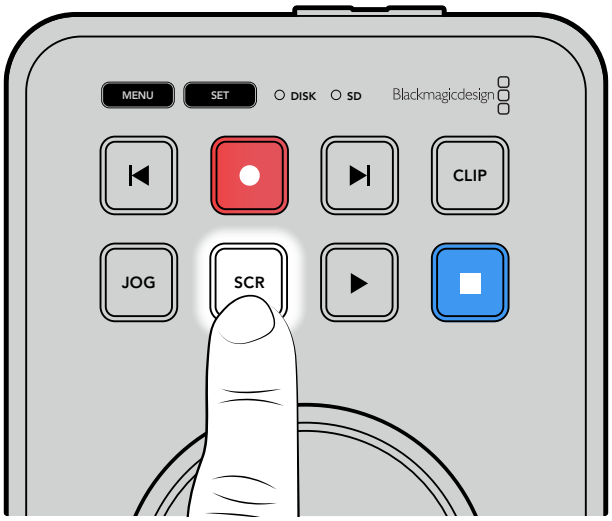
Quando o modo clipe é selecionado, pressionar “Play” uma segunda vez repetirá o clipe atual.

Usar o seletor de busca

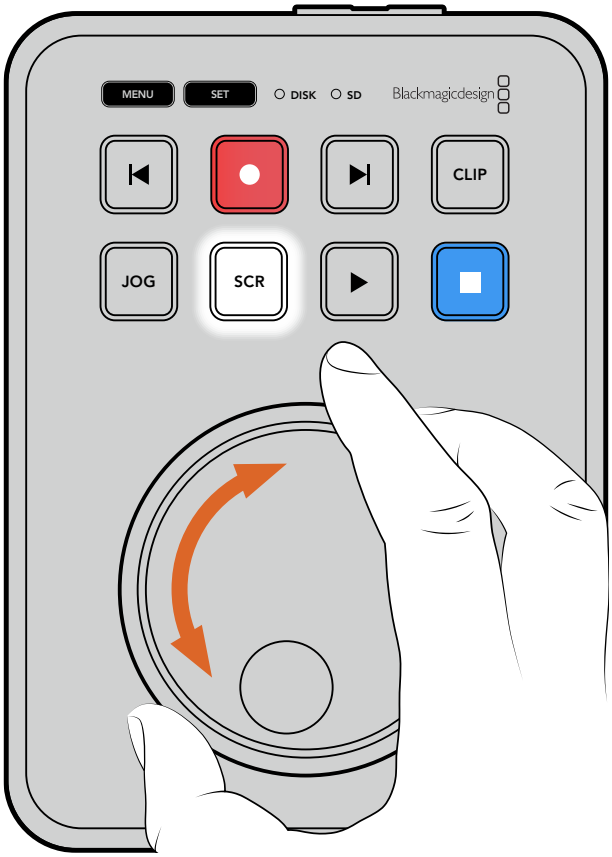
O seletor de busca oferece uma maneira rápida de navegar pelos seus clipes e selecionar momentos específicos para reproduzi-los, ou revisá-los quadro a quadro. Isso pode ser importante caso você precise localizar um momento específico monitorando o clipe visualmente à medida que você gira o seletor. Também é útil para posicionar o cursor de reprodução em um ponto de indicação específico, pronto para colocar o clipe no ar durante uma transmissão ao vivo.

Os modos de busca do seletor são: jog, scroll e shuttle.

JOG	**Jog**	Reproduz o clipe quadro por quadro, oferecendo controle preciso.
SCR	**Scroll**	Este modo de rolagem permite navegar em avanço ou retrocesso por todas as suas mídias gravadas. Conforme você gira o seletor, a rolagem é fixada ao seu movimento, oferecendo controle total sobre o posicionamento da reprodução. O botão scroll também exibirá a janela de navegação de volume que mostra o caminho do arquivo do vídeo que você está reproduzindo no momento. Para mais informações sobre a função de navegação por volume, consulte a seção ‘Navegação por Volume’ neste manual.
JOG SCR	**Shuttle**	Pressione os botões “JOG” e “SCR” simultaneamente para entrar no modo shuttle. No modo shuttle, você pode retroceder ou avançar pela sua mídia girando o seletor para a esquerda ou direita. Conforme você gira o seletor, a mídia se movimenta mais rápido, até a velocidade máxima de 50x. Para reduzir a velocidade de navegação a zero, gire o seletor de volta à posição inicial. Caso deseje parar em um ponto específico durante a navegação, pressione o botão “Stop”; ou pressione “Play” para continuar a reprodução na posição atual. É importante observar que a velocidade máxima de navegação pode ser reduzida no menu de configurações. Para mais informações, consulte a seção “Configurações” neste manual.



Pressione os botões “JOG” ou “SCR” para selecionar os modos de busca jog e scroll.

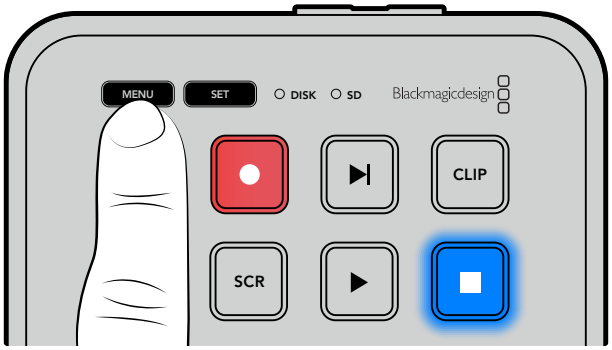


Após selecionar um modo de busca, gire o seletor.

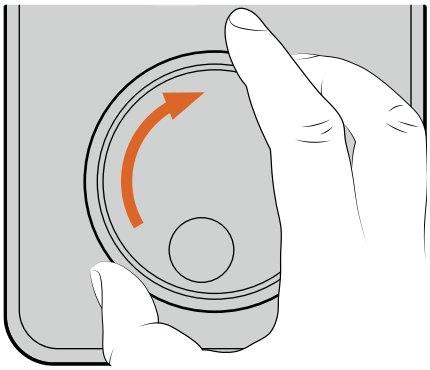
DICA Para retornar à reprodução normal, pressione o botão “Play” ou “Stop”

Alterar Configurações

Pressionar o botão “Menu” abrirá o menu de configurações, que será exibido como uma sobreposição de vídeo no canto inferior esquerdo da tela HDMI conectada.

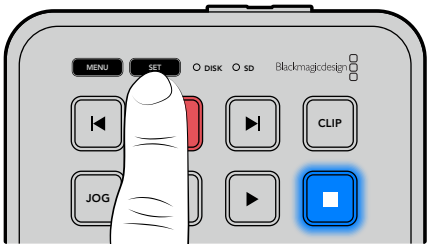


Pressione o botão “Menu” para acessar o menu de configurações.





Use o seletor de busca para navegar até um submenu ou configuração.





Pressione o botão “Set” para selecionar um submenu ou configuração.

Ajuste as configurações usando o seletor de busca ou os botões de avanço e retrocesso. Confirme a seleção pressionando o botão “Set”.

Para sair do menu, pressione “Menu” para retornar pelas opções até a tela inicial.

DICA Você pode posicionar o menu em qualquer um dos quatro cantos da sua tela usando o menu de configurações. Recomendamos desabilitar o menu após alterar as configurações para garantir que a saída HDMI forneça uma alimentação limpa quando conectada a um switcher HDMI, como o ATEM Mini Extreme.

Configurações

O menu de configurações é dividido em cinco categorias diferentes, incluindo Gravação, Monitoramento, Áudio, Armazenamento e Configuração. Cada um desses submenus contém configurações relacionadas, a maioria das quais podem ser ajustadas usando o painel de controle do HyperDeck Shuttle HD. Algumas configurações são exibidas apenas para referência e aparecerão sombreadas, como “Prefixo do Arquivo”, por exemplo. Nestes casos, as configurações podem ser ajustadas através do utilitário HyperDeck Setup.

Menu Gravação



Entrada

Exibe a entrada HDMI do HyperDeck Shuttle HD.

Codec

O HyperDeck Shuttle HD pode gravar vídeos compactados usando codecs H.264, Apple ProRes e DNxHD. Para usar a função de teleprômpter, selecione “Teleprômpter”.

Disparo de Gravação

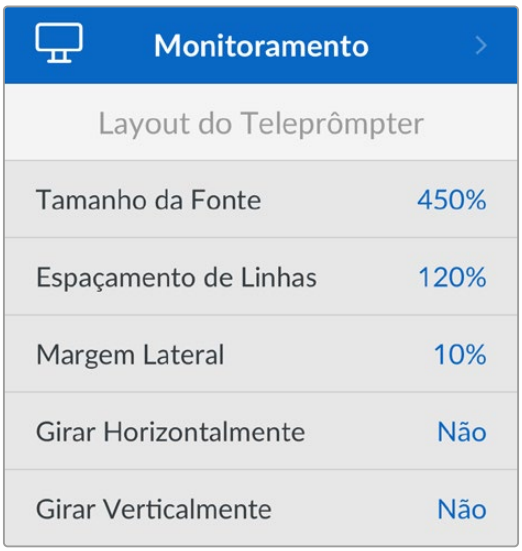
Há dois modos de disparo de gravação disponíveis: “Iniciar/Parar Vídeo” e “Timecode de Execução”.

Algumas câmeras, como a Blackmagic Pocket Cinema Camera 4K, enviam um sinal via HDMI para iniciar e cessar a gravação em gravadores externos. A configuração “Iniciar/Parar Vídeo” acionará o HyperDeck para que inicie ou pare a gravação quando você pressionar o botão de gravação na câmera.

Utilize a opção “Timecode de Execução” para acionar a unidade e iniciar a gravação quando ela receber um sinal de código de tempo válido através da entrada HDMI. Quando o sinal parar, a gravação também irá parar. Você pode desabilitar o disparo de gravação selecionando a opção “Nenhum”.

OBSERVAÇÃO Ao gravar com uma câmera HDMI, certifique-se de que a saída esteja limpa e com as sobreposições desativadas, pois qualquer sobreposição presente na saída de vídeo da sua câmera será gravada com a sua imagem.

Menu Monitoramento



Layout do Teleprômpter

O menu de monitoramento contém todas as configurações necessárias para utilizar o HyperDeck Shuttle HD como um teleprômpter.

Tamanho da Fonte

Ajuste o tamanho do texto selecionando a opção “Tamanho da Fonte” e pressionando “Set”. Gire o seletor no sentido horário para aumentar ou no sentido anti-horário para reduzir.

Espaçamento de Linhas

Gire o seletor para aumentar ou reduzir o espaçamento entre linhas.

Margem Lateral

Ajuste a largura das margens em ambos os lados da tela do teleprômpter.

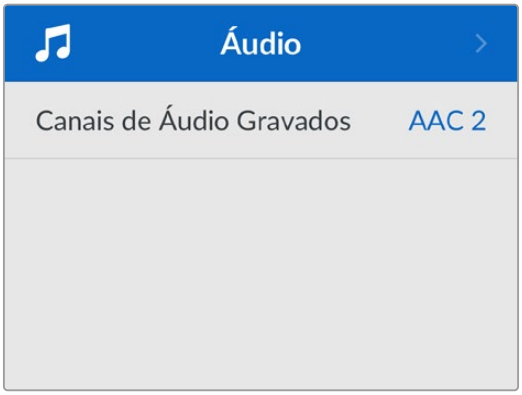
Girar

Se o monitor do seu teleprômpter estiver configurado para refletir em um vidro, por exemplo, diante de uma câmera ou um púlpito, será necessário ajustar as configurações no menu “Girar” para que o texto fique legível para o apresentador. Duas opções estão disponíveis:

Girar Horizontalmente - Utilize essa opção quando a parte inferior do monitor do teleprômpter estiver instalada mais perto da base do vidro.

Girar Verticalmente - Utilize essa opção quando a parte inferior do monitor do teleprômpter estiver instalada mais distante da base do vidro.

Menu Áudio

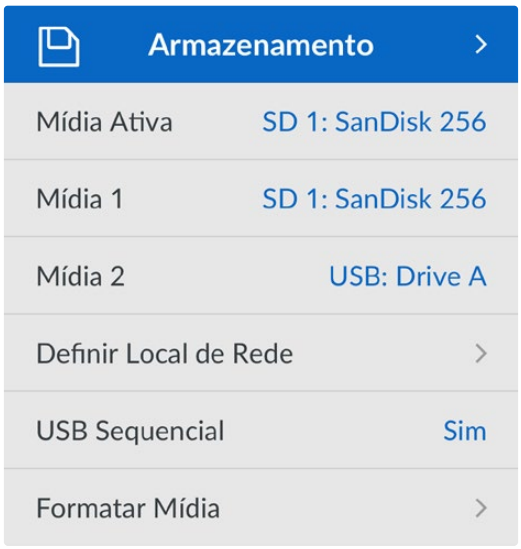


Canais de Áudio Gravados

O HyperDeck Shuttle HD pode gravar até oito canais de áudio PCM por vez. Para selecionar a quantidade de canais para gravação, expanda a lista de canais de áudio gravados e selecione 2, 4 ou 8 canais.

Menu Armazenamento

As mídias conectadas aparecerão nas configurações de armazenamento. Mídia 1 mostrará o nome do cartão SD conectado e Mídia 2 mostrará quaisquer discos flash USB plugados no conector “Ext Disk”. Ao utilizar um hub USB, como a Blackmagic MultiDock 10G, o disco ativo será exibido.



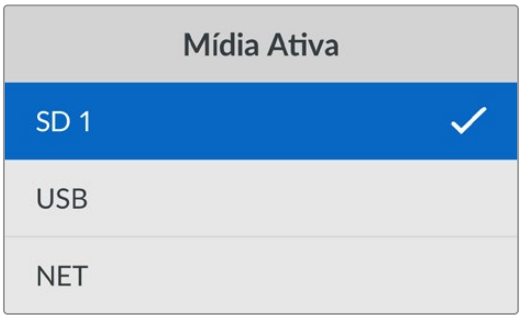
Mídia Ativa

Com os gravadores de disco HyperDeck Shuttle, você pode conectar um cartão SD, vários drives externos e armazenamento em rede ao mesmo tempo e acessar vários terabytes de espaço de gravação, tudo a partir de um gravador de disco HyperDeck Shuttle.

Se você tiver apenas um drive ou cartão SD conectado, essa será a mídia ativa para todas as reproduções e gravações. Se estiver usando mais de um, pode selecionar qual deseja usar para gravação e reprodução.

Para selecionar a mídia ativa:

1. Usando o seletor de busca, selecione “Mídia Ativa” no menu de armazenamento e pressione o botão “Set” piscante.
2. A mídia anexada aparecerá na lista. Use o seletor de busca para selecionar a mídia na qual você deseja gravar.

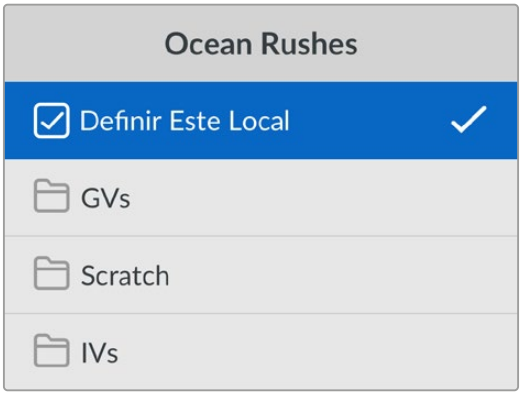


Definir o Local de Rede

O HyperDeck Shuttle pode reproduzir mídias HD da Blackmagic Cloud e de outros armazenamentos de rede via Ethernet.

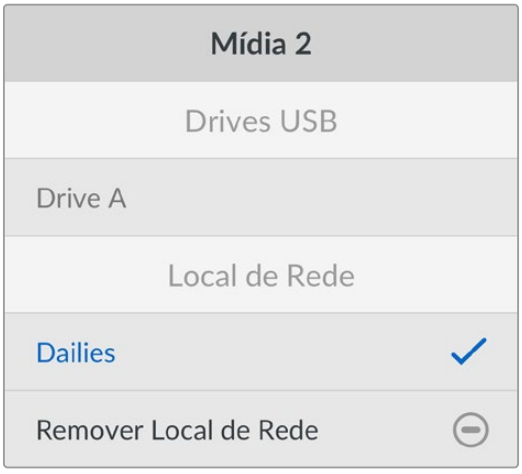
Para conectar a uma pasta de armazenamento de rede:

1. Usando o seletor de busca e o botão “Set”, selecione “Definir Local de Rede”. Uma caixa de diálogo de pesquisa de rede local aparecerá.
2. Qualquer servidor encontrado na sua rede aparecerá nessa lista. Usando o seletor de busca, destaque o nome do servidor e pressione “Set” para selecioná-lo. Uma lista de compartilhamentos disponíveis no servidor aparecerá. Usando o seletor de busca, destaque o compartilhamento que deseja selecionar e pressione “Set” até que a pasta que deseja usar seja exibida na parte superior da tela.
3. O nome da pasta aparecerá na parte superior da tela LCD. Para selecionar a pasta para gravação e reprodução, use o seletor de busca para selecionar “Definir Este Local” e pressione “Set”. Um tique aparecerá à direita.



4. Uma vez conectado, o local aparecerá na lista de armazenamento da mídia 2, em “Locais de Rede”.

O segundo compartimento de mídia nos gravadores de disco HyperDeck Shuttle é alocado para pastas USB e pastas de rede conectadas. Para selecionar as unidades USB conectadas e o armazenamento em rede, selecione “Mídia 2” no menu de mídia de armazenamento e pressione o botão piscante “Set”. Na lista da Mídia 2, selecione o armazenamento que deseja usar e pressione o botão “Set”. Agora você retornará ao menu de armazenamento. Você também pode remover o armazenamento de rede usando o menu “Mídia 2” e selecionando “Remover Local de Rede” na parte inferior do menu.



OBSERVAÇÃO Ao reproduzir a partir de um volume de rede, o HyperDeck Shuttle HD pressupõe que o servidor aceita usuários convidados. O acesso a servidores que exigem login e senha utilizando o menu e o botão “Set” não é suportado no momento. No entanto, você pode inserir credenciais usando o HyperDeck Ethernet Protocol.

USB Sequencial

Caso esteja utilizando uma Blackmagic MultiDock 10G ou similar para conectar mais de um drive através da conexão USB “Ext Disk”, ativar o recurso “USB Sequencial” garantirá que a gravação passe de um disco externo para o próximo.

Formatar Mídia

Cartões SD e mídias conectadas à porta rotulada “Ext Disk” na parte traseira podem ser formatados diretamente no HyperDeck ou através de um computador Mac ou Windows.

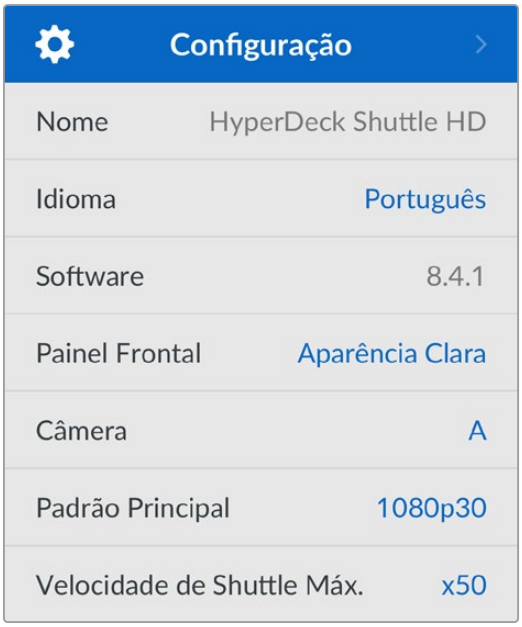
Para preparar mídias no HyperDeck Shuttle HD:

1. Usando o seletor de busca e o botão “Set”, selecione “Formatar Mídia”.
2. Selecione a mídia a ser formatada na lista e pressione “Set”.
3. Escolha o formato e pressione “Set”.
4. Uma janela de confirmação será exibida, detalhando qual cartão será formatado e o formato selecionado. Selecione “Formatar”.
5. Uma vez concluída, uma janela de formatação será exibida. Selecione “Ok”.

O HFS+ também é conhecido como Mac OS Expandido. Esse é o formato recomendado, pois é compatível com “journaling”. Os dados em mídias com o recurso “journaling” têm uma probabilidade maior de recuperação na rara eventualidade da sua mídia de armazenamento se corromper. O HFS+ é suportado nativamente por Mac. Já o exFAT é suportado nativamente por Mac e Windows sem a necessidade de adquirir outro software adicional. No entanto, o formato exFAT não é compatível com “journaling”. Para formatar mídias em um computador Mac ou Windows, consulte a seção ‘Formatar Mídias’ neste manual.

Menu Configuração

Este menu oferece várias configurações, incluindo seleção de idioma e padrão principal, além de submenus para ajustar a exibição do menu, configurações de rede e código de tempo.



Nome

Quando mais de um HyperDeck Shuttle HD estiver na rede, é recomendável nomear os gravadores para ajudar a identificá-los. Isso pode ser feito através do Blackmagic HyperDeck Setup ou do Blackmagic HyperDeck Ethernet Protocol usando um aplicativo terminal. O nome será exibido no menu de configurações.

Idioma

O HyperDeck Shuttle HD suporta 13 idiomas, incluindo inglês, chinês, japonês, coreano, espanhol, alemão, francês, russo, italiano, português, turco, ucraniano e polonês.

Para selecionar o idioma:

1. Após destacar o menu “Configuração”, pressione “Set”.
2. Gire o seletor de busca para escolher “Idioma” e pressione “Set”.
3. Utilize o seletor para escolher o idioma e pressione “Set”. Após a seleção, você retornará ao menu de configurações automaticamente.

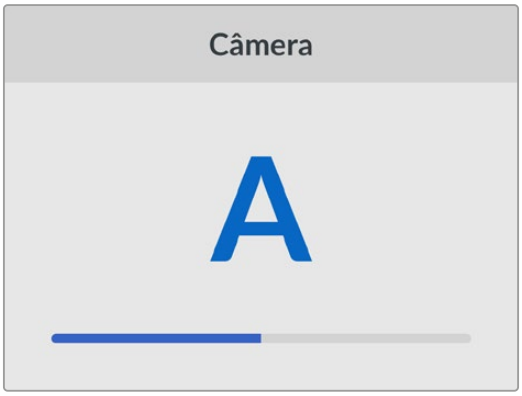
Software

Exibe a versão do software instalado.

Câmera

Esta configuração é útil ao usar o HyperDeck para gravar arquivos ISO de várias câmeras e, em seguida, editá-los em uma linha de tempo multicâmera no DaVinci Resolve.

Cada letra de identificação de câmera aparecerá nos metadados dos arquivos, permitindo que o DaVinci Resolve identifique cada ângulo facilmente ao usar o recurso de compartimento sincronizado.



Identifique sua câmera usando caracteres de A a Z; ou 1 a 9.

Padrão Principal

Em alguns casos, o HyperDeck Shuttle HD não consegue identificar qual é o padrão de vídeo que você deseja usar. Este recurso indicará ao HyperDeck qual é o padrão de vídeo que você mais usa.

Um bom exemplo é quando você habilita um HyperDeck Shuttle HD sem uma entrada de vídeo conectada e insere um disco com arquivos em dois padrões de vídeo diferentes. Qual padrão de vídeo o HyperDeck deve reproduzir? O recurso de padrão principal indicará o padrão de vídeo de sua preferência, alternará para esse formato e reproduzirá os arquivos.

O padrão principal também é útil quando você inicializa um HyperDeck Shuttle HD pela primeira vez e não há uma entrada de vídeo ou um disco de mídias inserido. Neste caso, o HyperDeck não consegue identificar qual padrão de vídeo usar para a saída de monitoramento. O padrão principal de vídeo indicará o que fazer.

Contudo, o recurso do padrão de vídeo principal é apenas um guia. Ele não substituirá nada. Por isso, se você tiver um disco de mídia com somente um tipo de arquivo de vídeo e acionar a reprodução, o gravador de disco HyperDeck alternará para esse padrão de vídeo e reproduzirá. O padrão principal de vídeo será ignorado, já que é óbvio que você deseja apenas reproduzir os arquivos do disco.

É uma situação semelhante com a gravação. Se você acionar a gravação, o HyperDeck simplesmente gravará qualquer padrão de vídeo que esteja conectado à entrada de vídeo. Depois que você concluir a gravação, o HyperDeck Shuttle HD reproduzirá os arquivos no mesmo padrão de vídeo do disco, mesmo se existirem outros arquivos no disco que correspondam ao padrão principal. É presumido que você deseja reproduzir o mesmo padrão de vídeo que acabou de gravar. Se você desconectar o disco de mídia e plugá-lo novamente, somente então o padrão principal será utilizado para selecionar quais tipos de arquivo você deseja reproduzir.

O recurso de padrão principal é apenas um guia para ajudar o HyperDeck Shuttle HD a tomar decisões sobre o que fazer quando ele não tiver certeza. Ele não é uma substituição que força o deck a se comportar de uma maneira específica.

Velocidade de Shuttle Máx.

A velocidade de shuttle máxima do HyperDeck Shuttle HD é 50x. Caso queira reduzi-la, você pode selecionar uma das outras predefinições de velocidade.

Data e Hora

Definir a data e a hora corretamente garante que o HyperDeck Shuttle tenha as mesmas informações de hora e data que a rede, além de evitar possíveis conflitos com sistemas de armazenamento em rede.



Definição Automática

Para definir a data e hora automaticamente, ative a opção “Definição Automática”. Ao ajustar data e hora automaticamente, o HyperDeck usará o servidor de protocolo de hora da rede configurado no campo NTP. Para definir a data e a hora manualmente, selecione “Não”.

NTP

O servidor NTP padrão é time.cloudflare.com, mas você também pode inserir manualmente um servidor NTP alternativo usando o HyperDeck Setup. Para mais informações sobre como configurar o servidor NTP, consulte a seção ‘HyperDeck Setup’ mais adiante neste manual.

Data

Para ajustar a data, selecione “Data” e pressione “Set”. Use o seletor para selecionar dia, mês e ano.

Hora

Para ajustar a hora, selecione “Hora” e pressione “Set”. Use o seletor para ajustar as horas e os minutos. O relógio interno utiliza o padrão 24 horas.

Menu

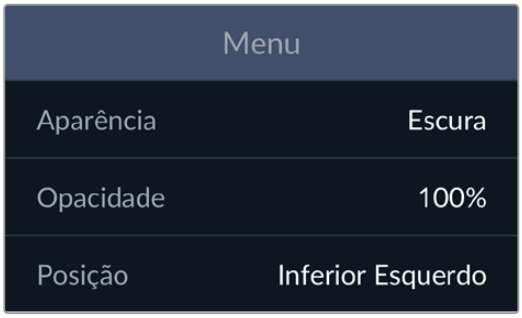
Use as configurações de Menu para ajustar a posição e a aparência do menu na tela HDMI conectada.



Aparência

Você pode configurar o menu na tela do HyperDeck no modo “Aparência Clara” ou “Aparência Escura”. O modo “Aparência Clara” oferece mais contraste ao utilizar mídas mais escuras, assim como no modo teleprômpter.





Opacidade

Ajuste os níveis para reduzir a opacidade da sobreposição do menu na tela conectada de 100% (nível padrão) para 20%.

Posição

Por padrão, o menu será sobreposto ao canto inferior esquerdo da tela. Para alterar a posição do menu, selecione “Posição” e pressione o botão “Set”. Agora você pode selecionar o canto superior esquerdo, superior direito, inferior esquerdo ou inferior direito da tela.

Rede



Protocolo

O Blackmagic HyperDeck vem configurado de fábrica como DHCP, portanto, uma vez conectado, o servidor de rede atribuirá um endereço IP automaticamente e nenhuma outra configuração de rede precisará ser ajustada. Caso precise definir um endereço manualmente, você pode conectar usando um IP estático.

Com “Protocolo” selecionado, pressione o botão “Set” para acessar o menu, navegue até “IP Estático” e pressione “Set”.

Endereço IP, Máscara de Sub-rede, Gateway, DNS Primário e DNS Secundário

Quando “IP Estático” estiver selecionado, você pode inserir as informações da sua rede manualmente.

Para alterar o endereço IP:

1. Use o seletor de busca para destacar “Endereço IP” e pressione o botão “Set” no painel frontal do HyperDeck.
2. Usando o seletor de busca, ajuste o seu endereço IP, pressionando “Set” para confirmar antes de ajustar o próximo valor.
3. Pressione “Set” para confirmar a alteração e passar para o próximo valor.

Após inserir seu endereço IP, você pode repetir esses passos para ajustar a Máscara de Sub-rede e o Gateway. Quando concluir, pressione o botão “Menu” para sair e retornar à tela inicial.

Timecode

Defina suas opções de entrada e saída de código de tempo. É possível gravar o código de tempo de origem, código de tempo da hora do dia ou definir seu código de tempo manualmente.



Entrada

Há quatro opções de entrada de código de tempo disponíveis durante a gravação.

Entrada de Vídeo	A seleção da entrada de vídeo obterá o código de tempo embutido de fontes HDMI com metadados SMPTE RP 188. Isso manterá a sincronização entre sua fonte HDMI e o arquivo gravado no HyperDeck Shuttle HD.
Interno	Use esta opção para gravar timecode de hora do dia através do gerador de timecode integrado.
Regen. Último Clipe	Selecionando a opção “Regen. Último Clipe” para sua entrada de código de tempo, cada arquivo iniciará um quadro após o último quadro do clipe anterior. Por exemplo, se o primeiro clipe terminar em 10:28:30:10, o código de tempo do próximo clipe começará em 10:28:30:11.
Predefinição	Caso deseje definir um código de tempo manualmente, selecione a opção “Predefinição”. Os clipes gravados começarão no código de tempo definido através da configuração “Predefinição”, descrita abaixo.

Descarte

Para fontes NTSC com taxas de quadros de 29,97 ou 59,94, você pode selecionar entre “Descartar Quadros” e “Sem Descartar Quadros”. Caso a fonte seja desconhecida, selecione “Padrão”. Isso manterá o padrão da entrada ou gravará com descarte de quadros se não houver nenhum código de tempo válido.

Predefinição

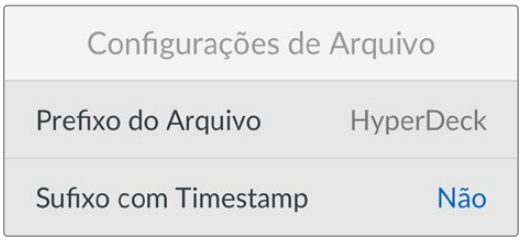
Você pode definir seu código de tempo manualmente ao pressionar o botão “Set” e inserir o código de tempo de início usando o seletor de busca e o botão “Set”. Certifique-se de que a opção “Predefinição” esteja selecionada no menu “Entrada”.

Saída

Selecione as opções de código de tempo para as saídas.

Linha de Tempo	Para enviar um código de tempo contínuo a todos os clipes gravados em um cartão ou drive, selecione “Linha de Tempo”.
Clipe	Selecionar a opção “Clipe” enviará o código de tempo de cada clipe individual.

Configurações de Arquivo



Prefixo do Arquivo

Quando configurado pela primeira vez, o HyperDeck Shuttle HD gravará clipes no seu cartão SD ou disco flash USB usando a seguinte convenção de nome de arquivo:

HyperDeck_0001	
HyperDeck_0001	**Prefixo**
HyperDeck_**0001**	**Número do Clipe**

Você pode alterar o prefixo do nome do arquivo através do utilitário HyperDeck Setup. Para mais informações, consulte a seção ‘Blackmagic HyperDeck Setup’ neste manual.

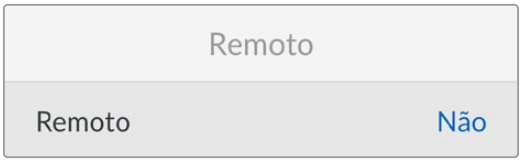
Sufixo com Timestamp

O carimbo de data/hora adicionado ao nome do arquivo é desativado por padrão. Caso queira registrar a data e a hora no nome do arquivo, habilite a opção “Sufixo com Timestamp”.

HyperDeck_2201061438_0001	
HyperDeck_2201061438_0001	**Prefixo do Arquivo**
HyperDeck_**22**01061438_0001	**Ano**
HyperDeck_22**01**061438_0001	**Mês**
HyperDeck_2201**06**1438_0001	**Dia**
HyperDeck_220106**14**38_0001	**Hora**
HyperDeck_22010614**38**_0001	**Minutos**
HyperDeck_2201061438_**0001**	**Número do Clipe**

Remoto

Esta configuração permite que o HyperDeck seja controlado remotamente por outro equipamento de vídeo, como um switcher ATEM Mini Extreme.



Remoto

Selecione “Remoto” para habilitar o controle remoto via Ethernet. Basta desativar “Remoto” para controlar a unidade localmente.

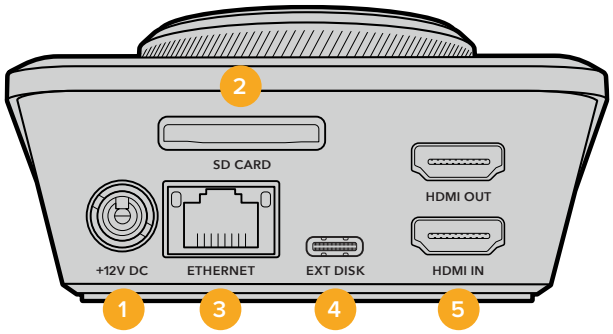
Redefinir



Padrão de Fábrica

Destaque “Padrão de Fábrica” no menu de configurações para redefinir seu HyperDeck com as configurações de fábrica. Quando você pressionar “Set”, será solicitado que você confirme sua seleção.

Painel Traseiro



1 Alimentação

O HyperDeck Shuttle HD é alimentado através de um kit de alimentação AC. O cabo de alimentação fornecido tem um conector com trava para prevenir desconexões, mas você também pode usar qualquer cabo 12 V 36 W para alimentar o HyperDeck Shuttle HD.

2 Cartão SD

Insira cartões SD no compartimento para gravação e reprodução.

3 Ethernet

Através da porta Ethernet você pode se conectar à sua rede para gravação em armazenamento de rede, transferências rápidas por FTP e transferências por HTTP através do Web Media Manager. Além disso, você pode controlar a unidade remotamente usando a API REST ou o HyperDeck Ethernet Protocol. Para mais detalhes sobre a transferência de arquivos através do Web Media Manager ou de um cliente de FTP, consulte a seção 'Transferir Arquivos via Rede' neste manual.

Quando conectado à mesma rede compartilhada com um switcher ATEM, você também pode controlar seu HyperDeck usando o switcher ATEM ou um painel ATEM físico.

4 Disco Externo

Conecte um disco flash no conector USB-C para gravar em unidades externas a até 5 Gb/s. Você também pode utilizar hubs USB-C multiporta ou uma Blackmagic MultiDock 10G para conectar um ou vários SSDs.

5 HDMI

Conecte a saída HDMI a televisores, monitores ou até mesmo um switcher HDMI, como o ATEM Mini Extreme. A saída HDMI também é usada para visualizar a sobreposição de menu.

Mídias de Armazenamento

Cartão SD

Para gravações HD de alta qualidade, recomendamos cartões SD UHS-I de alta velocidade. Esses cartões precisam ser capazes de obter velocidades de gravação acima de 220 MB/s para gravações de até Ultra HD 2160p60.

No entanto, caso esteja gravando a uma taxa de bits mais baixa com compactação mais elevada, você deve conseguir usar cartões mais lentos. Geralmente, quanto mais rápidos forem os cartões, melhores eles serão.

É recomendável verificar regularmente a última versão deste manual, que pode ser baixado a qualquer momento no site da Blackmagic Design em www.blackmagicdesign.com/br/support

Quais cartões SD devo usar com o HyperDeck Shuttle HD?

Os seguintes cartões SD são recomendados para 1080p a até 60 fps:

Marca	Modelo	Capacidade
Angelbird	AV PRO SD UHS-II 300MB/s V90 SDXC	256GB
Angelbird	AV PRO SD UHS-II 260MB/s V60 SDXC	128GB
Angelbird	AV PRO SD UHS-II 260MB/s V60 SDXC	64GB
SanDisk	Extreme Pro UHS-I 95MB/s SDXC	64GB
Wise	SD2-64U3 UHS-II 285MB/s SDXC	64GB
Lexar	Professional 1000x UHS-II 150MB/s SDXC	128GB
SONY	Tough SF-G128T	128GB
Kingston	CANVAS GO! Plus 170MB/s V30	64GB
Kingston	CANVAS GO! Plus 170MB/s V30	128GB
Kingston	CANVAS GO! Plus 170MB/s V30	512GB
ProGrade Digital	SDXC UHS-II V90 300R	64GB
ProGrade Digital	SDXC UHS-II V90 300R	128GB
SONY	Tough SF-G64T UHS-II SDXC	64GB
Delkin Devices	Black UHS-II V90 SDXC	256GB
Delkin Devices	Power UHS-II V90 SDXC	128GB
Delkin Devices	Power UHS-II V90 SDXC	256GB
Delkin Devices	Black UHS-II V90 SDXC	128GB
Exascend	Essential SDXC UHS-II V90 R 300MB/s	64GB
Exascend	Essential SDXC UHS-II V90 R 300MB/s	128GB
Exascend	Catalyst SDXC UHS-II V90 R 300MB/s	64GB

Discos externos

Todos os modelos HyperDeck podem gravar diretamente em unidades flash USB-C. Essas unidades rápidas e de capacidade superior possibilitam a gravação de vídeos por períodos prolongados. Depois, você pode conectar a unidade flash ao seu computador e editar diretamente dela.

Para capacidades de armazenamento ainda mais elevadas, você pode conectar uma doca ou um disco rígido externo USB-C. Para conectar sua Blackmagic MultiDock 10G ou unidade flash USB-C, conecte um cabo do seu dispositivo USB-C à porta “EXT DISK” na parte traseira do HyperDeck.

Quais drives USB-C devo utilizar com o HyperDeck Shuttle HD?

Os seguintes drives USB-C são recomendados para 1080p ProRes HQ a até 60 fps:

Marca	Modelo	Capacidade
Wise	PTS-256 Portable SSD 4K	256GB
OWC	Envoy Pro Ex	240GB
BUFFALO	SSD-PHE500U3-BA	500GB

Os seguintes drives USB-C são recomendados para 1080p DNxHD 220x a até 60 fps:

Marca	Modelo	Capacidade
OWC	Envoy Pro Ex	240GB

Os seguintes drives USB-C são recomendados para 1080p H.264 a até 60 fps:

Marca	Modelo	Capacidade
OWC	Envoy Pro Ex	240GB

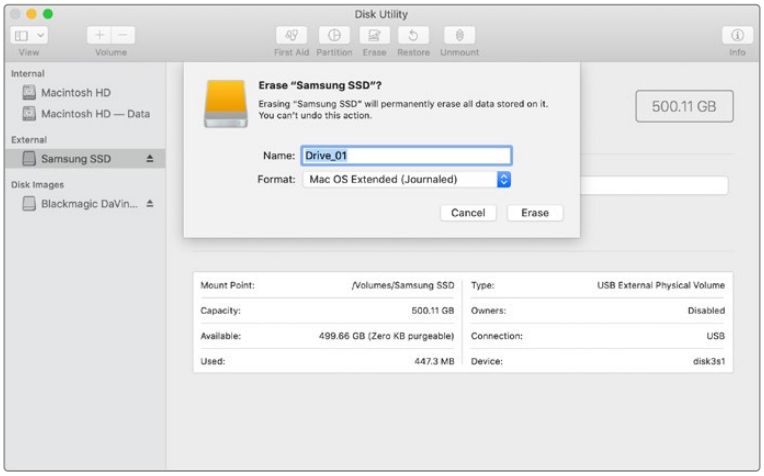
Formatar Mídias

Preparar mídias em um computador

O Utilitário de Disco incluído no Mac pode formatar um drive nos formatos HFS+ ou exFAT.

Lembre-se de fazer o backup de gravações importantes do seu disco, pois todos os dados serão perdidos após a formatação.

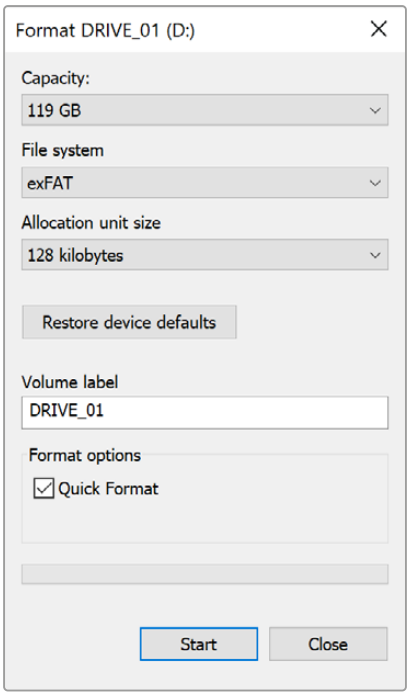
1. Conecte um disco flash USB ao seu computador através de uma doca externa ou adaptador de cabo e ignore qualquer mensagem relativa à utilização do SSD para backups com Time Machine. Para cartões SD, faça a conexão com o seu computador usando um leitor externo.
2. Vá até “Aplicativos/Utilitários” e inicie “Utilitário de Disco”.
3. Clique no ícone de disco do seu cartão SD ou disco flash USB e, em seguida, clique na aba “Apagar”.
4. Defina o formato como “macOS Expandido (Journaling)” ou “exFAT”.
5. Digite um nome para o novo volume e clique em “Apagar”. A sua mídia será formatada rapidamente e disponibilizada para uso com o HyperDeck.



Formatar mídias em um computador Windows

A caixa de diálogo “Formatar” permite formatar um drive no formato exFAT em um computador Windows. Lembre-se de fazer o backup de gravações importantes do seu SSD ou cartão SD, pois todos os dados serão perdidos após a formatação.

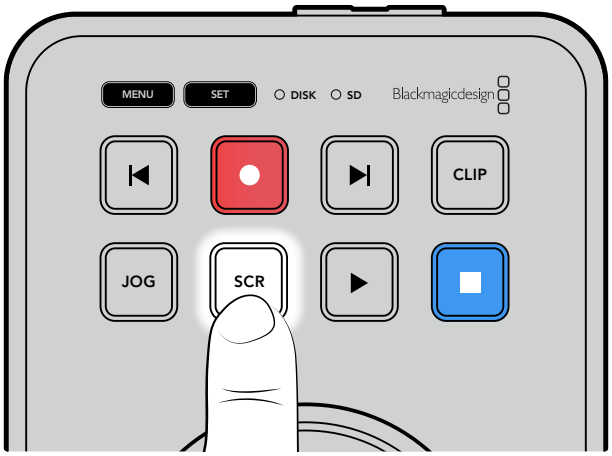
1. Conecte um disco flash USB ao seu computador com uma doca externa ou cabo adaptador. Para cartões SD, faça a conexão com o seu computador usando um leitor externo.
2. Abra o menu “Iniciar” ou a “Tela Inicial” e selecione “Computador”. Clique com o botão direito do mouse no seu disco flash USB ou cartão SD.
3. No menu contextual, selecione “Formatar”.
4. Defina o sistema de arquivo como “exFAT” e o tamanho da unidade de alocação para 128 kilobytes.
5. Digite um rótulo de volume, selecione “Formatação Rápida” e clique em “Iniciar”.
6. A sua mídia será formatada rapidamente e disponibilizada para uso com o HyperDeck.



Navegação por Volume

A navegação por volume permite abrir uma sobreposição de caminho de arquivo para que você possa localizar clipes em cartões de mídia, discos e drives de rede. Quando ativada, a sobreposição aparece na saída HDMI e você pode navegar pelos diretórios usando o botão “Scroll”, o botão “Clip” e o seletor de busca.

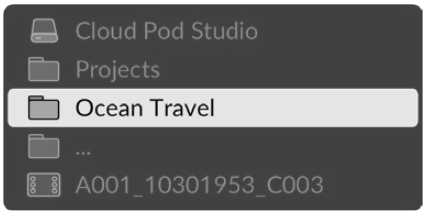
1 Abra a janela de navegação por volume pressionando o botão de rolagem rotulado “SCR”.





Pressione o botão “Scroll” para abrir a janela de navegação por volume na saída HDMI.

2 Depure ou percorra as imagens exibidas até encontrar um clipe da pasta desejada.



3 Pressione o botão “Scroll” para descer pelos volumes e o botão “Clip” para subir.

Para fechar a janela de navegação por volume, pressione o botão “Stop”, ou pressione “Play” para fechar a janela e iniciar a reprodução imediatamente.

OBSERVAÇÃO Para visualizar clipes que foram gravados em um codec, resolução ou taxa de quadros diferente, defina o codec e o padrão principal do seu HyperDeck de modo que correspondam.

Usar a Função Teleprômpter

Com um arquivo RTF padrão ou texto simples TXT, você pode usar o Blackmagic HyperDeck Shuttle HD como um teleprômpter. Crie seu arquivo no Editor de Texto ou WordPad e salve como um arquivo .rtf ou .txt em qualquer um dos 13 idiomas suportados. Uma vez aberto com o HyperDeck Shuttle HD, você pode ajustar o tamanho da fonte e o espaçamento entre linhas do seu texto.

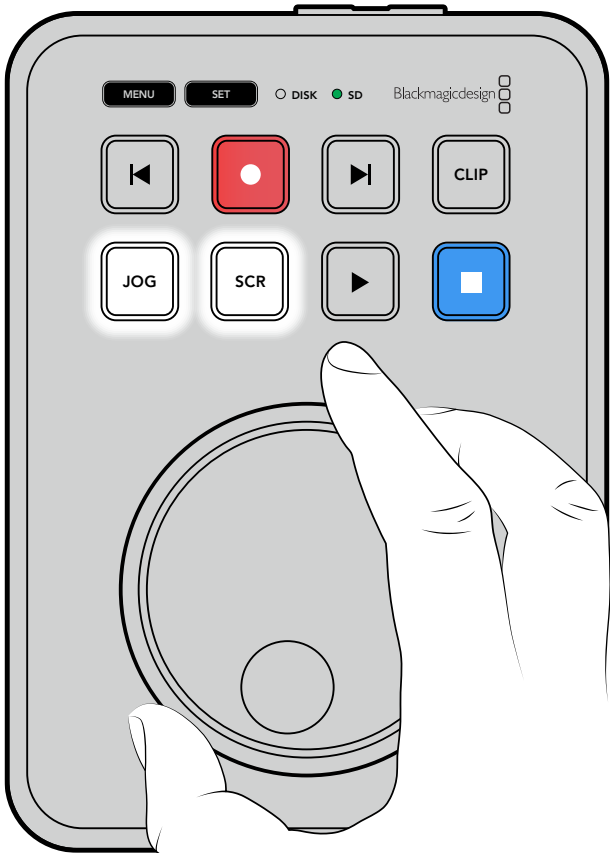
Para usar o teleprômpter:

1. Conecte a saída HDMI do HyperDeck Shuttle HD à tela HDMI que deseja utilizar.
2. Insira um cartão SD ou conecte um disco flash USB externo contendo o seu texto.
3. No menu “Gravação”, selecione a opção “Codec”. Navegue até a configuração “Teleprômpter” e pressione “Set”.

O texto aparecerá na sua tela. Agora, você pode iniciar a reprodução automaticamente usando o botão “Play” ou, para controle adicional, utilizando o seletor.

Controlar a Velocidade de Reprodução do Teleprômpter

O seletor do HyperDeck Shuttle HD pode ser usado para controlar a reprodução no modo teleprômpter da mesma maneira que na reprodução de mídias. Após carregar o texto, pressione os botões “Jog” e “Scr” ao mesmo tempo para habilitar a reprodução de velocidade variável.
Em seguida, gire o seletor. A rolagem do texto acompanhará a velocidade do movimento do seletor. Ou seja, quanto mais rápido você girar o seletor, mais rápido o texto se movimentará.



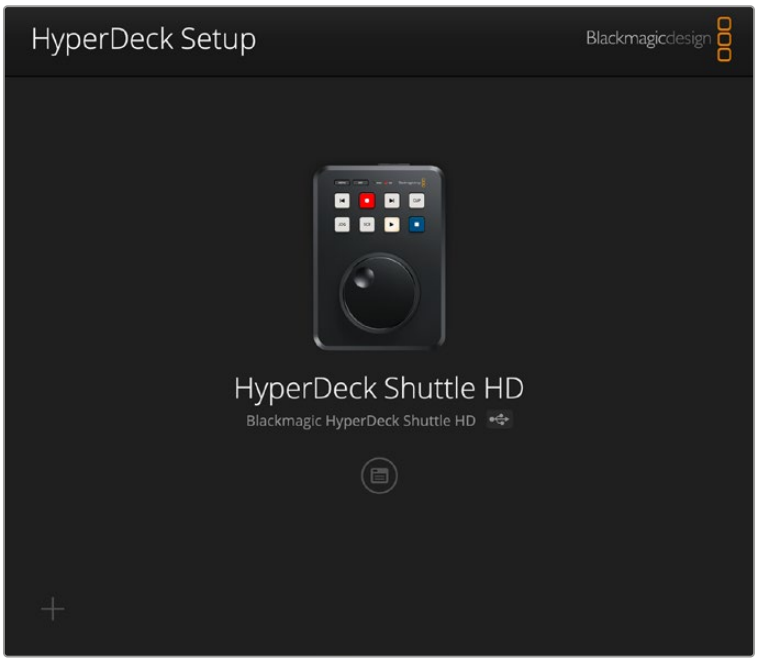
Para velocidades constantes, você pode usar os botões “Jog” e “Scroll” individualmente. No modo jog, girar o seletor movimentará o texto em uma velocidade lenta constante. No modo scroll, a velocidade será mais alta.

Para navegar pelos arquivos no seu cartão SD ou disco externo, pressione os botões de avanço e retrocesso.

O teleprômpter reconhecerá o tamanho, cor e se o texto está em negrito. Além disso, no menu “Monitoramento”, você pode ajustar o tamanho da fonte, espaçamento entre linhas, margens ou inverter a exibição horizontal ou verticalmente quando estiver projetando a tela em vidros divisores de feixe. Para mais informações, consulte a seção “Menu” acima.

Blackmagic HyperDeck Setup

O Blackmagic HyperDeck Setup é um utilitário de software para ajustar configurações e atualizar o software interno no seu HyperDeck.

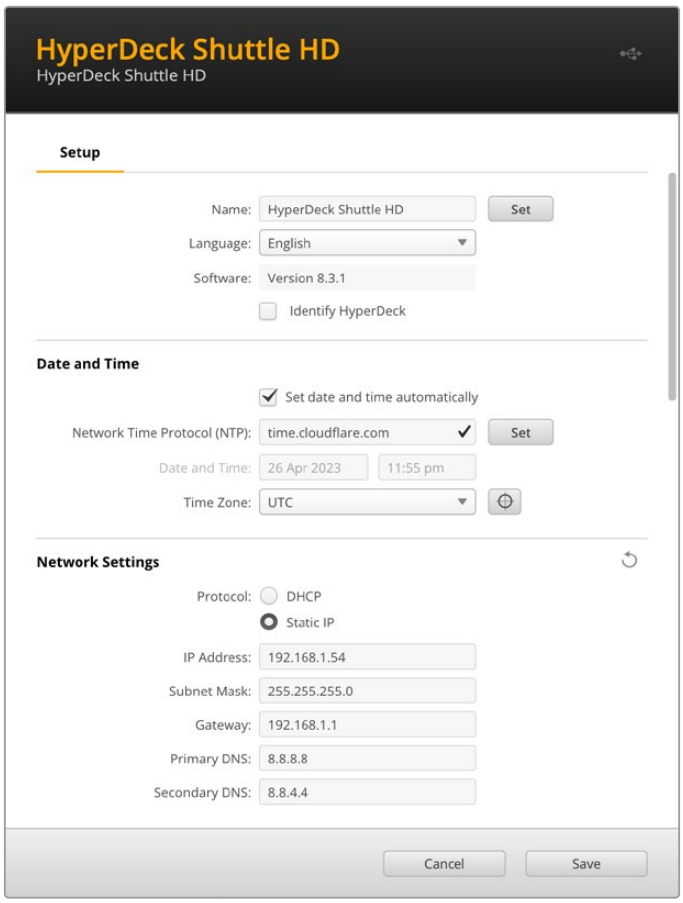


Para instalar o programa:

1. Baixe o instalador do Blackmagic HyperDeck Setup mais recente em www.blackmagicdesign.com/br/support.
2. Execute o instalador do Blackmagic HyperDeck Setup e siga as instruções na tela.
3. Após a instalação, conecte o seu HyperDeck Shuttle HD ao computador via o conector USB ou Ethernet no painel traseiro.
4. Inicie o Blackmagic HyperDeck Setup e siga as orientações na tela para atualizar o programa interno. Caso nenhuma instrução apareça, o software interno está atualizado e não há nada mais que você precise fazer.

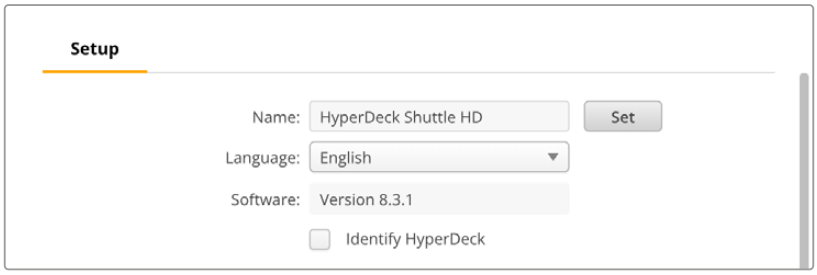
Clique na imagem do HyperDeck ou no ícone de configuração para abrir o menu de configurações.

A tela inicial mostrará o seu HyperDeck Shuttle HD e o nome da unidade. Este nome é útil para identificar a unidade quando mais de um HyperDeck estiver conectado ao seu computador e pode ser definido utilizando o menu de configurações do utilitário.



Setup

Caso você tenha mais de um gravador de disco HyperDeck, é recomendável nomear cada unidade para facilitar a identificação. Basta inserir um nome no campo “Name” e clicar no botão “Set”.
É importante observar que alterar o nome do HyperDeck invalidará quaisquer certificados digitais em uso, portanto vale a pena alterar o nome antes de gerar uma solicitação de assinatura de certificado ou certificado autoassinado.



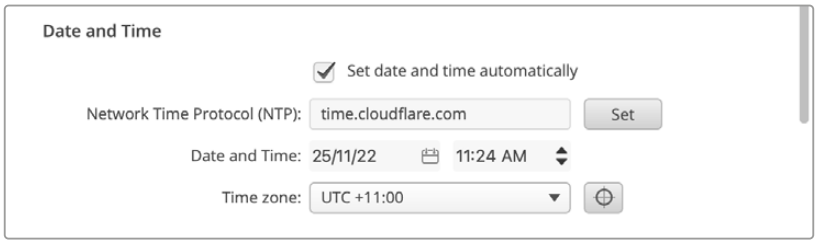
Identify HyperDeck

Clicar na caixa de verificação fará com que os botões de avanço e retrocesso na parte superior do HyperDeck Shuttle pisquem. Isso pode ser útil quando você tiver mais de um HyperDeck Shuttle e queira identificar a qual deles está conectado por meio do utilitário do HyperDeck Setup.

Date and Time

Para ajustar data e hora automaticamente, clique na caixa de seleção. Ao ajustar data e hora automaticamente, o HyperDeck Shuttle HD usará o servidor de protocolo de hora da rede configurado no campo NTP. O servidor NTP padrão é time.cloudflare.com, mas você também pode inserir um servidor NTP alternativo manualmente e, em seguida, clicar em “Set”.

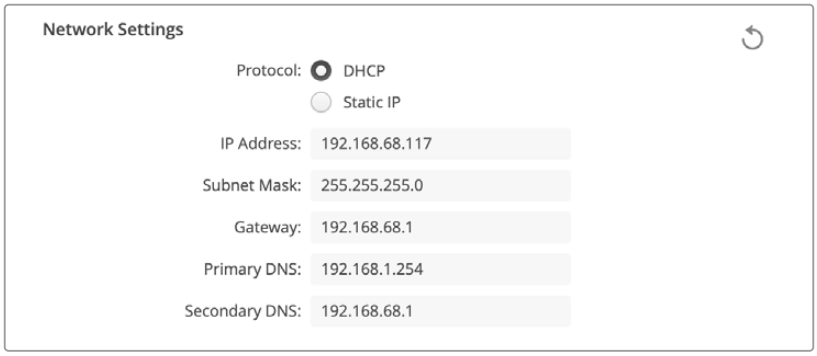
Caso esteja configurando data e hora manualmente, utilize os campos para selecionar a data, hora e fuso horário. Definir a data e a hora corretamente garante que as gravações tenham as mesmas informações de hora e data que a rede e também evita potenciais conflitos com alguns sistemas de armazenamento em rede.



Network Settings

Protocol

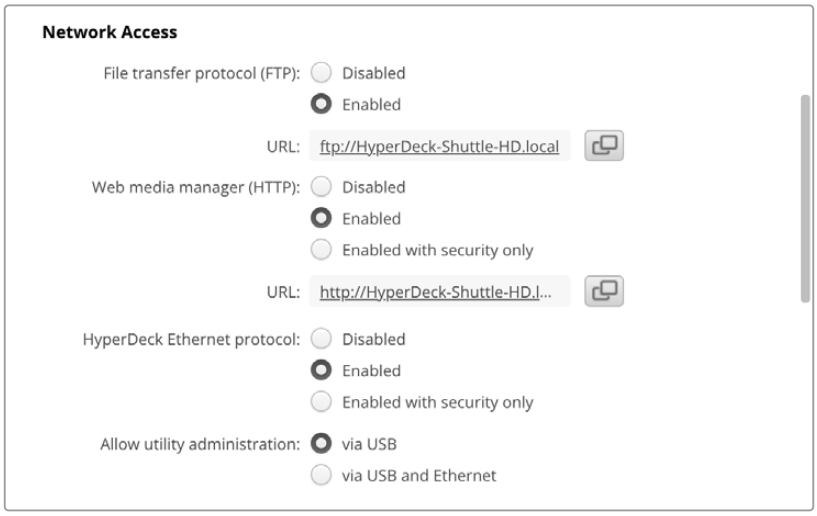
Para controlar o HyperDeck Shuttle HD com switchers ATEM ou controlá-lo remotamente através do HyperDeck Ethernet Protocol, o HyperDeck Shuttle HD precisa estar na mesma rede que o outro equipamento usando DHCP ou adicionando um endereço IP fixo manualmente.



DHCP	Os gravadores de disco HyperDeck Shuttle HD vêm de fábrica configurados como DHCP. O protocolo de configuração do host dinâmico, ou DHCP, é um serviço em servidores de rede que encontra automaticamente o gravador de disco HyperDeck e atribui um endereço IP. O DHCP facilita a conexão de equipamentos via Ethernet e garante que seus endereços IP não entrem em conflito entre si. A maioria dos computadores e switchers de rede suporta DHCP.
Static IP	Quando “Static IP” estiver selecionado, é possível inserir as informações da rede manualmente. Ao definir endereços IP manualmente para que todas as unidades possam se comunicar, elas devem compartilhar as mesmas configurações de máscara de sub-rede e gateway.

Network Access

O HyperDeck Shuttle HD pode ser acessado através de uma rede para transferência de arquivos e controle remoto via HyperDeck Ethernet Protocol. O acesso será habilitado por padrão, mas você pode optar por desabilitar o acesso individualmente ou habilitar o acesso através de nome de usuário e senha para aumentar a segurança ao usar o web media manager ou o HyperDeck Ethernet Protocol.



File Transfer Protocol

Habilite ou desabilite o acesso via FTP utilizando essa caixa de seleção. Caso esteja fornecendo acesso através de um cliente de FTP, como Cyberduck, clique no ícone para copiar o endereço de FTP. Para mais informações, consulte a seção ‘Transferir Arquivos via Rede’.

Web Media Manager

As mídias gravadas em cartões SD ou discos externos podem ser acessadas através de um navegador de internet utilizando o web media manager. Quando você clicar no link ou copiar e colar em seu navegador de internet, uma interface simples será aberta, onde você poderá fazer upload ou download de arquivos diretamente para os cartões SD na sua rede.

O acesso é habilitado via HTTP por padrão, mas você pode desativar totalmente o acesso ou exigir um certificado seguro usando a opção “Enabled with security only”. Ao usar um certificado digital, as conexões com o web media manager serão criptografadas via HTTPS. Para mais informações sobre certificados digitais, consulte a seção ‘Certificado Seguro’.

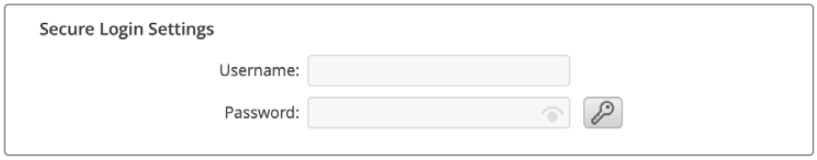
HyperDeck Ethernet Protocol

Você pode se conectar ao gravador de disco HyperDeck utilizando o HyperDeck Ethernet Protocol e um programa de linha de comando no seu computador, como o Terminal, no Mac, e PuTTY, no Windows. O acesso pode ser habilitado com ou sem nome de usuário e senha; ou desabilitado completamente. Você pode usar um programa SSL para criptografar sua sessão ao utilizar um utilitário como o Netcat. Para mais informações sobre os comandos disponíveis, consulte a seção ‘Informações para Desenvolvedores’ neste manual.

Allow Utility Administration

O Blackmagic HyperDeck Setup pode ser acessado quando o seu gravador de disco está conectado via rede ou USB. Para evitar que outros usuários obtenham acesso através da rede, selecione “via USB”.

Secure Login Settings



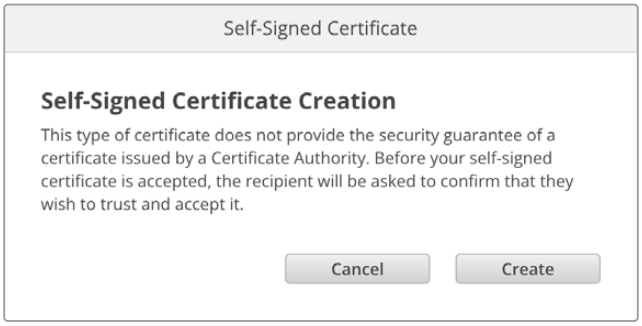
Caso você tenha selecionado “Enabled with security only” nas configurações de acesso via HyperDeck Ethernet Protocol, será necessário inserir um nome de usuário e senha. Digite um nome de usuário e senha e clique em “Save”. O campo de senha aparecerá vazio quando uma senha for inserida. Depois que o nome de usuário e senha estiverem definidos, será necessário inseri-los ao acessar o web media manager caso “Enabled with security only” esteja selecionado.

Certificado Seguro

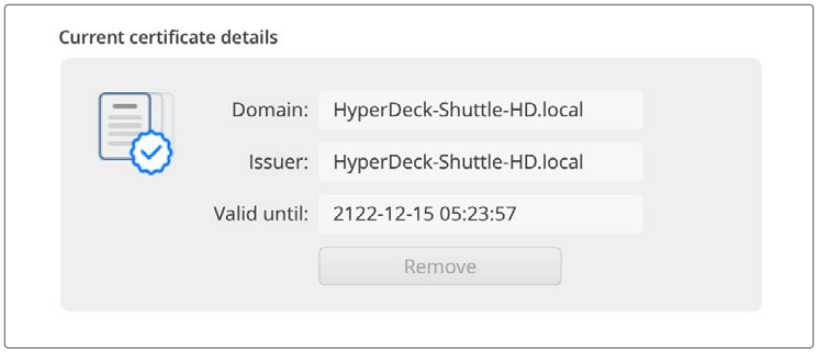
Para habilitar o acesso ao web media manager via HTTPS, ou quando o HyperDeck Ethernet Protocol estiver definido como “security only”, você precisará de um certificado seguro. Esse certificado digital atua como um cartão de identificação do HyperDeck Shuttle HD para que todas as conexões de entrada possam confirmar que estão se conectando à unidade correta. Além de confirmar a identidade da unidade, o uso de um certificado seguro garante que os dados transmitidos entre o HyperDeck Shuttle HD e um computador ou servidor sejam criptografados. Ao usar as configurações de login seguro, a conexão não apenas será criptografada, mas exigirá autenticação para acesso.

Existem dois tipos de certificado que você pode usar com o HyperDeck Shuttle: um certificado seguro assinado por uma autoridade de certificação ou um certificado autoassinado. Um certificado autoassinado pode ser seguro o suficiente para alguns fluxos de trabalho, por exemplo, acessando o HyperDeck Shuttle HD somente por meio de uma rede local.

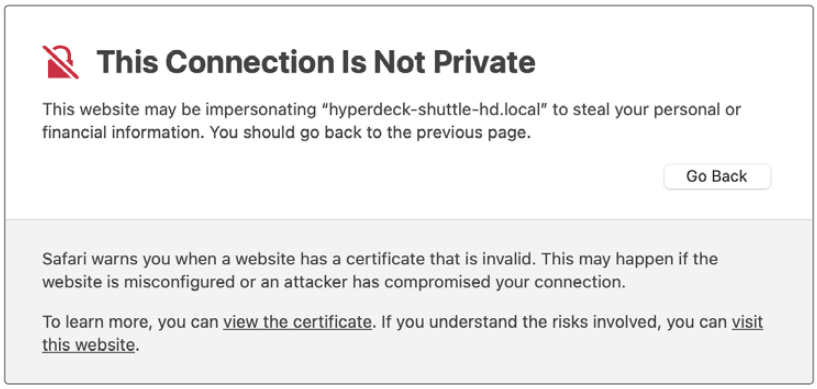
Para gerar um certificado autoassinado, clique em “Create Certificate”. Quando solicitado, confirme que você está ciente dos riscos relacionados ao uso de um certificado autoassinado. Depois de clicar em “Create”, os dados do certificado preencherão automaticamente os campos “Domain”, “Issuer” e “Valid until” no utilitário HyperDeck Setup.



Após uma redefinição de fábrica, qualquer certificado atual será excluído, mas você também pode removê-lo a qualquer momento clicando no botão “Remove” e seguindo as instruções.



Ao usar um certificado autoassinado para acessar arquivos de mídia usando HTTPS, seu navegador de internet irá alertá-lo sobre os riscos de acessar o site. Alguns navegadores permitirão que você prossiga depois de confirmar que entende os riscos, no entanto, outros navegadores podem impedi-lo de prosseguir.



Para garantir que o acesso seja concedido a qualquer navegador da Web, você precisará usar um certificado assinado.

Para obter um certificado assinado, primeiro você precisa gerar uma solicitação de assinatura de certificado, ou CSR, usando o utilitário Blackmagic HyperDeck Setup. Em seguida, essa solicitação de assinatura será enviada a uma autoridade de certificação, também conhecida como AC, ou ao departamento de TI. Uma vez concluída, será devolvido um certificado assinado com uma extensão de arquivo .cert, .crt ou .pem, que você pode importar para o HyperDeck Shuttle HD.



Para gerar uma solicitação de assinatura de certificado (CSR):

1 Clique no botão “Generate Signing Request”.



2 Uma janela será exibida solicitando que você insira um nome comum e um nome de assunto alternativo para o HyperDeck. Ajuste quaisquer outros detalhes conforme necessário usando a tabela abaixo.

Informação	Descrição	Exemplo
Nome Comum	O nome de domínio utilizado	hyperdeck.melbourne.com
Nome de Assunto Alternativo	Um nome de domínio alternativo	hyperdeck.melbourne.net
País	País da sua empresa	AU
Estado	Província, região ou estado	Victoria
Local	Nome da cidade, etc	Port Melbourne
Nome da Empresa	Nome da sua empresa	Blackmagic Design

3 Depois de preencher os detalhes do certificado, clique em “Generate”.

Ao gerar um .csr, você também criará uma chave pública e uma chave privada ao mesmo tempo. A chave pública será incluída com a solicitação de assinatura, enquanto a chave privada permanecerá com a unidade. Depois que a autoridade de certificação ou o departamento de TI verificarem as informações do CSR com a sua empresa, eles gerarão um certificado assinado com os dados acima, junto com sua chave pública.

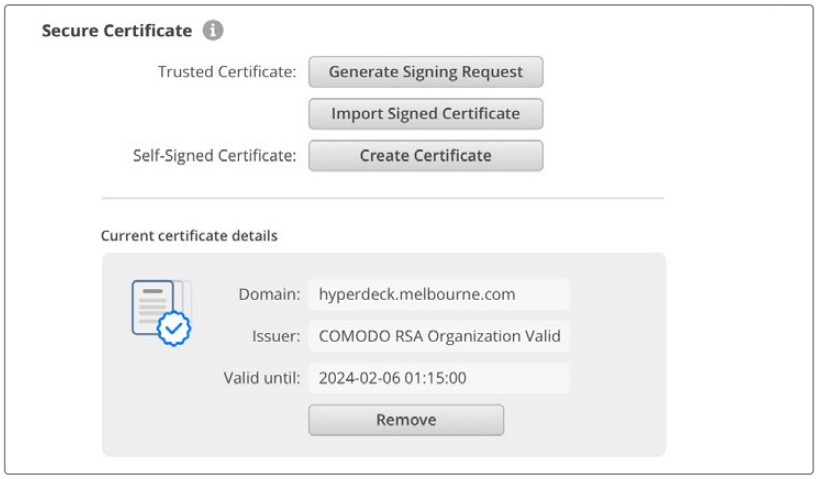
Uma vez importada, o HyperDeck Shuttle HD usará a chave pública e privada para confirmar a identidade do HyperDeck e para criptografar e descriptografar o compartilhamento de dados via HTTPS ou via HyperDeck Ethernet Protocol ao usar um programa SSL.

Para importar um certificado assinado:

1 Clique em “Import Signed Certificate”.

2 Navegue até o local do certificado assinado usando o navegador de arquivos e, quando o arquivo estiver selecionado, clique em “Open”.

Os campos de domínio, emissor e data de validade serão atualizados com os dados da sua autoridade de certificação. Geralmente, um certificado assinado será válido por cerca de um ano, portanto, o processo precisará ser repetido após a data de validade.

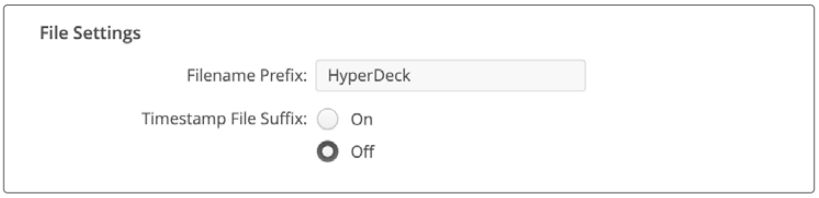


Como um nome de domínio foi selecionado, você precisará entrar em contato com o seu departamento de TI sobre a configuração do DNS para a unidade HyperDeck Shuttle HD. Isso direcionará todo o tráfego do endereço IP do HyperDeck Shuttle HD para o endereço de domínio selecionado na solicitação de assinatura.

Esse também será o endereço HTTPS que você usará para acessar arquivos através do web media manager, por exemplo, https://hyperdeck.melbourne.com.

É importante observar que o certificado será invalidado após uma redefinição de fábrica e um novo certificado precisará ser gerado e assinado.

File Settings



Quando configurado pela primeira vez, o HyperDeck Shuttle HD gravará clipes no cartão SD ou no disco flash USB usando “HyperDeck” como prefixo. Digite um novo nome de arquivo para alterar o prefixo.

O carimbo de data/hora adicionado ao nome do arquivo é desativado por padrão. Caso queira registrar data e hora no nome do arquivo, habilite essa opção. As configurações de prefixo do nome do arquivo e timestamp também estão disponíveis na tela do HyperDeck Shuttle HD.

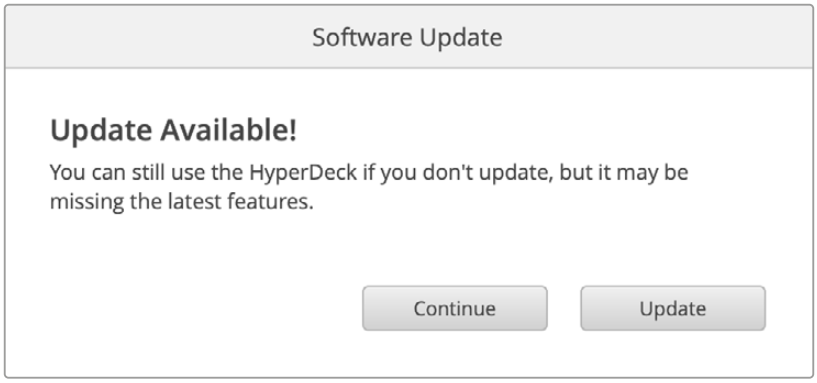
Reset

Toque em “Factory Reset” para restaurar o HyperDeck para as configurações de fábrica. Após uma redefinição de fábrica, o certificado seguro se tornará inválido. Se um certificado seguro estiver sendo usado, você precisará gerar uma nova solicitação de assinatura de certificado e enviar para uma autoridade de certificação ou departamento de TI.

Atualizar o software interno

Para atualizar o software interno:

1. Baixe o instalador do Blackmagic HyperDeck Setup mais recente em www.blackmagicdesign.com/br/support.
2. Execute o instalador do Blackmagic HyperDeck Setup e siga as instruções na tela.
3. Após a instalação, conecte o HyperDeck Shuttle HD ao computador via o conector USB ou Ethernet no painel traseiro.
4. Inicie o Blackmagic HyperDeck Setup e siga as orientações na tela para atualizar o programa interno. Caso nenhuma instrução apareça, o software interno está atualizado e não há nada mais que precise fazer.



Transferir Arquivos via Rede

O HyperDeck Shuttle HD suporta transferência de arquivos tanto via Protocolo de Transferência de Hipertexto Seguro, conhecido como HTTPS, e Protocolo de Transferência de Arquivos, conhecido como FTP. Isso permite que você copie arquivos diretamente do seu computador para o seu HyperDeck através de uma rede com as velocidades rápidas que uma rede local pode oferecer.

Por exemplo, você pode copiar novos arquivos para uma unidade HyperDeck que está sendo usada para reproduzir vídeo em paredes de vídeo e sinalização digital.

É possível transferir qualquer arquivo para o HyperDeck ou a partir dele, mas vale a pena ressaltar que qualquer arquivo que você pretenda reproduzir a partir do HyperDeck Shuttle HD precisará ser compatível com os codecs e as resoluções que o seu HyperDeck suporta.

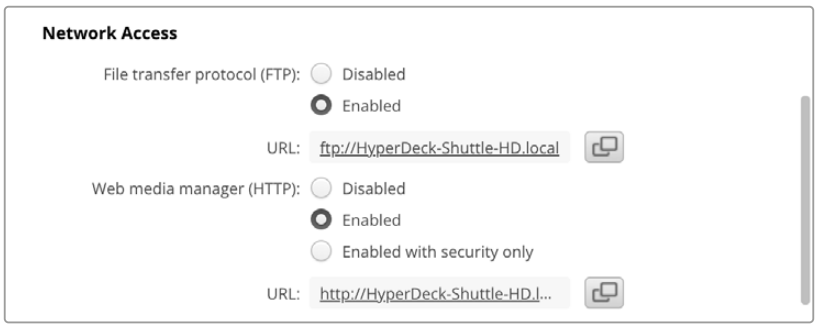
DICA Você pode transferir arquivos através de uma rede enquanto o HyperDeck estiver gravando. O HyperDeck ajustará a velocidade de transferência automaticamente para garantir que a gravação não seja afetada.

O acesso ao HyperDeck Shuttle HD por meio de qualquer um desses protocolos pode ser habilitado ou desabilitado no utilitário HyperDeck Setup. Por exemplo, você pode desabilitar o acesso FTP e habilitar o acesso HTTPS ao mesmo tempo.

Conectar ao HyperDeck Shuttle HD via HTTPS

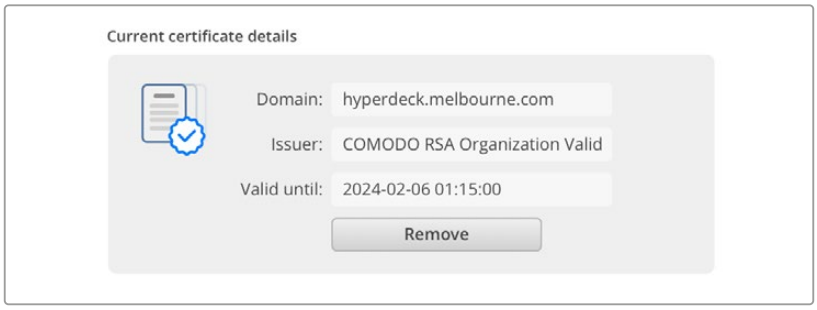
Para acessar o HyperDeck Shuttle HD através do web media manager, você precisará da URL disponibilizada nas configurações “Network Access”, que aparecem no utilitário HyperDeck Setup quando o computador está conectado via USB ou Ethernet, mas são desabilitadas quando apenas a Ethernet está conectada.

1. Usando um cabo USB-C, conecte o computador ao HyperDeck Shuttle HD através da porta USB no painel traseiro e abra o HyperDeck Setup. Você verá um ícone de conexão USB ao lado do nome da unidade. Clique no ícone circular ou em qualquer lugar na imagem do produto para abrir as configurações.
2. Quando estiver utilizando um certificado autoassinado, navegue até as configurações de acesso à rede e clique no ícone de cópia ao lado da URL. Essa URL é baseada no nome do seu HyperDeck. Para modificar a URL, altere o nome da unidade.



Ao utilizar um certificado autoassinado, clique no link.

3 Caso tenha importado um certificado assinado por um AC ou departamento de TI, copie e cole o endereço no campo “Domain” para o certificado atual.



Copie o endereço do domínio e cole em um navegador.

4 Abra o seu navegador de internet e cole o endereço em uma nova janela. Se você tiver habilitado o acesso somente com segurança, será solicitado que você insira o nome de usuário e a senha definidos no utilitário HyperDeck Setup.

Quando estiver utilizando um certificado autoassinado, o navegador exibirá um aviso sobre a privacidade da conexão, significa que um certificado assinado confiável não foi importado por meio do utilitário HyperDeck Setup.

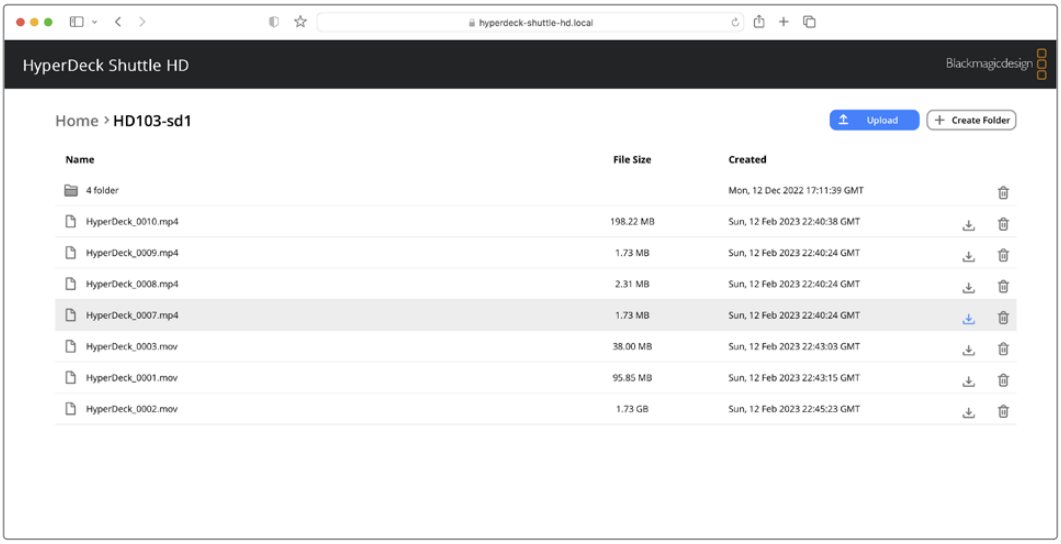
Para continuar sem um certificado válido e confiável, siga as instruções do seu navegador para reconhecer os riscos e prosseguir para o site.

Transferir Arquivos via Web Media Manager

Ao abrir o navegador do web media manager pela primeira vez, você verá que seus arquivos serão organizados de acordo com seus respectivos compartimentos de mídia.

SD1	Mídias nos cartões SD.
USB	Drives USB conectados serão listados com o prefixo USB/.

Clique duas vezes na mídia para revelar o conteúdo do cartão SD ou drive.



Clique no botão “Upload” para adicionar arquivos.

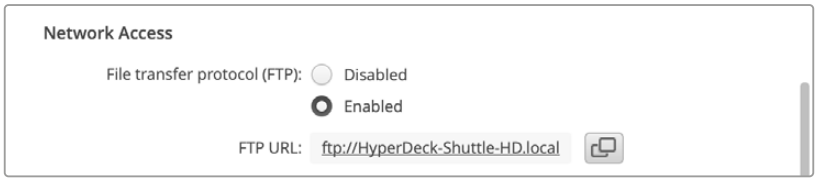
Para adicionar arquivos remotamente para reprodução, clique no botão “Upload”. Usando o navegador de arquivos, navegue até o seu arquivo e clique em “Upload”. Uma janela de status aparecerá durante o carregamento. Você também pode adicionar pastas, se necessário, usando o botão “Create Folder”.

Para baixar arquivos, use o ícone de seta na extremidade direita. Seu navegador pode solicitar que você permita downloads do site. Clique em “Permitir”. Para excluir um arquivo, clique no ícone de lixeira e uma janela de exclusão de arquivo será exibida. Clique em “Excluir” para prosseguir.

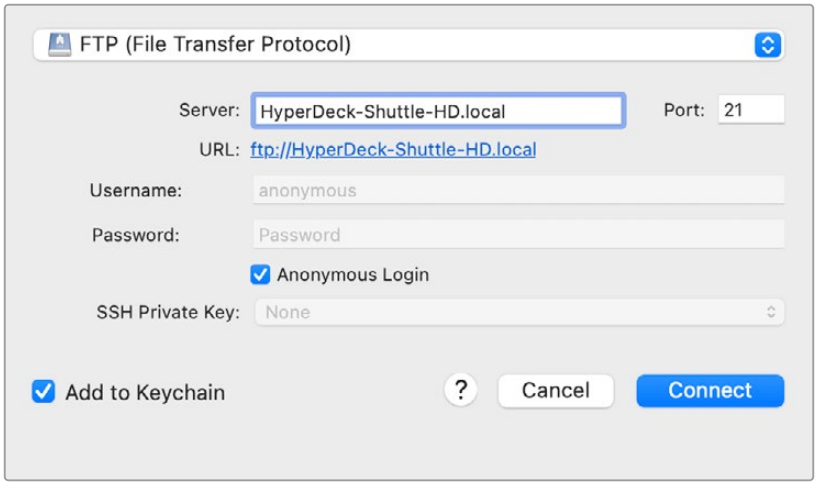
Transferir Arquivos via FTP

Com o seu computador e HyperDeck Shuttle HD na mesma rede, tudo o que você precisa é de um cliente de FTP e o endereço IP do HyperDeck Shuttle HD ou a URL do FTP no utilitário HyperDeck Setup.

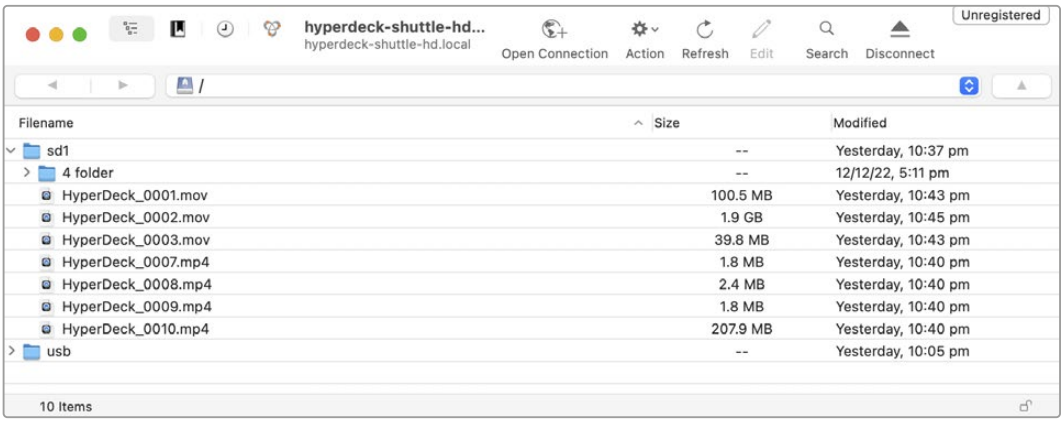
1. Baixe e instale um cliente FTP no computador ao qual você quer conectar o HyperDeck Shuttle HD. Recomendamos o Cyberduck, FileZilla ou Transmit, mas a maioria dos aplicativos FTP funcionará. O download do Cyberduck e do FileZilla é gratuito.
2. Com o HyperDeck Shuttle HD conectado à sua rede, abra o HyperDeck Setup e clique na URL do FTP ou pressione o ícone de cópia para colá-lo manualmente. Talvez seja necessário clicar no link uma segunda vez caso o programa FTP não abra uma conexão.



3. Se você estiver abrindo uma conexão FTP manualmente, cole a URL no campo do servidor. Marque “Anonymous Login”, se disponível.



4 Os cartões SD serão identificados como “sd1”. Se você expandir a pasta “usb”, todas os drives USB conectados aparecerão na lista.



Agora você pode arrastar e soltar arquivos usando a interface FTP.

Informações para Desenvolvedores

Blackmagic HyperDeck Ethernet Protocol

The Blackmagic HyperDeck Ethernet Protocol is a text based protocol accessed by connecting to TCP port 9993 on HyperDeck models that have a built in Ethernet connection. If you are a software developer, you can use the protocol to construct devices that integrate with our products. Here at Blackmagic Design our approach is to open up our protocols and we eagerly look forward to seeing what you come up with!

You can connect to your HyperDeck recorder using the HyperDeck Ethernet Protocol using a command line program on your computer, such as Terminal on a Mac and putty on a Windows computer.

The HyperDeck Ethernet Protocol lets you schedule playlists and recordings. The following is an example of how to play 7 clips from clip number 5 onwards via the HyperDeck Ethernet Protocol.

On a Mac

1. Open the Terminal application which is located with the applications > utilities folder.
2. Type in “nc” and a space followed by the IP address of your HyperDeck disk recorder, another space and “9993” which is the HyperDeck Ethernet Protocol port number. For example type: nc 192.168.1.154 9993. The Protocol preamble will appear.
3. Type “playrange set: clip id: 5 count: 7” and press ‘return’.

   On HyperDeck disk recorders with a timeline view, you will see in and out points marked around clips 5 through the end of clip 11.
4. Type “play”. Clips 5 through 11 will now play back.
5. To clear the playrange, type “playrange clear”
6. To exit from the protocol, type ‘quit’.

Protocol Commands

Command	Command Description
help or ?	Provides help text on all commands and parameters
commands	return commands in XML format
device info	return device information
disk list	query clip list on active disk
disk list: slot id: {n}	query clip list on disk in slot {n}
quit	disconnect ethernet control
ping	check device is responding
preview: enable: {true/false}	switch to preview or output
play	play from current timecode
play: speed: {-5000 to 5000}	play at specific speed
play: loop: {true/false}	play in loops or stop-at-end
play: single clip: {true/false}	play current clip or all clips

Command	Command Description
play: {clip id/clip/timecode/timeline/...}	play from the specified position see “goto” command for description of parameters parameters can be combined with {speed/loop/single clip}
playrange	query playrange setting
playrange set: clip id: {n}	set play range to play clip {n} only
playrange set: clip id: {n} count: {m}	set play range to {m} clips starting from clip {n}
playrange set: in: {inT} out: {outT}	set play range to play between: - timecode {inT} and timecode {outT}
playrange set: timeline in: {in} timeline out: {out}	set play range in units of frames between: - timeline position {in} and position {out}
playrange clear	clear/reset play range setting
play on startup	query unit play on startup state
play on startup: enable: {true/false}	enable or disable play on startup
play on startup: single clip: {true/false}	play single clip or all clips on startup
play option	query play options
play option: stop mode: {lastframe/nextframe/black}	set output frame when playback stops
record	record from current input
record: name: {name}	record named clip
record spill	spill current recording to next slot
record: spill: slot id: {n}	spill current recording to specified slot use current id to spill to same slot
spill order	query the device order used for record spill
stop	stop playback or recording
clips count	query number of clips on timeline
clips get	query all timeline clips
clips get: clip id: {n}	query a timeline clip info
clips get: clip id: {n} count: {m}	query m clips starting from n
clips get: version: {1/2/3}	query clip info using specified output version: version 1: id: name startT duration version 1: id: name startT duration startT depends on “configuration: timecode output: {clip/timeline}” version 2: id: clipInT clipDuration inT outT filename version 3: id: clipInT clipDuration inT outT folder/filename
clips add: name: {name}	append a clip to timeline, name can include subfolders e.g. folder1/HyperDeck_0001.mp4
clips add: clip id: {n} name: {name}	insert clip before existing clip {n}
clips add: in: {inT} out: {outT} name: {name}	append the clip portion between clip timecodes {inT} to {outT}
clips add: frame in: {in} frame out: {out} name: {name}	append the clip portion between clip frame numbers {in} to {out}

Command	Command Description
clips remove: clip id: {n}	remove clip {n} from the timeline (invalidates clip ids following clip {n})
clips clear	empty timeline clip list
clips rebuild	rebuild timeline with default rules
clip info	query clip info for the current playing/recording clip
clip info: clip id: {n}	query clip info for timeline clip id {n}
clip info: name: {name}	query clip info for the clip named {name} on active disk
transport info	query current activity
slot info	query active slot
slot info: slot id: {n}	query slot {n}
slot info: device: {device}	query slot containing device USB/network devices can be queried without being active “device” and “slot id” parameters are mutually exclusive in all commands
slot select: slot id: {n}	switch to specified slot
slot select: device: {device}	switch to slot containing device
slot select: video format: {format}	load clips of specified format
slot unblock	unblock active slot
slot unblock: slot id: {n}	unblock slot {n}
slot unblock: device: {device}	unblock disk device
external drive list	list all available USB/network drives for use in external slot
external drive select: device: {device}	switch external slot to specified external drive
external drive selected	query the currently selected external drive
cache info	query cache status
dynamic range	query dynamic range settings
dynamic range: playback override: {off/Rec709/Rec2020_SDR/HLG/ ST2084_300/ST2084_500/ ST2084_800/ST2084_1000/ ST2084_2000/ST2084_4000/ST2084	set playback dynamic range override
dynamic range: record override: {off/Rec709/Rec2020_SDR/HLG/ ST2084_300/ST2084_500/ ST2084_800/ST2084_1000/ ST2084_2000/ST2084_4000/ST2048}	set record dynamic range override
notify	query notification status
notify: remote: {true/false}	set remote notifications
notify: transport: {true/false}	set transport notifications
notify: slot: {true/false}	set slot notifications
notify: configuration: {true/false}	set configuration notifications

Command	Command Description
notify: dropped frames: {true/false}	set dropped frames notifications (reported dropped frame count is approximate)
notify: display timecode: {true/false}	set display timecode notifications
notify: timeline position: {true/false}	set playback timeline position notifications
notify: playrange: {true/false}	set playrange notifications
notify: cache: {true/false}	set cache notifications
notify: dynamic range: {true/false}	set dynamic range settings notifications
notify: slate: {true/false}	set digital slate notifications
notify: clips: {true/false}	set timeline clips notifications where two types of changes can occur: add: partial update with list of clips and insert positions snapshot: complete update of all clips on timeline
notify: disk: {true/false}	set disk clips notifications where two types of changes can occur: add: partial update with list of clips and insert positions snapshot: complete update of all clips on timeline
notify: device info: {true/false}	set device info notifications
notify: nas: {true/false}	set nas notifications triggered by commands such as “nas add” or “nas remove”
goto: clip id: {start/end}	goto first clip or last clip
goto: clip id: {n}	goto clip id {n}
goto: clip id: +{n}	go forward {n} clips
goto: clip id: -{n}	go backward {n} clips
goto: clip: {start/end}	goto start or end of clip
goto: clip: {n}	goto frame position {n} within current clip
goto: clip: +{n}	go forward {n} frames within current clip
goto: clip: -{n}	go backward {n} frames within current clip
goto: timeline: {start/end}	goto start or end of timeline
goto: timeline: {n}	goto frame position {n} within timeline
goto: timeline: +{n}	go forward {n} frames within timeline
goto: timeline: -{n}	go backward {n} frames within timeline
goto: timecode: {timecode}	goto absolute timecode position in timeline
goto: timecode: +{timecode}	go forward {timecode} duration
goto: timecode: -{timecode}	go backward {timecode} duration
goto: slot id: {n}	goto slot id {n}
goto: clip id: {n} clip: {m}	goto clip id {n} and offset to frame position {m} within that clip
goto: clip id: {n} timeline: {m}	goto clip id {n} and offset to frame position {m} within the timeline

Command	Command Description
goto: clip id: {n} timecode: {timecode}	goto clip id {n} and offset {timecode} duration {clip id/clip/timeline/timecode} support absolute and relative offsets use “play” instead of “goto” to play from seeked position
jog: timecode: {timecode}	jog to timecode
jog: timecode: +{timecode}	jog forward {timecode} duration
jog: timecode: -{timecode}	jog backward {timecode} duration
shuttle: speed: {-5000 to 5000}	shuttle with speed
remote	query unit remote control state
remote: enable: {true/false}	enable or disable remote control
remote: override: {true/false}	session override remote control
configuration	query configuration settings
configuration: video input: {SDI/HDMI/component/composite}	change the video input source
configuration: audio input: {embedded/XLR/RCA}	change the audio input source
configuration: file format: {format}	switch to one of the supported formats: H.265High_422, H.264High, H.264Medium, H.264Low, H.264High10_422, H.265High, H.265Medium, H.265Low, QuickTimeProResHQ, QuickTimeProRes, QuickTimeProResLT, QuickTimeProResProxy DNxHR_HQX, QuickTimeDNxHR_HQX, DNxHR_SQ, QuickTimeDNxHR_SQ, DNxHR_LB, QuickTimeDNxHR_LB, DNxHD220x, QuickTimeDNxHD220x, DNxHD145, QuickTimeDNxHD145, DNxHD45, QuickTimeDNxHD45
configuration: audio codec: {PCM/AAC}	switch to specific audio codec
configuration: timecode input: {external/embedded/internal/preset/clip}	change the timecode input
configuration: timecode output: {clip/timeline}	change the timecode output
configuration: timecode preference: {default/dropframe/nondropframe}	whether or not to use drop frame timecodes when not otherwise specified
configuration: timecode preset: {timecode}	set the timecode preset
configuration: audio input channels: {n}	set the number of audio channels recorded to {n}
configuration: record trigger: {none/recordbit/timecoderun}	change the record trigger
configuration: record prefix: {name}	set the record prefix name (supports UTF-8 name)
configuration: record cache: {true/false}	enable or disable record cache, has no effect if cache is not supported/installed/formatted
configuration: append timestamp: {true/false}	append timestamp to recorded filename
configuration: usb spill: {true/false}	enable or disable spilling between usb disks

Command	Command Description
configuration: reference source: {auto/input/external}	set source for the reference signal
configuration: genlock input resync: {true/false}	enable or disable genlock input resync when enabled set reference source to auto/external
configuration: xlr input id: {n} xlr type: {line/mic}	configure xlr input type multiple xlr inputs can be configured in a single command
uptime	return time since last boot
format: slot id: {n} prepare: {exFAT/HFS+} name: {name}	prepare formatting operation filesystem type with volume name {name} “slot id” can be omitted for the current mounted slot “name” defaults to current volume name if mounted (supports UTF-8)
format: device: {device} prepare: {exFAT/HFS+} name: {name}	prepare formatting operation for {device}
format: confirm: {token}	perform a pre-prepared formatting operation using token
identify: enable: {true/false}	identify the device
watchdog: period: {period in seconds}	client connection timeout
reboot	reboot device
slate clips	slate clips information
slate project	slate project information
slate lens	slate lens information
nas list	list all NAS share bookmarks
nas discovered	list all NAS servers that have been discovered via mDNS
nas selected	currently selected NAS share
nas deselect	unmount the currently selected NAS share
connection protocol: response version: {version}	changes which do not affect other client connections change the output of “clips get”, “disk list” and related responses version 1 205 clips get id: filename startT duration startT depends on “configuration: timecode output: {clip/timeline}” 519 clips info id: clipInT clipDuration inT outT filename 206 disk list id: filename codec format duration 520 disk list info id: filename codec format duration version 2 205 clips get id: clipInT clipDuration inT outT folder/filename 519 clips info id: clipInT clipDuration inT outT folder/filename 206 disk list id: codec format duration folder/filename 520 disk list info id: codec format duration folder/filename

Multiline commands:	Command Description
authenticate:↵	authenticate user for secure access
username: {username}	case sensitive username
password: {password}	case sensitive password
slate clips↵	set slate clips information:
reel: {n}	slate reel number, where {n} is in [1, 999]
scene id: {id}	slate scene id value, where {id} is a string
shot type: {WS/MS/CU/BCU/MCU/ECU/none}	slate shot type
take: {n}	slate take number, where {n} is in [1, 99]
take scenario: {PU/VFX/SER/none}	slate take scenario
take auto inc: {true/false}	slate take auto increment
good take: {true/false}	slate good take
environment: {interior/exterior}	slate environment
day night: {day/night}	slate day or night
slate project:↵	set slate project information:
project name: {name}	project name (can be empty, supports UTF-8)
camera: {index}	set camera index e.g. A
director: {name}	director (can be empty, supports UTF-8)
camera operator: {name}	camera operator (can be empty, supports UTF-8)
slate lens:↵	set lens information:
lens type: {type}	lens type (can be empty, supports UTF-8)
iris: {type}	camera iris (can be empty, supports UTF-8)
focal length: {length}	focal length (can be empty, supports UTF-8)
distance: {distance}	lens distance (can be empty, supports UTF-8)
filter: {filter}	lens filter (can be empty, supports UTF-8)
nas add:↵	add a NAS share to the list of bookmarks
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share
username: {username}	username to connect as (optional, defaults to guest)
password: {password}	password to connect with (optional)
nas remove:↵	remove NAS share bookmark, does not unmount share if mounted
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share
nas select:↵	mount NAS share asynchronously. Uses credentials provided in matching bookmark, otherwise uses guest credentials
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share Use “nas selected” or “notify: slot: true” to determine when share is mounted.

Command Combinations

You can combine the parameters into a single command, for example:

```
play: clip id: 3 speed: 200 loop: true single clip: true
```

Or for configuration:

```
configuration: video input: SDI audio input: XLR
```

Or to switch to the second disk, but only play NTSC clips:

```
slot select: slot id: 2 video format: NTSC
```

Using XML

While you can use the Terminal to talk to HyperDeck, if you are writing software, you can use XML to confirm the existence of a specific command based on the firmware of the HyperDeck you are communicating with. This helps your software user interface adjust to the capabilities of the specific HyperDeck model and software version.

Protocol Details

Connection

The HyperDeck Ethernet server listens on TCP port 9993.

Basic syntax

The HyperDeck protocol is a line oriented text protocol. Lines from the server will be separated by an ascii CR LF sequence. Messages from the client may be separated by LF or CR LF.

New lines are represented in this document as a "↵" symbol.

Single line command syntax

Command parameters are usually optional. A command with no parameters is terminated with a new line:

```
{Command name}↵
```

If parameters are specified, the command name is followed by a colon, then pairs of parameter names and values. Each parameter name is terminated with a colon character:

```
{Command name}: {Parameter}: {Value} {Parameter}: {Value} ...↵
```

Multiline command syntax

The HyperDeck protocol also supports an equivalent multiline syntax where each parameter-value pair is entered on a new line. E.g.

```
{Command name}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
↵
```

Response syntax

Simple responses from the server consist of a three digit response code and descriptive text terminated by a new line:

```
{Response code} {Response text}↵
```

If a response carries parameters, the response text is terminated with a colon, and parameter name and value pairs follow on subsequent lines until a blank line is returned:

```
{Response code} {Response text}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
...
↵
```

Successful response codes

A simple acknowledgement of a command is indicated with a response code of 200:

```
200 ok↵
```

Other successful responses carry parameters and are indicated with response codes in the range of 201 to 299.

Failure response codes

Failure responses to commands are indicated with response codes in the range of 100 to 199:

```
100 syntax error
101 unsupported parameter
102 invalid value
103 unsupported
104 disk full
105 no disk
106 disk error
107 timeline empty
108 internal error
109 out of range
110 no input
111 remote control disabled
112 clip not found
120 connection failed
121 authentication failed
122 authentication required
150 invalid state
151 invalid codec
160 invalid format
161 invalid token
162 format not prepared
163 parameterized single line command not supported
```

Asynchronous response codes

The server may return asynchronous messages at any time. These responses are indicated with response codes in the range of 500 to 599:

```
5xx {Response Text}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
↵
```

Connection response

On connection, an asynchronous message will be delivered:

```
500 connection info:↵
protocol version: {Version}↵
model: {Model Name}↵
↵
```

Connection rejection

A limited number of clients may connect at a time. If too many clients attempt to connect concurrently, they will receive an error and be disconnected:

```
120 connection failed↵
```

Timecode syntax

Timecodes are expressed as non-drop-frame timecode in the format:

```
HH:MM:SS:FF
```

Handling of deck "remote" state

The “remote” command may be used to enable or disable the remote control of the deck. Any attempt to change the deck state over ethernet while remote access is disabled will generate an error:

```
111 remote control disabled↵
```

To enable or disable remote control:

```
remote: enable: {“true”, “false”} ↵
```

The current remote control state may be overridden allowing remote access over ethernet irrespective of the current remote control state:

```
remote: override: {“true”, “false”} ↵
```

The override state is only valid for the currently connected ethernet client and only while the connection remains open.

The “remote” command may be used to query the remote control state of the deck by specifying no parameters:

```
remote↵
```

The deck will return the current remote control state:

```
210 remote info:↵
enabled: {“true”, “false”}↵
override: {“true”, “false”}↵
↵
```

Asynchronous remote control information change notification is disabled by default and may be configured with the “notify” command. When enabled, changes in remote state will generate a “510 remote info:”asynchronous message with the same parameters as the “210 remote info:” message.

Closing connection

The "quit" command instructs the server to cleanly shut down the connection:

```
quit↵
```

Checking connection status

The "ping" command has no function other than to determine if the server is responding:

```
ping↵
```

Getting help

The "help" or "?" commands return human readable help text describing all available commands and parameters:

```
help↵
```

Or:

```
?↵
```

The server will respond with a list of all supported commands:

```
201 help:↵
{Help Text}↵
{Help Text}↵
↵
```

Switching to preview mode

The "preview" command instructs the deck to switch between preview mode and output mode:

```
preview: enable: {"true", "false"}↵
```

Playback will be stopped when the deck is switched to preview mode. Switching to playback is not permitted during record. Use the stop command to stop recording before switching to playback.

Controlling device playback

The “play” command instructs the deck to start playing:

```
play↵
```

The play command accepts a number of parameters which may be used together in most combinations.

By default, the deck will play all remaining clips on the timeline then stop.
The “single clip” parameter may be used to override this behavior:

```
play: single clip: {“true”, “false”}↵
```

By default, the deck will play at normal (100%) speed. An alternate speed may be specified in percentage between -5000 to 5000:

```
play: speed: {% normal speed}↵
```

By default, the deck will stop playing when it reaches to the end of the timeline. The “loop” parameter may be used to override this behavior:

```
play: loop: {“true”, “false”}↵
```

To play from the start of a particular clip:

```
play: clip id: {Clip Id}↵
```

To play from a position offset from the start of particular clip:

```
play: clip id: {Clid Id} timecode: +{timecode}↵
```

The “playrange” command returns the current playrange setting if any:

```
playrange↵
```

To override this behaviour and select a particular clip:

```
playrange set: clip id: {Clip ID}↵
```

To only play a certain number of clips starting at a particular clip:

```
playrange set: clip id: {n} count: {m}↵
```

To only play a certain timecode range:

```
playrange set: in: {in timecode} out: {out timecode}↵
```

To play a certain timeline range:

```
playrange set: timeline in: {in} timeline out: {out}↵
```

To clear a set playrange and return to the default value:

```
playrange clear↵
```

The “play on startup command” instructs the deck on what action to take on startup. By default, the deck will not play. Use the “enable” command to start playback after each power up.

```
play on startup: enable {“true”, “false”}↵
```

By default, the unit will play back all clips on startup. Use the “single clip” command to override.

```
play on startup: single clip: {“true”, “false”}↵
```

The “play option” command queries the output frame for when playback stops:

```
play option↵
```

By default, the deck will display the last frame when playback stops. To override this behaviour, the “stop mode” parameter can be used:

```
play option: stop mode: {“lastframe”, “nextframe”, “black”}↵
```

Stopping deck operation

The "stop" command instructs the deck to stop the current playback or capture:

```
stop↵
```

Changing timeline position

The "goto" command instructs the deck to switch to playback mode and change its position within the timeline.

To go to the start of a specific clip:

```
goto: clip id: {Clip ID}↵
```

To move forward/back {count} clips from the current clip on the current timeline:

```
goto: clip id: +/-{count}↵
```

Note that if the resultant clip id goes beyond the first or last clip on timeline, it will be clamp at the first or last clip.

To go to the start or end of the current clip:

```
goto: clip: {“start”, “end”}↵
```

To go to the start of the first clip or the end of the last clip:

```
goto: timeline: {“start”, “end”}↵
```

To go to a specified timecode:

```
goto: timecode: {timecode}↵
```

To move forward or back a specified duration in timecode:

```
goto: timecode: {“+”, “-”}{duration in timecode}↵
```

To specify between slot 1 and slot 2:

```
goto: slot id: {Slot ID}↵
```

Note that only one parameter/value pair is allowed for each goto command.

Enumerating supported commands and parameters

The "commands" command returns the supported commands:

```
commands↵
```

The command list is returned in a computer readable XML format:

```
212 commands:
<commands>↵
     <command name="…"><parameter name="…"/>…</command>↵
     <command name="…"><parameter name="…"/>…</command>↵
     …
</commands>↵
↵
```

More XML tokens and parameters may be added in later releases.

Controlling asynchronous notifications

The “notify” command may be used to enable or disable asynchronous notifications from the server.
To enable or disable transport notifications:

```
notify: transport: {“true”, “false”}↵
```

To enable or disable slot notifications:

```
notify: slot: {“true”, “false”}↵
```

To enable or disable remote notifications:

```
notify: remote: {“true”, “false”}↵
```

To enable or disable configuration notifications:

```
notify: configuration: {“true”, “false”}↵
```

Multiple parameters may be specified. If no parameters are specified, the server returns the current state of all notifications:

```
209 notify:↵
transport: {“true”, “false”}↵
slot: {“true”, “false”}↵
remote: {“true”, “false”}↵
configuration: {“true”, “false”}↵
dropped frames: {“true”, “false”}↵
display timecode: {“true”, “false”}↵
timeline position: {“true”, “false”}↵
playrange: {“true”, “false”}↵
cache: {“true”, “false”}↵
dynamic range: {“true”, “false”}↵
slate: {“true”, “false”}↵
clips: {“true”, “false”}↵
disk: {“true”, “false”}↵
device info: {“true”, “false”}↵
nas: {“true”, “false”}↵
↵
```

Retrieving device information

The "device info" command returns information about the connected deck device:

```
device info↵
```

The server will respond with:

```
204 device info:↵
protocol version: {Version}↵
model: {Model Name}↵
unique id: {unique alphanumeric identifier}↵
slot count: {number of storage slots}↵
software version: {software version}↵
name: {device name}↵
↵
```

Retrieving slot information

The "slot info" command returns information about a slot. Without parameters, the command returns information for the currently selected slot:

```
slot info↵
```

If a slot id is specified, that slot will be queried:

```
slot info: slot id: {Slot ID}↵
```

The server will respond with slot specific information:

```
202 slot info:↵
slot id: {Slot ID}↵
slot name: {“slot name”}↵
device name: {identifying name for disk device}↵
status: {"empty", "mounting", "error", "mounted"}↵
volume name: {Volume name}↵
recording time: {recording time available in seconds}↵
video format: {disk's default video format}↵
blocked: {“true”, “false”}↵
remaining size: {remaining size in bytes}↵
total size: {total size in bytes}↵
↵
```

A slot can also be specificed by its device. This is particularly useful when there are multiple drives connected via USB. First list the available external drives:

```
external drive list↵
226 external drive info:↵
device: {device}↵
```

Then use slot info with device to query the drive:

```
slot info: device: {device}↵
```

Asynchronous slot information change notification is disabled by default and may be configured with the "notify" command. When enabled, changes in slot state will generate a "502 slot info:" asynchronous message with the same parameters as the "202 slot info:" message.

Retrieving clip information

The “disk list” command returns the information for each playable clip on a given disk. Without parameters, the command returns information for the current active disk:

```
disk list↵
```

If a slot id is specified, the disk in that slot will be queried:

```
disk list: slot id: {Slot ID}↵
```

The server responds with the list of all playable clips on the disk in the format of: Index, name, formats, and duration in timecode:

```
206 disk list:↵
slot id: {Slot ID}↵
{clip index}: {name} {file format} {video format} {Duration timecode}↵
{clip index}: {name} {file format} {video format} {Duration timecode}↵
…
↵
```

Note that the *clip index* starts from 1.

Retrieving clip count

The "clips count" command returns the number of clips on the current timeline:

```
clips count ↵
```

The server responds with the number of clips:

```
214 clips count: ↵
clip count: {Count}↵
```

Retrieving timeline information

The "clips get" command returns information for each available clip on the current timeline. Without parameters, the command returns information for all clips on timeline:

```
clips get↵
```

In version 1, the start timecode reported is either a clip timecode or a timeline timecode depending on the configured output timecode.

The server responds with a list of clip IDs, names and timecodes:

```
205 clips info:↵
clip count: {Count}↵
{Clip ID}: {Name} {Start timecode} {Duration timecode}↵
{Clip ID}: {Name} {Start timecode} {Duration timecode}↵
…
↵
```

The “clips get” command provides a more detailed response when using the “version: 2” parameter:

```
clips get: version: 2↵
```

The server responds with a list of clip IDs, timecodes, in points, out points and names. Clip name is the last field making it simpler to parse when names have embedded spaces.

```
{Clip ID}: {Clip start timecode} {Duration timecode} {inTimecode}
{outTimecode}
{name}↵
{Clip ID}: {Clip start timecode} {Duration timecode} {inTimecode}
{outTimecode}
{name}↵
…
↵
```

For models that support recursive timelines “clips get: version: 3” replaces the {name} field with {path to clip name} where the {path to clip name} can include directories and subdirectories.

Retrieving transport information

The “transport info” command returns the state of the transport:

```
transport info ↵
```

The server responds with transport specific information:

```
208 transport info:

status: {“preview”, “stopped”, “play”, “forward”, “rewind”,
“jog”, “shuttle”,”record”}↵

speed: {Play speed between -5000 and 5000 %}↵

slot id: {Slot ID or “none”}↵

slot name: {“slot name”}↵

device name: {identifying name for disk device}↵

clip id: {Clip ID or “none”}↵

single clip: {“true”, “false”}↵

display timecode: {timecode}↵

timecode: {timecode}↵

video format: {Video format}↵

loop: {“true”, “false”}↵

timeline: {n}↵

input video format: {Video format”}↵

dynamic range: {“off”, “Rec709”, “Rec2020_SDR”, “HLG”,
“ST2084_300”, “ST2084_500”, “ST2084_800”, “ST2084_1000”,
“ST2084_2000”, “ST2084_4000”, “ST2048” or “none”}↵

reference locked: {“false”, “true”}

↵
```

The "timecode" value is the timecode within the current timeline for playback or the clip for record. The "display timecode" is the timecode displayed on the front of the deck. The two timecodes will differ in some deck modes.

Asynchronous transport information change notification is disabled by default and may be configured with the "notify" command. When enabled, changes in transport state will generate a "508 transport info:" asynchronous message with the same parameters as the "208 transport info:" message.

Video Formats

The following video formats are currently supported on HyperDeck Extreme, HyperDeck Studio and HyperDeck Shuttle:

720p50, 720p5994, 720p60

1080p23976, 1080p24, 1080p25, 1080p2997, 1080p30, 1080p60

1080i50, 1080i5994, 1080i60

HyperDeck Extreme HDR models also support the following formats:

NTSC, PAL, NTSCp, PALp

2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p30, 2160p50, 2160p59.94, 2160p60

4Kp23976, 4Kp24, 4Kp25, 4Kp2997, 4Kp30

4Kp50, 4Kp5994, 4Kp60

HyperDeckExtreme 8K HDR adds support for the following 8K formats:

4320p23.98, 4320p24, 4320p25, 4320p29.97, 4320p30, 4320p50, 4320p59.94, 4320p60

8Kp23976, 8Kp24, 8Kp25

HyperDeck Studio Pro and Plus models support these 4k formats:

4Kp23976, 4Kp24, 4Kp25, 4Kp2997, 4Kp30

HyperDeck Studio 4K Pro adds support for the following 4k formats:

4Kp50, 4Kp5994, 4Kp60

Video format support may depend on the file format selected and may vary between models and software releases.

File Formats

All HyperDeck models currently support the following file formats:

H.264High_SDI

H.264High

H.264Medium

H.264Low

QuickTimeProResHQ

QuickTimeProRes

QuickTimeProResLT

QuickTimeProResProxy

QuickTimeDNxHD220x

DNxHD220x

QuickTimeDNxHD145

DNxHD145

QuickTimeDNxHD45

DNxHD45

HyperDeck Studio 4K Pro and HyperDeck Extrme HDR models also support the following file formats:

H.265High_SDI

H.265High

H.265Medium

H.265Low

QuickTimeDNxHR_HQX

DNxHR_HQX

QuickTimeDNxHR_SQ

DNxHR_SQ

QuickTimeDNxHR_LB

DNxHR_LB

Supported file formats may vary between models and software releases.

Querying and updating configuration information

The "configuration" command may be used to query the current configuration of the deck:

```
configuration↵
```

The server returns the configuration of the deck:

```
211 configuration:↵
audio input: {“embedded”, “XLR”, “RCA”}↵
audio mapping: {n}↵
video input: {“SDI”, “HDMI”, “component”, “composite”}↵
file format: {format}↵
audio codec: {“PCM”, “AAC”}↵
timecode input: {“external”, “embedded”, “preset”, “clip”}↵
timecode output: {“clip”, “timeline”}↵
timecode preference: {“default”, “dropframe”, “nondropframe”}↵
timecode preset: {timecode}↵
audio input channels: {n}↵
record trigger: {“none”, “recordbit”, “timecoderun”}↵
record prefix: {name}↵
record cache: {“true”, “false”}↵
append timestamp: {“true”, “false”}↵
genlock input resync: {“true”, “false”}↵
reference source: {“auto”, “input”, “external”}↵
xlr input id: {“n”}↵
xlr type: {”line”, ”mic”}↵
usb spill: {“true”, “false”}↵
↵
```

One or more configuration parameters may be specified to change the configuration of the deck.

To change the current video input:

```
configuration: video input: {“SDI”, “HDMI”, “component”}↵
```

Valid video inputs may vary between models. To configure the current audio input:

```
configuration: audio input: {“embedded”, “XLR”, “RCA”}↵
```

Valid audio inputs may vary between models.

To configure the current file format:

```
configuration: file format: {File format}↵
```

Note that changes to the file format may require the deck to reset, which will cause the client connection to be closed. In such case, response code 213 will be returned (instead of 200) before the client connection is closed:

```
“213 deck rebooting”
```

Asynchronous configuration information change notification is disabled by default and may be configured with the “notify” command. When enabled, changes in configuration will generate a “511 configuration:” asynchronous message with the same parameters as the “211 configuration:” message.

Selecting active slot and video format

The "slot select" command instructs the deck to switch to a specified slot, or/and to select a specified output video format.

To switch to a specified slot:

```
slot select: slot id: {slot ID}↵
```

To switch to a disk device, including USB drives that are not yet made active:

```
slot select: device: {identifying name for disk device}↵
```

To select the output video format:

```
slot select: video format: {video format}↵
```

Either or all slot select parameters may be specified. Note that selecting video format will result in a rescan of the disk to reconstruct the timeline with all clips of the specified video format.

Clearing the current timeline

The "clips clear" command instructs the deck to empty the current timeline:

```
clips clear↵
```

The server responds with

```
200 ok↵
```

Adding a clip to the current timeline

The "clips add:" command instructs the deck to add a clip to the current timeline:

```
clips add: name: {clip name}↵
```

The server responds with

```
200 ok↵
```

or in case of error

```
1xx {error description}↵
```

Configuring the watchdog

The “watchdog” command instructs the deck to monitor the connected client and terminate the connection if the client is inactive for at least a specified period of time.

To configure the watchdog:

```
watchdog: period: {period in seconds}↵
```

To avoid disconnection, the client must send a command to the server at least every {period} seconds.
Note that if the period is set to 0 or less than 0, connection monitoring will be disabled.

Network Area Storage

On networks using multicast DNS the “nas discovered” command will list network servers the HyperDeck has discovered:

```
nas discovered↵
225 nas host info:
CloudStoreMini.local. CloudStoreMini
CloudStore80.local. CloudStore80
CloudStore320.local. CloudStore320
```

A network share can be added as a bookmark to the HyperDeck using ‘nas add’

```
nas add:
url: smb://CloudStore80.local/Studio1
```

For shares that require a username and password consider using the secure mode of the HyperDeck Ethernet protocol to avoid passwords being sent as plaintext.

```
nas add:
url: smb://192.168.1.1/Main
username: user1234
password: Password1234
```

A share can be made available for recording and playback using ‘nas select’. If a bookmark exists for that share, ‘nas select’ will use the credentials stored in the bookmark. Otherwise ‘nas select’ will connect using Guest credentials.

```
nas select:
url: smb://192.168.1.1/Main
```

Only one share can be mounted at a time using ‘nas select’.

You can query the currently selected nas share using the ‘nas selected’ command. If ‘notify: slot: true’ was used an asynchronous notification will be sent when the share is mounted.

HyperDeck Control REST API

Se você é um desenvolvedor de software, poderá criar aplicativos personalizados ou usufruir de ferramentas prontas para uso, como o cliente REST ou o Postman, para controlar e interagir com gravadores de disco HyperDeck usando a API HyperDeck Control REST. Essa API permite que você execute uma ampla gama de operações, como iniciar ou parar gravações, gerenciar a reprodução, acessar informações de disco e muito mais. Seja desenvolvendo um aplicativo personalizado adaptado às suas necessidades específicas ou utilizando ferramentas existentes, essa API permite que você explore todo o potencial dos gravadores de disco HyperDeck com facilidade. Aguardamos ansiosamente para conhecer suas soluções criativas.

Transport Control API

API for controlling Transport on Blackmagic Design products.

GET /transports/0

Get device's basic transport status.

Response

200 - Transport status.

The response is a JSON object.

Name	Type	Description
mode	string	Transport mode. Possible values are: InputPreview, InputRecord, Output.

PUT /transports/0

Set device's basic transport status.

Parameters

Name	Type	Description
mode	string	Transport mode. Possible values are: InputPreview, Output.

Response

204 - Transport mode was set.

GET /transports/0/stop

Determine if transport is stopped.

Response

200 - Transport stop response.

The response is a JSON object.

PUT /transports/0/stop

Stop transport. Deprecated, use POST /tranports/0/stop instead.

Response

204 - Transport stopped.

POST /transports/0/stop

Stop transport.

Response

204 - Transport stopped.

GET /transports/0/play

Determine if transport is playing.

Response

200 - Transport play response.
The response is a JSON object.

PUT /transports/0/play

Start playing on transport. Deprecated, use POST /tranports/0/play instead.

Response

204 - Transport playing.

POST /transports/0/play

Start playing on transport.

Response

204 - Transport playing.

GET /transports/0/playback

Get playback state.

Response

200 - OK
The response is a JSON object.

Name	Type	Description
type	string	Possible values are: Play, Jog, Shuttle, Var.
loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
speed	number	Playback Speed, 1.0 for normal forward playback
position	integer	Playback position on the timeline in units of video frames

PUT /transports/0/playback

Set playback state.

Parameters

Name	Type	Description
type	string	Possible values are: Play, Jog, Shuttle, Var.
loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
speed	number	Playback Speed, 1.0 for normal forward playback
position	integer	Playback position on the timeline in units of video frames

Response

204 - No Content

GET /transports/0/record

Get record state.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
recording	boolean	Is transport in Input Record mode

PUT /transports/0/record

Set record state. Deprecated, use POST /transports/0/record instead.

Parameters

Name	Type	Description
recording	boolean	Is transport in Input Record mode
clipName	string	Used to set the requested clipName to record to, when specifying “recording” attribute to True

Response

204 - Recording started.

POST /transports/0/record

Start recording.

Parameters

Name	Type	Description
clipName	string	Specific name of clip to record to.

Response

204 - Recording started.

GET /transports/0/clipIndex

Get the clip index of the currently playing clip on the timeline.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clipIndex	number	The 0-based index of the clip being played on the timeline. null when there is no timeline or an empty timeline.

GET /transports/0/timecode

Get device's timecode.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
display	string	The display timecode serialised as a string.
timeline	string	The timeline timecode serialised as a string.

GET /transports/0/timecode/source

Get timecode source selected on device

Response

200 - OK

The response is a JSON object.

Name	Type	Description
timecode	string	Possible values are: Timeline, Clip.

GET /transports/0/clip

Get clip information about the currently recording (or transferring) clip, if it exists

Response

200 - Information about the clip currently being recorded.

The response is a JSON object.

Name	Type	Description
clip	object	
clip.clipUniqueId	integer	Unique ID used to identify this clip
clip.filePath	string	Path to the file relative to the root of a mount
clip.fileSize	integer	Size of file on disk in bytes
clip.codecFormat	object	
clip.codecFormat.codec	string	Currently selected codec.
clip.codecFormat.container	string	Multimedia container format.
clip.videoFormat (required)	object	Video format configuration.
clip.videoFormat.name	string	Video format serialised as a string.
clip.videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
clip.videoFormat.height	number	Height dimension of video format.
clip.videoFormat.width	number	Width dimension of video format.
clip.videoFormat.interlaced	boolean	Is the display format interlaced?
clip.startTimecode	string	Start timecode of the clip serialised as string
clip.durationTimecode	string	Duration of the clip in timecode format serialised as string
clip.frameCount	integer	Number of frames in clip; duration of the clip in frames

System Control API

API for controlling the System Modes on Blackmagic Design products.

GET /system

Get device system information.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codecFormat	object	
codecFormat.codec	string	Currently selected codec.
codecFormat.container	string	Multimedia container format.
videoFormat (required)	object	Video format configuration.
videoFormat.name	string	Video format serialised as a string.
videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
videoFormat.height	number	Height dimension of video format.
videoFormat.width	number	Width dimension of video format.
videoFormat.interlaced	boolean	Is the display format interlaced?

GET /system/product

Get device product information.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
deviceName	string	Name of device as displayed in Setup
productName	string	Device's product name
softwareVersion	string	Software version running on device

GET /system/supportedCodecFormats

Get the list of supported codecs.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codecs	array	
codecs[i]	object	
codecs[i].codec	string	Currently selected codec.
codecs[i].container	string	Multimedia container format.

GET /system/codecFormat

Get the currently selected codec.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codec	string	Currently selected codec.
container	string	Multimedia container format.

PUT /system/codecFormat

Set the codec.

Parameters

Name	Type	Description
codec	string	Currently selected codec.
container	string	Multimedia container format.

Response

204 - The codec updated successfully.

GET /system/videoFormat

Get the currently selected video format.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
name	string	Video format serialised as a string.
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

PUT /system/videoFormat

Set the timeline video format. Deprecated, use PUT /timelines/0/videoFormat instead.

Parameters

This parameter can be one of the following types:

Name	Type	Description
name	string	Video format serialised as a string.

Name	Type	Description
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

Response

204 - The video format updated successfully.

400 - Invalid request.

409 - Operation unsupported in the current state.

Media Control API

API for controlling media devices in Blackmagic Design products.

GET /media/workingset

Get the list of media devices currently in the working set.

Response

200 - The list of media devices in the working set. Entries are null if there is no media device in that slot.

The response is a JSON object.

Name	Type	Description
size	integer	The fixed size of this device's working set
workingset (required)	array	
workingset[i]	object	
workingset[i].index	integer	Index of this media in the working set
workingset[i].activeDisk	boolean	Is this current item the active disk
workingset[i].volume	string	Volume name
workingset[i].deviceName	string	Internal device name of this media device
workingset[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
workingset[i].totalSpace	integer	Total space on media device in bytes
workingset[i].remainingSpace	integer	Remaining space on media device in bytes
workingset[i].clipCount	integer	Number of clips currently on the device

GET /media/active

Get the currently active media device.

Response

200 - The current active media device.

The response is a JSON object.

Name	Type	Description
workingsetIndex	integer	Working set index of the active media device
deviceName	string	Internal device name of this media device

204 - No media is currently active

PUT /media/active

Set the currently active media device.

Parameters

Name	Type	Description
workingsetIndex	integer	Working set index of the media to become active

Response

204 - The active media device was set successfully.

400 - Setting the currently active media device is not possible in the current state.

GET /media/devices/doformatSupportedFilesystems

Get the list of filesystems available to format the device.

Response

200 - The list of filesystems permitted for formatting.

The response is a JSON object.

GET /media/devices/{deviceName}

Get information about a requested device.

Parameters

Name	Type	Description
{deviceName}	string	

Response

200 - Information about the requested device.

The response is a JSON object.

Name	Type	Description
state	string	The current state of the media device. Possible values are: None, Scanning, Mounted, Uninitialised, Formatting, RaidComponent.

400 - Invalid device name

404 - Device not found

GET /media/devices/{deviceName}/doformat

Get a format key, used to format the device with a PUT request.

Parameters

Name	Type	Description
{deviceName}	string	

Response

200 - Format prepared

The response is a JSON object.

Name	Type	Description
deviceName	string	Internal device name of this media device
key	string	The key used to format this device, it must be fetched with the GET request and then provided back with a PUT request

400 - Cannot format the device

404 - Device not found

PUT /media/devices/{deviceName}/doformat

Perform a format of the media device.

Parameters

Name	Type	Description
{deviceName}	string	

Name	Type	Description
key	string	The key used to format this device, it must be fetched with the GET request and then provided back with a PUT request
filesystem	string	Filesystem to format to. GET doFormatSupportedFilesystems returns list of supported filesystems.
volume	string	Volume name to set for the disk after format

Response

204 - Format successful

400 - Cannot format the device, invalid filesystem or key

404 - Device not found

Timeline Control API

API for controlling playback timeline.

GET /timelines/0

Get the playback timeline.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clips	array	
clips[i]	object	
clips[i].clipUniqueId	integer	Unique identifier used to identify this media clip. If the same media clip is added to the timeline multiple times, each timeline clip has the same clipUniqueId
clips[i].frameCount	integer	Duration of timeline clip in frames, the number of frames in this clip on the timeline
clips[i].durationTimecode	string	Duration of the timeline clip in timecode format serialised as string. This will differ to durationTimecode reported in /clips for this clipUniqueId if clipIn or frameCount was specified when adding this clip to the timeline.
clips[i].clipIn	string	In frame offset for the clip on the timeline, where 0 is the first frame of the on-disk clip
clips[i].inTimecode	string	Clip timecode of the first frame of this timeline clip serialised as string (clip startTimecode + clipIn frames)
clips[i].timelineIn	string	Timeline position of the first frame of this clip, where 0 is the first frame of the timeline
clips[i].timelineInTimecode	string	Timeline timecode of the first frame of this timeline clip serialised as string

Response

404 - No timeline / disk available.

DELETE /timelines/0

Clear the current playback timeline. Deprecated, prefer to use POST /timelines/0/clear

Response

204 - The timeline was cleared.

POST /timelines/0

Add a clip to the timeline.

Parameters

Name	Type	Description
insertBefore	integer	Clip(s) will be inserted before this timeline clip index. If omitted, inserts to the end of the timeline. 0 inserts to the beginning of the timeline.
clips		

Response

204 - The clip was added to the timeline as specified.

POST /timelines/0/add

Add a clip to the end of the timeline. Deprecated, use POST /timelines/0 to add clips within the timeline.

Parameters

This parameter can be one of the following types:

Name	Type	Description
clips	integer	Unique ID (clipUniqueId) of the clip to add to the timeline

Name	Type	Description
clips	array	
clips[i]	integer	Unique ID (clipUniqueId) of the clip to add to the timeline

Response

204 - The clip was added to the end of the timeline.

DELETE /timelines/0/clear

Clear the playback timeline.

Response

204 - The timeline was cleared.

DELETE /timelines/0/clips/{timelineClipIndex}

Remove the specified clip from the timeline.

Parameters

Name	Type	Description
{timelineClipIndex}	integer	

Response

204 - The specified clip was removed from the timeline.

Event Control API

API For working with built-in websocket.

GET /event/list

Get the list of events that can be subscribed to using the websocket API.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
events	array	
events[i]	string	List of events that can be subscribed to using the websocket API

Clips Control API

API for listing clips on disk.

GET /clips

Get the list of clips on the active disk.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clips	array	
clips[i]	object	
clips[i].clipUniqueId	integer	Unique ID used to identify this clip
clips[i].filePath	string	Path to the file relative to the root of a mount
clips[i].fileSize	integer	Size of file on disk in bytes
clips[i].codecFormat	object	
clips[i].codecFormat.codec	string	Currently selected codec.
clips[i].codecFormat.container	string	Multimedia container format.
clips[i].videoFormat (required)	object	Video format configuration.
clips[i].videoFormat.name	string	Video format serialised as a string.
clips[i].videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
clips[i].videoFormat.height	number	Height dimension of video format.
clips[i].videoFormat.width	number	Width dimension of video format.
clips[i].videoFormat.interlaced	boolean	Is the display format interlaced?
clips[i].startTimecode	string	Start timecode of the clip serialised as string
clips[i].durationTimecode	string	Duration of the clip in timecode format serialised as string
clips[i].frameCount	integer	Number of frames in clip; duration of the clip in frames

Response

404 - There is no active disk

HyperDeck Control API

API for controlling HyperDecks.

POST /system/reboot

Reboots the device.

Response

204 - The device will reboot immediately.

409 - Rebooting is not possible in the current state.

GET /system/uptime

Gets the current system uptime.

Response

200 - The current system uptime

The response is a JSON object.

Name	Type	Description
uptimeSeconds	integer	The system uptime in seconds

PUT /system/identify

Sets the identify mode. If set to true, will exit identify mode after 10 seconds.

Parameters

Name	Type	Description
enabled	boolean	Is the device identifying itself?

Response

204 - Identify updated successfully.

GET /transports/0/recordCache

Gets information about the recording cache.

Response

200 - Current information about the recording cache

The response is a JSON object.

Name	Type	Description
status	string	The current status of the cache. “none” means no cache is detected by the device. Possible values are: undetected, unformatted, idle, transferring, queued, recording, disabled.
remainingRecordingTime	integer	The remaining recording time in seconds.
transferringDevice	string	The device name of the disk the cache is currently transferring to.

GET /transports/0/recordCache/enabled

Checks if the record cache is enabled.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
enabled	boolean	Is the record cache enabled?

PUT /transports/0/recordCache/enabled

Enables or disables the record cache. Has no effect if cache is not supported / installed / formatted.

Parameters

Name	Type	Description
enabled	boolean	Is the record cache enabled?

Response

204 - Record cache enabled / disabled was changed.

GET /transports/0/record/spillOrder

Gets media devices in order of which will next be spilled to.

Response

200 - The media device spill order

The response is a JSON object.

Name	Type	Description
devices	array	
devices[i]	object	
devices[i].deviceName	string	Internal device name of the drive.

POST /transports/0/record/spillToNewFile

Spills to a new file.

Response

204 - Spilled to a new file.

POST /transports/0/record/spillToNextDevice

Spills to the next media device

Response

204 - Spilled to the specified drive.

GET /transports/0/inputVideoFormat

Gets the video format of the input video signal.

Response

200 - The video format of the input video signal. “inputVideoFormat” is null when there is no timeline.

The response is a JSON object.

Name	Type	Description
inputVideoFormat (required)	object	Video format configuration.
inputVideoFormat.name	string	Video format serialised as a string.
inputVideoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
inputVideoFormat.height	number	Height dimension of video format.
inputVideoFormat.width	number	Width dimension of video format.
inputVideoFormat.interlaced	boolean	Is the display format interlaced?

GET /transports/0/supportedInputVideoSources

Gets the currently supported input video signal sources.

Response

200 - The supported input video signal sources.

The response is a JSON object.

Name	Type	Description
supportedInputVideoSources	array	
supportedInputVideoSources[i]	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

GET /transports/0/inputVideoSource

Gets the source of the input video signal.

Response

200 - The input video signal source. The source will be one in the list from GET /transports/0/supportedInputVideoSources.

The response is a JSON object.

Name	Type	Description
inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

PUT /transports/0/inputVideoSource

Sets the source of the input video signal.

Parameters

Name	Type	Description
inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

Response

204 - The source of the input video signal was set successfully.

400 - The source specified was invalid or unsupported.

GET /timelines/0/playRange

Gets the current timeline play range. playRange is null if playing the whole timeline, or there is no play range.

Response

200 - The current timeline play range.

The response is a JSON object.

Name	Type	Description
playRange		

PUT /timelines/0/playRange

Sets the timeline play range.

Parameters

Name	Type	Description
playRange		

Response

204 - The timeline play range was set successfully.

POST /timelines/0/playRange/clear

Clears the timeline play range, sets the play range to be the whole timeline.

Response

204 - The timeline play range was cleared successfully.

GET /timelines/0/videoFormat

Gets the video format of the timeline.

Response

200 - The video format of the timeline. “videoFormat” is null when there is no timeline.

The response is a JSON object.

Name	Type	Description
videoFormat (required)	object	Video format configuration.
videoFormat.name	string	Video format serialised as a string.
videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
videoFormat.height	number	Height dimension of video format.
videoFormat.width	number	Width dimension of video format.
videoFormat.interlaced	boolean	Is the display format interlaced?

PUT /timelines/0/videoFormat

Sets the video format of the timeline.

Parameters

This parameter can be one of the following types:

Name	Type	Description
name	string	Video format serialised as a string.

Name	Type	Description
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

Response

204 - The timeline video format was set successfully.

400 - The requested video format was invalid.

409 - The video format cannot be changed at this time.

POST /timelines/0/rebuild

Rebuilds the timeline with default rules in the current timeline format.

Response

204 - The timeline was rebuilt with default rules.

GET /media/external

Gets the list of present external media devices.

Response

200 - The list of present external media devices

The response is a JSON object.

Name	Type	Description
devices	array	
devices[i] (required)	object	
devices[i].volume	string	Volume name
devices[i].deviceName	string	Internal device name of this media device
devices[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
devices[i].totalSpace	integer	Total space on media device in bytes
devices[i].remainingSpace	integer	Remaining space on media device in bytes
devices[i].clipCount	integer	Number of clips currently on the device

GET /media/external/selected

Gets the current selected external media device.

Response

200 - The selected external media device

The response is a JSON object.

Name	Type	Description
selected	object	
selected.deviceName	string	Internal device name of the drive.

404 - No selected external media has been selected

PUT /media/external/selected

Sets the current selected external media device.

Parameters

Name	Type	Description
selected	object	
selected.deviceName	string	Internal device name of the drive.

Response

204 - The selected external media device was set successfully.

GET /media/nas/discovered

Gets the NAS hosts discoverable by the device.

Response

200 - The list of discovered NAS hosts

The response is a JSON object.

Name	Type	Description
hosts	array	
hosts[i]	object	
hosts[i].hostName	string	The hostname of the NAS host
hosts[i].friendlyName	string	The friendly name of the NAS host
hosts[i].ip	string	The IP address of the NAS host

GET /media/nas/bookmarks

Gets all NAS share bookmarks.

Response

200 - The list of NAS share bookmarks

The response is a JSON object.

Name	Type	Description
hosts	array	
hosts[i] (required)	object	
hosts[i].url	string	URL of the NAS share

POST /media/nas/bookmarks

Add a new NAS share bookmarks.

Parameters

Response

204 - The NAS bookmark was added successfully.

400 - The NAS bookmark could not be added.

GET /media/nas/bookmarks/{url}

Get information about a requested network share bookmark.

Parameters

Name	Type	Description
{url}	string	

Response

200 - Information about the requested network share bookmark.

The response is a JSON object.

Name	Type	Description
url	string	URL of the NAS share

404 - Network share bookmark not found

PUT /media/nas/bookmarks/{url}

Adds a bookmark with the requested URL.

Parameters

Name	Type	Description
{url}	string	

Name	Type	Description
username	string	Default value is: guest.
password	string	

Response

204 - The NAS bookmark has been created.

400 - The NAS bookmark could not be created.

DELETE /media/nas/bookmarks/{url}

Deletes a bookmark with the requested URL.

Parameters

Name	Type	Description
{url}	string	

Response

204 - The NAS bookmark has been deleted.

GET /media/nas/selected

Gets the currently selected share bookmark.

Response

200 - Information about the selected network share bookmark.

The response is a JSON object.

Name	Type	Description
selected	object	
selected.url	string	URL of the NAS share

404 - No NAS drive has been selected.

PUT /media/nas/selected

Sets the selected share bookmark to the requested bookmark, or clears the bookmark.

Parameters

Name	Type	Description
selected	object	
selected.url	string	URL of the NAS share

Response

204 - The selected NAS bookmark was set.

400 - The selected NAS bookmark could not be set.

Notification websocket - 1.0.0

Service that notifies subscribers of device state changes.

messages

Subscribe (The messages from the server/device)

Response Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: subscribe, unsubscribe, listSubscriptions, listProperties, websocketOpened .
.data.properties	array	
.data.properties[i]	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.values	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.data.success	boolean	
.type	string	Possible values are: response .
.id	number	Optional parameter that repeats the id in the output for tracking messages

Event Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: propertyValueChanged .
.data.property	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.value	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.type	string	Possible values are: event .

Publish (The messages that user can send to the server/device)

Response Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: subscribe, unsubscribe, listSubscriptions, listProperties, websocketOpened .
.data.properties	array	
.data.properties[i]	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.values	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.data.success	boolean	
.type	string	Possible values are: response .
.id	number	Optional parameter that repeats the id in the output for tracking messages

Device Properties

/media/workingset

The value JSON returned via the eventResponse when the /media/workingset property changes on the device:

Name	Type	Description
size	integer	The fixed size of this device's working set
workingset (required)	array	
workingset[i]	object	
workingset[i].index	integer	Index of this media in the working set
workingset[i].activeDisk	boolean	Is this current item the active disk
workingset[i].volume	string	Volume name
workingset[i].deviceName	string	Internal device name of this media device
workingset[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
workingset[i].totalSpace	integer	Total space on media device in bytes
workingset[i].remainingSpace	integer	Remaining space on media device in bytes
workingset[i].clipCount	integer	Number of clips currently on the device

/media/active

The value JSON returned via the eventResponse when the /media/active property changes on the device:

Name	Type	Description
.workingsetIndex	integer	Working set index of the active media device
.deviceName	string	Internal device name of this media device

/system

The value JSON returned via the eventResponse when the /system property changes on the device:

Name	Type	Description
.codecFormat	object	Currently selected codec
.codecFormat.codec	string	Currently selected codec
.codecFormat.container	string	Multimedia container format
.videoFormat	string	Name of the video format

/system/codecFormat

Currently selected codec

The value JSON returned via the eventResponse when the /system/codecFormat property changes on the device:

Name	Type	Description
.codec	string	Currently selected codec
.container	string	Multimedia container format

/system/videoFormat

Name of the video format

The value JSON returned via the eventResponse when the /system/videoFormat property changes on the device:

Name	Type	Description

/timelines/0

The value JSON returned via the eventResponse when the /timelines/0 property changes on the device:

Name	Type	Description
.clips	array	
.clips[i]	object	
.clips[i].clipUniqueId	integer	Unique identifier used to identify this media clip. If the same media clip is added to the timeline multiple times, each timeline clip has the same clipUniqueId
.clips[i].frameCount	integer	Duration of timeline clip in frames, the number of frames in this clip on the timeline
.clips[i].durationTimecode	string	Duration of the timeline clip in timecode format serialised as string. This will differ to durationTimecode reported in /clips for this clipUniqueId if clipIn or frameCount was specified when adding this clip to the timeline.
.clips[i].clipIn	string	In frame offset for the clip on the timeline, where 0 is the first frame of the on-disk clip
.clips[i].inTimecode	string	Clip timecode of the first frame of this timeline clip serialised as string (clip startTimecode + clipIn frames)
.clips[i].timelineIn	string	Timeline position of the first frame of this clip, where 0 is the first frame of the timeline
.clips[i].timelineInTimecode	string	Timeline timecode of the first frame of this timeline clip serialised as string

/transports/0

The value JSON returned via the eventResponse when the /transports/0 property changes on the device:

Name	Type	Description
.mode	string	Transport mode Possible values are: InputPreview, InputRecord, Output .

/transports/0/stop

true when transport mode is InputPreview or when in Output mode and speed is 0

The value JSON returned via the eventResponse when the /transports/0/stop property changes on the device:

Name	Type	Description

/transports/0/play

True when transport is in Output mode and speed is non-zero

The value JSON returned via the eventResponse when the /transports/0/play property changes on the device:

Name	Type	Description

/transports/0/playback

The value JSON returned via the eventResponse when the /transports/0/playback property changes on the device:

Name	Type	Description
.type	string	Possible values are: Play, Jog, Shuttle, Var .
.loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
.singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
.speed	number	Playback speed, 1.0 for normal forward playback
.position	integer	Playback position on the timeline in units of video frames

/transports/0/record

The value JSON returned via the eventResponse when the /transports/0/record property changes on the device:

Name	Type	Description
.recording	boolean	Is transport in Input Record mode

/transports/0/timecode

The value JSON returned via the eventResponse when the /transports/0/timecode property changes on the device:

Name	Type	Description
display	string	The display timecode serialised as a string.
timeline	string	The timeline timecode serialised as a string.

/transports/0/timecode/source

The value JSON returned via the eventResponse when the /transports/0/timecode/source property changes on the device:

Name	Type	Description
.timecode	string	Possible values are: Timeline, Clip .

/transports/0/clipIndex

The value JSON returned via the eventResponse when the /transports/0/clipIndex property changes on the device:

Name	Type	Description
.clipIndex	number	The 0-based index of the clip being played on the timeline. null when there is no timeline or an empty timeline.

/media/external

The value JSON returned via the eventResponse when the /media/external property changes on the device:

Name	Type	Description
.volume	string	Volume name
.deviceName	string	Name of media device
.remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
.totalSpace	integer	Total space on media device in bytes
.remainingSpace	integer	Remaining space on media device in bytes
.clipCount	integer	Number of clips currently on the device

/media/external/selected

The value JSON returned via the eventResponse when the /media/external/selected property changes on the device:

Name	Type	Description
.deviceName	string	Internal device name of this media device

/transports/0/inputVideoSource

The value JSON returned via the eventResponse when the /transports/0/inputVideoSource property changes on the device:

Name	Type	Description
.inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite .

/transports/0/inputVideoFormat

The value JSON returned via the eventResponse when the /transports/0/inputVideoFormat property changes on the device:

Name	Type	Description
.inputVideoFormat	string	Name of the video format

/timelines/0/videoFormat

The value JSON returned via the eventResponse when the /timelines/0/videoFormat property changes on the device:

Name	Type	Description
.videoFormat	string	Name of the video format

/media/nas/discovered

The value JSON returned via the eventResponse when the /media/nas/discovered property changes on the device:

Name	Type	Description
.hostName	string	Hostname of external network drive
.friendlyName	string	Name of external network drive
.ip	string	IP Address of external network drive

/media/nas/bookmarks

The value JSON returned via the eventResponse when the /media/nas/bookmarks property changes on the device:

Name	Type	Description
.hosts	array	
.hosts[i]	object	
.hosts[i].url	string	URL associated with bookmark

Ajuda

Obtendo Ajuda

A maneira mais rápida de obter ajuda é visitando as páginas de suporte online da Blackmagic Design e consultando os materiais de suporte mais recentes disponíveis para o seu gravador de disco Blackmagic HyperDeck.

Central de Suporte Técnico Online Blackmagic Design

O manual, o software e as notas de suporte mais recentes podem ser encontrados na Central de Suporte Técnico da Blackmagic Design em www.blackmagicdesign.com/br/support.

Fórum Blackmagic Design

O fórum da Blackmagic Design no nosso site é um recurso útil que você pode acessar para obter mais informações e ideias criativas. Também pode ser uma maneira mais rápida de obter ajuda, pois já podem existir respostas de outros usuários experientes e da equipe da Blackmagic Design, o que o ajudará a seguir em frente. Você pode visitar o fórum em https://forum.blackmagicdesign.com

Entrar em Contato com o Suporte Técnico Blackmagic Design

Caso não encontre a ajuda que precisa no nosso material de suporte ou no fórum, use o botão “Envie-nos um email” na página de suporte para nos encaminhar uma solicitação de suporte. Como alternativa, clique no botão “Encontre sua equipe de suporte local” na página de suporte e ligue para a sua assistência técnica da Blackmagic Design mais próxima.

Verificar a Versão de Software Instalada

Para verificar a versão do software Blackmagic HyperDeck instalada no seu computador, abra a janela “Sobre Blackmagic HyperDeck Setup”.

- No macOS, abra o Blackmagic HyperDeck Setup na pasta de aplicativos. Selecione “Sobre Blackmagic HyperDeck Setup” no menu de aplicativos para revelar o número da versão.
- No Windows, abra o utilitário Blackmagic HyperDeck Setup a partir do menu “Iniciar” ou da tela inicial. Clique em “Ajuda” na barra de menu e selecione “Sobre Blackmagic HyperDeck Setup” para revelar o número da versão.

Como Obter as Atualizações de Software Mais Recentes

Após verificar a versão do software Blackmagic HyperDeck Setup instalado no seu computador, por favor visite a Central de Suporte Técnico da Blackmagic Design em www.blackmagicdesign.com/br/support para conferir as últimas atualizações. Embora seja aconselhável executar as atualizações mais recentes, você deve evitar atualizar aplicativos caso esteja no meio de um projeto importante.

Informações Regulatórias

Eliminação de resíduos de equipamentos elétricos e eletrônicos dentro da União Europeia



O símbolo no produto indica que este equipamento não pode ser eliminado com outros materiais residuais. Para descartar seus resíduos de equipamento, ele deve ser entregue a um ponto de coleta designado para reciclagem. A coleta separada e a reciclagem do seu equipamento descartado no momento do descarte ajudará a conservar os recursos naturais e garantir que ele seja reciclado de maneira a proteger a saúde humana e o meio ambiente. Para mais informações sobre onde você pode descartar seu equipamento usado para reciclagem, entre em contato com a agência de reciclagem da sua cidade local ou o revendedor do produto adquirido.



Este equipamento foi testado e respeita os limites para um dispositivo digital Classe A, conforme a Parte 15 das normas da FCC. Esses limites foram criados para fornecer proteção razoável contra interferências prejudiciais quando o equipamento é operado em um ambiente comercial. Este equipamento gera, usa e pode irradiar energia de radiofrequência e, se não for instalado ou usado de acordo com as instruções, poderá causar interferências prejudiciais nas comunicações via rádio. A operação deste produto em uma área residencial pode causar interferência prejudicial. Nesse caso o usuário será solicitado a corrigir a interferência às suas próprias custas.

A operação está sujeita às duas condições a seguir:

1. Este dispositivo não poderá causar interferência nociva.
2. Este dispositivo deve aceitar qualquer interferência recebida, incluindo interferência que possa causar um funcionamento indesejado.



R-R-BMD-20211410001

Declaração ISED (Canadá)



Este dispositivo está em conformidade com as normas canadenses aplicáveis aos aparelhos digitais de Classe A.

Quaisquer modificações ou utilização deste produto fora dos limites previstos poderão anular a conformidade com estas normas.

A conexão às interfaces HDMI deve ser feita com cabos HDMI blindados de alta qualidade.

Este equipamento foi testado para conformidade com o uso pretendido em um ambiente comercial. Se o equipamento for usado em um ambiente doméstico, ele poderá causar interferência radioelétrica.

Informações de Segurança

O produto é adequado para uso em locais tropicais com temperatura ambiente de até 40 °C.

Certifique-se de que ventilação adequada seja fornecida ao redor do produto e não esteja restringida.

Não há componentes internos reparáveis pelo operador. Solicite o serviço de manutenção à assistência técnica local da Blackmagic Design.



Utilize apenas em altitudes até 2000 m acima do nível do mar.

Declaração do Estado da Califórnia

Este produto pode expô-lo a produtos químicos, tais como vestígios de bifenilos polibromados dentro de peças de plástico, que é conhecido no estado da Califórnia por causar câncer e defeitos congênitos ou outros danos reprodutivos.

Para mais informações, visite www.P65Warnings.ca.gov.

Escritório Europeu

Blackmagic Design B.V, Amsterdam
Sloterdijk Teleport Towers Office 2.17,
Kingsfordweg 151,
Amsterdam, 1043GR.

Garantia

12 Meses de Garantia Limitada

A Blackmagic Design garante que este produto estará livre de defeitos de materiais e fabricação por um período de 12 meses a partir da data de compra. Se o produto apresentar defeito durante este período de garantia, a Blackmagic Design, a seu critério, consertará o produto com defeito sem cobrança pelos componentes e mão de obra, ou providenciará a substituição em troca pelo produto defeituoso.

Para obter o serviço sob esta garantia você, o Consumidor, deve notificar a Blackmagic Design do defeito antes da expiração do período de garantia e tomar as providências necessárias para o desempenho do serviço. O Consumidor é responsável pelo empacotamento e envio do produto defeituoso para um centro de assistência designado pela Blackmagic Design com os custos de envio pré-pagos. O Consumidor é responsável pelo pagamento de todos os custos de envio, seguro, taxas, impostos e quaisquer outros custos para os produtos que nos forem devolvidos por qualquer razão.

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Temmuz 2024

Kurulum ve Kullanım Kılavuzu

Blackmagicdesign

HyperDeck
Shuttle HD



HyperDeck Shuttle HD



Hoş Geldiniz

Blackmagic HyperDeck Shuttle HD disk kaydedicinizi satın aldığınız için teşekkür ederiz!

İlk Blackmagic HyperDeck disk kaydedicileri tasarladığımızda, hızlı SSD depolama kullanarak video kaydını ve oynatımını kolaylaştırmak istedik. Şu an, HyperDeck Shuttle HD'yi sunmaktan heyecan duyuyoruz!

HyperDeck Shuttle HD, masaüstünüz için tasarlanmış, küçük, taşınabilir bir HDMI video kayıt cihazıdır. Büyük bir arama kadranının ve alışık olduğunuz aktarım kontrollerinin, kayıt cihazını tek elle çalıştırmanıza olanak vermesi, canlı yapımda bir ATEM Mini switcher ile birlikte kullanmak üzere HyperDeck Shuttle HD'yi mükemmel bir eş haline getirir. HyperDeck Shuttle HD'yi, bir teleprompter olarak bile kullanabilirsiniz!

ProRes, DNxHD ya da H.264 kodeklerini kullanan HyperDeck Shuttle HD, yıldırım gibi hızlı kayıt ve oynatım için SD kartlara veya harici flaş disklere kayıt yapar.

Bu kullanım kılavuzunun en güncel versiyonu ve HyperDeck yazılım güncellemeleri için lütfen, www.blackmagicdesign.com/tr adresindeki destek sayfamıza bakın. Yazılımınızı güncel tutarak, daima en son özelliklere sahip olduğunuzdan emin olabilirsiniz. Yeni yazılımlar çıktığında size duyurabilmemiz için yazılımı indirirken, lütfen güncel bilgilerinizle sitemize kaydolun. Yeni özellikler ve geliştirmeler üzerinde sürekli çalıştığımızdan, yorumlarınızı almaktan mutluluk duyarız!



Grant Petty
Blackmagic Design CEO

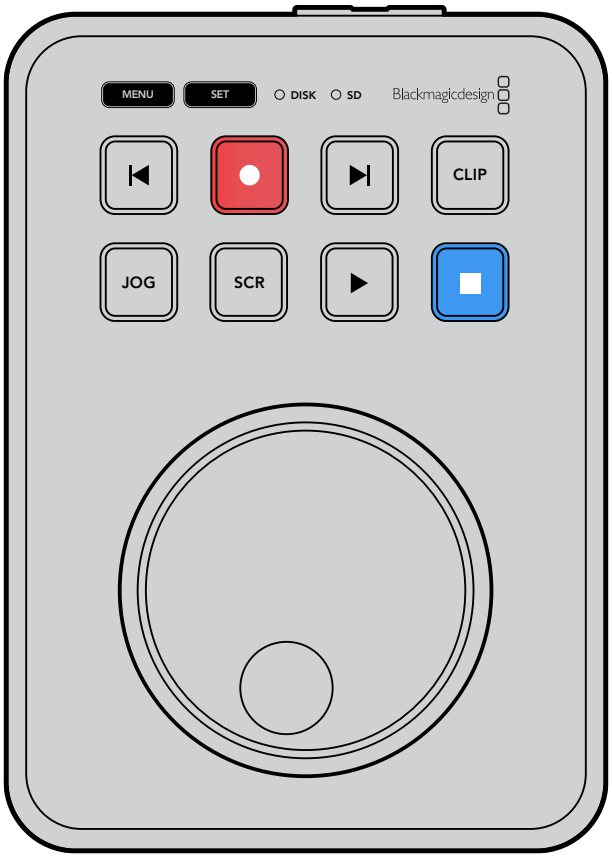
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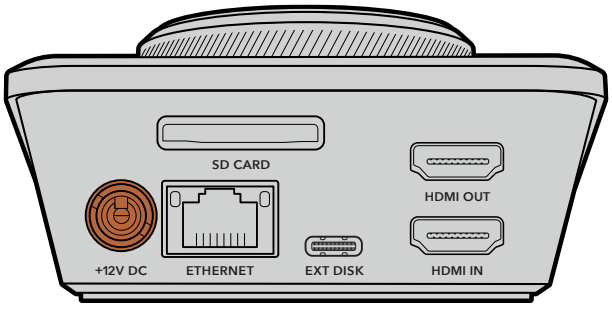
HyperDeck Shuttle HD'nizi kullanmaya başlamak için; güç kaynağını bağlamanız, bir HDMI video kaynağı takmanız, bir SD kart veya harici ortam yerleştirmeniz ve ardından kaydet butonuna basmanız yeterlidir!

HyperDeck Shuttle HD cihazınızı kullanmaya nasıl başlayacağınızı, kılavuzun bu bölümü gösterir.



Güç Kaynağının Takılması

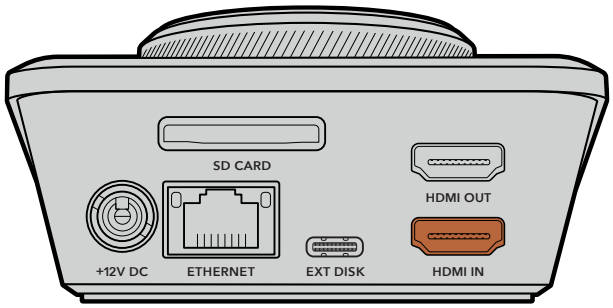
HyperDeck Shuttle HD'nize güç vermek için beraberinde gelen güç adaptörünü, arka paneldeki güç girişine takın. Kilitleme halkasının sıkılması, kazayla çıkmasını önlemek üzere güç kablosunu sabitler.



Güç adaptörünün kablosunu, HyperDeck Shuttle HD'nin güç girişine bağlayın

Video ve Sesin Bağlanması

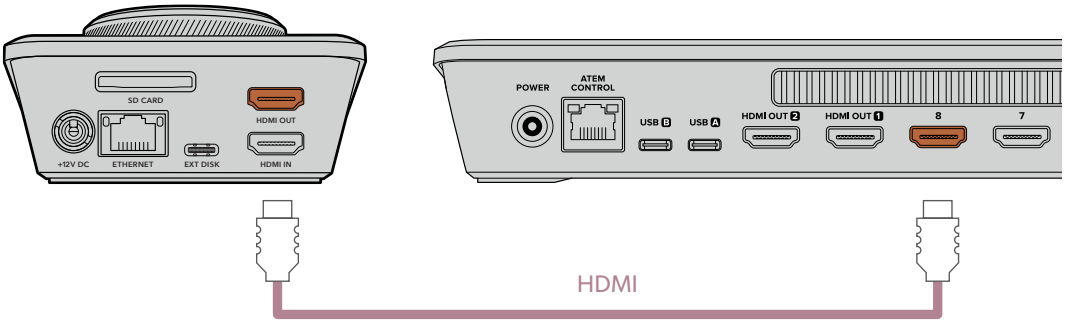
HyperDeck Shuttle HD'nize video bağlantısı yapmak için, arka paneldeki HDMI girişine bir HDMI video kaynağı takın.



Bir ATEM Mini switcher ya da HDMI televizyon gibi hedef ekipmanlarınızı, HDMI çıkışına bağlayın.

HyperDeck'inizin ayarlarını değiştirirken, ayarlar menüsünü görüntülemek için de HDMI çıkışı kullanılır. Çünkü ayarlar menüsü, HDMI girişindeki video katmanı aracılığıyla görüntülenir. Menü ayarları hakkında daha fazla bilgiyi, bu kılavuzun ilerisindeki ‘Ayarların Değiştirilmesi’ bölümünde bulabilirsiniz.

BİLGİ Giriş video kaynağınızı, bağlı ekranda göremiyorsanız muhtemelen oynatım modunda olabilirsiniz. Kayıt modunu etkinleştirmek için ‘kayıt’ butonuna basın.



Bir HDMI televizyon veya ATEM Mini switcher gibi hedef ekipmanlarınızı, HDMI çıkışına bağlayın

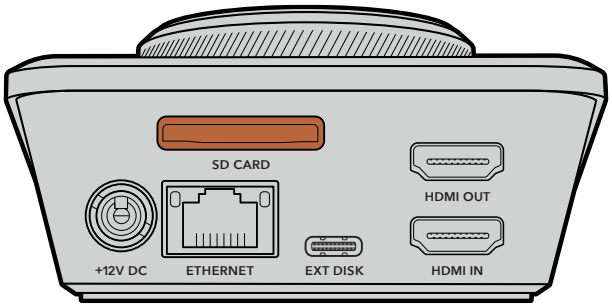
Ortamın Takılması

Tüm HyperDeck Shuttle HD disk kayıt cihazları, hiçbir ayarı yapılandırmaya gerek kalmadan, hemen kayıt yapmaya hazır bir şekilde satılırlar. İhtiyacınız olan tek şey, formatlanmış bir SD kart veya harici disktir.

Menü ayarları üzerinden ortamı kolaylıkla formatlayabilirsiniz. Ayrıca, bir bilgisayar kullanarak da formatlayabilirsiniz. Daha fazla bilgi için bu kılavuzdaki 'Ortamın Formatlanması' bölümüne başvurun. Video kaydetmek için en iyi ortam türleri hakkında bilgiler ile önerilen SD kartlar ve disklerin bir listesini de orada bulabilirsiniz.

Bir SD kart takmak için:

1 Altın rengindeki konnektörler yukarı bakacak şekilde SD kartı tutun ve ortam yuvasıyla hizalayın. Sıkı bir şekilde yerine kilitlendiğini hissedene dek, kartı yuvaya yavaşça itin.



2 HyperDeck'iniz, SD kartı doğrular. HyperDeck Shuttle HD'nin üst tarafındaki ışıklı SD göstergesi, doğrulama yapılırken yeşil yanar. Doğrulandıktan sonra gösterge kapanır.



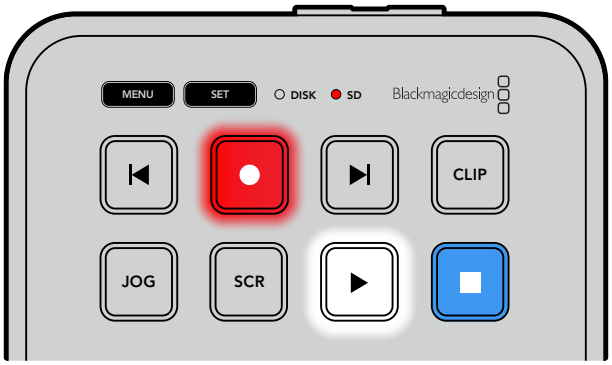
Başlamak için yapmanız gerekenlerin hepsi bundan ibarettir ve artık HyperDeck Shuttle HD'niz, kayıt ve oynatım için hazırdır!

Kliplerin nasıl kaydedildiği ve oynatıldığı, ayarların nasıl değiştirildiği ve benzeri birçok konuda ayrıntılı bilgi için bu kılavuzu okumaya devam edin.

Video Kaydı

Video kaynağınızın HDMI hedef ekipmanınızda görüntülendiğini teyit ettikten sonra, hemen kayda başlayabilirsiniz!

Kaydı başlatmak için, 'kayıt' butonuna basın. Bir SD karta kayıt yaparken, SD göstergesinin yanı sıra, 'kayıt' ve 'oynat' butonları da kırmızı yanar. Harici bir diske kayıt yaparken, 'disk' göstergesi kırmızı yanar.



Kaydı bitirmek için 'durdur' butonuna basın.

Oynatım

Oynatımı başlatmak için ‘oynat’ butonuna basın. Oynatım sırasında, ‘oynat’ butonunun ışığı yanar ve ‘disk’ ya da ‘SD’ ortam yuvasının göstergesi yeşil yanar.

Kaydedilmiş birden fazla klip varsa ‘ileri’ ve ‘geri’ atlama butonlarına basarak bunlar arasında hızla hareket edebilirsiniz.



Atlama Butonlarının Kullanımı

Klibin başına gitmek için 'geri' atlama butonuna basın. Bu butona birden fazla basmak, daha önce kaydedilmiş kliplerden geçerek geriye doğru gider.

Klipleriniz boyunca ilerlemek için ‘ileri’ atlatma butonuna basın. HyperDeck Setup yazılımında “identify HyperDeck” (Hyperdeck’i tanımla) onay kutusu seçildiğinde de atlatma butonları yanıp söner.



Her klibin başına gitmek için 'ileri' ve ‘geri' atlama butonlarını kullanın.

BİLGİ Video dosyalarını oynatmak üzere HyperDeck'inizi, dosyaları kaydetmek için kullanılan kodekle eşleşecek şekilde ayarlamanız gerekir. Bunu, menüyü kullanarak yapabilirsiniz. Daha fazla bilgi için, bu kullanım kılavuzunun ilerisindeki 'Ayarların Değiştirilmesi' bölümüne başvurun.

Kliplerin Döngüye Alınması

Oynatım sırasında 'oynat' butonuna tekrar basmak, siz 'durdur' butonuna basana kadar HyperDeck Shuttle HD'nizi, tüm klipleri döngüye alacak şekilde ayarlar.

Tek klibi döngüye almak istiyorsanız HyperDeck'inizi ‘klip’ moduna alın ve oynatmak için bir ve döngüye almak için iki kez ‘oynat’ butonuna basın.

Tüm klipleri döngüye al	Oynatım sırasında, kaydedilmiş tüm klipleri döngüye almak için 'oynat' butonuna ikinci kez basın
Oynatılan klibi döngüye al	Klip modundayken, oynatılan klibi döngüye almak için 'oynat' butonuna ikinci kez basın

Klip Modu

Klip modu, oynatmayı tek bir kliple sınırlamanıza izin verir. Örneğin, klip modu etkinleştirildiğinde, bir klibe hızlı geçiş yapabilir veya atlayabilirsiniz ve ardından, klip sona erdiğinde oynatımın duracağını bilerek oynat butonuna basabilirsiniz.



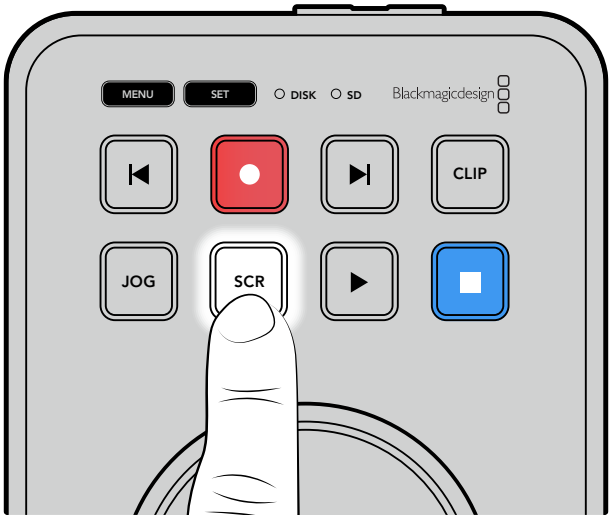
Klip modu seçildiğinde, 'oynat' butonuna ikinci kez basmak oynatılan klibi döngüye alır

Arama Kadranının Kullanımı

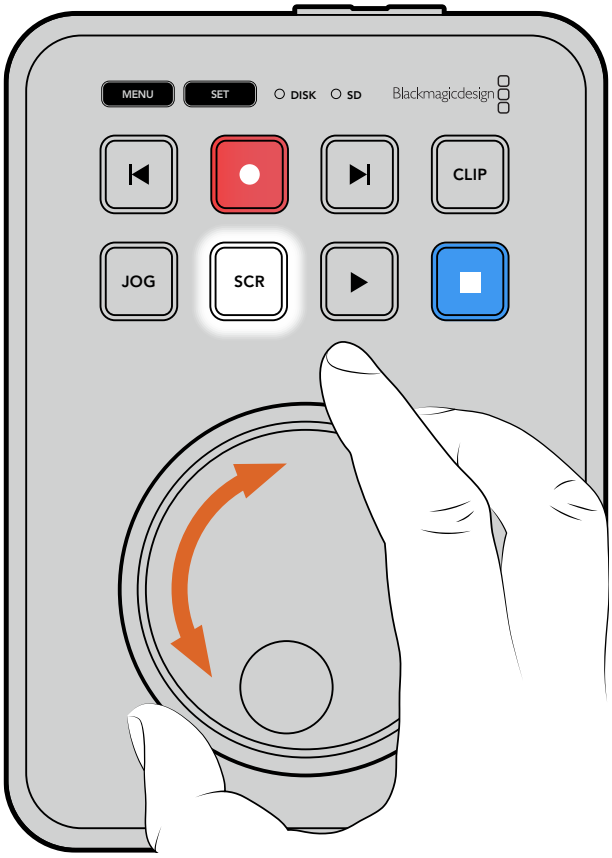
Arama kadranı, kliplerinizin arasında gezinmek ve oynatım için belirli anları seçmek veya kare kare klipleri gözden geçirmek için hızlı bir yöntem sunar. Bu, kadranı çevirdikçe klibi gözünüzle takip ederek belirli bir anı bulmanız gerektiğinde önemli olabilir. Ayrıca, canlı bir yayın sırasında yayına alınacak bir klibin belirli bir noktasında, oynatım çubuğunu bekletmek için de yararlıdır.

Arama kadranı modları arasında; Jog (yavaş oynatım), Scroll (interaktif oynatım) ve Shuttle (hızlı oynatım) bulunur.

JOG	**Yavaş Oynatım (Jog)**	Klibi kare kare oynatarak hassas kontrol sağlar.
SCR	**İnteraktif Oynatım (Scroll)**	İnteraktif oynatım modu, tüm kayıtlı medyanız arasında hızla ileri ve geri gitmenizi sağlar. Arama kadranını çevirdikçe, interaktif oynatım modu hareketinize kilitlenir, böylece oynatımı nereden başlatacağınız üzerinde tam kontrole sahip olursunuz. İnteraktif oynatım butonu (SCR) ayrıca, o anda oynatmakta olduğunuz videonun dosya yolunu gösteren "klasörde arama" penceresini de görüntüler. Klasörde arama fonksiyonu hakkında daha fazla bilgi, bu kılavuzun ilerleyen kısımlarındaki "klasörde arama" bölümünde bulunabilir.
JOG SCR	**Hızlı Oynatım (Shuttle)**	Hızlı oynatım moduna girmek için 'jog' ve 'scr' butonlarına eşzamanlı basın. Hızlı oynatım modundayken kadranı sola veya sağa çevirerek, medyanızı geri veya hızlı ileri sarabilirsiniz. Kadranı çevirdikçe, medya maksimum hız olan x50'ye ulaşana kadar daha hızlı oynayacaktır. Hızlı oynatımı yavaşlatarak durdurmak için kadranı tekrar başlangıç konumuna çevirin. Hızlı oynatım esnasında belirli bir noktada durmak için, durdurma butonuna basın veya oynatımı mevcut konumdan devam ettirmek için oynat butonuna basın. Kurulum menüsü kullanılarak maksimum hızlı oynatım hızının düşürülebileceğini belirtmekte fayda var. Daha fazla bilgi için bu kılavuzun ilerleyen bölümlerindeki 'Ayarlar' kısmına bakınız.



Yavaş oynatım ve interaktif oynatım arama modlarını seçmek için özel 'JOG' veya 'SCR' butonlarına basın.



Bir arama modu seçildikten sonra, arama kadranını çevirin

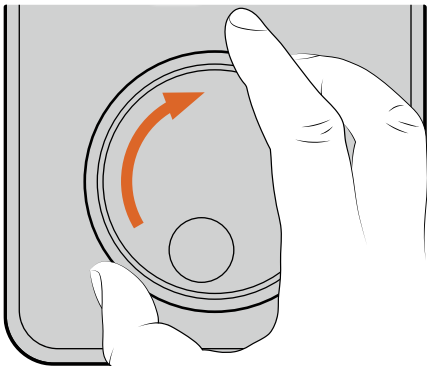
BİLGİ Normal oynatıma geçmek için, 'oynat' veya 'durdur' butonuna basın.

Ayarların Değiştirilmesi

‘Menu’ butonuna basmak, ayarlar menüsünü açar. Bu menü, bağlı HDMI ekranınızın sol alt köşesinde bir video katmanı olarak görüntülenir.

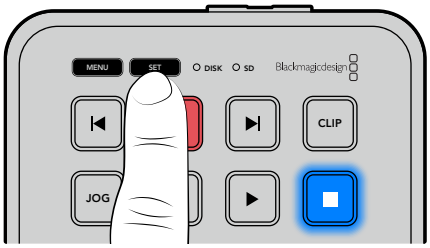


Ayarlar menüsünü açmak için ‘menu’ butonuna basın





Alt menüye veya ayara gitmek için arama kadranını kullanın





Alt menüyü veya ayarı seçmek için 'set' butonuna basın

Arama kadranını ya da ileri ve geri atlama butonlarını kullanarak ayarları düzenleyin. ‘Set’ butonuna basarak seçimi onaylayın.

Menüden çıkmak üzere seçenekler boyunca geri gelerek ana ekrana dönmek için 'menu' butonuna basın.

BİLGİ Kurulum menüsünü kullanarak, ekranınızın dört köşesinden herhangi birine menüyü yerleştirebilirsiniz. ATEM Mini Extreme gibi bir HDMI switcher’e bağlanıldığında, ayarlarda değişiklik yapmayı tamamladıktan sonra, HDMI çıkışındaki sinyalin temiz bir sinyal olduğundan emin olmak için menüyü kapatmanızı tavsiye ederiz.

Ayarlar

Ayarlar menüsü; kayıt, monitör, ses, depolama ve kurulum olarak 5 ayrı bölümde düzenlenmiştir. Bu alt menülerin her biri, HyperDeck Shuttle HD kontrol paneli kullanılarak çoğu ayarlanabilen, ilgili ayarları kapsar. Dosya adı öneki gibi bazı ayarlar gridir ve yalnızca gösterilirler. Bu durumda, HyperDeck Kurulum yardımcı programı aracılığıyla ayar yapılabilir.

Kayıt Menüsü



Giriş

HyperDeck Shuttle HD HDMI girişini gösterir.

Kodek

HyperDeck Shuttle HD; H.264, Apple ProRes ve DNxHD kodeklerini kullanarak sıkıştırılmış video kaydedebilir. Teleprompter işlevini kullanmak için 'teleprompter'i seçin.

Kayıt T0etikleme

Geçerli olan iki kayıt tetikleme modu vardır; video ile başlat/durdur ve zaman kodu ile tetikle.

Blackmagic Pocket Cinema Camera 4K gibi bazı kameralar, harici kayıt cihazlarında kaydı başlatmak ve durdurmak için HDMI bağlantısı üzerinden bir sinyal gönderir. 'Video ile başlat/durdur' seçeneğini kullanmak, kamerada kayıt düğmesine basıldığında, kaydı başlatması veya durdurması için Hyperdeck'i tetikler.

HDMI girişi üzerinden geçerli bir zaman kodu sinyali aldığında kaydı başlatması için cihazı tetiklemek üzere, 'zaman kodu ile tetikle' seçeneğini kullanın. Sinyal durduğunda, kayıt da durur. 'Hiçbiri' seçeneğini kullanarak kaydı tetiklemeyi etkisiz hale getirin.

NOT Bir HDMI kameradan kayıt yaparken, kameranızın video çıkışında bulunan herhangi bir katman görüntünüzle birlikte kayıt edileceği için çıkışın temiz ve katmanların ise kapalı olduğundan emin olun.

Monitör Menüsü



Teleprompter Düzeni

HyperDeck Shuttle HD'yi teleprompter olarak kullanmak için gereken tüm ayarlar monitör menüsündedir.

Yazı Boyutu

Yazı boyutu seçeneğini belirleyip 'set' butonuna basarak metnin boyutunu ayarlayın. Yazı boyutunu artırmak için saat yönünde veya azaltmak için saat yönünün tersine kadranı çevirin.

Satır Aralığı

Satır aralığını artırmak veya azaltmak için kadranı çevirin.

Kenar Boşluğu

Teleprompter ekranının her iki tarafındaki kenar boşluklarının genişliklerini ayarlayın.

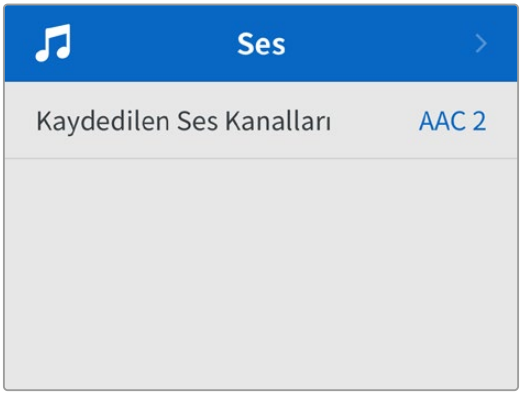
Ters Çevir

Teleprompter monitörünüz, bir kameranın önü veya bir podyumdaki konuşmacının önü gibi bir cam üzerine yansıtılacak şekilde ayarlanmışsa sunumu yapan kişi için okunabilir hale getirmek üzere 'ters çevirme' ayarlarını kullanmanız gerekecektir. Kullanabileceğiniz iki ters çevirme modu vardır:

Yatay Ters Çevir - Bunu, teleprompter monitörünün alt kısmı, camın tabanına en yakın monte edildiğinde kullanın.

Dikey Ters Çevir - Bunu, teleprompter monitörünün alt kısmı, camın tabanından uzağa monte edildiğinde kullanın.

Ses Menüsü



Kaydedilen Ses Kanalları

HyperDeck Shuttle HD, bir seferde 8 kanala kadar PCM ses kaydedebilir. Kaydedilen kanal sayısını seçmek için, kaydedilen ses kanalları listesini genişletin ve 2, 4 veya 8 kanal seçin.

Kodek, H.264 olarak ayarlanmışsa 2 kanal AAC sesi de seçebilirsiniz, böylece kayıtları doğrudan YouTube'ye yükleyebilirsiniz.

Depolama Menüsü

Bağlanan ortam, depolama ayarlarında belirir. Ortam 1, takılan SD kartın adını listeler ve ortam 2, harici disk bağlantısına takılan herhangi bir USB flaş diski gösterir. Blackmagic MultiDock 10G gibi bir USB çoğaltıcı kullanıyorsanız, aktif olan disk görüntülenir.



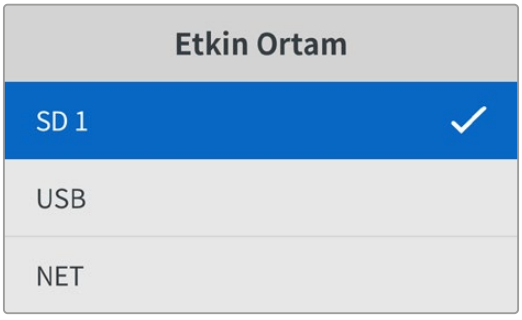
Etkin Ortam

HyperDeck Shuttle kullanırken, aynı anda 1 adet SD kart, çok sayıda harici disk ve ağ depolama bağlayabilirsiniz. Yani, bir tek HyperDeck Shuttle disk kaydediciden kayıt için terabaytlarca alana erişim sağlayabilirsiniz!

Sadece bir SD kart veya disk bağlı olduğunda, tüm oynatım ve kayıt için etkin ortamınız bu olur. Birden fazla ortam kullandığınızda, kayıt ve oynatım için kullanmak üzere istediğiniz ortamı seçebilirsiniz.

Etkin ortamı seçmek için:

1. Arama kadranını kullanarak depolama menüsünde “etkin ortam” seçeneğini vurgulayın ve yanıp sönen “set” butonuna basın.
2. Bağlı ortamlar listede görünür. Arama kadranını kullanarak kayıt için kullanmak istediğiniz ortamı seçin.

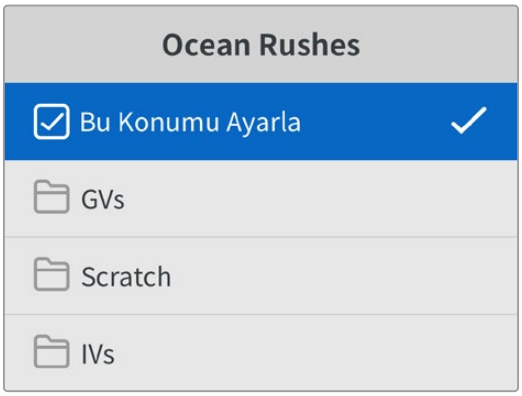


Ağ Konumunu Ayarla

HyperDeck Shuttle, Blackmagic Cloud ve diğer ağ erişimli depolama alanlarındaki HD medyayı Ethernet aracılığıyla oynatabilir.

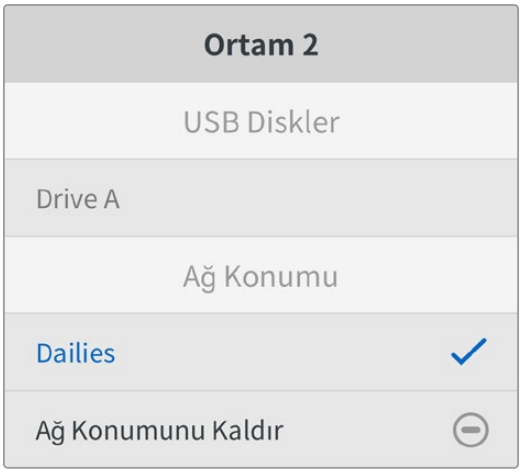
Bir ağ depolama klasörüne bağlanmak için:

1. Arama kadranını ve “set” butonunu kullanarak “ağ konumunu ayarla” ibaresini seçin. Bir yerel ağ arama menü ekranı belirir.
2. Yerel ağınızda bulunan tüm sunucular, bir listede görüntülenir. Arama kadranını kullanarak sunucu ismine gelin ve seçmek için “set” butonuna basın. Sunucudaki mevcut paylaşımların bir listesi belirir. Arama kadranını kullanarak seçmek istediğiniz paylaşıma gidin ve “set” butonuna basın ve kullanmak istediğiniz klasör ekranın üst kısmında görüntüleninceye kadar basmaya devam edin.
3. Klasörün adı artık LCD ekranın üst kısmında görünür. Bu klasörü kayıt ve oynatım için seçmek üzere arama kadranını kullanarak “bu konumu ayarla” seçeneğine gelin ve “set” butonuna basın. Klasör adının yanında bir onay işareti belirir.



4. Bağlandıktan sonra, Ortam 2 depolama listesindeki ağ konumlarının altında, bu konum görünür.

HyperDeck Shuttle disk kayıt cihazlarındaki ikinci ortam yuvası hem USB hem de bağlı ağdaki klasörler için ayrılmıştır. Bağlı olan USB diskler ve ağ depolama arasında seçim yapmak için, depolama ortamı menüsünden “ortam 2”yi seçin ve yanıp sönen “set” butonuna basın. Ortam 2 listesindeki kullanmak istediğiniz depolama alanını seçin ve “set” butonuna basın. Şimdi, depolama menüsüne geri döneceksiniz. Ayrıca, ortam 2 menüsündeki “ağ konumunu kaldır” seçeneğini kullanarak, bir ağ depolama alanını kaldırabilirsiniz.



NOT Bir ağ klasöründen oynatım yaparken, HyperDeck Shuttle HD, sunucuda ziyaretçi olarak oturum açıldığını varsayar. Oturum açma ve şifre gerektiren sunuculara, “menu” ve “set” butonları kullanılarak erişim henüz desteklenmemektedir ama HyperDeck Ethernet Protokolü kullanarak bilgileri girebilirsiniz.

Kaydı USB’ye Geçir Ayarı

'Harici disk' usb bağlantısı üzerinden birden fazla diski bağlamak için bir Blackmagic MultiDock 10G veya benzer bir cihaz kullanıyorsanız kaydı USB’ye geçir ayarını açmak, kaydın bir harici diskten diğerine geçmesini sağlar.

Ortamı Formatla

Kartlar ve arkadaki harici disk bağlantısı üzerinden bağlı ortam, doğrudan cihazda veya bir Mac veya Windows bilgisayar üzerinden formatlanabilir.

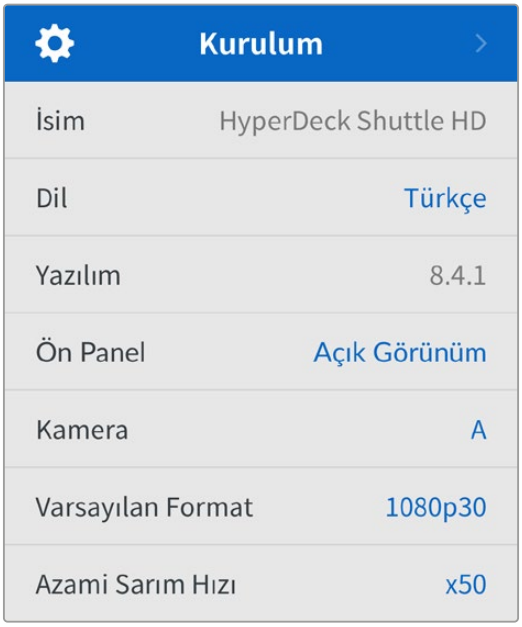
HyperDeck Shuttle HD’de Ortamın Hazırlanması:

1. Arama kadranı ve ‘SET’ butonunu kullanarak, ‘Ortamı Formatla' seçeneğini seçin.
2. Formatlamak için listeden ortamı seçin ve ‘SET’ butonuna basın.
3. Formatı seçin ve ‘SET’ butonuna basın.
4. Hangi kartın formatlanacağını ve seçilen format seçeneğini ayrıntılı olarak gösteren bir onay penceresi görünecektir. Formatla komutunu seçin.
5. Bir formatlama penceresi görünecektir. Formatlama biter bitmez ‘Tamam' butonuna basın.

HFS+ aynı zamanda Mac OS X Extended olarak da bilinir ve ‘journaling’ (günlükleme) tarzı dosya sistemini desteklediğinden, tavsiye edilen formattır. Günlüklenen ortamdaki verilerin, depolama ortamınızda nadiren olabilecek bozulma durumunda geri getirilmesi daha muhtemeldir. HFS+ Mac tarafından yerel olarak desteklenir. exFAT ise herhangi bir ek yazılıma gereksinim duyulmadan, Mac ve Windows tarafından yerel olarak desteklenir, fakat günlüklemeyi desteklemez. Bir Mac veya Windows bilgisayarda ortamı formatlamak için, ortamın formatlanması bölümüne bakınız.

Kurulum Menüsü

Dil seçimi ve varsayılan format gibi ayarları kapsayan kurulum menüsü ayrıca; menü ekranı, ağ ayarları ve zaman kodu seçenekleri için bölümler içerir.



İsim

Ağınızda birkaç HyperDeck Shuttle HD olduğunda, farklı cihazları tanımak için onlara ayrı ayrı isimler vermeyi isteyebilirsiniz. Bu, Blackmagic HyperDeck Setup yazılımı üzerinden veya bir terminal uygulaması kullanılarak Blackmagic Hyperdeck Ethernet Protokolü ile yapılabilir. Ad, kurulum menüsünde görünür.

Dil

HyperDeck Shuttle HD 13 dili destekler. Desteklenen diller arasında; İngilizce, Çince, Japonca, Korece, İspanyolca, Almanca, Fransızca, Rusça, İtalyanca, Portekizce, Türkçe, Ukraynaca ve Polonyaca bulunur.

Dili seçmek için:

1. Kurulum menüsü seçiliyken, ‘set’ butonuna basın.
2. Dili seçmek için arama kadranıyla menüde ilerleyin ve ‘set’ butonuna basın.
3. Arama kadranını kullanarak dili seçin ve ‘set’ butonuna basın. Dil seçilir seçilmez, otomatik olarak kurulum menüsüne dönersiniz.

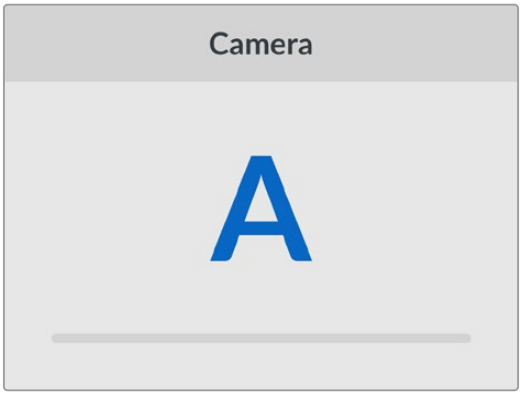
Yazılım

Mevcut yazılım sürümünü görüntüler.

Kamera

Bu ayar; HyperDeck’i birkaç kameradan ISO kayıt, yani ayrı dosyalar kaydetmek için kullanırken ve daha sonra onları DaVinci Resolve’de çok kameralı bir zaman çizelgesinde kurgulamak için faydalıdır.

Her bir kamerayı temsilen kimlik harfleri, dosyaların metaverilerinde görünerek, Senkron Bin özelliğini kullanırken, DaVinci Resolve’nin her bir kamerayı kolaylıkla belirlemesini sağlar.



A-Z arasında harfleri veya 1-9 arasında rakamları kullanarak kameranıza bir kimlik verin.

Varsayılan Format

HyperDeck Shuttle HD, kullanmak istediğiniz video formatını bazen bilemez. Bu ayar, en sık kullanmayı istediğiniz video formatını HyperDeck'in bilmesini sağlar.

Bir HyperDeck Shuttle HD'yi açtığınızda, bağlı video sinyali yoksa ve 2 farklı video formatına sahip dosyalar içeren bir disk yerleştirdiyseniz, buna iyi bir örnektir. HyperDeck’in hangi video formatını oynatması gerekir? Varsayılan video formatı, hangi video formatını tercih ettiğiniz konusunda cihazı yönlendirir ve cihaz, o formata geçerek dosyaları oynatır.

HyperDeck Shuttle HD'yi ilk açtığınızda, bir video giriş sinyalinin ve takılı bir diskin olmadığında da varsayılan video fotmatı kullanışlıdır. Bu durumda HyperDeck, monitör çıkışı için hangi video formatını kullanacağını bilmez. Varsayılan video formatı, ne yapacağı konusunda cihazı yönlendirir.

Bunların yanında, varsayılan video formatı yalnızca bir kılavuzdur. Hiçbir şeyi geçersiz kılmaz. Yani, üzerinde sadece 1 tip video dosyası bulunan bir medya diskiniz varsa ve oynat düğmesine basarsanız HyperDeck disk kaydedici o video formatına geçer ve videoyu oynatır. Bu durumda, varsayılan video formatını yok sayar, çünkü yalnızca diskteki dosyaları oynatmak istediğiniz açıktır.

Kayıt için de benzer bir durum söz konusudur. Kayıt butonuna bastığınızda, HyperDeck, video girişine bağlı olan video formatında kayıt yapar. Üstelik, kayıt tamamlandıktan sonra, diskte varsayılan video formatıyla eşleşen başka dosyalar olsa bile, HyperDeck Shuttle HD diskteki aynı formattaki video dosyalarını oynatır. Biraz önce kayıt işleminde kullandığınız video formatını oynatmak istediğiniz varsayılır. Medya diskini cihazdan çıkartır ve tekrar takarsanız, sadece bu durumda hangi tip dosyaların oynatılacağını seçmek için varsayılan video formatını kullanılır.

Varsayılan video formatı, sadece HyperDeck Shuttle HD ne yapacağı konusunda emin olmadığında karar vermesine yardımcı olan bir kılavuzdur. Deck'in belirli bir şekilde davranmasını zorlayan bir geçersiz kılma işlemi değildir.

Hızlı Sarım Azami Hızı

HyperDeck Shuttle HD'deki hızlı oynatımın azami hızı, 50 kat hızındadır. Bu hızı düşürmek isterseniz farklı hız ön ayarlarından birini seçebilirsiniz.

Tarih ve Saat

Tarih ve saati doğru ayarlamak, HyperDeck Shuttle cihazınızın ağınızla aynı saat ve tarih bilgilerine sahip olmasını sağlar ve ayrıca, bazı ağ sistemlerinde oluşabilecek çakışmaları da önler.



Tarih ve Saati Otomatik Ayarla

Tarih ve saati otomatik olarak ayarlamak için "tarih ve saati otomatik ayarla" seçeneğini "açık" olarak belirleyin. HyperDeck otomatik olarak tarih ve saati ayarlarken, NTP alanında belirlenmiş zaman protokolü ağ sunucusunu kullanır. Tarih ve saati manuel olarak ayarlamak için bu seçeneği "kapalı" olarak belirleyin.

NTP

Varsayılan NTP sunucusu, time.cloudflare.com'dur fakat HyperDeck Setup yardımcı yazılımı ile manuel olarak alternatif bir NTP sunucusu girebilirsiniz. NTP sunucusunun kurulumu hakkında daha fazla bilgi için, bu kılavuzdaki "HyperDeck Setup" bölümüne bakın.

Tarih

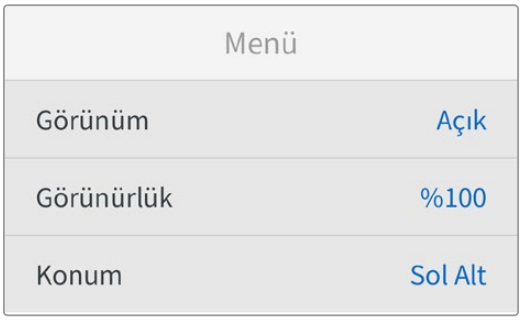
Tarihi manuel olarak girmek için, tarih alanını seçin ve "set" butonuna basın. Menü kadranını kullanarak, gün, ay ve yılı seçebilirsiniz.

Saat

Saati ayarlamak için, saati seçin ve "set" butonuna basın. Saat ve dakika ayarını yapmak için menü kadranını kullanın. Dahili saat 24 saatlik zaman formatındadır.

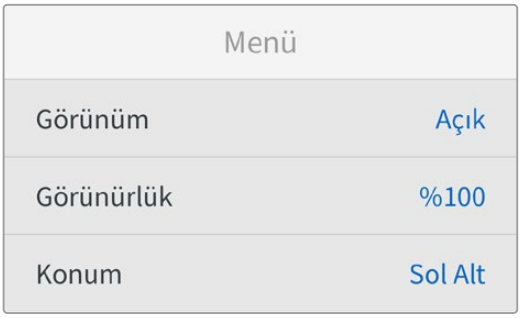
Menü Ayarları

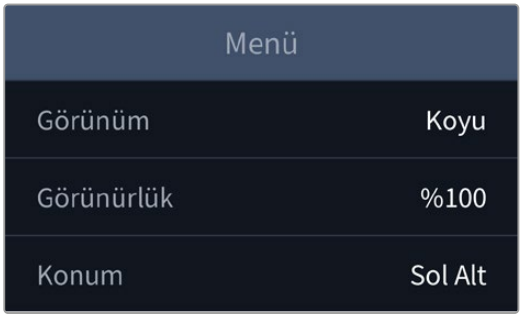
Menü ayarlarını kullanarak, menünün bağlı olan HDMI ekranındaki yerini ve görünümünü ayarlayabilirsiniz.



Görünüm

HyperDeck'inizin ekranı üzerindeki menüyü, koyu veya açık moda ayarlayın. Açık mod, medya koyu olduğunda ya da teleprompter modundayken daha yüksek kontrast sunar.





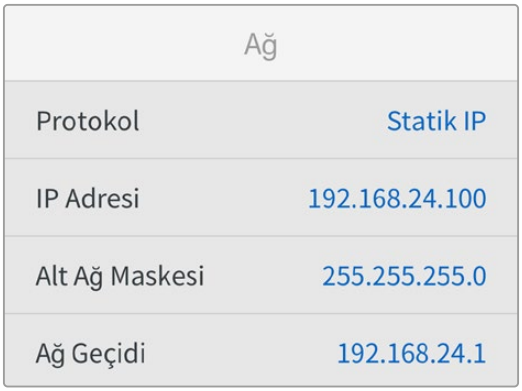
Görünürlük

Bağlı ekrandaki menü katmanının görünürlüğü varsayılan seviye olan %100'den %20'ye kadar düşürmek için seviyeleri ayarlayın.

Konum

Menü katmanı, varsayılan olarak ekranın sol alt köşesindedir. Menüyü farklı bir yere taşımak için 'konum'u seçin ve 'SET' butonuna basın. Artık ekranın sol üst, sağ üst, sol alt veya sağ alt köşesini seçebilirsiniz.

Ağ Ayarları



Protokol

Blackmagic Hyperdeck, DHCP'ye ayarlanmış olarak gelir, yani bir kez bağlandıktan sonra, ağ sunucunuz otomatik olarak bir IP adresi atayacaktır ve başka bir ağ ayarının yapılması gerekmez. Manuel bir adres belirlemeniz gerekiyorsa, statik bir IP üzerinden bağlanabilirsiniz.

Menüye erişmek için 'protokol' seçiliyken 'set' butonuna basın, 'Statik IP' seçeneğine gidin ve tekrar 'set' butonuna basın.

IP Adresi, Alt Ağ Maskesi, Ağ Geçidi, Birincil DNS ve İkincil DNS

Statik IP seçildikten sonra, ağ bilgilerinizi manuel olarak girebilirsiniz.

IP adresini değiştirmek için:

1. Arama kadranını kullanarak 'IP Adresi' seçeneğini vurgulayın ve HyperDeck'inizin kontrol panelindeki 'set' butonuna basın.
2. Arama kadranını kullanarak IP adresini ayarlayın, IP adresinizi ayarlamak için arama kadranını döndürün, bir sonraki basamağı ayarlamadan önce, girdiğiniz değeri teyit etmek üzere 'set' butonuna basın.
3. Yaptığınız değişikliği onaylamak için 'set' butonuna basın ve bir sonraki basamağa ilerleyin.

IP adresini girme işlemini tamamladığınızda, alt ağ maskesini ve ağ geçidini ayarlamak için bu adımları tekrarlayabilirsiniz. İşlemler tamamlandığında, menüden çıkmak ve ana ekrana geri dönmek için 'menü' butonuna basın.

Zaman Kodu Ayarları

Kaynak zaman kodunu kaydetme, sistem saati zaman kodunu kaydetme veya zaman kodunuzu manuel olarak ayarlama arasında seçim yapmak da dahil olmak üzere, zaman kodu giriş ve çıkış seçeneklerinizi ayarlayın.



Giriş

Kayıt yaparken, dört tane zaman kodu girişi seçeneği vardır.

Video Girişi	Video girişinin seçilmesi, SMPTE RP 188 metaveri içeren HDMI kaynaklarından, gömülü zaman kodunu alır. Bu, HDMI kaynağınız ile HyperDeck Shuttle HD'de kaydedilen dosya arasındaki senkronu muhafaza eder.
Dahili	Dahili zaman kodu üreteci aracılığıyla günlük saat zaman koduyla kaydetmek için, bu seçeneği kullanın.
Son Klipten Al	Zaman kodu girişiniz için 'son klipten al' opsiyonunu seçtiğinizde, dosyaların her biri bir önceki klibin en son karesinden bir kare sonra başlar. Örneğin, ilk klibiniz 10:28:30:10'da bitiyorsa bir sonraki klibin zaman kodu 10:28:30:11'de başlayacaktır.
Önayar	Zaman kodunu manuel olarak ayarlamak istiyorsanız önayar seçeneğini belirleyin. Kaydedilen klipler, bu bölümün ilerleyen sayfalarında gösterildiği üzere 'önayar' ayarı aracılığıyla düzenlenen zaman kodunda başlar.

Kare Düşüren

29.97 veya 59.94 kare hızlarındaki NTSC kaynaklar için, ‘kare düşüren’ veya ‘kare düşürmeyen’ zaman kodunu seçebilirsiniz. Kaynağın ne olduğu bilinmiyorsa ‘varsayılan’ı seçin. Bu işlem, girişin standardını muhafaza eder veya geçerli bir zaman kodu olmadığında, varsayılan ayar olarak kare düşüren moda geçer.

Önayar

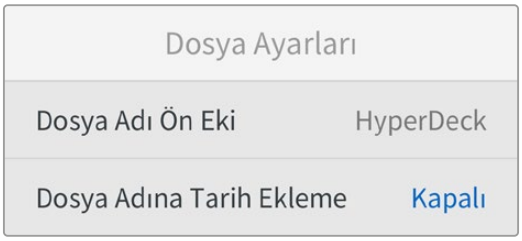
Zaman kodunuzu; 'set' butonuna basarak ve arama kadranı ile ‘set’ butonunu kullanmak suretiyle başlangıç zaman kodunu girerek, manuel olarak ayarlayabilirsiniz. Giriş menüsünde 'önayar'ın seçildiğinden emin olun.

Çıkış

Çıkışlarınız için zaman kodu seçeneklerinizi belirleyin.

Zaman Çizelgesi	Bir kart veya diskte kayıtlı tüm klipler için kesintisiz bir zaman kodu çıkarmak üzere zaman çizelgesini seçin.
Klip	Klip seçeneği, her bir klibe ait zaman kodunu çıkarır.

Dosya Ayarları



Dosya Adı Öneki

Kurulumunu ilk yaptığınızda, HyperDeck Shuttle HD cihazınız aşağıdaki dosya adı düzenini kullanarak, klipleri SD kartınıza veya USB Flaş diskinize kaydeder.

HyperDeck_0001	
HyperDeck_0001	**Ön Ek**
HyperDeck**_0001**	**Klip Numarası**

Dosya adı öne ekini, HyperDeck Setup yardımcı yazılımı ile değiştirebilirsiniz. Daha fazla bilgi için, bu kılavuzun ilerleyen kısımlarındaki 'Blackmagic HyperDeck Kurulumu' bölümüne bakın.

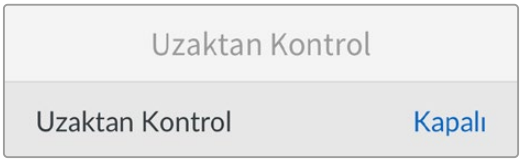
Dosya Adı Tarih Eki

Dosya adına eklenen tarih bilgisi, fabrika ayarı olarak kapalı durumdadır. Dosya adına tarih ve saat bilgilerinin kaydedilmesini istiyorsanız, ‘dosya adı tarih eki’ seçeneğini etkin hale getirin.

HyperDeck_2201061438_0001	
HyperDeck_2201061438_0001	**Dosya Adı Öneki**
HyperDeck_**22**01061438_0001	**Yıl**
HyperDeck_22**01**061438_0001	**Ay**
HyperDeck_2201**06**1438_0001	**Gün**
HyperDeck_220106**14**38_0001	**Saat**
HyperDeck_2201061**38**_0001	**Dakika**
HyperDeck_2201061438_**0001**	**Klip Numarası**

Uzaktan Kontrol Ayarları

Uzaktan kontrol ayarı, HyperDeck'in diğer video ekipmanları, örneğin bir ATEM Mini Extreme switcher tarafından uzaktan kontrol edilmesini sağlar.



Uzaktan Kontrol

Ethernet üzerinden uzaktan kontrolü etkinleştirmek için ‘uzaktan kontrol’ modunu seç. Cihazı yerel olarak kontrol etmek için uzaktan kontrol seçimini kaldırın.

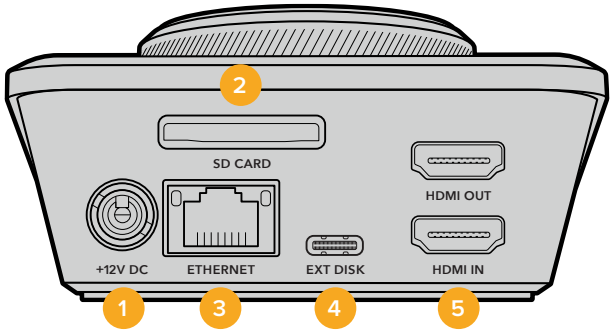
Sıfırlama Ayarları



Fabrika Ayarlarına Sıfırla

HyperDeck'inizi fabrika ayarlarına geri döndürmek için kurulum menüsünde 'fabrika ayarlarına sıfırla’yı vurgulayın. 'Set' butonuna basar basmaz, sizden seçiminizi onaylamanız istenir.

Arka Panel



1 Güç

HyperDeck Shuttle HD, bir AC adaptör ile çalışır. Cihaz ile gelen güç kablosu, güç kesintisini önlemek için kilitlenebilir bir konektöre sahiptir fakat, HyperDeck Shuttle HD'yi çalıştırmak için herhangi bir 36W 12V güç kablosunu da kullanabilirsiniz.

2 SD Kart

Kayıt ve oynatım için SD kartları yuvaya yerleştirin.

3 Ethernet

Ethernet portu; ağ depolama alanına kayıt, hızlı ftp aktarımları ve ağ medya yöneticisi aracılığıyla http aktarımları için ağınıza bağlanmanızı sağlar. Üstelik, REST API veya HyperDeck Ethernet Protokolünü kullanarak cihazı uzaktan kontrol edebilirsiniz. Ağ medya yöneticisi veya bir FTP istemcisi aracılığıyla dosyaların aktarılması hakkında daha fazla bilgi için, bu kılavuzdaki "Bir Ağ Üzerinden Dosya Aktarımı" bölümüne bakın.

Bir ATEM switcher'in bağlı olduğu aynı ağı paylaştığında, ATEM switcher veya ATEM donanım paneli kullanarak da HyperDeck'inizi kontrol edebilirsiniz.

4 Harici Disk

Harici disklere 5Gb/sn'ye kadar hızlarda kayıt yapmak için, USB-C konektöre bir flaş disk bağlayın. Bir veya daha çok sayıda SSD bağlamak üzere çok portlu USB-C hub cihazlarını veya Blackmagic MultiDock 10G'yi bağlayabilirsiniz.

5 HDMI

HDMI çıkışını; HDMI televizyonlara, monitörlere ve hatta ATEM Mini Extreme gibi bir switcher'e bağlayın. HDMI çıkışı, menü katmanını görüntülemek için de kullanılır.

Depolama Ortamı

SD Kart

Yüksek kalitede HD kayıt için yüksek hızlı UHS-I SD kartları öneriyoruz. Ultra HD 2160p60'a kadar kaydedebilmesi için bu kartların, 220MB/sn'nin üzerinde bir yazma hızına sahip olmaları gerekir.

Ancak, daha yüksek sıkıştırma ile daha düşük bit hızında kayıt yapıyorsanız, daha yavaş kartlar kullanabilirsiniz. Genel olarak, kartlarınız ne kadar hızlıysa o kadar iyidir.

Daha güncel bilgiler için düzenli olarak bu kılavuzun en güncel sürümüne bakmanızda fayda vardır ve her zaman www.blackmagicdesign.com/tr/support adresindeki Blackmagic Design internet sitesinden indirilebilir.

HyperDeck Shuttle HD ile hangi SD kartları kullanmalıyım?

60 fps'ye kadar 1080p için, aşağıdaki SD Kartlar önerilir.

Marka	Model	Kapasite
Angelbird	AV PRO SD UHS-II 300MB/s V90 SDXC	256GB
Angelbird	AV PRO SD UHS-II 260MB/s V60 SDXC	128GB
Angelbird	AV PRO SD UHS-II 260MB/s V60 SDXC	64GB
SanDisk	Extreme Pro UHS-I 95MB/s SDXC	64GB
Wise	SD2-64U3 UHS-II 285MB/s SDXC	64GB
Lexar	Professional 1000x UHS-II 150MB/s SDXC	128GB
SONY	Tough SF-G128T	128GB
Kingston	CANVAS GO! Plus 170MB/s V30	64GB
Kingston	CANVAS GO! Plus 170MB/s V30	128GB
Kingston	CANVAS GO! Plus 170MB/s V30	512GB
ProGrade Digital	SDXC UHS-II V90 300R	64GB
ProGrade Digital	SDXC UHS-II V90 300R	128GB
SONY	Tough SF-G64T UHS-II SDXC	64GB
Delkin Devices	Black UHS-II V90 SDXC	256GB
Delkin Devices	Power UHS-II V90 SDXC	128GB
Delkin Devices	Power UHS-II V90 SDXC	256GB
Delkin Devices	Black UHS-II V90 SDXC	128GB
Exascend	Essential SDXC UHS-II V90 R 300MB/s	64GB
Exascend	Essential SDXC UHS-II V90 R 300MB/s	128GB
Exascend	Catalyst SDXC UHS-II V90 R 300MB/s	64GB

Harici Disk

Tüm HyperDeck modelleri, doğrudan USB-C flaş disklere kayıt yapabilir. Bu hızlı ve yüksek kapasiteli diskler, uzun süreler boyunca video kaydetmenize olanak verir. Sonra, aynı flaş diski bilgisayarınıza takabilir ve doğrudan bu diskten kurgulama yapabilirsiniz!

Daha da yüksek depolama kapasiteleri için bir USB-C docking istasyonu veya harici bir sabit disk bağlayabilirsiniz. Blackmagic MultiDock 10G'nizi veya USB-C flaş diskinizi bağlamak için, USB-C'ye bağlı olan cihazdan HyperDeck'nizin arka panelindeki 'ext disk' (harici disk) portuna bir kablo bağlayın.

HyperDeck Shuttle HD ile hangi USB-C diskleri kullanmalıyım?

60 fps'ye kadar 1080p ProRes HQ için, aşağıdaki USB-C diskler önerilir.

Marka	Model	Kapasite
Wise	PTS-256 Portable SSD 4K	256GB
OWC	Envoy Pro Ex	240GB
BUFFALO	SSD-PHE500U3-BA	500GB

60 fps'ye kadar 1080p DNxHD 220x için, aşağıdaki USB-C diskler önerilir:

Marka	Model	Kapasite
OWC	Envoy Pro Ex	240GB

60 fps'ye kadar 1080p H.264 için, aşağıdaki USB-C diskler önerilir.

Marka	Model	Kapasite
OWC	Envoy Pro Ex	240GB

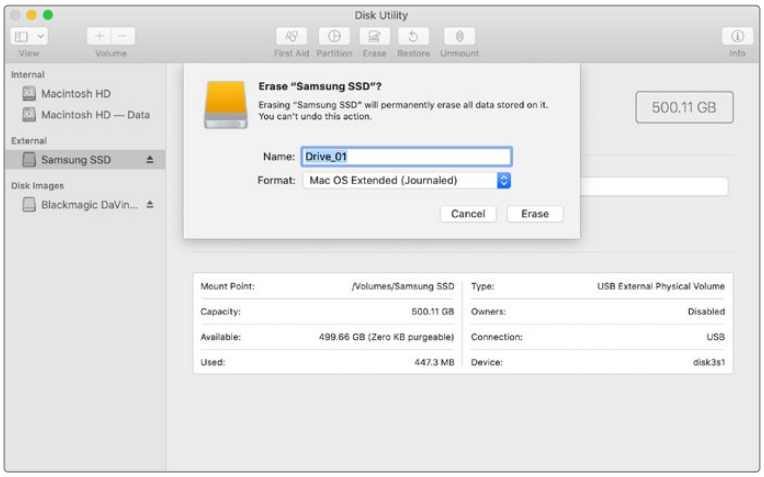
Ortamın Formatlanması

Bir Mac Bilgisayarda Ortamın Formatlanması

Mac ile gelen Disk Utility uygulaması, bir sürücüyü HFS+ veya exFAT formatlarında formatlayabilir.

Diskte bulunan önemli dosyalarınızı yedeklediğinizden emin olun, çünkü formatlama yapıldığında, diskteki her şey silinecektir.

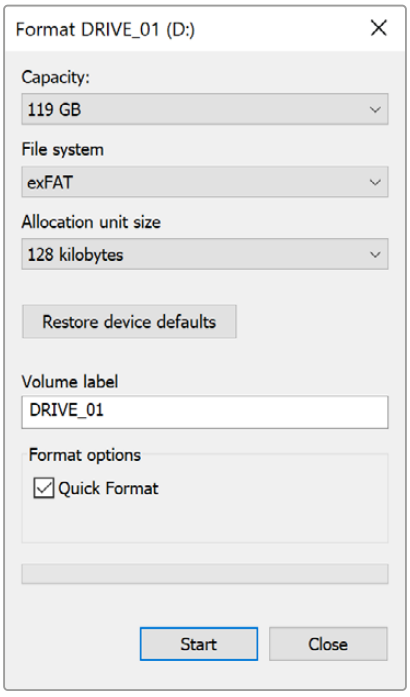
1. Harici bir dock veya bir kablo adaptörü ile bilgisayarınıza bir USB flaş disk bağlayın ve Time Machine yedeklemesi için SSD'nizi kullanma taleplerini içeren mesajları reddedin. SD kartları, harici bir kart okuyucu üzerinden bilgisayarınıza bağlayın.
2. Uygulamalar/yardımcı yazılımlar sekmesine girin ve Disk Utility uygulamasını başlatın.
3. SD kart veya USB flaş diskinizin disk simgesini tıklayın ve sonra 'erase' (sil) sekmesine tıklayın.
4. Formatı 'Mac OS Extended (Journaled)' veya 'exFAT' olarak ayarlayın.
5. Yeni disk bölümü için bir isim girin ve sonra 'sil' üzerine tıklayın. Ortamınız hızla formatlanacaktır ve HyperDeck ile kullanıma hazır hale getirilecektir.



Ortamın bir Windows Bilgisayarda Formatlanması

'Format' diyalog kutusu, bir Windows PC üzerindeki bir diski exFAT formatında formatlayabilir. SSD veya SD kartınızda bulunan önemli dosyalarınızı yedeklediğinizden emin olun, çünkü formatlama yapıldığında hepsi silinecektir.

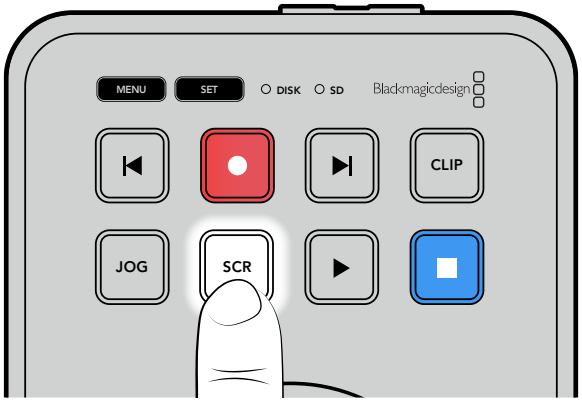
1. Harici bir dock veya kablo adaptörüyle, bilgisayarınıza bir USB flaş disk bağlayın. SD kartları, harici bir kart okuyucu üzerinden bilgisayarınıza bağlayın.
2. Başlat menüsünü veya başlat ekranını açın ve bilgisayarım sekmesini seçin. USB flaş diskinize veya SD kartınıza sağ tıklayın.
3. İçerik menüsünden 'format' ibaresini seçin.
4. Dosya sistemini 'exFAT' olarak ve birim ayırma boyutunu da 128 kilobyte olarak ayarlayın.
5. Bir disk bölümü adı girin, 'quick format' (hızlı format) ibaresini seçin ve 'start' üzerine tıklayın.
6. Ortamınız hızla formatlanacaktır ve HyperDeck ile kullanıma hazır hale getirilecektir.



Klasörde Arama

Klasörde arama fonksiyonu; ortam kartlarında, disklerde ve ağ sürücülerinde klipleri bulabilmek için bir dosya yolu katmanı açmanızı sağlar. Etkinleştirildiğinde, bu katman HDMI çıkışında görünür ve ardından, interaktif oynatım butonunu, klip butonunu ve yavaş sarım tekerini kullanarak dizinler arasında gezinebilirsiniz.

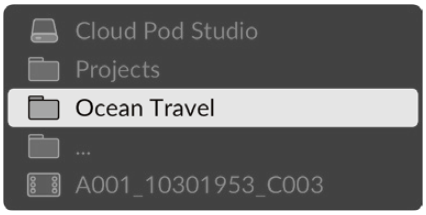
1 SCR ibareli interaktif oynatım butonuna basarak, klasörde arama penceresini açın.





"Klasörde arama" penceresini HDMI çıkışında açmak için interaktif oynatım butonuna basın

2 Klasörden ilgilendiğiniz klibi bulana kadar, ekrandaki görüntüler arasında ilerleyin veya atlayın.



3 Klasörler arasında aşağı doğru ilerlemek için interaktif oynatım butonuna ve yukarı ilerlemek için klip butonuna basın.

Klasörde arama penceresini kapatmak için durdur butonuna basın veya pencereyi kapatmak ve hemen oynatımı başlamak için "oynat" butonuna basın.

NOT Farklı bir kodek, çözünürlük veya kare hızı kullanılarak kaydedilen klipleri görüntülemek için, HyperDeck'inizin kodeğini ve varsayılan formatını eşleşecek şekilde ayarlayın.

Teleprompter Fonksiyonunun Kullanımı

Standart bir RTF veya düz metin dosyası kullanarak, Blackmagic HyperDeck Shuttle HD'yi teleprompter olarak kullanabilirsiniz. Dosyanızı TextEdit veya WordPad'de oluşturun ve desteklenen 13 dilden herhangi birinde, zengin metin formatı veya düz metin dosyası olarak kaydedin. HyperDeck Shuttle HD ile açıldıktan sonra, komut dosyanızın yazı tipi boyutunu ve satır aralığını ayarlayabilirsiniz.

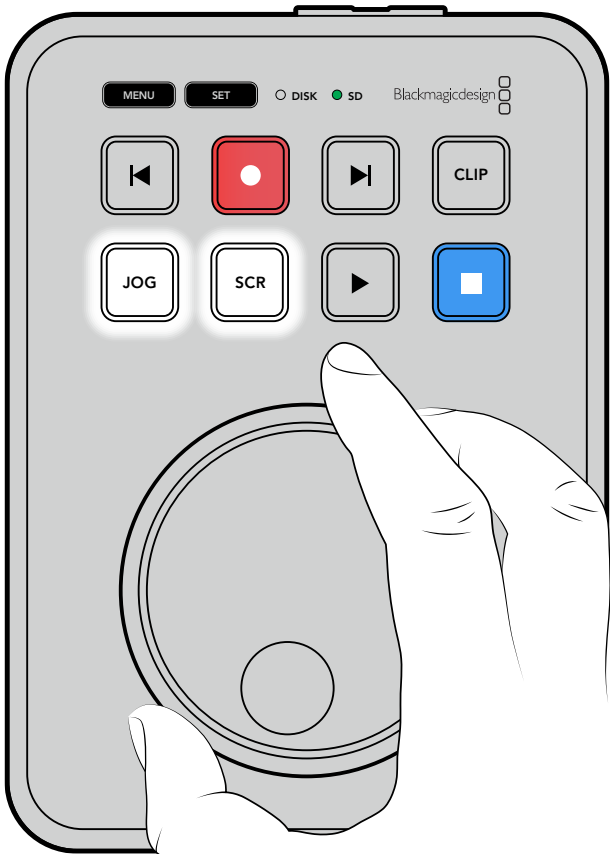
Teleprompteri kullanmak için:

1. HyperDeck Shuttle HD'nin HDMI çıkışını, kullanmak istediğiniz HDMI ekranına bağlayın.
2. Bir SD kart takın veya komut dosyanızı içeren harici bir USB flaş disk bağlayın.
3. Kayıt menüsünden kodek seçeneğini seçin. 'Teleprompter' ayarına gidin ve 'ayarla'ya basın.

Komut dosyası ekranınızda görünecektir. Oynatım butonunu kullanarak, oynatımı otomatik olarak buradan başlatabilir veya ek kontrol için kadranı kullanabilirsiniz.

Teleprompter Oynatım Hızının Kontrolü

HyperDeck Shuttle HD üzerindeki büyük kadran, medya oynatımı için olduğu gibi teleprompter modundayken, oynatımı kontrol etmek için de kullanılabilir. Bir komut dosyası yüklendiğinde, değişken hızlı oynatımı açmak için "jog" ve "scr" düğmelerine birlikte basın. Seçildikten sonra kadranı çevirin. Komut dosyası, kadranın hareketine göre bir hızda hareket edecektir. Örneğin, kadran ne kadar hızlı çevrilirse, komut dosyası o kadar hızlı ilerler.



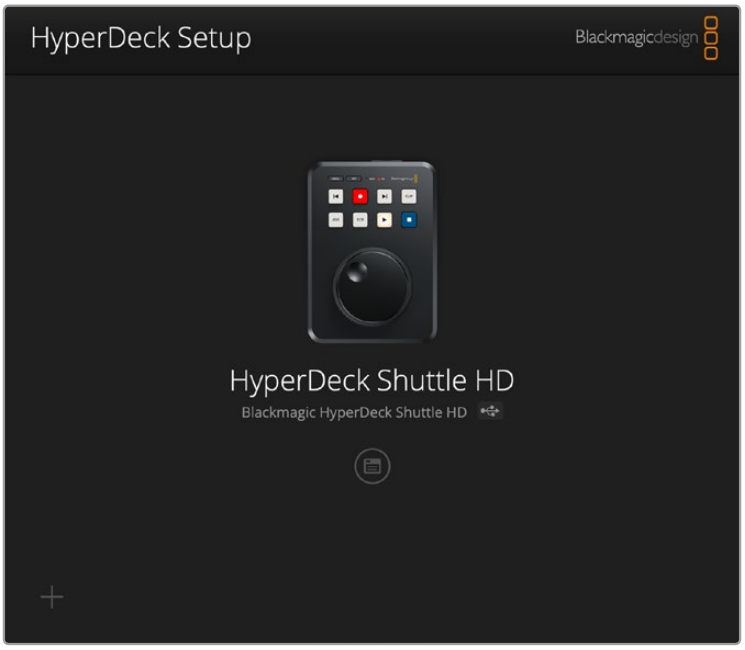
Sabit hızlar için, yavaş oynatım ve interaktif oynatım butonlarını ayrı ayrı kullanabilirsiniz. Bir kez seçildiğinde, kadranı çevirmek komut dosyasını yavaş oynatım modunda sabit bir düşük hızda veya interaktif oynatım modunda daha yüksek bir hızda hareket ettirir.

SD kartınızdaki veya harici diskinizdeki dosyalar arasında gezinmek için ileri ve geri tuşlarına basın.

Teleprompter; dosyadan kalın yazı tipinin ayarlanıp ayarlanmadığını, yazı tipi boyutunu ve rengini tanıyacaktır. Buna ek olarak, monitör menüsünü kullanarak, ekranı teleprompter camına yansıtırken, ekranı yatay veya dikey olarak çevirebilir veya yazı tipi boyutunu, satır aralığını ve kenar boşluklarını değiştirebilirsiniz. Daha fazla bilgi için, bu kılavuzun daha önceki kısımlarındaki 'menü ayarları' bölümüne bakın.

Blackmagic HyperDeck Setup

Blackmagic HyperDeck Setup, ayarları değiştirmek ve HyperDeck'inizdeki dahili yazılımı güncellemek için kullanabileceğiniz bir yardımcı yazılımdır.

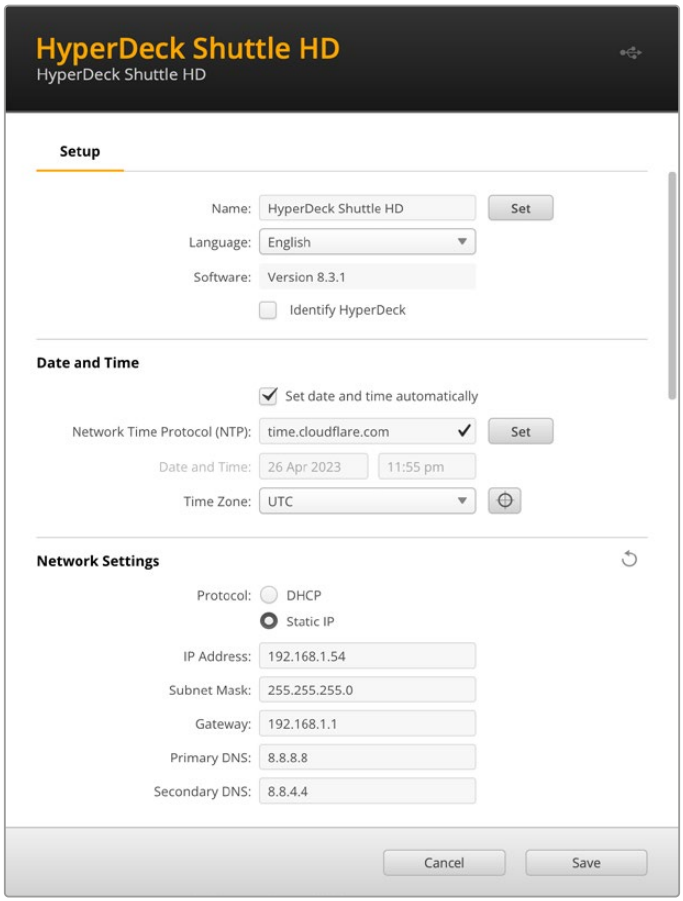


Yazılımı yüklemek için:

1. www.blackmagicdesign.com/tr/support adresinden, en son Blackmagic HyperDeck Setup yükleyici sürümünü indirin.
2. Bilgisayarınızda Blackmagic HyperDeck Kurulum yükleyicisini çalıştırın ve ekran talimatlarını takip edin.
3. Yükleme tamamlandıktan sonra, HyperDeck Shuttle HD'nizi arka panelindeki USB veya Ethernet bağlantısı aracılığıyla bilgisayara bağlayın.
4. Blackmagic HyperDeck Setup yazılımını başlatın ve dahili yazılımı güncellemek için ekrandaki komutları takip edin. Herhangi bir komut belirmezse, bu dahili yazılımın güncel olduğunu işaret eder ve yapmanız gereken başka bir şey yoktur.

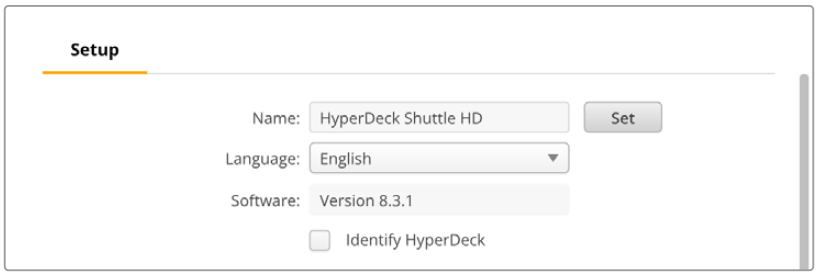
Ayarlar menüsü açmak için HyperDeck görüntüsünü veya ayarlar simgesini tıklayın.

Ana ekran, HyperDeck Shuttle HD'nizi ve cihazın adını gösterecektir. Bu ad, bilgisayarınıza birden fazla HyperDeck bağlandığında cihazı tanımlamaya yardımcı olur ve yardımcı yazılımın ayarlar menüsü kullanılarak düzenlenebilir.



Kurulum

Birden fazla HyperDeck disk kaydediciniz varsa kolay tanınmaları için her cihaza farklı bir isim vermek isteyebilirsiniz. Bunu, isim alanına yeni bir ad girerek ve “set” butonuna tıklayarak yapabilirsiniz. HyperDeck’in ismini değiştirilmek, kullanılan dijital sertifikaların hepsini geçersiz kılar, bu yüzden bir sertifika imza talebi veya kendinden imzalı sertifika oluşturmadan önce ismi değiştirmekte fayda var.



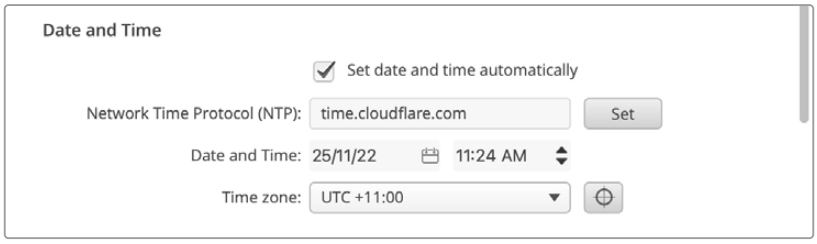
HyperDeck’i Tanımla

Bu onay kutusuna tıklamak, HyperDeck Shuttle’nizin üst tarafındaki “atlatma” butonlarının yanıp sönmesine neden olur. Birden fazla HyperDeck Shuttle’niz olduğunda ve HyperDeck Setup yardımcı yazılımı aracılığıyla hangisine bağlı olduğunuzu belirlemek istediğinizde, bu kullanışlı olabilir.

Tarih ve Saat

Bu kutuyu işaretleyerek tarih ve saatinizi otomatik olarak ayarlayın. Tarih ve saati otomatik olarak ayarlarken, HyperDeck Shuttle HD cihazınız NTP alanında belirlenmiş olan ağ zaman protokolü sunucusunu kullanır. Varsayılan NTP sunucu, time.cloudflare.com'dur, fakat alternatif bir NTP sunucusunu manuel olarak girebilir ve ardından "set" (ayarla) seçeneğini tıklayabilirsiniz.

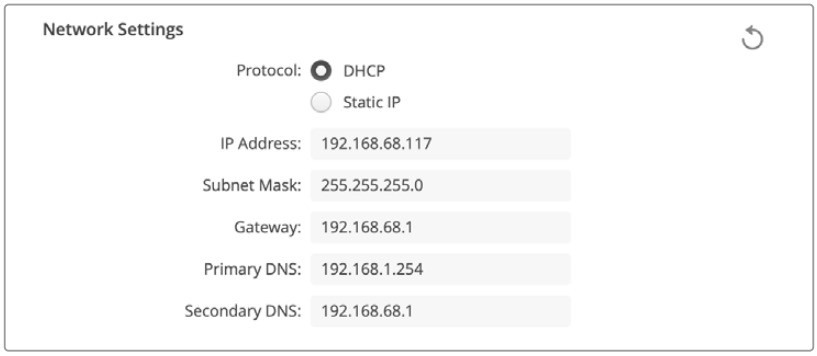
Tarih ve saatinizi manuel giriyorsanız; tarih, saat ve saat diliminizi girmek için ilgili alanları kullanın. Tarih ve saatin doğru ayarlanması, kayıtlarınızın ağınızla aynı saat ve tarih bilgilerine sahip olmasını sağlar ve ayrıca, bazı ağ depolama sistemlerinde oluşabilecek çakışmaları önler.



Ağ Ayarları

Protokol

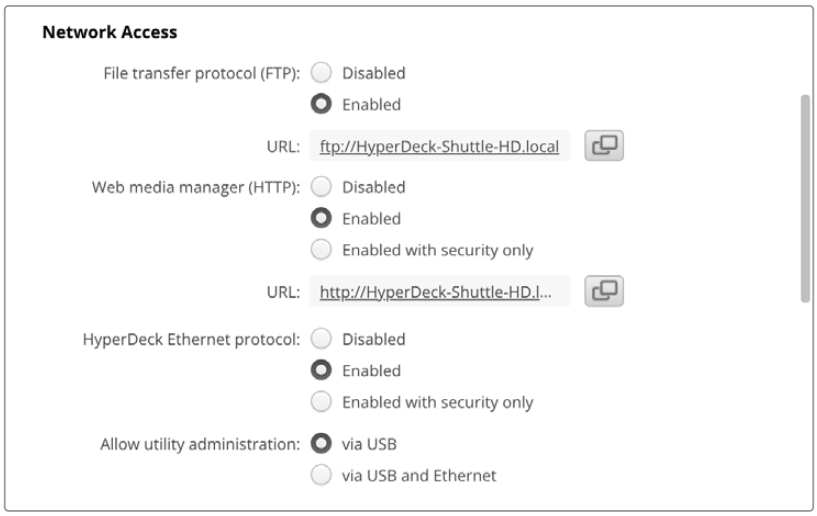
HyperDeck Shuttle HD cihazınızı ATEM switcher'lerle kontrol etmek veya HyperDeck Ethernet Protokolü aracılığıyla uzaktan kontrol etmek için sabit bir IP adresini manuel olarak ekleyerek veya DHCP kullanarak, HyperDeck Shuttle HD'yi diğer ekipmanlarınızla aynı ağa bağlamanız gerekir.



DHCP	HyperDeck Shuttle HD disk kaydedicileri, varsayılan olarak DHCP'ye ayarlanmış olarak gelir. Dinamik ana bilgisayar yapılandırma protokolü veya diğer adıyla DHCP, HyperDeck disk kaydedicinizi otomatikman tespit eden ve bir IP adresi atayan, ağ sunucularındaki bir hizmettir. DHCP, Ethernet üzerinden ekipmanların bağlanmasını ve IP adreslerinin birbirleriyle çakışmasını önlemeyi kolaylaştıran harika bir servistir. Bilgisayarların ve ağ dağıtıcıların çoğu DHCP'yi destekler.
Statik IP	"Static IP" seçiliyken, ağ detaylarınızı manuel olarak girebilirsiniz. Tüm cihazların birbiriyle iletişim kurabilmesi için IP adreslerini manuel olarak ayarlarken, cihazların aynı alt ağ maskesi ve ağ geçidi ayarlarını paylaşıyor olması gerekir.

Ağ Erişimi

HyperDeck Ethernet Protocol aracılığıyla uzaktan kontrol ve dosya aktarımı için bir ağ üzerinden HyperDeck Shuttle HD'ye erişilebilir. Erişim, varsayılan olarak etkinleştirilmiştir, fakat ağ medya yöneticisini veya HyperDeck Ethernet Protocol'ü kullanırken, ek güvenlik için bir kullanıcı adı ve şifre ile erişim iznini etkinleştirmeyi veya erişimi etkisiz hale getirmeyi seçebilirsiniz.



Dosya Aktarım Protokolü

Onay kutusunu kullanarak, FTP üzerinden erişimi etkinleştirin veya etkisiz hale getirin. CyberDuck gibi bir FTP istemcisi aracılığıyla erişim sağlıyorsanız, FTP adresini kopyalamak için ikonu tıklayın. Daha fazla bilgi için, "bir ağ üzerinden dosya transferi" bölümüne bakın.

Web Media Manager

SD kartlara veya harici disklere kaydedilen medyaya, "web media manager" kullanılarak bir web tarayıcısı aracılığıyla erişilebilir. Link'i tıkladığınızda veya kopyalayıp web tarayıcınıza yapıştırdığınızda, ağınız üzerinden doğrudan SD kartlara dosya yükleyebileceğiniz veya indirebileceğiniz basit bir arayüz açılır.

Varsayılan olarak erişim, HTTP aracılığıyla etkinleştirilir, ama erişimi tamamen devre dışı bırakabilir ya da "enabled with security only" (sadece güvenlik ile etkinleştir) seçeneğini kullanarak, bir güvenlik sertifikası isteyebilirsiniz. Dijital sertifika kullanırken, web medya yöneticisine bağlantılar HTTPS aracılığıyla şifrelenir. "Güvenlik sertifikası" hakkında daha fazla bilgi, dijital sertifikalar hakkında bölümündedir.

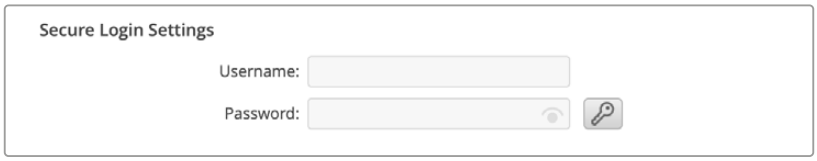
HyperDeck Ethernet Protocol

Mac bilgisayarlarda Terminal ve Windows bilgisayarlarda PuTTY gibi bir komut satırı yazılımını ve HyperDeck Ethernet Protocol'ü kullanarak, HyperDeck disk kaydedicinize bağlanabilirsiniz. Bir kullanıcı adı ve şifre ile veya bunlar olmadan erişim etkinleştirilebilir ya da tamamen devre dışı bırakılabilir. Netcat gibi bir yardımcı yazılım kullanırken, oturumunuzu şifrelemek için bir SSL programı kullanabilirsiniz. Kullanılabilir komutlar hakkında daha fazla bilgi için bu kılavuzun "yazılım geliştiricileri için bilgiler" bölümüne bakın.

Yardımcı Yazılım Yönetimine İzin Ver (Allow Utility Administration)

Blackmagic HyperDeck Setup yazılımına, disk kaydediciniz ağ veya USB aracılığıyla bağlandığında erişilebilir. Kullanıcıların ağ üzerinden erişimini engellemek için sadece USB'yi seçin.

Güvenli Giriş Ayarları (Secure Login Settings)



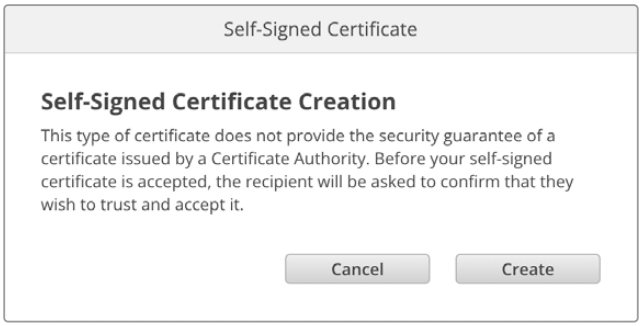
HyperDeck Ethernet Protocol üzerinden erişim için “enabled with security only” (sadece güvenlik ile etkinleştir) seçeneğini seçtiyseniz bir kullanıcı adı ve şifre girmeniz gerekir. Bir kullanıcı adı ve şifre yazın ve “save” (kaydet) seçeneğini tıklayın. Şifre girildikten sonra, şifre alanı boş görünür. Bir kullanıcı adı ve şifre belirlendikten sonra, “enabled with security only” seçilirse web medya yöneticisine erişirken bu bilgileri girmeniz gerekir.

Güvenlik Sertifikası

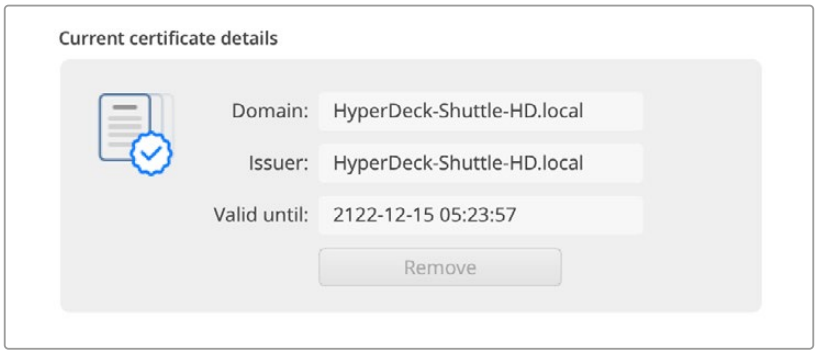
HTTPS aracılığıyla web medya yöneticisi erişimini etkinleştirmek için ya da HyperDeck Ethernet Protocol sadece güvenli seçeneğine ayarlandığında, bir güvenlik sertifikasına ihtiyacınız olur. Bu dijital sertifika, HyperDeck Shuttle HD’niz için bir kimlik kartı işlevi görür, böylece gelen tüm bağlantılar, doğru cihaza bağlandıklarını teyit edebilirler. Bir güvenlik sertifikası kullanmak, cihazın kimliğini doğrulamanın yanı sıra, HyperDeck Shuttle HD ile bir bilgisayar veya sunucu arasında iletilen verilerin şifrelenmesini sağlar. Güvenli oturum açma ayarlarını kullanırken, bağlantı sadece şifrelenmekle kalmaz, ayrıca erişim için kimlik doğrulaması gerektirir.

Bir sertifika yetkilisi tarafından imzalanmış güvenlik sertifikası veya kendinden imzalı sertifika olmak üzere, HyperDeck Shuttle ile kullanabileceğiniz iki sertifika türü bulunur. Bazı kullanıcı iş akışları için kendinden imzalı bir sertifika yeterince güvenli olabilir. Yerel bir ağ üzerinden HyperDeck Shuttle HD’ye erişim, buna örnektir.

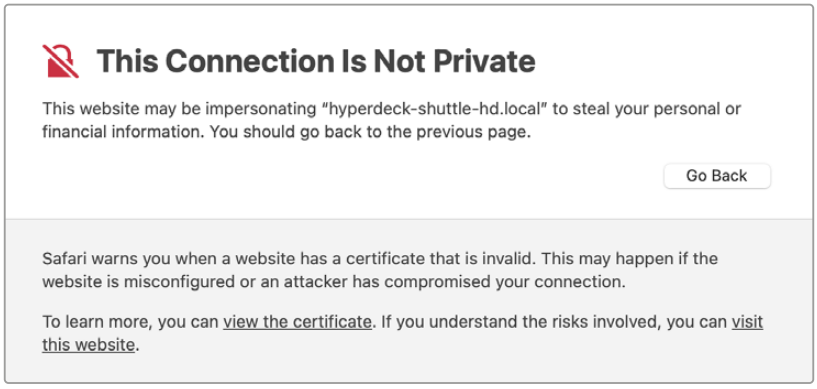
Kendinden imzalı bir sertifika oluşturmak için “create certificate” (sertifika oluştur) seçeneğine tıklayın. Kendinden imzalı bir sertifika kullanmakla ilgili riskleri anladığınızı doğrulamanız istenecektir. “Create” (oluştur) tıklandıktan sonra, HyperDeck Setup yardımcı yazılımındaki “domain” (alan adı), “issuer” (düzenleyen) ve “valid until” (son geçerlilik tarihi) alanları, sertifika bilgileri tarafından otomatik doldurur.



Fabrika ayarlarına sıfırlama işleminin ardından, varolan sertifikaların hepsi silinir, fakat, “remove” butonunu tıklayarak ve komutları takip ederek, istediğiniz zaman silebilirsiniz.



HTTPS kullanarak medya dosyalarına erişmek için kendinden imzalı bir sertifika kullanırken, internet tarayıcınız siteye erişmenin riskleri konusunda sizi uyarır. Bazı internet tarayıcıları, riskleri anladığınızı onayladığınızda ilerlemenize izin verirken, başka internet tarayıcıları ilerlemenizi tamamen engelleyebilir.



Herhangi bir internet tarayıcısına erişim sağlanmasını garantilemek için, imzalı bir sertifika kullanmanız gerekir.

İmzalı bir sertifika temin etmek için önce, Blackmagic HyperDeck Setup yardımcı yazılımını kullanarak bir sertifika imzalama talebi veya CSR oluşturmanız gerekir. Bu imzalama talebi daha sonra imzalanmak üzere CA olarak da bilinen bir sertifika yetkilisine veya BT departmanınıza gönderilir. Tamamlandığında, HyperDeck Shuttle HD cihazınıza yükleyebileceğiniz, .cert, .crt veya .pem dosya uzantılı imzalı bir sertifika geri gönderilecektir.



Sertifika imzalama talebini (certificate signing request - CSR) oluşturmak için:

1 “Generate signing request” (imza talebi oluştur) butonunu tıklayın.



2 HyperDeck için ortak bir isim ve alternatif konu adı girmenizi isteyen bir pencere belirir. Aşağıdaki tabloyu kullanarak tüm diğer detayları istediğiniz gibi değiştirin.

Bilgi	Tanım	Örnek
Common Name (Ortak İsim)	Kullanacağınız alan adı	hyperdeck.melbourne.com
Subject Alternative Name (Alternatif Konu Adı)	Alternatif bir alan adı	hyperdeck.melbourne.net
Country (Ülke)	Kurumunuzun bulunduğu ülke	AU
State (Eyalet)	İl, bölge, ülke veya eyalet	Victoria
Location (Konum)	Kasaba, şehir, köy vb. isim	Port Melbourne
Organization Name (Kurum Adı)	Kurumunuzun adı	Blackmagic Design

3 Sertifika detaylarını doldurduktan sonra, “create” (oluştur) seçeneğine basın.

Bir .csr oluşturduğunuzda, bir genel ve özel anahtar da oluşturmuş olursunuz. Genel anahtar, imzalama talebine dahil edilecek, özel anahtar ise cihazda kalacaktır. CA veya BT departmanı, imzalama talebindeki bilgileri şirketinizle doğruladıktan sonra, genel anahtarınızla birlikte yukarıdaki bilgileri içeren, imzalı bir sertifika oluşturacaktır.

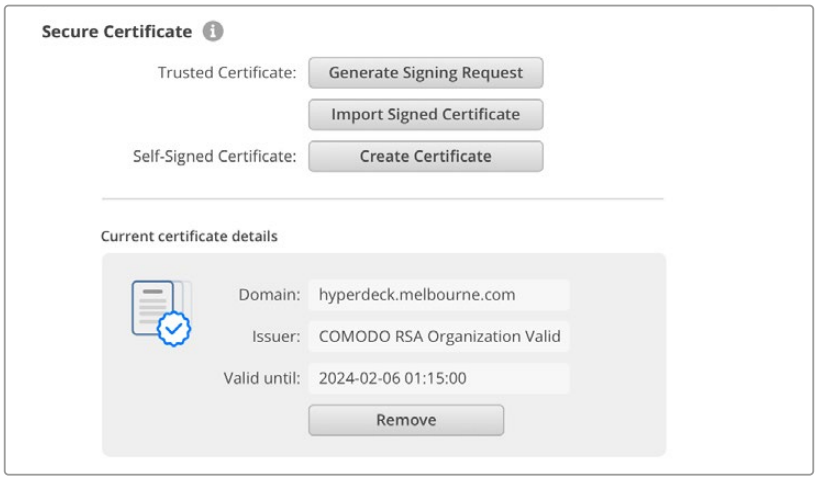
Yüklendikten sonra, HyperDeck’in kimliğini doğrulamak ve bir SSL yazılımı kullanırken HTTPS veya HyperDeck Ethernet Protocol aracılığıyla veri paylaşımını şifrelemek ve şifresini çözmek için HyperDeck Shuttle HD cihazı, genel ve özel anahtarı kullanacaktır.

İmzalı bir sertifikayı yüklemek için:

1 “Import signed certificate” (imzalı sertifikayı yükle) ibaresini tıklayın.

2 Dosya tarayıcıyı kullanarak imzalı sertifikanın konumuna gidin ve dosyayı seçtikten sonra “open” (aç) seçeneğini tıklayın.

Alan adı, düzenleyen ve son geçerlilik tarihi alanları, sertifika yetkilisinden gelen bilgilerle güncellenecektir. Genellikle, imzalı bir sertifika yaklaşık bir yıl geçerlidir, bu nedenle geçerlilik tarihinin sonuna yaklaşırken, işlemin tekrarlanması gerekecektir.

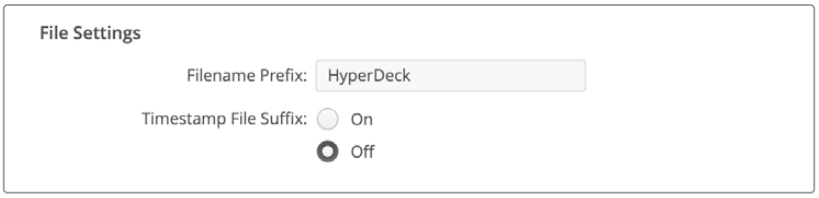


Bir alan adı seçildiğinden, HyperDeck Shuttle HD cihazı için alan adı sistemi (DNS) girdisini çözümleme konusunda BT departmanınızla konuşmanız gerekecektir. Bu, HyperDeck Shuttle HD'nin IP adresi için tüm trafiği, imzalama talebinde seçilmiş olan alan adı adresine yönlendirecektir.

Bu ayrıca, "web media manager" aracılığıyla dosyalara erişmek için kullandığınız HTTPS adresi de olacaktır. Örneğin, https://hyperdeck.melbourne.com

Fabrika ayarlarına sıfırlama işleminden sonra, sertifikanın geçersiz olacağını ve yeni bir sertifikanın oluşturulup imzalanması gerekeceğini belirtmekte fayda var.

Dosya Ayarları



İlk kurulduğunda HyperDeck Shuttle HD'niz, ön ek olarak 'HyperDeck'i kullanarak klipleri SD kartınıza veya USB flaş diskinize kaydeder. Ön eki değiştirmek için yeni bir dosya adı yazın.

Dosya adına eklenen zaman bilgisi, varsayılan olarak kapalı durumdadır. Dosya adınıza tarih ve saatin kaydedilmesini istiyorsanız bu işlevi etkinleştirin. Dosya adı ön eki ve zaman bilgisi ayarları, HyperDeck Shuttle HD'deki ekran menüsü aracılığıyla da yapılabilir.

Fabrika Ayarlarına Sıfırla

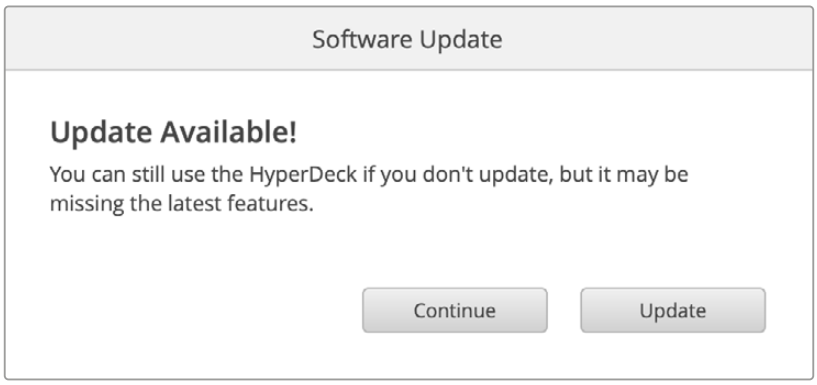
HyperDeck cihazınızı fabrika ayarlarına sıfırlamak için "fabrika ayarlarına sıfırla"yı seçin. Fabrika ayarlarına sıfırlama, mevcut sertifikayı geçersiz kılar. Güvenli sertifika kullanılıyorsa bir sertifika yetkilisi veya BT departmanı tarafından imzalanacak yeni bir sertifika imzalama talebi oluşturmanız gerekecektir.

Dahili Yazılımın Güncellenmesi

Dahili yazılımı güncellemek için:

1. www.blackmagicdesign.com/tr/support adresinden, en son Blackmagic HyperDeck Setup yükleyicisini indirin.
2. Bilgisayarınızda Blackmagic HyperDeck Setup yükleyicisini çalıştırın ve ekran talimatlarını takip edin.
3. Yükleme tamamlandıktan sonra, HyperDeck Shuttle HD'nizi arka panelindeki USB veya Ethernet bağlantısı aracılığıyla bilgisayara bağlayın.

4 Blackmagic HyperDeck Setup yazılımını başlatın ve dahili yazılımı güncellemek için ekrandaki komutları takip edin. Herhangi bir komut belirmezse, bu dahili yazılımın güncel olduğuna işaret eder ve yapmanız gereken başka bir şey yoktur.



Bir Ağ Üzerinden Dosyaların Transferi

HyperDeck Shuttle HD, hem HTTPS olarak bilinen güvenli bağlantılı metin aktarım protokolü hem de FTP olarak bilinen dosya aktarma protokolü üzerinden dosya transferini destekler. Bu, bir ağ aracılığıyla yerel bir ağın sağlayabileceği yüksek hızlarda, dosyaları doğrudan bilgisayarınızdan HyperDeck cihazınıza kopyalamanızı mümkün kılar. Örneğin, monitör duvarlarında ve dijital tabelalarda video oynatımı için kullanılan bir HyperDeck cihazına yeni dosyalar kopyalıyor olabilirsiniz.

Herhangi bir dosyayı, HyperDeck cihazınıza ya da HyperDeck cihazınızdan aktarabilirsiniz fakat, HyperDeck Shuttle HD'den oynatmayı düşündüğünüz dosyaların, HyperDeck'inizin desteklediği kodeklerle ve çözünürlüklerle uyumlu olması gerektiğini belirtmemizde fayda var.

BİLGİ HyperDeck cihazınız kayıt yaparken, bir ağ üzerinden dosyaları transfer edebilirsiniz. Kayıt işleminin etkilenmemesi için HyperDeck cihazı aktarım hızlarını otomatikman ayarlayacaktır.

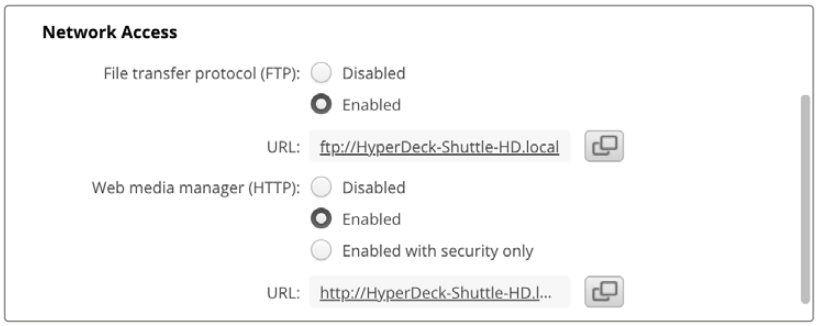
Bu protokollerin herhangi biri üzerinden HyperDeck Shuttle HD'ye erişim, HyperDeck Setup yardımcı yazılımı aracılığıyla etkinleştirilebilir veya etkisiz hale getirilebilir. Örneğin; aynı anda FTP erişimini devre dışı bırakabilir ve HTTPS erişimini etkinleştirebilirsiniz.

HTTPS aracılığıyla HyperDeck Shuttle HD'ye Bağlanma

HyperDeck Shuttle HD'ye "web media manager" üzerinden erişmek için ağ erişim ayarlarındaki URL'ye ihtiyacınız olur. Ağ erişim ayarları, bilgisayarınız USB veya Ethernet aracılığıyla bağlandığında HyperDeck Setup yardımcı yazılımında belirir, fakat yalnızca Ethernet bağlı olduğunda etkisiz olurlar.

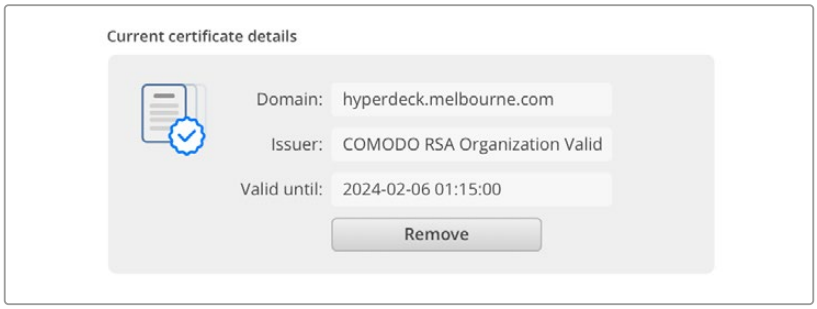
1 Bir USB-C kablosu kullanarak, arka paneldeki USB portu üzerinden bilgisayarınızı HyperDeck Shuttle HD'ye bağlayın ve HyperDeck Setup yazılımını açın. Cihaz adının yanında bir USB bağlantı ikonu göreceksiniz. Ayarları açmak için dairesel ikonu veya ürün görüntüsünün herhangi bir yerini tıklayın.

2 Kendi imzaladığınız bir sertifikayı kullanırken, ağ erişim ayarlarına gidin ve URL'nin yanındaki kopyalama simgesini tıklayın. URL, HyperDeck'inizin ismine bağlıdır. URL'yi değiştirmek için cihazın ismini değiştirin.



Kendinden imzalı bir sertifika kullanırken bu bağlantıyı tıklayın

3 Bir sertifika yetkilisi veya BT departmanı tarafından imzalanmış bir sertifikayı yüklüyorsanız, geçerli sertifikanın adresini kopyalayıp alan adı kısmına yapıştırın.



Alan adı adresini kopyalayın ve bir tarayıcıya yapıştırın

4 İnternet tarayıcısını açın ve adresi yeni bir pencereye yapıştırın. Yalnızca güvenlik bilgileriyle erişimi etkinleştirdiyseniz HyperDeck Setup yardımcı yazılımında ayarlanan kullanıcı adını ve şifreyi girmeniz istenir.

Kendinden imzalı bir sertifikayı kullanırken, bağlantının gizliliğine ilişkin bir web tarayıcı uyarısı belirir ve bu, HyperDeck Setup yardımcı yazılımı aracılığıyla, imzalanmış güvenilir bir sertifikanın yüklenmemiş olduğu anlamına gelir.

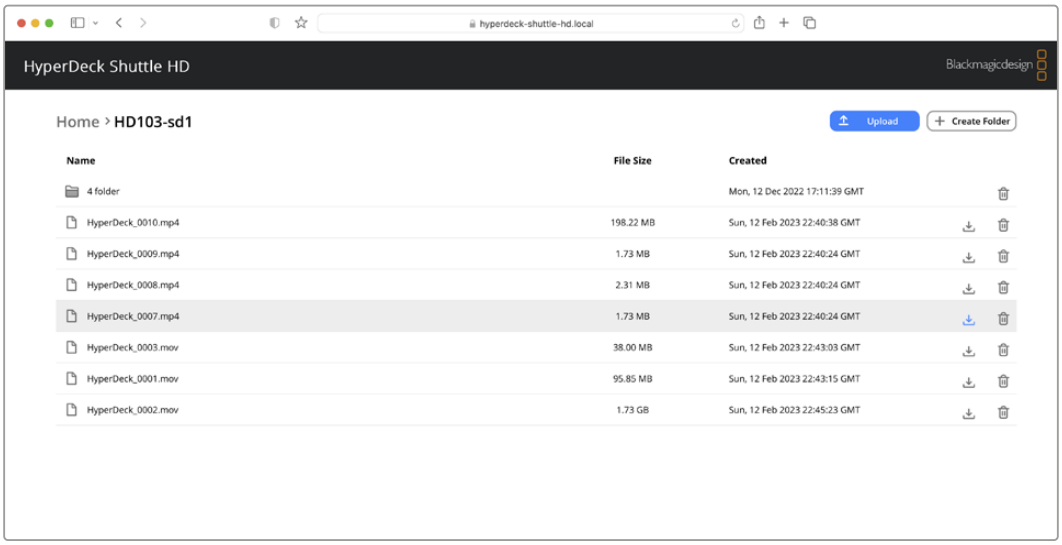
Geçerli ve güvenilir bir sertifika olmadan devam etmek için riskleri kabul etmek ve internet sitesine ilerlemek için tarayıcınızın talimatlarını takip edin.

Web Media Manager Kullanarak Dosya Aktarımı

"Web media manager" tarayıcı penceresini ilk açtığınızda, dosyalarınızın ilgili ortam yuvaları üzerinden sıralandığını göreceksiniz.

SD1	SD kartlardaki Medya
USB	Bağlı olan USB diskleri, USB/ ön ekiyle listelenir.

SD kartın veya diskin içeriğini ortaya çıkarmak için ortamı çift tıklayın.



Dosya eklemek için “upload” (yükle) butonunu tıklayın

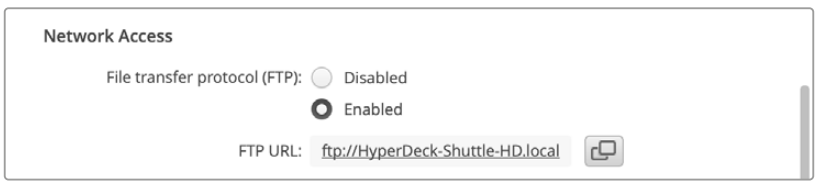
Oynatım için dosyaları uzaktan eklemek için “upload” (yükle) butonunu tıklayın. Dosya tarayıcıyı kullanarak, dosyanıza gidin ve “upload” ibaresini tıklayın. Yükleme sırasında bir durum penceresi görünecektir. Gerekirse “create folder” (klasör oluştur) butonunu kullanarak klasörler de ekleyebilirsiniz.

Dosyaları indirmek için en sağdaki ok ikonunu kullanın. Tarayıcınız, internet sitesinden dosya indirmeye izin vermenizi isteyebilir. “Allow” (izin ver) ibaresini tıklayın. Bir dosyayı silmek için çöp kutusu ikonunu tıklayın ve bir dosya silme penceresi görünecektir. Devam etmek için “delete” (sil) ibaresini tıklayın.

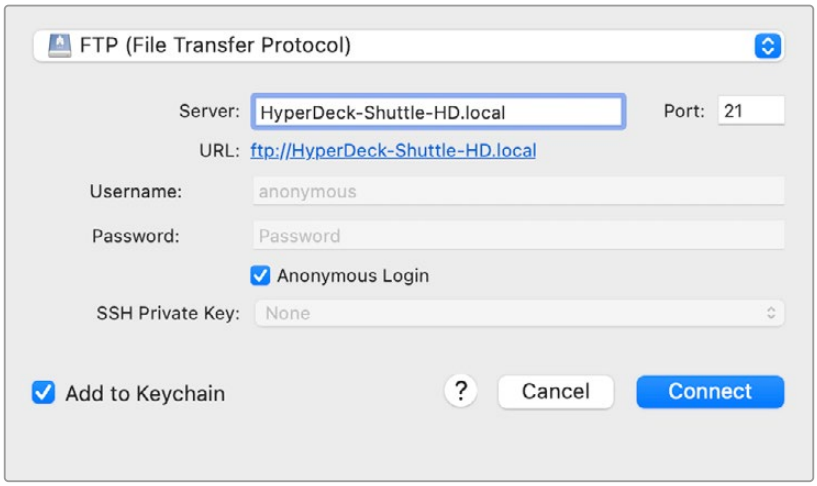
FTP üzerinden Dosya Aktarma

Bilgisayarınız ve HyperDeck Shuttle HD cihazınız aynı ağa bağlandıktan sonra, tek ihtiyacınız olan bir ftp istemci ve HyperDeck Shuttle HD cihazınızın IP adresi ya da HyperDeck Setup yardımcı yazılımındaki FTP URL bilgisidir.

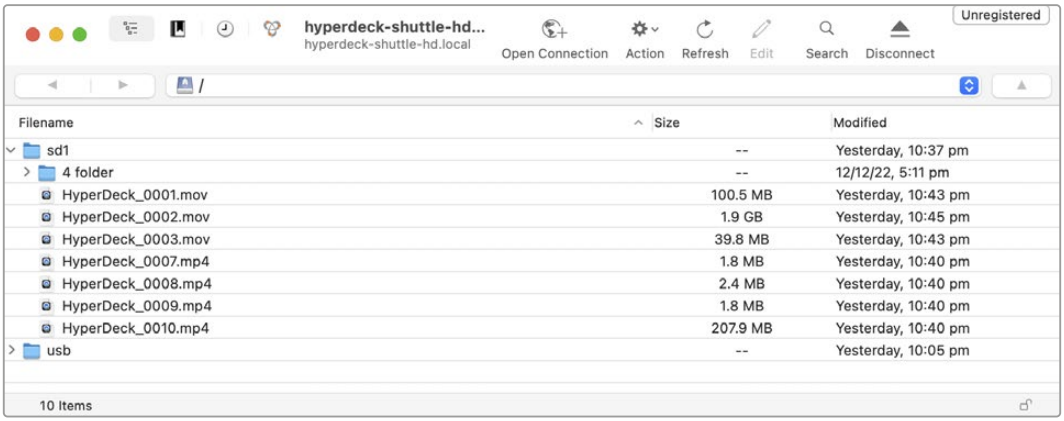
1. HyperDeck Shuttle HD’nizi bağlamak istediğiniz bilgisayara bir FTP istemcisi indirin ve yükleyin. Cyberduck, FileZilla veya Transmit uygulamalarını tavsiye ederiz ama FTP uygulamalarının çoğu çalışacaktır. Cyberduck ve FileZilla’yı ücretsiz olarak indirebilirsiniz.
2. HyperDeck Shuttle HD’nin ağınıza bağlıyken, HyperDeck Setup yazılımını açın ve FTP URL ibaresini tıklayın veya manuel olarak yapıştırmak için kopyala ikonunu tıklayın. FTP yazılımı bir bağlantı açmazsa, linki ikinci kez tıklamanız gerekebilir.



3. Bir FTP bağlantısını manuel olarak açıyorsanız, URL’yi sunucu alanına yapıştırın. Varsa “anonymous login” (isimsiz oturum açma) seçeneğini işaretleyin.



4 SD kartlar, sd1 tarafından tespit edilir. USB klasörünü genişletirseniz, bağlı olan tüm USB diskler listede görünür.



Artık, FTP arayüzünü kullanarak dosyaları sürükleyip bırakabilirsiniz.

Yazılım Geliştiriciler için Bilgiler

Blackmagic HyperDeck Ethernet Protocol

The Blackmagic HyperDeck Ethernet Protocol is a text based protocol accessed by connecting to TCP port 9993 on HyperDeck models that have a built in Ethernet connection. If you are a software developer, you can use the protocol to construct devices that integrate with our products. Here at Blackmagic Design our approach is to open up our protocols and we eagerly look forward to seeing what you come up with!

You can connect to your HyperDeck recorder using the HyperDeck Ethernet Protocol using a command line program on your computer, such as Terminal on a Mac and putty on a Windows computer.

The HyperDeck Ethernet Protocol lets you schedule playlists and recordings. The following is an example of how to play 7 clips from clip number 5 onwards via the HyperDeck Ethernet Protocol.

On a Mac

1. Open the Terminal application which is located with the applications > utilities folder.
2. Type in “nc” and a space followed by the IP address of your HyperDeck disk recorder, another space and “9993” which is the HyperDeck Ethernet Protocol port number. For example type: nc 192.168.1.154 9993. The Protocol preamble will appear.
3. Type “playrange set: clip id: 5 count: 7” and press ‘return’.

   On HyperDeck disk recorders with a timeline view, you will see in and out points marked around clips 5 through the end of clip 11.
4. Type “play”. Clips 5 through 11 will now play back.
5. To clear the playrange, type “playrange clear”
6. To exit from the protocol, type ‘quit’.

Protocol Commands

Command	Command Description
help or ?	Provides help text on all commands and parameters
commands	return commands in XML format
device info	return device information
disk list	query clip list on active disk
disk list: slot id: {n}	query clip list on disk in slot {n}
quit	disconnect ethernet control
ping	check device is responding
preview: enable: {true/false}	switch to preview or output
play	play from current timecode
play: speed: {-5000 to 5000}	play at specific speed
play: loop: {true/false}	play in loops or stop-at-end
play: single clip: {true/false}	play current clip or all clips

Command	Command Description
play: {clip id/clip/timecode/timeline/...}	play from the specified position see “goto” command for description of parameters parameters can be combined with {speed/loop/single clip}
playrange	query playrange setting
playrange set: clip id: {n}	set play range to play clip {n} only
playrange set: clip id: {n} count: {m}	set play range to {m} clips starting from clip {n}
playrange set: in: {inT} out: {outT}	set play range to play between: - timecode {inT} and timecode {outT}
playrange set: timeline in: {in} timeline out: {out}	set play range in units of frames between: - timeline position {in} and position {out}
playrange clear	clear/reset play range setting
play on startup	query unit play on startup state
play on startup: enable: {true/false}	enable or disable play on startup
play on startup: single clip: {true/false}	play single clip or all clips on startup
play option	query play options
play option: stop mode: {lastframe/nextframe/black}	set output frame when playback stops
record	record from current input
record: name: {name}	record named clip
record spill	spill current recording to next slot
record: spill: slot id: {n}	spill current recording to specified slot use current id to spill to same slot
spill order	query the device order used for record spill
stop	stop playback or recording
clips count	query number of clips on timeline
clips get	query all timeline clips
clips get: clip id: {n}	query a timeline clip info
clips get: clip id: {n} count: {m}	query m clips starting from n
clips get: version: {1/2/3}	query clip info using specified output version: version 1: id: name startT duration version 1: id: name startT duration startT depends on “configuration: timecode output: {clip/timeline}” version 2: id: clipInT clipDuration inT outT filename version 3: id: clipInT clipDuration inT outT folder/filename
clips add: name: {name}	append a clip to timeline, name can include subfolders e.g. folder1/HyperDeck_0001.mp4
clips add: clip id: {n} name: {name}	insert clip before existing clip {n}
clips add: in: {inT} out: {outT} name: {name}	append the clip portion between clip timecodes {inT} to {outT}
clips add: frame in: {in} frame out: {out} name: {name}	append the clip portion between clip frame numbers {in} to {out}

Command	Command Description
clips remove: clip id: {n}	remove clip {n} from the timeline (invalidates clip ids following clip {n})
clips clear	empty timeline clip list
clips rebuild	rebuild timeline with default rules
clip info	query clip info for the current playing/recording clip
clip info: clip id: {n}	query clip info for timeline clip id {n}
clip info: name: {name}	query clip info for the clip named {name} on active disk
transport info	query current activity
slot info	query active slot
slot info: slot id: {n}	query slot {n}
slot info: device: {device}	query slot containing device USB/network devices can be queried without being active “device” and “slot id” parameters are mutually exclusive in all commands
slot select: slot id: {n}	switch to specified slot
slot select: device: {device}	switch to slot containing device
slot select: video format: {format}	load clips of specified format
slot unblock	unblock active slot
slot unblock: slot id: {n}	unblock slot {n}
slot unblock: device: {device}	unblock disk device
external drive list	list all available USB/network drives for use in external slot
external drive select: device: {device}	switch external slot to specified external drive
external drive selected	query the currently selected external drive
cache info	query cache status
dynamic range	query dynamic range settings
dynamic range: playback override: {off/Rec709/Rec2020_SDR/HLG/ ST2084_300/ST2084_500/ ST2084_800/ST2084_1000/ ST2084_2000/ST2084_4000/ST2084	set playback dynamic range override
dynamic range: record override: {off/Rec709/Rec2020_SDR/HLG/ ST2084_300/ST2084_500/ ST2084_800/ST2084_1000/ ST2084_2000/ST2084_4000/ST2048}	set record dynamic range override
notify	query notification status
notify: remote: {true/false}	set remote notifications
notify: transport: {true/false}	set transport notifications
notify: slot: {true/false}	set slot notifications
notify: configuration: {true/false}	set configuration notifications

Command	Command Description
notify: dropped frames: {true/false}	set dropped frames notifications (reported dropped frame count is approximate)
notify: display timecode: {true/false}	set display timecode notifications
notify: timeline position: {true/false}	set playback timeline position notifications
notify: playrange: {true/false}	set playrange notifications
notify: cache: {true/false}	set cache notifications
notify: dynamic range: {true/false}	set dynamic range settings notifications
notify: slate: {true/false}	set digital slate notifications
notify: clips: {true/false}	set timeline clips notifications where two types of changes can occur: add: partial update with list of clips and insert positions snapshot: complete update of all clips on timeline
notify: disk: {true/false}	set disk clips notifications where two types of changes can occur: add: partial update with list of clips and insert positions snapshot: complete update of all clips on timeline
notify: device info: {true/false}	set device info notifications
notify: nas: {true/false}	set nas notifications triggered by commands such as “nas add” or “nas remove”
goto: clip id: {start/end}	goto first clip or last clip
goto: clip id: {n}	goto clip id {n}
goto: clip id: +{n}	go forward {n} clips
goto: clip id: -{n}	go backward {n} clips
goto: clip: {start/end}	goto start or end of clip
goto: clip: {n}	goto frame position {n} within current clip
goto: clip: +{n}	go forward {n} frames within current clip
goto: clip: -{n}	go backward {n} frames within current clip
goto: timeline: {start/end}	goto start or end of timeline
goto: timeline: {n}	goto frame position {n} within timeline
goto: timeline: +{n}	go forward {n} frames within timeline
goto: timeline: -{n}	go backward {n} frames within timeline
goto: timecode: {timecode}	goto absolute timecode position in timeline
goto: timecode: +{timecode}	go forward {timecode} duration
goto: timecode: -{timecode}	go backward {timecode} duration
goto: slot id: {n}	goto slot id {n}
goto: clip id: {n} clip: {m}	goto clip id {n} and offset to frame position {m} within that clip
goto: clip id: {n} timeline: {m}	goto clip id {n} and offset to frame position {m} within the timeline

Command	Command Description
goto: clip id: {n} timecode: {timecode}	goto clip id {n} and offset {timecode} duration {clip id/clip/timeline/timecode} support absolute and relative offsets use “play” instead of “goto” to play from seeked position
jog: timecode: {timecode}	jog to timecode
jog: timecode: +{timecode}	jog forward {timecode} duration
jog: timecode: -{timecode}	jog backward {timecode} duration
shuttle: speed: {-5000 to 5000}	shuttle with speed
remote	query unit remote control state
remote: enable: {true/false}	enable or disable remote control
remote: override: {true/false}	session override remote control
configuration	query configuration settings
configuration: video input: {SDI/HDMI/component/composite}	change the video input source
configuration: audio input: {embedded/XLR/RCA}	change the audio input source
configuration: file format: {format}	switch to one of the supported formats: H.265High_422, H.264High, H.264Medium, H.264Low, H.264High10_422, H.265High, H.265Medium, H.265Low, QuickTimeProResHQ, QuickTimeProRes, QuickTimeProResLT, QuickTimeProResProxy DNxHR_HQX, QuickTimeDNxHR_HQX, DNxHR_SQ, QuickTimeDNxHR_SQ, DNxHR_LB, QuickTimeDNxHR_LB, DNxHD220x, QuickTimeDNxHD220x, DNxHD145, QuickTimeDNxHD145, DNxHD45, QuickTimeDNxHD45
configuration: audio codec: {PCM/AAC}	switch to specific audio codec
configuration: timecode input: {external/embedded/internal/preset/clip}	change the timecode input
configuration: timecode output: {clip/timeline}	change the timecode output
configuration: timecode preference: {default/dropframe/nondropframe}	whether or not to use drop frame timecodes when not otherwise specified
configuration: timecode preset: {timecode}	set the timecode preset
configuration: audio input channels: {n}	set the number of audio channels recorded to {n}
configuration: record trigger: {none/recordbit/timecoderun}	change the record trigger
configuration: record prefix: {name}	set the record prefix name (supports UTF-8 name)
configuration: record cache: {true/false}	enable or disable record cache, has no effect if cache is not supported/installed/formatted
configuration: append timestamp: {true/false}	append timestamp to recorded filename
configuration: usb spill: {true/false}	enable or disable spilling between usb disks

Command	Command Description
configuration: reference source: {auto/input/external}	set source for the reference signal
configuration: genlock input resync: {true/false}	enable or disable genlock input resync when enabled set reference source to auto/external
configuration: xlr input id: {n} xlr type: {line/mic}	configure xlr input type multiple xlr inputs can be configured in a single command
uptime	return time since last boot
format: slot id: {n} prepare: {exFAT/HFS+} name: {name}	prepare formatting operation filesystem type with volume name {name} “slot id” can be omitted for the current mounted slot “name” defaults to current volume name if mounted (supports UTF-8)
format: device: {device} prepare: {exFAT/HFS+} name: {name}	prepare formatting operation for {device}
format: confirm: {token}	perform a pre-prepared formatting operation using token
identify: enable: {true/false}	identify the device
watchdog: period: {period in seconds}	client connection timeout
reboot	reboot device
slate clips	slate clips information
slate project	slate project information
slate lens	slate lens information
nas list	list all NAS share bookmarks
nas discovered	list all NAS servers that have been discovered via mDNS
nas selected	currently selected NAS share
nas deselect	unmount the currently selected NAS share
connection protocol: response version: {version}	changes which do not affect other client connections change the output of “clips get”, “disk list” and related responses version 1 205 clips get id: filename startT duration startT depends on “configuration: timecode output: {clip/timeline}” 519 clips info id: clipInT clipDuration inT outT filename 206 disk list id: filename codec format duration 520 disk list info id: filename codec format duration version 2 205 clips get id: clipInT clipDuration inT outT folder/filename 519 clips info id: clipInT clipDuration inT outT folder/filename 206 disk list id: codec format duration folder/filename 520 disk list info id: codec format duration folder/filename

Multiline commands:	Command Description
authenticate:↵	authenticate user for secure access
username: {username}	case sensitive username
password: {password}	case sensitive password
slate clips↵	set slate clips information:
reel: {n}	slate reel number, where {n} is in [1, 999]
scene id: {id}	slate scene id value, where {id} is a string
shot type: {WS/MS/CU/BCU/MCU/ECU/none}	slate shot type
take: {n}	slate take number, where {n} is in [1, 99]
take scenario: {PU/VFX/SER/none}	slate take scenario
take auto inc: {true/false}	slate take auto increment
good take: {true/false}	slate good take
environment: {interior/exterior}	slate environment
day night: {day/night}	slate day or night
slate project:↵	set slate project information:
project name: {name}	project name (can be empty, supports UTF-8)
camera: {index}	set camera index e.g. A
director: {name}	director (can be empty, supports UTF-8)
camera operator: {name}	camera operator (can be empty, supports UTF-8)
slate lens:↵	set lens information:
lens type: {type}	lens type (can be empty, supports UTF-8)
iris: {type}	camera iris (can be empty, supports UTF-8)
focal length: {length}	focal length (can be empty, supports UTF-8)
distance: {distance}	lens distance (can be empty, supports UTF-8)
filter: {filter}	lens filter (can be empty, supports UTF-8)
nas add:↵	add a NAS share to the list of bookmarks
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share
username: {username}	username to connect as (optional, defaults to guest)
password: {password}	password to connect with (optional)
nas remove:↵	remove NAS share bookmark, does not unmount share if mounted
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share
nas select:↵	mount NAS share asynchronously. Uses credentials provided in matching bookmark, otherwise uses guest credentials
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share Use “nas selected” or “notify: slot: true” to determine when share is mounted.

Command Combinations

You can combine the parameters into a single command, for example:

```
play: clip id: 3 speed: 200 loop: true single clip: true
```

Or for configuration:

```
configuration: video input: SDI audio input: XLR
```

Or to switch to the second disk, but only play NTSC clips:

```
slot select: slot id: 2 video format: NTSC
```

Using XML

While you can use the Terminal to talk to HyperDeck, if you are writing software, you can use XML to confirm the existence of a specific command based on the firmware of the HyperDeck you are communicating with. This helps your software user interface adjust to the capabilities of the specific HyperDeck model and software version.

Protocol Details

Connection

The HyperDeck Ethernet server listens on TCP port 9993.

Basic syntax

The HyperDeck protocol is a line oriented text protocol. Lines from the server will be separated by an ascii CR LF sequence. Messages from the client may be separated by LF or CR LF.

New lines are represented in this document as a "↵" symbol.

Single line command syntax

Command parameters are usually optional. A command with no parameters is terminated with a new line:

```
{Command name}↵
```

If parameters are specified, the command name is followed by a colon, then pairs of parameter names and values. Each parameter name is terminated with a colon character:

```
{Command name}: {Parameter}: {Value} {Parameter}: {Value} ...↵
```

Multiline command syntax

The HyperDeck protocol also supports an equivalent multiline syntax where each parameter-value pair is entered on a new line. E.g.

```
{Command name}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
↵
```

Response syntax

Simple responses from the server consist of a three digit response code and descriptive text terminated by a new line:

```
{Response code} {Response text}↵
```

If a response carries parameters, the response text is terminated with a colon, and parameter name and value pairs follow on subsequent lines until a blank line is returned:

```
{Response code} {Response text}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
...
↵
```

Successful response codes

A simple acknowledgement of a command is indicated with a response code of 200:

```
200 ok↵
```

Other successful responses carry parameters and are indicated with response codes in the range of 201 to 299.

Failure response codes

Failure responses to commands are indicated with response codes in the range of 100 to 199:

```
100 syntax error
101 unsupported parameter
102 invalid value
103 unsupported
104 disk full
105 no disk
106 disk error
107 timeline empty
108 internal error
109 out of range
110 no input
111 remote control disabled
112 clip not found
120 connection failed
121 authentication failed
122 authentication required
150 invalid state
151 invalid codec
160 invalid format
161 invalid token
162 format not prepared
163 parameterized single line command not supported
```

Asynchronous response codes

The server may return asynchronous messages at any time. These responses are indicated with response codes in the range of 500 to 599:

```
5xx {Response Text}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
↵
```

Connection response

On connection, an asynchronous message will be delivered:

```
500 connection info:↵
protocol version: {Version}↵
model: {Model Name}↵
↵
```

Connection rejection

A limited number of clients may connect at a time. If too many clients attempt to connect concurrently, they will receive an error and be disconnected:

```
120 connection failed↵
```

Timecode syntax

Timecodes are expressed as non-drop-frame timecode in the format:

```
HH:MM:SS:FF
```

Handling of deck "remote" state

The “remote” command may be used to enable or disable the remote control of the deck. Any attempt to change the deck state over ethernet while remote access is disabled will generate an error:

```
111 remote control disabled↵
```

To enable or disable remote control:

```
remote: enable: {“true”, “false”} ↵
```

The current remote control state may be overridden allowing remote access over ethernet irrespective of the current remote control state:

```
remote: override: {“true”, “false”} ↵
```

The override state is only valid for the currently connected ethernet client and only while the connection remains open.

The “remote” command may be used to query the remote control state of the deck by specifying no parameters:

```
remote↵
```

The deck will return the current remote control state:

```
210 remote info:↵
enabled: {“true”, “false”}↵
override: {“true”, “false”}↵
↵
```

Asynchronous remote control information change notification is disabled by default and may be configured with the “notify” command. When enabled, changes in remote state will generate a “510 remote info:”asynchronous message with the same parameters as the “210 remote info:” message.

Closing connection

The "quit" command instructs the server to cleanly shut down the connection:

```
quit↵
```

Checking connection status

The "ping" command has no function other than to determine if the server is responding:

```
ping↵
```

Getting help

The "help" or "?" commands return human readable help text describing all available commands and parameters:

```
help↵
```

Or:

```
?↵
```

The server will respond with a list of all supported commands:

```
201 help:↵
{Help Text}↵
{Help Text}↵
↵
```

Switching to preview mode

The "preview" command instructs the deck to switch between preview mode and output mode:

```
preview: enable: {"true", "false"}↵
```

Playback will be stopped when the deck is switched to preview mode. Switching to playback is not permitted during record. Use the stop command to stop recording before switching to playback.

Controlling device playback

The “play” command instructs the deck to start playing:

```
play↵
```

The play command accepts a number of parameters which may be used together in most combinations.

By default, the deck will play all remaining clips on the timeline then stop.
The “single clip” parameter may be used to override this behavior:

```
play: single clip: {“true”, “false”}↵
```

By default, the deck will play at normal (100%) speed. An alternate speed may be specified in percentage between -5000 to 5000:

```
play: speed: {% normal speed}↵
```

By default, the deck will stop playing when it reaches to the end of the timeline. The “loop” parameter may be used to override this behavior:

```
play: loop: {“true”, “false”}↵
```

To play from the start of a particular clip:

```
play: clip id: {Clip Id}↵
```

To play from a position offset from the start of particular clip:

```
play: clip id: {Clid Id} timecode: +{timecode}↵
```

The “playrange” command returns the current playrange setting if any:

```
playrange↵
```

To override this behaviour and select a particular clip:

```
playrange set: clip id: {Clip ID}↵
```

To only play a certain number of clips starting at a particular clip:

```
playrange set: clip id: {n} count: {m}↵
```

To only play a certain timecode range:

```
playrange set: in: {in timecode} out: {out timecode}↵
```

To play a certain timeline range:

```
playrange set: timeline in: {in} timeline out: {out}↵
```

To clear a set playrange and return to the default value:

```
playrange clear↵
```

The “play on startup command” instructs the deck on what action to take on startup. By default, the deck will not play. Use the “enable” command to start playback after each power up.

```
play on startup: enable {“true”, “false”}↵
```

By default, the unit will play back all clips on startup. Use the “single clip” command to override.

```
play on startup: single clip: {“true”, “false”}↵
```

The “play option” command queries the output frame for when playback stops:

```
play option↵
```

By default, the deck will display the last frame when playback stops. To override this behaviour, the “stop mode” parameter can be used:

```
play option: stop mode: {“lastframe”, “nextframe”, “black”}↵
```

Stopping deck operation

The "stop" command instructs the deck to stop the current playback or capture:

```
stop↵
```

Changing timeline position

The "goto" command instructs the deck to switch to playback mode and change its position within the timeline.

To go to the start of a specific clip:

```
goto: clip id: {Clip ID}↵
```

To move forward/back {count} clips from the current clip on the current timeline:

```
goto: clip id: +/-{count}↵
```

Note that if the resultant clip id goes beyond the first or last clip on timeline, it will be clamp at the first or last clip.

To go to the start or end of the current clip:

```
goto: clip: {“start”, “end”}↵
```

To go to the start of the first clip or the end of the last clip:

```
goto: timeline: {“start”, “end”}↵
```

To go to a specified timecode:

```
goto: timecode: {timecode}↵
```

To move forward or back a specified duration in timecode:

```
goto: timecode: {“+”, “-”}{duration in timecode}↵
```

To specify between slot 1 and slot 2:

```
goto: slot id: {Slot ID}↵
```

Note that only one parameter/value pair is allowed for each goto command.

Enumerating supported commands and parameters

The "commands" command returns the supported commands:

```
commands↵
```

The command list is returned in a computer readable XML format:

```
212 commands:
<commands>↵
     <command name="…"><parameter name="…"/>…</command>↵
     <command name="…"><parameter name="…"/>…</command>↵
     …
</commands>↵
↵
```

More XML tokens and parameters may be added in later releases.

Controlling asynchronous notifications

The “notify” command may be used to enable or disable asynchronous notifications from the server.
To enable or disable transport notifications:

```
notify: transport: {“true”, “false”}↵
```

To enable or disable slot notifications:

```
notify: slot: {“true”, “false”}↵
```

To enable or disable remote notifications:

```
notify: remote: {“true”, “false”}↵
```

To enable or disable configuration notifications:

```
notify: configuration: {“true”, “false”}↵
```

Multiple parameters may be specified. If no parameters are specified, the server returns the current state of all notifications:

```
209 notify:↵
transport: {“true”, “false”}↵
slot: {“true”, “false”}↵
remote: {“true”, “false”}↵
configuration: {“true”, “false”}↵
dropped frames: {“true”, “false”}↵
display timecode: {“true”, “false”}↵
timeline position: {“true”, “false”}↵
playrange: {“true”, “false”}↵
cache: {“true”, “false”}↵
dynamic range: {“true”, “false”}↵
slate: {“true”, “false”}↵
clips: {“true”, “false”}↵
disk: {“true”, “false”}↵
device info: {“true”, “false”}↵
nas: {“true”, “false”}↵
↵
```

Retrieving device information

The "device info" command returns information about the connected deck device:

```
device info↵
```

The server will respond with:

```
204 device info:↵
protocol version: {Version}↵
model: {Model Name}↵
unique id: {unique alphanumeric identifier}↵
slot count: {number of storage slots}↵
software version: {software version}↵
name: {device name}↵
↵
```

Retrieving slot information

The "slot info" command returns information about a slot. Without parameters, the command returns information for the currently selected slot:

```
slot info↵
```

If a slot id is specified, that slot will be queried:

```
slot info: slot id: {Slot ID}↵
```

The server will respond with slot specific information:

```
202 slot info:↵
slot id: {Slot ID}↵
slot name: {“slot name”}↵
device name: {identifying name for disk device}↵
status: {"empty", "mounting", "error", "mounted"}↵
volume name: {Volume name}↵
recording time: {recording time available in seconds}↵
video format: {disk's default video format}↵
blocked: {“true”, “false”}↵
remaining size: {remaining size in bytes}↵
total size: {total size in bytes}↵
↵
```

A slot can also be specificed by its device. This is particularly useful when there are multiple drives connected via USB. First list the available external drives:

```
external drive list↵
226 external drive info:↵
device: {device}↵
```

Then use slot info with device to query the drive:

```
slot info: device: {device}↵
```

Asynchronous slot information change notification is disabled by default and may be configured with the "notify" command. When enabled, changes in slot state will generate a "502 slot info:" asynchronous message with the same parameters as the "202 slot info:" message.

Retrieving clip information

The “disk list” command returns the information for each playable clip on a given disk. Without parameters, the command returns information for the current active disk:

```
disk list↵
```

If a slot id is specified, the disk in that slot will be queried:

```
disk list: slot id: {Slot ID}↵
```

The server responds with the list of all playable clips on the disk in the format of: Index, name, formats, and duration in timecode:

```
206 disk list:↵
slot id: {Slot ID}↵
{clip index}: {name} {file format} {video format} {Duration timecode}↵
{clip index}: {name} {file format} {video format} {Duration timecode}↵
…
↵
```

Note that the *clip index* starts from 1.

Retrieving clip count

The "clips count" command returns the number of clips on the current timeline:

```
clips count ↵
```

The server responds with the number of clips:

```
214 clips count: ↵
clip count: {Count}↵
```

Retrieving timeline information

The "clips get" command returns information for each available clip on the current timeline. Without parameters, the command returns information for all clips on timeline:

```
clips get↵
```

In version 1, the start timecode reported is either a clip timecode or a timeline timecode depending on the configured output timecode.

The server responds with a list of clip IDs, names and timecodes:

```
205 clips info:↵
clip count: {Count}↵
{Clip ID}: {Name} {Start timecode} {Duration timecode}↵
{Clip ID}: {Name} {Start timecode} {Duration timecode}↵
…
↵
```

The “clips get” command provides a more detailed response when using the “version: 2” parameter:

```
clips get: version: 2↵
```

The server responds with a list of clip IDs, timecodes, in points, out points and names. Clip name is the last field making it simpler to parse when names have embedded spaces.

```
{Clip ID}: {Clip start timecode} {Duration timecode} {inTimecode}
{outTimecode}
{name}↵
{Clip ID}: {Clip start timecode} {Duration timecode} {inTimecode}
{outTimecode}
{name}↵
…
↵
```

For models that support recursive timelines “clips get: version: 3” replaces the {name} field with {path to clip name} where the {path to clip name} can include directories and subdirectories.

Retrieving transport information

The “transport info” command returns the state of the transport:

```
transport info ↵
```

The server responds with transport specific information:

```
208 transport info:

status: {“preview”, “stopped”, “play”, “forward”, “rewind”,
“jog”, “shuttle”,”record”}↵

speed: {Play speed between -5000 and 5000 %}↵

slot id: {Slot ID or “none”}↵

slot name: {“slot name”}↵

device name: {identifying name for disk device}↵

clip id: {Clip ID or “none”}↵

single clip: {“true”, “false”}↵

display timecode: {timecode}↵

timecode: {timecode}↵

video format: {Video format}↵

loop: {“true”, “false”}↵

timeline: {n}↵

input video format: {Video format”}↵

dynamic range: {“off”, “Rec709”, “Rec2020_SDR”, “HLG”,
“ST2084_300”, “ST2084_500”, “ST2084_800”, “ST2084_1000”,
“ST2084_2000”, “ST2084_4000”, “ST2048” or “none”}↵

reference locked: {“false”, “true”}

↵
```

The "timecode" value is the timecode within the current timeline for playback or the clip for record. The "display timecode" is the timecode displayed on the front of the deck. The two timecodes will differ in some deck modes.

Asynchronous transport information change notification is disabled by default and may be configured with the "notify" command. When enabled, changes in transport state will generate a "508 transport info:" asynchronous message with the same parameters as the "208 transport info:" message.

Video Formats

The following video formats are currently supported on HyperDeck Extreme, HyperDeck Studio and HyperDeck Shuttle:

720p50, 720p5994, 720p60

1080p23976, 1080p24, 1080p25, 1080p2997, 1080p30, 1080p60

1080i50, 1080i5994, 1080i60

HyperDeck Extreme HDR models also support the following formats:

NTSC, PAL, NTSCp, PALp

2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p30, 2160p50, 2160p59.94, 2160p60

4Kp23976, 4Kp24, 4Kp25, 4Kp2997, 4Kp30

4Kp50, 4Kp5994, 4Kp60

HyperDeckExtreme 8K HDR adds support for the following 8K formats:

4320p23.98, 4320p24, 4320p25, 4320p29.97, 4320p30, 4320p50, 4320p59.94, 4320p60

8Kp23976, 8Kp24, 8Kp25

HyperDeck Studio Pro and Plus models support these 4k formats:

4Kp23976, 4Kp24, 4Kp25, 4Kp2997, 4Kp30

HyperDeck Studio 4K Pro adds support for the following 4k formats:

4Kp50, 4Kp5994, 4Kp60

Video format support may depend on the file format selected and may vary between models and software releases.

File Formats

All HyperDeck models currently support the following file formats:

H.264High_SDI

H.264High

H.264Medium

H.264Low

QuickTimeProResHQ

QuickTimeProRes

QuickTimeProResLT

QuickTimeProResProxy

QuickTimeDNxHD220x

DNxHD220x

QuickTimeDNxHD145

DNxHD145

QuickTimeDNxHD45

DNxHD45

HyperDeck Studio 4K Pro and HyperDeck Extrme HDR models also support the following file formats:

H.265High_SDI

H.265High

H.265Medium

H.265Low

QuickTimeDNxHR_HQX

DNxHR_HQX

QuickTimeDNxHR_SQ

DNxHR_SQ

QuickTimeDNxHR_LB

DNxHR_LB

Supported file formats may vary between models and software releases.

Querying and updating configuration information

The "configuration" command may be used to query the current configuration of the deck:

```
configuration↵
```

The server returns the configuration of the deck:

```
211 configuration:↵
audio input: {“embedded”, “XLR”, “RCA”}↵
audio mapping: {n}↵
video input: {“SDI”, “HDMI”, “component”, “composite”}↵
file format: {format}↵
audio codec: {“PCM”, “AAC”}↵
timecode input: {“external”, “embedded”, “preset”, “clip”}↵
timecode output: {“clip”, “timeline”}↵
timecode preference: {“default”, “dropframe”, “nondropframe”}↵
timecode preset: {timecode}↵
audio input channels: {n}↵
record trigger: {“none”, “recordbit”, “timecoderun”}↵
record prefix: {name}↵
record cache: {“true”, “false”}↵
append timestamp: {“true”, “false”}↵
genlock input resync: {“true”, “false”}↵
reference source: {“auto”, “input”, “external”}↵
xlr input id: {“n”}↵
xlr type: {”line”, ”mic”}↵
usb spill: {“true”, “false”}↵
↵
```

One or more configuration parameters may be specified to change the configuration of the deck.

To change the current video input:

```
configuration: video input: {“SDI”, “HDMI”, “component”}↵
```

Valid video inputs may vary between models. To configure the current audio input:

```
configuration: audio input: {“embedded”, “XLR”, “RCA”}↵
```

Valid audio inputs may vary between models.

To configure the current file format:

```
configuration: file format: {File format}↵
```

Note that changes to the file format may require the deck to reset, which will cause the client connection to be closed. In such case, response code 213 will be returned (instead of 200) before the client connection is closed:

```
“213 deck rebooting”
```

Asynchronous configuration information change notification is disabled by default and may be configured with the “notify” command. When enabled, changes in configuration will generate a “511 configuration:” asynchronous message with the same parameters as the “211 configuration:” message.

Selecting active slot and video format

The "slot select" command instructs the deck to switch to a specified slot, or/and to select a specified output video format.

To switch to a specified slot:

```
slot select: slot id: {slot ID}↵
```

To switch to a disk device, including USB drives that are not yet made active:

```
slot select: device: {identifying name for disk device}↵
```

To select the output video format:

```
slot select: video format: {video format}↵
```

Either or all slot select parameters may be specified. Note that selecting video format will result in a rescan of the disk to reconstruct the timeline with all clips of the specified video format.

Clearing the current timeline

The "clips clear" command instructs the deck to empty the current timeline:

```
clips clear↵
```

The server responds with

```
200 ok↵
```

Adding a clip to the current timeline

The "clips add:" command instructs the deck to add a clip to the current timeline:

```
clips add: name: {clip name}↵
```

The server responds with

```
200 ok↵
```

or in case of error

```
1xx {error description}↵
```

Configuring the watchdog

The “watchdog” command instructs the deck to monitor the connected client and terminate the connection if the client is inactive for at least a specified period of time.

To configure the watchdog:

```
watchdog: period: {period in seconds}↵
```

To avoid disconnection, the client must send a command to the server at least every {period} seconds.
Note that if the period is set to 0 or less than 0, connection monitoring will be disabled.

Network Area Storage

On networks using multicast DNS the “nas discovered” command will list network servers the HyperDeck has discovered:

```
nas discovered↵
225 nas host info:
CloudStoreMini.local. CloudStoreMini
CloudStore80.local. CloudStore80
CloudStore320.local. CloudStore320
```

A network share can be added as a bookmark to the HyperDeck using ‘nas add’

```
nas add:
url: smb://CloudStore80.local/Studio1
```

For shares that require a username and password consider using the secure mode of the HyperDeck Ethernet protocol to avoid passwords being sent as plaintext.

```
nas add:
url: smb://192.168.1.1/Main
username: user1234
password: Password1234
```

A share can be made available for recording and playback using ‘nas select’. If a bookmark exists for that share, ‘nas select’ will use the credentials stored in the bookmark. Otherwise ‘nas select’ will connect using Guest credentials.

```
nas select:
url: smb://192.168.1.1/Main
```

Only one share can be mounted at a time using ‘nas select’.

You can query the currently selected nas share using the ‘nas selected’ command. If ‘notify: slot: true’ was used an asynchronous notification will be sent when the share is mounted.

HyperDeck Control REST API

Bir yazılım geliştiriciyseniz HyperDeck disk kayıt cihazlarını sorunsuz şekilde kontrol etmek ve cihazlarla iletişim halinde olmak için HyperDeck Control REST API (Uygulama Kodlama Arayüzü) kullanarak, özel uygulamalar oluşturabilir veya REST istemcisi veya Postman gibi kullanıma hazır araçlardan faydalanabilirsiniz. Bu API, kayıt başlatma veya durdurma, oynatım yönetimi, disk bilgilerine erişim gibi geniş çeşitlilikte işlemleri gerçekleştirmenizi sağlar. İster belirli ihtiyaçlarınıza uygun özel bir uygulama geliştirin, ister varolan araçlardan yararlanın, HyperDeck disk kaydedicilerin tüm potansiyelini kolayca ortaya çıkarmanıza, bu API imkan verir. Neler yaptığınızı görmek için sabırsızlanıyoruz!

Transport Control API

API for controlling Transport on Blackmagic Design products.

GET /transports/0

Get device's basic transport status.

Response

200 - Transport status.

The response is a JSON object.

Name	Type	Description
mode	string	Transport mode. Possible values are: InputPreview, InputRecord, Output.

PUT /transports/0

Set device's basic transport status.

Parameters

Name	Type	Description
mode	string	Transport mode. Possible values are: InputPreview, Output.

Response

204 - Transport mode was set.

GET /transports/0/stop

Determine if transport is stopped.

Response

200 - Transport stop response.

The response is a JSON object.

PUT /transports/0/stop

Stop transport. Deprecated, use POST /tranports/0/stop instead.

Response

204 - Transport stopped.

POST /transports/0/stop

Stop transport.

Response

204 - Transport stopped.

GET /transports/0/play

Determine if transport is playing.

Response

200 - Transport play response.
The response is a JSON object.

PUT /transports/0/play

Start playing on transport. Deprecated, use POST /tranports/0/play instead.

Response

204 - Transport playing.

POST /transports/0/play

Start playing on transport.

Response

204 - Transport playing.

GET /transports/0/playback

Get playback state.

Response

200 - OK
The response is a JSON object.

Name	Type	Description
type	string	Possible values are: Play, Jog, Shuttle, Var.
loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
speed	number	Playback Speed, 1.0 for normal forward playback
position	integer	Playback position on the timeline in units of video frames

PUT /transports/0/playback

Set playback state.

Parameters

Name	Type	Description
type	string	Possible values are: Play, Jog, Shuttle, Var.
loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
speed	number	Playback Speed, 1.0 for normal forward playback
position	integer	Playback position on the timeline in units of video frames

Response

204 - No Content

GET /transports/0/record

Get record state.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
recording	boolean	Is transport in Input Record mode

PUT /transports/0/record

Set record state. Deprecated, use POST /transports/0/record instead.

Parameters

Name	Type	Description
recording	boolean	Is transport in Input Record mode
clipName	string	Used to set the requested clipName to record to, when specifying “recording” attribute to True

Response

204 - Recording started.

POST /transports/0/record

Start recording.

Parameters

Name	Type	Description
clipName	string	Specific name of clip to record to.

Response

204 - Recording started.

GET /transports/0/clipIndex

Get the clip index of the currently playing clip on the timeline.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clipIndex	number	The 0-based index of the clip being played on the timeline. null when there is no timeline or an empty timeline.

GET /transports/0/timecode

Get device's timecode.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
display	string	The display timecode serialised as a string.
timeline	string	The timeline timecode serialised as a string.

GET /transports/0/timecode/source

Get timecode source selected on device

Response

200 - OK

The response is a JSON object.

Name	Type	Description
timecode	string	Possible values are: Timeline, Clip.

GET /transports/0/clip

Get clip information about the currently recording (or transferring) clip, if it exists

Response

200 - Information about the clip currently being recorded.

The response is a JSON object.

Name	Type	Description
clip	object	
clip.clipUniqueId	integer	Unique ID used to identify this clip
clip.filePath	string	Path to the file relative to the root of a mount
clip.fileSize	integer	Size of file on disk in bytes
clip.codecFormat	object	
clip.codecFormat.codec	string	Currently selected codec.
clip.codecFormat.container	string	Multimedia container format.
clip.videoFormat (required)	object	Video format configuration.
clip.videoFormat.name	string	Video format serialised as a string.
clip.videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
clip.videoFormat.height	number	Height dimension of video format.
clip.videoFormat.width	number	Width dimension of video format.
clip.videoFormat.interlaced	boolean	Is the display format interlaced?
clip.startTimecode	string	Start timecode of the clip serialised as string
clip.durationTimecode	string	Duration of the clip in timecode format serialised as string
clip.frameCount	integer	Number of frames in clip; duration of the clip in frames

System Control API

API for controlling the System Modes on Blackmagic Design products.

GET /system

Get device system information.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codecFormat	object	
codecFormat.codec	string	Currently selected codec.
codecFormat.container	string	Multimedia container format.
videoFormat (required)	object	Video format configuration.
videoFormat.name	string	Video format serialised as a string.
videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
videoFormat.height	number	Height dimension of video format.
videoFormat.width	number	Width dimension of video format.
videoFormat.interlaced	boolean	Is the display format interlaced?

GET /system/product

Get device product information.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
deviceName	string	Name of device as displayed in Setup
productName	string	Device's product name
softwareVersion	string	Software version running on device

GET /system/supportedCodecFormats

Get the list of supported codecs.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codecs	array	
codecs[i]	object	
codecs[i].codec	string	Currently selected codec.
codecs[i].container	string	Multimedia container format.

GET /system/codecFormat

Get the currently selected codec.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codec	string	Currently selected codec.
container	string	Multimedia container format.

PUT /system/codecFormat

Set the codec.

Parameters

Name	Type	Description
codec	string	Currently selected codec.
container	string	Multimedia container format.

Response

204 - The codec updated successfully.

GET /system/videoFormat

Get the currently selected video format.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
name	string	Video format serialised as a string.
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

PUT /system/videoFormat

Set the timeline video format. Deprecated, use PUT /timelines/0/videoFormat instead.

Parameters

This parameter can be one of the following types:

Name	Type	Description
name	string	Video format serialised as a string.

Name	Type	Description
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

Response

204 - The video format updated successfully.

400 - Invalid request.

409 - Operation unsupported in the current state.

Media Control API

API for controlling media devices in Blackmagic Design products.

GET /media/workingset

Get the list of media devices currently in the working set.

Response

200 - The list of media devices in the working set. Entries are null if there is no media device in that slot.

The response is a JSON object.

Name	Type	Description
size	integer	The fixed size of this device's working set
workingset (required)	array	
workingset[i]	object	
workingset[i].index	integer	Index of this media in the working set
workingset[i].activeDisk	boolean	Is this current item the active disk
workingset[i].volume	string	Volume name
workingset[i].deviceName	string	Internal device name of this media device
workingset[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
workingset[i].totalSpace	integer	Total space on media device in bytes
workingset[i].remainingSpace	integer	Remaining space on media device in bytes
workingset[i].clipCount	integer	Number of clips currently on the device

GET /media/active

Get the currently active media device.

Response

200 - The current active media device.

The response is a JSON object.

Name	Type	Description
workingsetIndex	integer	Working set index of the active media device
deviceName	string	Internal device name of this media device

204 - No media is currently active

PUT /media/active

Set the currently active media device.

Parameters

Name	Type	Description
workingsetIndex	integer	Working set index of the media to become active

Response

204 - The active media device was set successfully.

400 - Setting the currently active media device is not possible in the current state.

GET /media/devices/doformatSupportedFilesystems

Get the list of filesystems available to format the device.

Response

200 - The list of filesystems permitted for formatting.

The response is a JSON object.

GET /media/devices/{deviceName}

Get information about a requested device.

Parameters

Name	Type	Description
{deviceName}	string	

Response

200 - Information about the requested device.

The response is a JSON object.

Name	Type	Description
state	string	The current state of the media device. Possible values are: None, Scanning, Mounted, Uninitialised, Formatting, RaidComponent.

400 - Invalid device name

404 - Device not found

GET /media/devices/{deviceName}/doformat

Get a format key, used to format the device with a PUT request.

Parameters

Name	Type	Description
{deviceName}	string	

Response

200 - Format prepared

The response is a JSON object.

Name	Type	Description
deviceName	string	Internal device name of this media device
key	string	The key used to format this device, it must be fetched with the GET request and then provided back with a PUT request

400 - Cannot format the device

404 - Device not found

PUT /media/devices/{deviceName}/doformat

Perform a format of the media device.

Parameters

Name	Type	Description
{deviceName}	string	

Name	Type	Description
key	string	The key used to format this device, it must be fetched with the GET request and then provided back with a PUT request
filesystem	string	Filesystem to format to. GET doFormatSupportedFilesystems returns list of supported filesystems.
volume	string	Volume name to set for the disk after format

Response

204 - Format successful

400 - Cannot format the device, invalid filesystem or key

404 - Device not found

Timeline Control API

API for controlling playback timeline.

GET /timelines/0

Get the playback timeline.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clips	array	
clips[i]	object	
clips[i].clipUniqueId	integer	Unique identifier used to identify this media clip. If the same media clip is added to the timeline multiple times, each timeline clip has the same clipUniqueId
clips[i].frameCount	integer	Duration of timeline clip in frames, the number of frames in this clip on the timeline
clips[i].durationTimecode	string	Duration of the timeline clip in timecode format serialised as string. This will differ to durationTimecode reported in /clips for this clipUniqueId if clipIn or frameCount was specified when adding this clip to the timeline.
clips[i].clipIn	string	In frame offset for the clip on the timeline, where 0 is the first frame of the on-disk clip
clips[i].inTimecode	string	Clip timecode of the first frame of this timeline clip serialised as string (clip startTimecode + clipIn frames)
clips[i].timelineIn	string	Timeline position of the first frame of this clip, where 0 is the first frame of the timeline
clips[i].timelineInTimecode	string	Timeline timecode of the first frame of this timeline clip serialised as string

Response

404 - No timeline / disk available.

DELETE /timelines/0

Clear the current playback timeline. Deprecated, prefer to use POST /timelines/0/clear

Response

204 - The timeline was cleared.

POST /timelines/0

Add a clip to the timeline.

Parameters

Name	Type	Description
insertBefore	integer	Clip(s) will be inserted before this timeline clip index. If omitted, inserts to the end of the timeline. 0 inserts to the beginning of the timeline.
clips		

Response

204 - The clip was added to the timeline as specified.

POST /timelines/0/add

Add a clip to the end of the timeline. Deprecated, use POST /timelines/0 to add clips within the timeline.

Parameters

This parameter can be one of the following types:

Name	Type	Description
clips	integer	Unique ID (clipUniqueId) of the clip to add to the timeline

Name	Type	Description
clips	array	
clips[i]	integer	Unique ID (clipUniqueId) of the clip to add to the timeline

Response

204 - The clip was added to the end of the timeline.

DELETE /timelines/0/clear

Clear the playback timeline.

Response

204 - The timeline was cleared.

DELETE /timelines/0/clips/{timelineClipIndex}

Remove the specified clip from the timeline.

Parameters

Name	Type	Description
{timelineClipIndex}	integer	

Response

204 - The specified clip was removed from the timeline.

Event Control API

API For working with built-in websocket.

GET /event/list

Get the list of events that can be subscribed to using the websocket API.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
events	array	
events[i]	string	List of events that can be subscribed to using the websocket API

Clips Control API

API for listing clips on disk.

GET /clips

Get the list of clips on the active disk.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clips	array	
clips[i]	object	
clips[i].clipUniqueId	integer	Unique ID used to identify this clip
clips[i].filePath	string	Path to the file relative to the root of a mount
clips[i].fileSize	integer	Size of file on disk in bytes
clips[i].codecFormat	object	
clips[i].codecFormat.codec	string	Currently selected codec.
clips[i].codecFormat.container	string	Multimedia container format.
clips[i].videoFormat (required)	object	Video format configuration.
clips[i].videoFormat.name	string	Video format serialised as a string.
clips[i].videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
clips[i].videoFormat.height	number	Height dimension of video format.
clips[i].videoFormat.width	number	Width dimension of video format.
clips[i].videoFormat.interlaced	boolean	Is the display format interlaced?
clips[i].startTimecode	string	Start timecode of the clip serialised as string
clips[i].durationTimecode	string	Duration of the clip in timecode format serialised as string
clips[i].frameCount	integer	Number of frames in clip; duration of the clip in frames

Response

404 - There is no active disk

HyperDeck Control API

API for controlling HyperDecks.

POST /system/reboot

Reboots the device.

Response

204 - The device will reboot immediately.

409 - Rebooting is not possible in the current state.

GET /system/uptime

Gets the current system uptime.

Response

200 - The current system uptime

The response is a JSON object.

Name	Type	Description
uptimeSeconds	integer	The system uptime in seconds

PUT /system/identify

Sets the identify mode. If set to true, will exit identify mode after 10 seconds.

Parameters

Name	Type	Description
enabled	boolean	Is the device identifying itself?

Response

204 - Identify updated successfully.

GET /transports/0/recordCache

Gets information about the recording cache.

Response

200 - Current information about the recording cache

The response is a JSON object.

Name	Type	Description
status	string	The current status of the cache. “none” means no cache is detected by the device. Possible values are: undetected, unformatted, idle, transferring, queued, recording, disabled.
remainingRecordingTime	integer	The remaining recording time in seconds.
transferringDevice	string	The device name of the disk the cache is currently transferring to.

GET /transports/0/recordCache/enabled

Checks if the record cache is enabled.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
enabled	boolean	Is the record cache enabled?

PUT /transports/0/recordCache/enabled

Enables or disables the record cache. Has no effect if cache is not supported / installed / formatted.

Parameters

Name	Type	Description
enabled	boolean	Is the record cache enabled?

Response

204 - Record cache enabled / disabled was changed.

GET /transports/0/record/spillOrder

Gets media devices in order of which will next be spilled to.

Response

200 - The media device spill order

The response is a JSON object.

Name	Type	Description
devices	array	
devices[i]	object	
devices[i].deviceName	string	Internal device name of the drive.

POST /transports/0/record/spillToNewFile

Spills to a new file.

Response

204 - Spilled to a new file.

POST /transports/0/record/spillToNextDevice

Spills to the next media device

Response

204 - Spilled to the specified drive.

GET /transports/0/inputVideoFormat

Gets the video format of the input video signal.

Response

200 - The video format of the input video signal. “inputVideoFormat” is null when there is no timeline.

The response is a JSON object.

Name	Type	Description
inputVideoFormat (required)	object	Video format configuration.
inputVideoFormat.name	string	Video format serialised as a string.
inputVideoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
inputVideoFormat.height	number	Height dimension of video format.
inputVideoFormat.width	number	Width dimension of video format.
inputVideoFormat.interlaced	boolean	Is the display format interlaced?

GET /transports/0/supportedInputVideoSources

Gets the currently supported input video signal sources.

Response

200 - The supported input video signal sources.

The response is a JSON object.

Name	Type	Description
supportedInputVideoSources	array	
supportedInputVideoSources[i]	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

GET /transports/0/inputVideoSource

Gets the source of the input video signal.

Response

200 - The input video signal source. The source will be one in the list from GET /transports/0/supportedInputVideoSources.

The response is a JSON object.

Name	Type	Description
inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

PUT /transports/0/inputVideoSource

Sets the source of the input video signal.

Parameters

Name	Type	Description
inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

Response

204 - The source of the input video signal was set successfully.

400 - The source specified was invalid or unsupported.

GET /timelines/0/playRange

Gets the current timeline play range. playRange is null if playing the whole timeline, or there is no play range.

Response

200 - The current timeline play range.

The response is a JSON object.

Name	Type	Description
playRange		

PUT /timelines/0/playRange

Sets the timeline play range.

Parameters

Name	Type	Description
playRange		

Response

204 - The timeline play range was set successfully.

POST /timelines/0/playRange/clear

Clears the timeline play range, sets the play range to be the whole timeline.

Response

204 - The timeline play range was cleared successfully.

GET /timelines/0/videoFormat

Gets the video format of the timeline.

Response

200 - The video format of the timeline. “videoFormat” is null when there is no timeline.

The response is a JSON object.

Name	Type	Description
videoFormat (required)	object	Video format configuration.
videoFormat.name	string	Video format serialised as a string.
videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
videoFormat.height	number	Height dimension of video format.
videoFormat.width	number	Width dimension of video format.
videoFormat.interlaced	boolean	Is the display format interlaced?

PUT /timelines/0/videoFormat

Sets the video format of the timeline.

Parameters

This parameter can be one of the following types:

Name	Type	Description
name	string	Video format serialised as a string.

Name	Type	Description
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

Response

204 - The timeline video format was set successfully.

400 - The requested video format was invalid.

409 - The video format cannot be changed at this time.

POST /timelines/0/rebuild

Rebuilds the timeline with default rules in the current timeline format.

Response

204 - The timeline was rebuilt with default rules.

GET /media/external

Gets the list of present external media devices.

Response

200 - The list of present external media devices

The response is a JSON object.

Name	Type	Description
devices	array	
devices[i] (required)	object	
devices[i].volume	string	Volume name
devices[i].deviceName	string	Internal device name of this media device
devices[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
devices[i].totalSpace	integer	Total space on media device in bytes
devices[i].remainingSpace	integer	Remaining space on media device in bytes
devices[i].clipCount	integer	Number of clips currently on the device

GET /media/external/selected

Gets the current selected external media device.

Response

200 - The selected external media device

The response is a JSON object.

Name	Type	Description
selected	object	
selected.deviceName	string	Internal device name of the drive.

404 - No selected external media has been selected

PUT /media/external/selected

Sets the current selected external media device.

Parameters

Name	Type	Description
selected	object	
selected.deviceName	string	Internal device name of the drive.

Response

204 - The selected external media device was set successfully.

GET /media/nas/discovered

Gets the NAS hosts discoverable by the device.

Response

200 - The list of discovered NAS hosts

The response is a JSON object.

Name	Type	Description
hosts	array	
hosts[i]	object	
hosts[i].hostName	string	The hostname of the NAS host
hosts[i].friendlyName	string	The friendly name of the NAS host
hosts[i].ip	string	The IP address of the NAS host

GET /media/nas/bookmarks

Gets all NAS share bookmarks.

Response

200 - The list of NAS share bookmarks

The response is a JSON object.

Name	Type	Description
hosts	array	
hosts[i] (required)	object	
hosts[i].url	string	URL of the NAS share

POST /media/nas/bookmarks

Add a new NAS share bookmarks.

Parameters

Response

204 - The NAS bookmark was added successfully.

400 - The NAS bookmark could not be added.

GET /media/nas/bookmarks/{url}

Get information about a requested network share bookmark.

Parameters

Name	Type	Description
{url}	string	

Response

200 - Information about the requested network share bookmark.

The response is a JSON object.

Name	Type	Description
url	string	URL of the NAS share

404 - Network share bookmark not found

PUT /media/nas/bookmarks/{url}

Adds a bookmark with the requested URL.

Parameters

Name	Type	Description
{url}	string	

Name	Type	Description
username	string	Default value is: guest.
password	string	

Response

204 - The NAS bookmark has been created.

400 - The NAS bookmark could not be created.

DELETE /media/nas/bookmarks/{url}

Deletes a bookmark with the requested URL.

Parameters

Name	Type	Description
{url}	string	

Response

204 - The NAS bookmark has been deleted.

GET /media/nas/selected

Gets the currently selected share bookmark.

Response

200 - Information about the selected network share bookmark.

The response is a JSON object.

Name	Type	Description
selected	object	
selected.url	string	URL of the NAS share

404 - No NAS drive has been selected.

PUT /media/nas/selected

Sets the selected share bookmark to the requested bookmark, or clears the bookmark.

Parameters

Name	Type	Description
selected	object	
selected.url	string	URL of the NAS share

Response

204 - The selected NAS bookmark was set.

400 - The selected NAS bookmark could not be set.

Notification websocket - 1.0.0

Service that notifies subscribers of device state changes.

messages

Subscribe (The messages from the server/device)

Response Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: subscribe, unsubscribe, listSubscriptions, listProperties, websocketOpened .
.data.properties	array	
.data.properties[i]	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.values	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.data.success	boolean	
.type	string	Possible values are: response .
.id	number	Optional parameter that repeats the id in the output for tracking messages

Event Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: propertyValueChanged .
.data.property	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.value	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.type	string	Possible values are: event .

Publish (The messages that user can send to the server/device)

Response Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: subscribe, unsubscribe, listSubscriptions, listProperties, websocketOpened .
.data.properties	array	
.data.properties[i]	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.values	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.data.success	boolean	
.type	string	Possible values are: response .
.id	number	Optional parameter that repeats the id in the output for tracking messages

Device Properties

/media/workingset

The value JSON returned via the eventResponse when the /media/workingset property changes on the device:

Name	Type	Description
size	integer	The fixed size of this device's working set
workingset (required)	array	
workingset[i]	object	
workingset[i].index	integer	Index of this media in the working set
workingset[i].activeDisk	boolean	Is this current item the active disk
workingset[i].volume	string	Volume name
workingset[i].deviceName	string	Internal device name of this media device
workingset[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
workingset[i].totalSpace	integer	Total space on media device in bytes
workingset[i].remainingSpace	integer	Remaining space on media device in bytes
workingset[i].clipCount	integer	Number of clips currently on the device

/media/active

The value JSON returned via the eventResponse when the /media/active property changes on the device:

Name	Type	Description
.workingsetIndex	integer	Working set index of the active media device
.deviceName	string	Internal device name of this media device

/system

The value JSON returned via the eventResponse when the /system property changes on the device:

Name	Type	Description
.codecFormat	object	Currently selected codec
.codecFormat.codec	string	Currently selected codec
.codecFormat.container	string	Multimedia container format
.videoFormat	string	Name of the video format

/system/codecFormat

Currently selected codec

The value JSON returned via the eventResponse when the /system/codecFormat property changes on the device:

Name	Type	Description
.codec	string	Currently selected codec
.container	string	Multimedia container format

/system/videoFormat

Name of the video format

The value JSON returned via the eventResponse when the /system/videoFormat property changes on the device:

Name	Type	Description

/timelines/0

The value JSON returned via the eventResponse when the /timelines/0 property changes on the device:

Name	Type	Description
.clips	array	
.clips[i]	object	
.clips[i].clipUniqueId	integer	Unique identifier used to identify this media clip. If the same media clip is added to the timeline multiple times, each timeline clip has the same clipUniqueId
.clips[i].frameCount	integer	Duration of timeline clip in frames, the number of frames in this clip on the timeline
.clips[i].durationTimecode	string	Duration of the timeline clip in timecode format serialised as string. This will differ to durationTimecode reported in /clips for this clipUniqueId if clipIn or frameCount was specified when adding this clip to the timeline.
.clips[i].clipIn	string	In frame offset for the clip on the timeline, where 0 is the first frame of the on-disk clip
.clips[i].inTimecode	string	Clip timecode of the first frame of this timeline clip serialised as string (clip startTimecode + clipIn frames)
.clips[i].timelineIn	string	Timeline position of the first frame of this clip, where 0 is the first frame of the timeline
.clips[i].timelineInTimecode	string	Timeline timecode of the first frame of this timeline clip serialised as string

/transports/0

The value JSON returned via the eventResponse when the /transports/0 property changes on the device:

Name	Type	Description
.mode	string	Transport mode Possible values are: InputPreview, InputRecord, Output .

/transports/0/stop

true when transport mode is InputPreview or when in Output mode and speed is 0

The value JSON returned via the eventResponse when the /transports/0/stop property changes on the device:

Name	Type	Description

/transports/0/play

True when transport is in Output mode and speed is non-zero

The value JSON returned via the eventResponse when the /transports/0/play property changes on the device:

Name	Type	Description

/transports/0/playback

The value JSON returned via the eventResponse when the /transports/0/playback property changes on the device:

Name	Type	Description
.type	string	Possible values are: Play, Jog, Shuttle, Var .
.loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
.singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
.speed	number	Playback speed, 1.0 for normal forward playback
.position	integer	Playback position on the timeline in units of video frames

/transports/0/record

The value JSON returned via the eventResponse when the /transports/0/record property changes on the device:

Name	Type	Description
.recording	boolean	Is transport in Input Record mode

/transports/0/timecode

The value JSON returned via the eventResponse when the /transports/0/timecode property changes on the device:

Name	Type	Description
display	string	The display timecode serialised as a string.
timeline	string	The timeline timecode serialised as a string.

/transports/0/timecode/source

The value JSON returned via the eventResponse when the /transports/0/timecode/source property changes on the device:

Name	Type	Description
.timecode	string	Possible values are: Timeline, Clip .

/transports/0/clipIndex

The value JSON returned via the eventResponse when the /transports/0/clipIndex property changes on the device:

Name	Type	Description
.clipIndex	number	The 0-based index of the clip being played on the timeline. null when there is no timeline or an empty timeline.

/media/external

The value JSON returned via the eventResponse when the /media/external property changes on the device:

Name	Type	Description
.volume	string	Volume name
.deviceName	string	Name of media device
.remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
.totalSpace	integer	Total space on media device in bytes
.remainingSpace	integer	Remaining space on media device in bytes
.clipCount	integer	Number of clips currently on the device

/media/external/selected

The value JSON returned via the eventResponse when the /media/external/selected property changes on the device:

Name	Type	Description
.deviceName	string	Internal device name of this media device

/transports/0/inputVideoSource

The value JSON returned via the eventResponse when the /transports/0/inputVideoSource property changes on the device:

Name	Type	Description
.inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite .

/transports/0/inputVideoFormat

The value JSON returned via the eventResponse when the /transports/0/inputVideoFormat property changes on the device:

Name	Type	Description
.inputVideoFormat	string	Name of the video format

/timelines/0/videoFormat

The value JSON returned via the eventResponse when the /timelines/0/videoFormat property changes on the device:

Name	Type	Description
.videoFormat	string	Name of the video format

/media/nas/discovered

The value JSON returned via the eventResponse when the /media/nas/discovered property changes on the device:

Name	Type	Description
.hostName	string	Hostname of external network drive
.friendlyName	string	Name of external network drive
.ip	string	IP Address of external network drive

/media/nas/bookmarks

The value JSON returned via the eventResponse when the /media/nas/bookmarks property changes on the device:

Name	Type	Description
.hosts	array	
.hosts[i]	object	
.hosts[i].url	string	URL associated with bookmark

Yardım

Yardım İçin

Yardım almanın en hızlı yolu, Blackmagic Design online destek sayfalarına girip, Blackmagic HyperDeck disk kaydedici için mevcut olan en son destek kaynaklarını incelemenizdir.

Blackmagic Design Online Destek Sayfaları

En güncel kılavuz, yazılım ve destek notlarına, www.blackmagicdesign.com/tr/support adresindeki BlackmagicDesign destek merkezinden ulaşılabilir.

Blackmagic Design Forum

İnternet sitemizdeki Blackmagic Design forum sayfası, daha fazla bilgi ve yaratıcı fikirler için ziyaret edebileceğiniz faydalı bir kaynaktır. Burası, yardım almanız için daha hızlı bir yol olabilir çünkü, sorularınız için, başka deneyimli kullanıcılar ya da Blackmagic Design çalışanları tarafından verilen yanıtları bulabilir ve böylelikle çalışmalarınıza devam edebilirsiniz. Foruma https://forum.blackmagicdesign.com adresinden ulaşabilirsiniz.

Blackmagic Design Destek Hizmetiyle İrtibat

Aradığınız yardımı destek kaynaklarında ya da forum'da bulamadığınız durumda, lütfen destek sayfamıza girerek "Bize e-posta gönderin" butonunu tıklayarak e-post yoluyla destek talebinde bulunun. Bunun yerine, destek sayfasındaki "Yerel destek ekibini arayın" butonunu tıklayabilir ve size en yakın olan Blackmagic Design destek ofisini arayabilirsiniz.

Yüklü Olan Yazılım Sürümünün Kontrol Edilmesi

Bilgisayarınızda Blackmagic HyperDeck yazılımının hangi sürümünün yüklü olduğunu kontrol etmek için, ‘Blackmagic HyperDeck Setup Hakkında’ penceresini açın.

- Mac OS’te, Blackmagic HyperDeck Setup yazılımını, ‘Uygulamalar’ (Applications) dosyasından açın. Sürüm numarasını görüntülemek için, uygulamalar menüsünden ‘About Blackmagic HyperDeck Setup sekmesini seçin.
- Windows bilgisayarlarda, başlat menüsündeki veya başlangıç ekranındaki Blackmagic HyperDeck Setup yardımcı yazılımını açın. Sürüm numarasını görüntülemek için ‘Help’ (Yardım) menüsünü tıklayın ve ‘About Blackmagic HyperDeck Setup’ ibaresini seçin.

En Son Yazılım Güncellemelerine Erişim

Bilgisayarınızda yüklü olan Blackmagic HyperDeck Setup yazılımının sürümünü gözden geçirdikten sonra, en son güncellemeleri incelemek üzere, www.blackmagicdesign.com/tr/support adresinden, Blackmagic Design destek merkezine bakın. En son güncellemelerle çalışmak faydalı olsa da, yazılımı önemli bir projenin ortasındayken güncellemekten kaçınmanızda yarar vardır.

Mevzuata İlişkin Bildirimler

Avrupa Birliği Dahilinde Elektrikli ve Elektronik Ekipman Atıklarının Bertaraf Edilmesi.

Ürün üzerindeki sembol, bu ekipmanın başka atık malzemelerle bertaraf edilmemesi şartını belirler. Atık ekipmanlarınızı bertaraf edebilmeniz için, geri dönüşümünü sağlamak üzere, belirlenmiş toplama noktasına teslim edilmeleri gerekmektedir. Bertaraf anında atık cihazlarınızın ayrı olarak toplanması ve geri dönüşümü, doğal kaynakların korunmasına yardımcı olacaktır ve insan sağlığını ve çevreyi koruyucu bir şekilde geri dönüşümünü sağlayacaktır. Atık ekipmanlarınızı geri dönüşüm için nereye teslim edebileceğiniz konusunda daha fazla bilgi için, lütfen yerel belediyenizin geri dönüşüm şubesini ya da ürünü satın aldığınız satış bayisini arayınız.

Bu cihaz, test edilmiş ve Federal İletişim Komisyonu (FCC) koşullarının 15. bölümü doğrultusunda A Sınıfı dijital cihazların sınırlarıyla uyumlu olduğu tespit edilmiştir. İlgili sınırlar, bu cihaz ticari bir ortamda çalıştırıldığında, zararlı müdahalelere karşı makul koruma sağlaması amacıyla tasarlanmıştır. Bu ekipman, radyo frekans enerjisi üretir, kullanır ve saçabilir ve talimatlar doğrultusunda kurulmadığı ve kullanılmadığı takdirde, radyo komünikasyonlarına zararlı müdahaleye yol açabilir. Bu ürünün bir yerleşim bölgesinde çalıştırılması zararlı müdahaleye yol açabilir. Bu durumda, müdahalenin düzeltilmesi için ilgili maliyeti kullanıcı karşılamak zorundadır.

Bu cihazın çalıştırılması aşağıdaki iki şarta bağlıdır:

1. Bu cihaz, zararlı müdahaleye sebebiyet vermemelidir.
2. Bu cihaz, arzu edilmeyen bir çalışma şekline yol açacak müdahale de dahil olmak üzere maruz kaldığı her türlü müdahaleyi kabul etmelidir.

R-R-BMD-20211410001

ISED Kanada Beyannamesi

ICES-3 (A)
NMB-3 (A)

Bu cihaz, A Sınıfı dijital cihazlar için Kanada standartlarıyla uyumludur.

Bu cihaza yapılacak herhangi bir değişiklik veya kullanım amacı dışında kullanılması, bu standartlara uyumluluğunu hükümsüz kılabilir.

HDMI arayüzlerine bağlantı, yüksek kaliteli korumalı HDMI kablolarıyla yapılmalıdır.

Bu cihaz, ticari ortamda kullanım amacına uygunluk için test edilmiştir. Cihaz ev ortamında kullanıldığında, radyo parazitine neden olabilir.

Güvenlik Bilgileri

Bu ürün çevresel ısısı 40º C'ye kadar olan tropikal ortamlarda kullanılmaya uygundur.

Bu ürünün çevresinde yeterli havalandırma olduğundan ve hava akımının kısıtlanmadığından emin olun.

Ürünün içinde, kullanıcı tarafından tamir edebilecek hiçbir parça bulunmamaktadır. Gerekli tamiratları yerel Blackmagic Design servis merkezine yönlendirin.



Deniz seviyesinden yüksekliğin 2000m'yi aşmadığı yerlerde kullanın.

Kaliforniya Eyaleti Beyannamesi

Bu ürün; plastik parçaları dahilinde, eser miktarda polibromine bifenil gibi kimyasal maddelere sizi maruz bırakabilir. Kaliforniya eyaletinde, bu maddelerin kansere, doğum kusurlarına veya başka üreme bozukluklarına sebebiyet verdiği bilinmektedir.

Daha fazla bilgi için www.P65Warnings.ca.gov adresini ziyaret ediniz.

Avrupa Ofisi

Blackmagic Design B.V, Amsterdam
Sloterdijk Teleport Towers Office 2.17,
Kingsfordweg 151,
Amsterdam, 1043GR.

Garanti

12 Ay Sınırlı Garanti

Blackmagic Design şirketi, bu ürünün satın alındığı tarihten itibaren malzeme ve işçilik bakımından 12 ay boyunca kusursuz ve arızasız olacağını garanti eder. Bu garanti süresi içinde üründe bir arıza ve kusur söz konusu olursa, Blackmagic Design kendi seçimi doğrultusunda, arızalı ürünü parça ve işçilik bedeli talep etmeksizin tamir edecektir veya yenisiyle değiştirecektir.

Bu garanti kapsamındaki hizmetten yararlanmak için, kusur ve hataya ilişkin garanti süresi sona ermeden, Müşteri Blackmagic Design'i bilgilendirmeli ve söz konusu hizmetin sağlanması için uygun düzenlemeleri yapmalıdır. Blackmagic Design tarafından özel belirlenmiş ve yetkilendirilmiş bir hizmet merkezine arızalı ürünün ambalajlanarak nakliyesi, Müşteri'nin sorumluluğudur ve nakliye ücretleri, peşin ödenmiş olmalıdır. Herhangi bir sebepten dolayı bize iade edilen ürünlerin; tüm nakliye, sigorta, gümrük vergileri, vergi ve tüm diğer masrafların ödenmesi, Müşteri sorumluluğu altındadır.

Bu garanti; yanlış kullanım ya da yanlış veya kusurlu bakımdan kaynaklanan herhangi bir arızayı, bozukluğu ya da hasarı kapsamaz. Blackmagic Design, burada açıklanan durumlarda bu garanti kapsamında hizmet sağlamak zorunda değildir: a) Blackmagic Design temsilcileri haricindeki başka personelin ürünü kurma, tamir etme ya da bakımını yapma girişimlerinden kaynaklanan hasarın tamiri, b) uygun olmayan kullanım veya uyumlu olmayan ekipmanlara bağlamaktan kaynaklanan hasarın tamiri, c) Blackmagic Design ürünü olmayan parçaların ya da malzemenin kullanımından kaynaklanan hasarın ya da arızanın tamiri ya da d) Modifiye veya başka ürünlerle entegre edilmiş bir ürünü; söz konusu modifikasyon ya da entegrasyonun, gereken tamiratın süresini uzattığı ya da ürün bakımını zorlaştırdığı durumlarda tamir edilmesi. BU GARANTİ, BLACKMAGIC DESIGN TARAFINDAN VERİLMİŞTİR VE AÇIK YA DA ZIMNİ, HERHANGİ BİR GARANTİNİN YERİNİ TUTAR. BLACKMAGIC DESIGN VE SATICILARI, ZIMNİ TİCARİ UYGUNLUK GARANTİSİNİ YA DA ÖZEL BİR AMACA UYGUNLUK GARANTİSİNİ KABUL ETMEZ. KUSURLU BİR ÜRÜNÜN TAMİRİ VEYA DEĞİŞTİRİLMESİ, BLACKMAGIC DESIGN'İN MÜŞTERİLERİNE SUNDUĞU TAM VE MÜNHASIR ÇÖZÜMDÜR. BLACKMAGIC DESIGN YA DA SATICILARININ OLABİLECEK HASARLAR HAKKINDA ÖNCEDEN BİLGİSİ OLMASINI GÖZETMEKSİZİN, ÜRÜNDE DOLAYLI, ÖZEL, TESADÜFİ YA DA NETİCE OLARAK ORTAYA ÇIKAN HERHANGİ BİR HASAR İÇİN, BLACKMAGIC DESIGN SORUMLU DEĞİLDİR. BLACKMAGIC DESIGN, MÜŞTERİLER TARAFINDAN EKİPMANIN YASAL OLMAYAN HERHANGİ BİR KULLANIMINDAN SORUMLU DEĞİLDİR. BLACKMAGIC DESIGN, BU ÜRÜNÜN KULLANIMINDAN KAYNAKLANAN HERHANGİ BİR HASARDAN SORUMLU DEĞİLDİR. BU ÜRÜNÜN ÇALIŞTIRILMASINDAN DOĞAN RİSK, KULLANICININ KENDİSİNE AİTTİR.

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Lipiec 2024

Instrukcja instalacji i obsługi

Blackmagicdesign

HyperDeck Shuttle HD



HyperDeck Shuttle HD



Szanowny kliencie,

Dziękujemy za zakup nagrywarki dyskowej HyperDeck Shuttle HD!

Kiedy projektowaliśmy oryginalne nagrywarki dyskowe Blackmagic HyperDeck, chcieliśmy ułatwić nagrywanie i odtwarzanie wideo przy użyciu szybkiej pamięci SSD. Teraz z radością przedstawiamy HyperDeck Shuttle HD!

HyperDeck Shuttle HD to niewielka, przenośna nagrywarka wideo HDMI przeznaczona do komputerów stacjonarnych. Duże pokrętło wyszukiwania i znajome elementy sterujące transportem umożliwiają obsługę nagrywarki jedną ręką, co sprawia, że HyperDeck Shuttle HD jest idealnym narzędziem do produkcji na żywo z mikserem ATEM Mini. Możesz nawet wykorzystać HyperDeck Shuttle HD jako teleprompter!

HyperDeck Shuttle HD nagrywa na karty SD lub zewnętrzne dyski flash przy użyciu kodeków ProRes, DNxHD lub H.264, zapewniając błyskawiczne nagrywanie i odtwarzanie.

Prosimy o zapoznanie się ze stroną pomocy technicznej pod adresem www.blackmagicdesign.com/pl, gdzie znajduje się najnowsza wersja tej instrukcji obsługi oraz aktualizacje oprogramowania HyperDeck. Aktualne oprogramowanie zapewni Ci dostęp do wszystkich najnowszych funkcji! Po pobraniu oprogramowania zarejestruj się, podając swoje dane. Tak będziemy mogli Cię poinformować, gdy dostępna będzie aktualizacja. Ciągle pracujemy nad nowymi funkcjami i unowocześnieniami, więc zależy nam, abyś podzielił się z nami swoją opinią.



Grant Petty
Dyrektor generalny Blackmagic Design

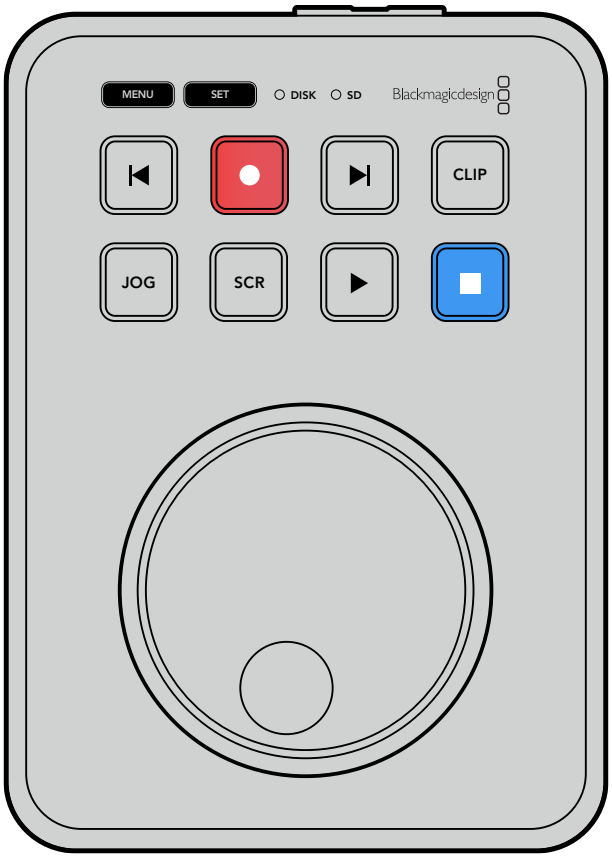
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Rozpoczęcie pracy

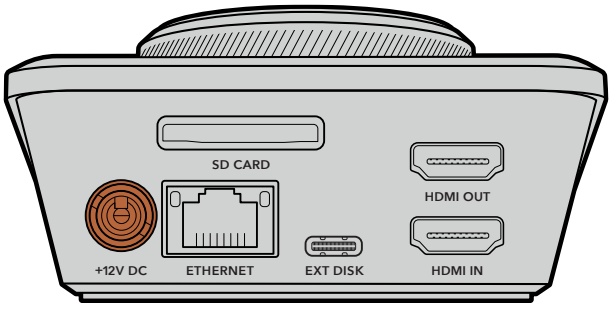
Rozpoczęcie pracy z HyperDeck Shuttle HD jest bardzo proste: wystarczy podłączyć urządzenie do zasilania, podłączyć źródło wideo HDMI, włożyć kartę SD lub nośnik zewnętrzny, a następnie nacisnąć przycisk nagrywania.

W tej części instrukcji przedstawiono sposób rozpoczęcia pracy z HyperDeck Shuttle HD.



Podłączanie zasilania

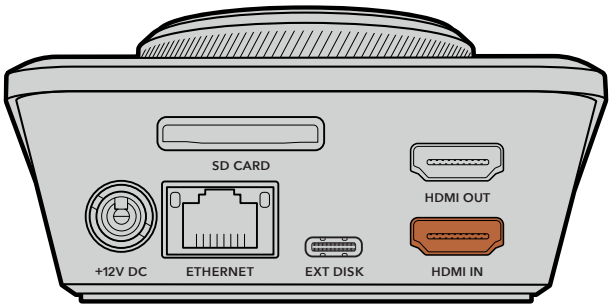
Aby włączyć HyperDeck Shuttle HD, podłącz dostarczony zasilacz do wejścia zasilania na tylnym panelu. Dokręcenie pierścienia blokującego zabezpiecza kabel zasilający przed przypadkowym odłączeniem.



Podłącz zasilacz do wejścia zasilania HyperDeck Shuttle HD

Podłączanie wideo i audio

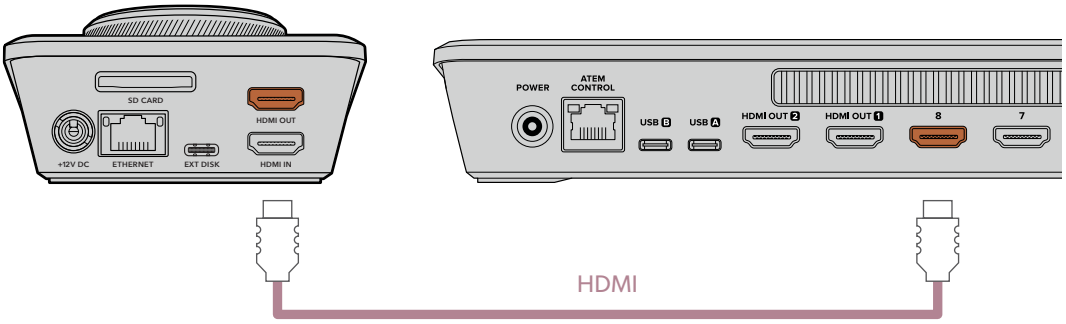
Aby podłączyć wideo do HyperDeck Shuttle HD, podłącz źródło wideo HDMI do wejścia HDMI na tylnym panelu.



Podłącz sprzęt docelowy do wyjścia HDMI. Na przykład mikser ATEM Mini lub telewizor HDMI.

Wyjście HDMI jest również używane do wyświetlania menu ustawień podczas zmiany ustawień HyperDecka. Dzieje się tak, ponieważ menu ustawień jest wyświetlane za pomocą nakładki wideo na wyjściu HDMI. Więcej informacji na temat ustawień menu można znaleźć w sekcji „Zmiana ustawień” w dalszej części niniejszej instrukcji.

WSKAZÓWKA Jeśli na podłączonym wyświetlaczu nie widać wejścia źródła wideo, może to oznaczać, że urządzenie znajduje się w trybie odtwarzania. Naciśnij przycisk nagrywania, aby włączyć tryb nagrywania.



Podłącz wyjście HDMI do sprzętu docelowego, takiego jak telewizor HDMI lub mikser ATEM Mini

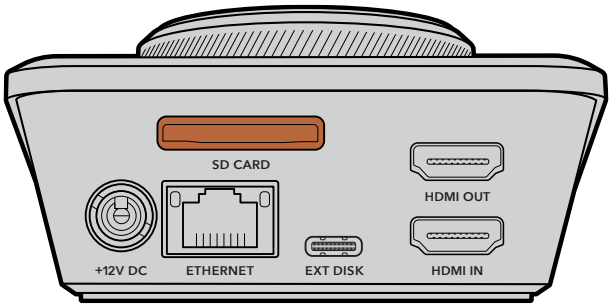
Podłączanie nośnika

Wszystkie nagrywarki dyskowe HyperDeck Shuttle HD są od razu gotowe do nagrywania bez konieczności konfigurowania jakichkolwiek ustawień. Wystarczy sformatowana karta SD lub dysk zewnętrzny.

Nośniki można łatwo formatować za pomocą ustawień menu. Formatowanie można również przeprowadzić przy użyciu komputera. Więcej informacji można znaleźć w sekcji „Formatowanie nośnika” w niniejszej instrukcji. Można również znaleźć informacje o rodzajach nośników, które są najlepsze do nagrywania wideo oraz listę zalecanych kart SD i dysków zewnętrznych.

Aby podłączyć kartę SD:

1. Przytrzymaj kartę SD złotymi stykami skierowanymi do góry i wyrównaj ją ze slotem na nośnik. Teraz delikatnie wepchnij kartę do slotu, aż poczujesz, że została prawidłowo włożona.



2 Twój HyperDeck dokona weryfikacji karty SD. Jest to sygnalizowane przez podświetloną na zielono kontrolkę SD w górnej części urządzenia HyperDeck Shuttle HD. Po weryfikacji kontrolka się wyłączy.



To wystarczy, aby rozpocząć. HyperDeck Shuttle HD jest teraz gotowy do nagrywania i odtwarzania.

Czytając niniejszą instrukcję można uzyskać szczegółowe informacje na temat nagrywania i odtwarzania klipów, zmiany ustawień i wiele więcej.

Nagrywanie wideo

Po potwierdzeniu, że źródło wideo jest wyświetlane na sprzęcie docelowym HDMI, można od razu rozpocząć nagrywanie.

Rozpocznij nagrywanie, naciskając przycisk nagrywania. Podczas nagrywania na kartę SD kontrolka SD zaświeci się na czerwono, podobnie jak przyciski nagrywania i odtwarzania. Podczas nagrywania na dysk zewnętrzny kontrolka dysku zaświeci się na czerwono.

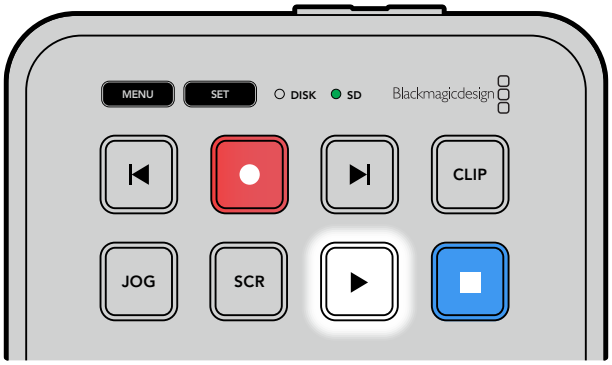


Aby zakończyć nagrywanie, naciśnij przycisk zatrzymania.

Odtwarzanie

Naciśnij przycisk odtwarzania, aby rozpocząć odtwarzanie. Podczas odtwarzania przycisk odtwarzania będzie podświetlony, a kontrolka nośnika DISK lub SD będzie podświetlona na zielono.

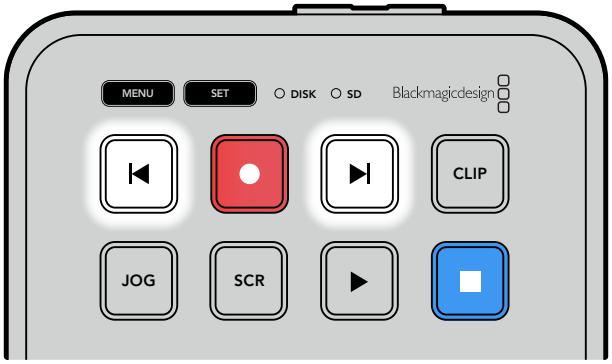
Jeśli nagrano wiele klipów, można szybko je przeglądać naciskając przyciski przeskakiwania do przodu i do tyłu.



Korzystanie z przycisków przeskakiwania

Naciśnij przycisk przeskakiwania do tyłu, aby rozpocząć odtwarzanie klipu od początku. Naciśnięcie przycisku kilkakrotnie spowoduje cofnięcie się do wcześniej nagranych klipów.

Naciśnij przycisk przeskakiwania do przodu, aby przewijać klipy do przodu. Przyciski przeskakiwania będą również migać, gdy pole wyboru **Identify HyperDeck** jest zaznaczone w oprogramowaniu HyperDeck Setup.



Użyj przycisków przeskakiwania do przodu i do tyłu, aby przejść do początku każdego klipu

WSKAZÓWKA Aby odtwarzać pliki wideo na urządzeniu HyperDeck, należy ustawić kodek zgodny z kodekiem używanym do nagrywania plików. Można to zrobić za pomocą menu. Więcej informacji znajduje się w części „Zmiana ustawień” niniejszej instrukcji obsługi.

Zapętlanie klipów

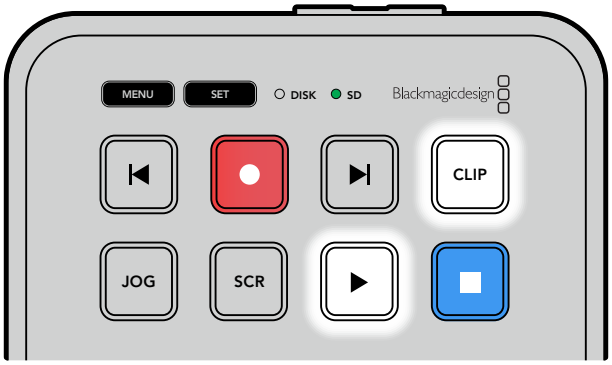
Podczas odtwarzania, ponowne naciśnięcie przycisku odtwarzania ustawi HyperDeck Shuttle HD na zapętlanie wszystkich klipów do momentu naciśnięcia przycisku zatrzymania.

Jeśli chcesz zapętlić pojedynczy klip, ustaw HyperDeck na tryb klipu i naciśnij jednokrotnie przycisk odtwarzania, aby odtworzyć. Naciśnij przycisk ponownie, aby zapętlić.

Zapętlij wszystkie klipy	Podczas odtwarzania naciśnij przycisk odtwarzania ponownie, aby zapętlić wszystkie nagrane klipy
Zapętlij bieżący klip	W trybie klipu naciśnij przycisk odtwarzania ponownie, aby zapętlić bieżący klip

Tryb klipu

Tryb klipu pozwala ograniczyć odtwarzanie do pojedynczego klipu. Na przykład przy włączonym trybie klipu można przesuwać lub przeskakiwać do klipu, a następnie nacisnąć przycisk odtwarzania, wiedząc, że odtwarzanie zostanie zatrzymane po zakończeniu klipu.



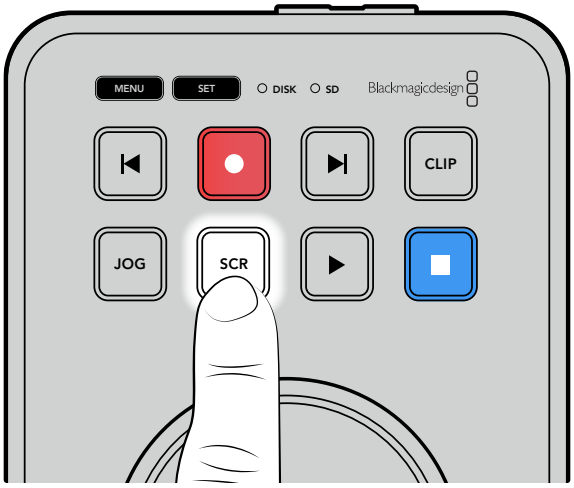
Gdy wybrany jest tryb klipu, ponowne naciśnięcie przycisku odtwarzania spowoduje zapętlenie bieżącego klipu

Korzystanie z pokrętła wyszukiwania

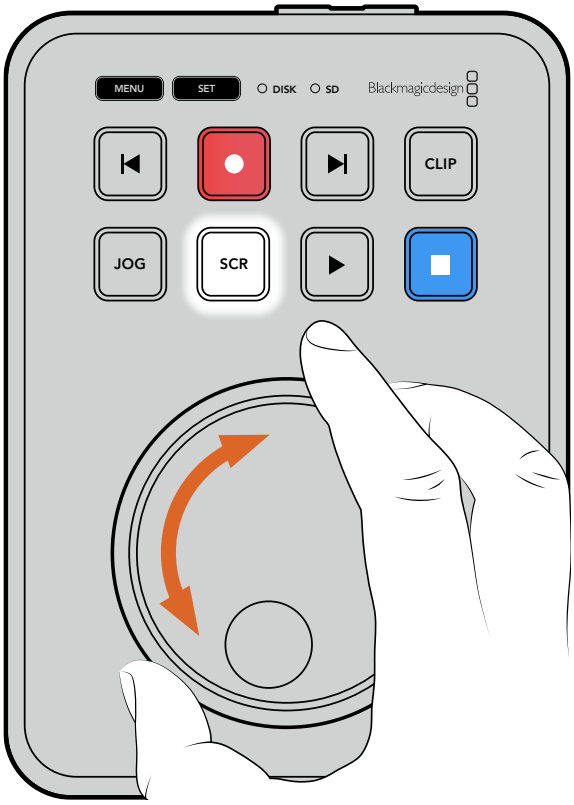
Pokrętło wyszukiwania zapewnia szybki sposób poruszania się po klipach i wybierania określonych momentów do odtworzenia lub przeglądania ich klatka po klatce. Może to być ważne, jeśli chcesz zlokalizować określony moment, wizualnie monitorując klip poprzez obracanie pokrętła. Jest to również pomocne przy ustawianiu wskaźnika odtwarzania w określonym punkcie startu, do którego plik się przewinie na antenie i będzie gotowy do transmisji na żywo.

Tryby pokrętła wyszukiwania to Jog, Scroll i Shuttle.

JOG	**Jog**	Odtwarza klip klatka po klatce, umożliwiając precyzyjne sterowanie.
SCR	**Scroll**	Tryb przewijania scroll umożliwia szybkie przewijanie do przodu i do tyłu wszystkich nagranych materiałów. Podczas obracania pokrętła wyszukiwania, przewijanie jest dostosowane do twoich ruchów, co daje Ci pełną kontrolę nad pozycją odtwarzania. Przycisk scroll spowoduje również wyświetlenie okna przeglądania woluminów, które pokazuje ścieżkę pliku aktualnie odtwarzanego wideo. Więcej informacji na temat funkcji przeglądania woluminów można znaleźć w sekcji „Przeglądanie woluminów” w dalszej części niniejszej instrukcji.
JOG SCR	**Shuttle**	Naciśnij jednocześnie przyciski JOG i SCR, aby przejść do trybu shuttle. W trybie shuttle można przewijać multimedia do tyłu lub do przodu, obracając pokrętło w lewo lub w prawo. W miarę obracania pokrętła multimedia będą się przesuwały coraz szybciej, aż do osiągnięcia maksymalnej prędkości x50. Aby spowolnić prędkość shuttle do zatrzymania, obróć pokrętło z powrotem do pozycji wyjściowej. Aby zatrzymać odtwarzanie w określonym punkcie, naciśnij przycisk zatrzymania lub naciśnij przycisk odtwarzania, aby wznowić odtwarzanie w bieżącym miejscu. Warto zauważyć, że maksymalną prędkość shuttle można obniżyć w menu ustawień. Więcej informacji można znaleźć w rozdziale „Ustawienia” niniejszej instrukcji.



Naciśnij dedykowane przyciski **JOG** lub **SCR**, aby wybrać tryby wyszukiwania jog i shuttle.

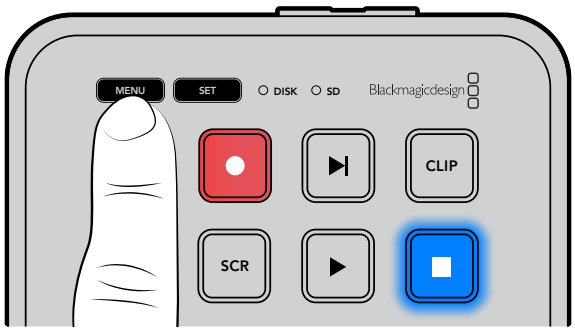


Po wybraniu trybu wyszukiwania obróć pokrętło wyszukiwania

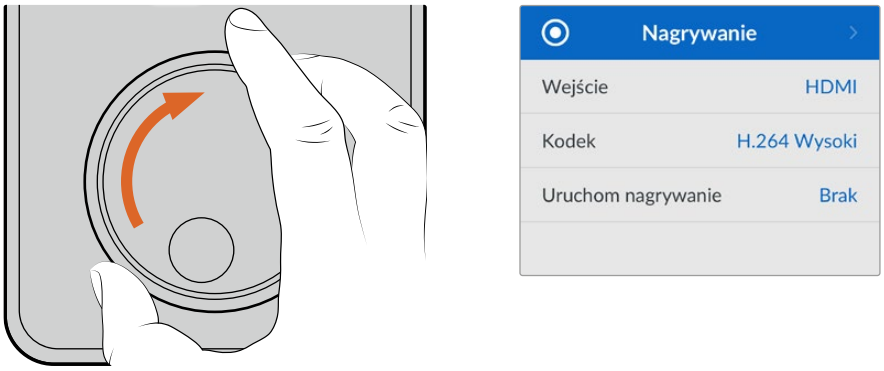
WSKAZÓWKA Aby wznowić normalne odtwarzanie, naciśnij przycisk **PLAY** lub **STOP**.

Zmiana ustawień

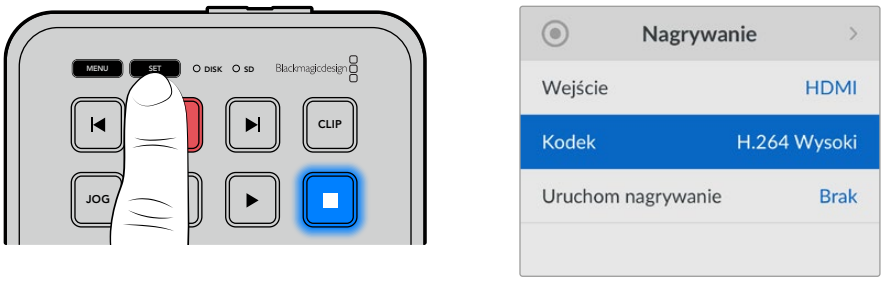
Naciśnięcie przycisku **MENU** otworzy menu ustawień, które pojawi się jako nakładka wideo w lewym dolnym rogu podłączonego wyświetlacza HDMI.



Naciśnij przycisk **MENU**, aby otworzyć menu ustawień



Użyj pokrętła wyszukiwania, aby przejść do podmenu lub ustawienia



Naciśnij przycisk **SET**, aby wybrać podmenu lub ustawienie

Dostosuj ustawienia za pomocą pokrętła wyszukiwania lub przycisków przeskakiwania do przodu i do tyłu. Potwierdź wybór, naciskając przycisk **SET**.

Aby wyjść z menu, należy nacisnąć przycisk **MENU** w celu cofnięcia się do opcji i powrotu do ekranu głównego.

WSKAZÓWKA Menu można ustawić w dowolnym z czterech rogów ekranu za pomocą menu ustawień. Zalecamy wyłączenie menu po zakończeniu zmiany ustawień, aby upewnić się, że wyjście HDMI jest czyste po podłączeniu do miksera HDMI, takiego jak ATEM Mini Extreme.

Ustawienia

Menu ustawień jest podzielone na 5 różnych kategorii, w tym nagrywanie, podgląd, audio, pamięć i ustawienia. Każde z tych podmenu zawiera odpowiednie ustawienia, z których większość można dostosować za pomocą panelu sterowania HyperDeck Shuttle HD. Niektóre ustawienia są tylko wyświetlane i będą wyszarzone, na przykład prefiks nazwy pliku. W takim przypadku ustawienie można dostosować za pomocą oprogramowania HyperDeck Setup.

Menu nagrywania



Wejście

Wyświetla wejście HDMI HyperDeck Shuttle HD.

Kodek

Dzięki HyperDeck Shuttle HD można nagrywać skompresowane wideo przy użyciu kodeków H.264, Apple ProRes i DNxHD. Aby użyć funkcji teleprompterа, wybierz opcję **Teleprompter**.

Uruchom nagrywanie

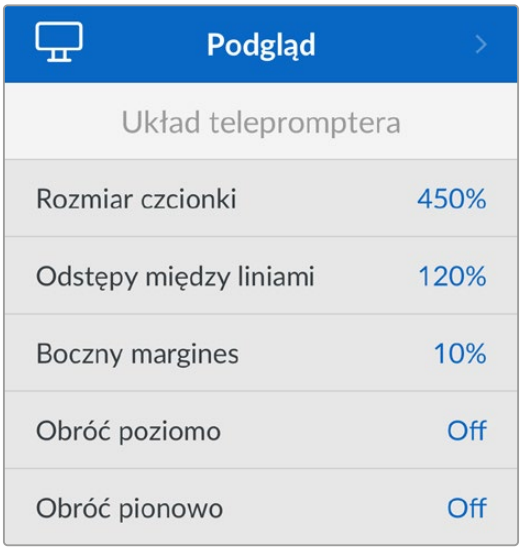
Dostępne są dwa tryby uruchamiania nagrywania: **Wł./Wył. wideo** i **Uruchom kod czasowy**.

Niektóre kamery, takie jak Blackmagic Pocket Cinema Camera 4K, wysyłają sygnał przez HDMI, aby rozpocząć i zatrzymać nagrywanie na zewnętrznych nagrywarkach. Wybór **Wł./Wył. wideo** spowoduje, że HyperDeck rozpocznie lub zatrzyma nagrywanie po naciśnięciu przycisku nagrywania w kamerze.

Użyj opcji **Uruchom kod czasowy**, aby uruchomić urządzenie w celu rozpoczęcia nagrywania, gdy przesłany zostanie do jego wejścia prawidłowy sygnał kodu czasowego. Gdy sygnał ustanie, nagrywanie również zostanie zatrzymane. Wyłącz uruchamianie nagrywania, stukając w opcję **Brak**.

UWAGA Podczas nagrywania z kamery HDMI należy upewnić się, że wyjście jest czyste, a nakładki wyłączone, ponieważ wszelkie nakładki obecne na wyjściu wideo kamery zostaną nagrane wraz z obrazem.

Menu monitora



Układ telepromptera

Menu monitora zawiera wszystkie ustawienia dotyczące używania HyperDeck Shuttle HD jako telepromptera.

Rozmiar czcionki

Dostosuj rozmiar tekstu, wybierając opcję rozmiaru czcionki i naciskając przycisk **SET**. Obracaj pokrętłem w prawo, aby zwiększyć poziom lub w lewo, aby go zmniejszyć.

Odstępy między wierszami

Obracaj pokrętłem, aby zwiększyć lub zmniejszyć odstępy między wierszami.

Boczny margines

Dostosuj szerokość marginesów bocznych po obu stronach wyświetlacza telepromptera.

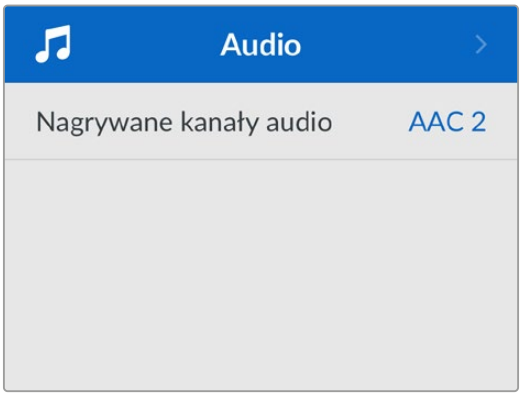
Obróć

Jeśli monitor telepromptera jest ustawiony tak, aby odbijał się na szybce, na przykład przed kamerą lub na podium mówcy, konieczne będzie użycie ustawień obracania, aby obraz był czytelny dla prezentera. Dostępne są dwa tryby obracania:

Obróć poziomo – użyj tej opcji, gdy dolna część monitora telepromptera jest zamontowana najbliżej podstawy szybki.

Obróć pionowo – użyj tej opcji, gdy dolna część monitora telepromptera jest zamontowana dalej od podstawy szybki.

Menu audio



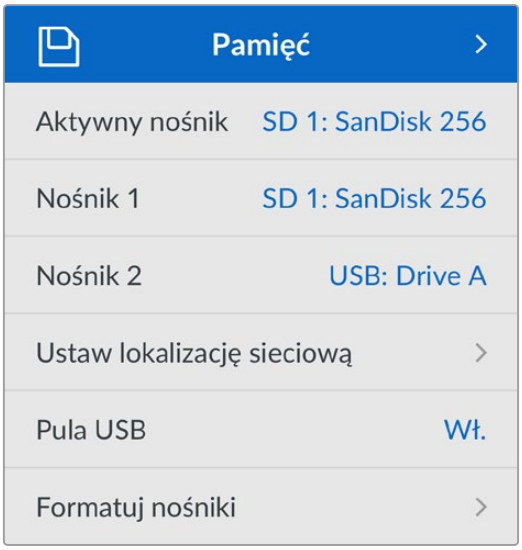
Nagrywane kanały audio

HyperDeck Shuttle HD może nagrywać do 8 kanałów audio PCM jednocześnie. Aby wybrać liczbę kanałów do nagrania, rozwiń listę nagrywanych kanałów audio i wybierz 2, 4 lub 8 kanałów.

Jeśli kodek jest ustawiony na H.264, można również wybrać 2 kanały audio AAC, aby przesyłać nagrania bezpośrednio do serwisu YouTube.

Menu pamięci

Podłączony nośnik pojawi się w ustawieniach pamięci masowej. Nośnik 1 wyświetli nazwę podłączonej karty SD, a nośnik 2 wyświetli dowolny dysk flash USB podłączony do złącza **EXT DISK**. W przypadku korzystania z hubu USB, takiego jak Blackmagic MultiDock 10G, wyświetlany jest aktywny dysk.



Aktywny nośnik

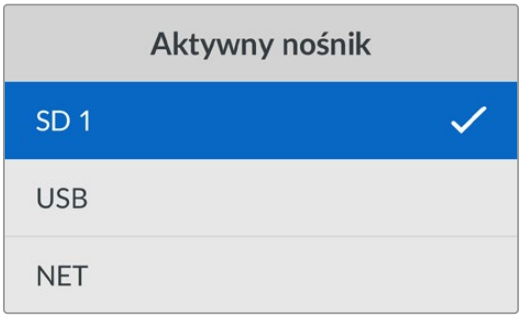
Podczas korzystania z HyperDeck Shuttle można podłączyć jednocześnie jedną kartę SD, wiele dysków zewnętrznych i sieciową pamięć masową. Oznacza to, że z poziomu jednej nagrywarki dyskowej HyperDeck Shuttle dostępne są terabajty przestrzeni do nagrywania!

Jeśli podłączony jest tylko jeden dysk lub karta SD, będzie to aktywny nośnik do odtwarzania i nagrywania. Jeśli korzystasz z więcej niż jednego nośnika, możesz wybrać, którego chcesz używać do nagrywania i odtwarzania.

Wybór aktywnych nośników:

Za pomocą pokrętła wyszukiwania podświetl **Aktywny nośnik** w menu pamięci masowej i naciśnij migający przycisk **SET**.

3 Podłączone nośniki pojawią się na liście. Za pomocą pokrętła wyszukiwania wybierz nośnik, na którym chcesz nagrywać.



Ustawianie lokalizacji sieciowej

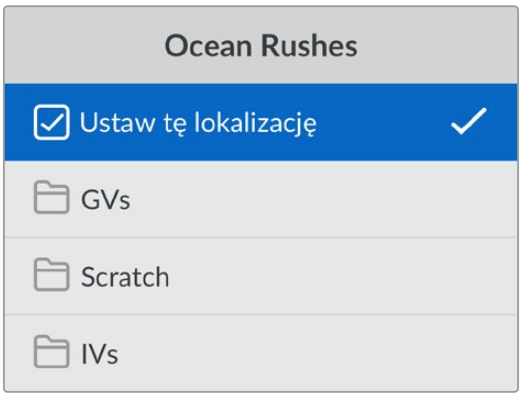
HyperDeck Shuttle może odtwarzać multimedia w HD z Blackmagic Cloud i innych pamięci masowych z dostępem sieciowym przez Ethernet.

Aby połączyć się z folderem sieciowej pamięci masowej:

1 Za pomocą pokrętła wyszukiwania i przycisku **SET** wybierz opcję **Ustaw lokalizację sieciową**. Pojawi się okno dialogowe wyszukiwania sieci lokalnej.

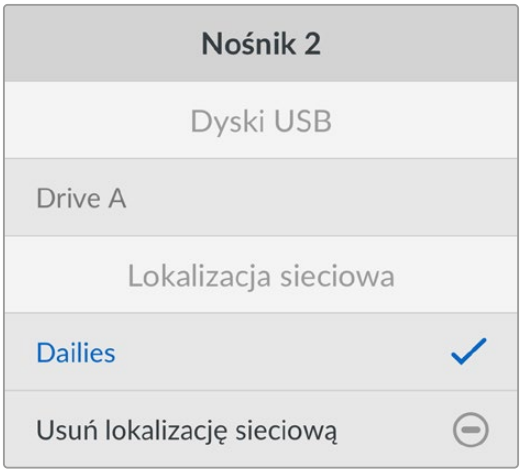
1 Wszystkie serwery znalezione w sieci lokalnej zostaną wyświetlone na liście. Podświetl nazwę serwera za pomocą pokrętła wyszukiwania i naciśnij **SET**, aby go wybrać. Na serwerze pojawi się lista dostępnych udziałów sieciowych. Za pomocą pokrętła wyszukiwania podświetl udział sieciowy, który chcesz wybrać, naciśnij **SET** i kontynuuj, aż folder, którego chcesz użyć, zostanie wyświetlony w górnej części ekranu.

1 Nazwa folderu pojawi się teraz w górnej części ekranu LCD. Aby wybrać ten folder do nagrywania i odtwarzania, użyj pokrętła wyszukiwania, wybierz opcję **Ustaw tę lokalizację** i naciśnij przycisk **SET**. Po prawej stronie pojawi się symbol zaznaczenia.



2 Po podłączeniu lokalizacja pojawi się na liście **Nośnik 2** w obszarze lokalizacji sieciowych.

3 Drugi slot na nośniki w nagrywarkach dyskowych HyperDeck Shuttle jest przeznaczony zarówno dla USB, jak i podłączonych folderów sieciowych. Aby wybrać pomiędzy podłączonymi dyskami USB i pamięcią sieciową, wybierz **Nośnik 2** z menu nośników pamięci i naciśnij migający przycisk **SET**. Z listy **Nośnik 2** wybierz nośnik, którego chcesz użyć i naciśnij przycisk **SET**. Nastąpi powrót do menu pamięci. Pamięć sieciową można również usunąć, korzystając z menu **Nośnik 2** i wybierając opcję **Usuń lokalizację sieciową** w dolnej części menu.



UWAGA Podczas odtwarzania z woluminu sieciowego HyperDeck Shuttle HD zakłada, że loguje się na serwerze jako gość. Dostęp do serwera wymagający loginu i hasła nie jest obecnie obsługiwany za pomocą przycisków menu i ustawień, ale można wprowadzić dane uwierzytelniające za pomocą HyperDeck Ethernet Protocol.

Pula USB

Jeśli korzystasz z Blackmagic MultiDock 10G lub podobnego urządzenia do podłączenia więcej niż jednego dysku za pośrednictwem połączenia USB **EXT DISK**, włączenie funkcji **Pula USB** zapewni, że nagrywanie będzie odbywać się z jednego dysku zewnętrznego na drugi.

Formatuj nośnik

Karty SD i nośniki podłączone przez tylne złącze **EXT DISK** mogą być formatowane bezpośrednio w urządzeniu lub przez komputer z systemem Mac lub Windows.

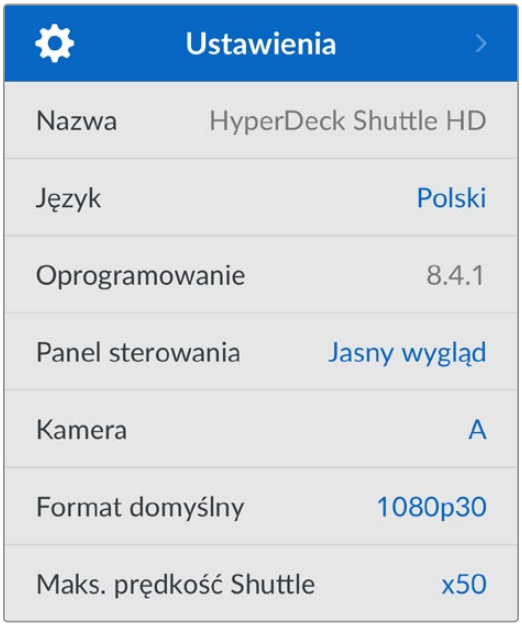
Przygotowanie nośników na HyperDeck Shuttle HD:

1. Używając pokrętła wyszukiwania i przycisku **SET**, wybierz **Formatuj nośnik**.
2. Wybierz nośnik z listy, które chcesz sformatować i naciśnij **SET**.
3. Wybierz format i naciśnij **SET**.
4. Wyświetli się okienko potwierdzające z informacją, która karta zostanie sformatowana oraz wybranym formatem. Wybierz format.
5. Po zakończeniu pojawi się okno formatowania. Wybierz **OK**.

HFS+ jest również znany jako Mac OS X Extended i jest zalecanym formatem, ponieważ obsługuje „dziennikowanie”. Dane na nośnikach z zapisem w dzienniku łatwiej odzyskać w rzadkim przypadku, gdy nośnik pamięci uległby uszkodzeniu. HFS+ jest natywnie obsługiwany przez Mac. Natomiast exFAT jest natywnie obsługiwany przez systemy Mac i Windows bez konieczności korzystania z dodatkowego oprogramowania, ale nie obsługuje on dziennikowania. Aby sformatować multimedia na komputerze z systemem Mac lub Windows, przejdź do części „Formatowanie nośnika”.

Menu ustawień

Menu ustawień zawiera ustawienia dotyczące wyboru języka i domyślnego standardu, a także sekcje odnoszące się do wyświetlania menu, ustawień sieci i opcji kodu czasowego.



Nazwa

Jeśli w sieci znajduje się więcej niż jeden HyperDeck Shuttle HD, możesz nadać im odrębne nazwy, by ułatwić identyfikację różnych urządzeń. Możesz to zrobić w oprogramowaniu Blackmagic HyperDeck Setup lub za pomocą protokołu Hyperdeck Ethernet Protocol, korzystając z aplikacji terminalowej. Nazwa wyświetli się w menu ustawień.

Język

Hyperdeck Shuttle HD obsługuje 13 popularnych języków: angielski, chiński, japoński, koreański, hiszpański, niemiecki, francuski, rosyjski, włoski, portugalski, turecki, ukraiński i polski.

Aby wybrać język:

1. Gdy menu ustawień zostanie podświetlone, naciśnij **SET**.
2. Przekręć pokrętło wyszukiwania, aby wybrać język i naciśnij **SET**.
3. Za pomocą pokrętła wyszukiwania wybierz język i naciśnij **SET**. Po wybraniu opcji nastąpi automatyczny powrót do menu ustawień.

Oprogramowanie

Wyświetla aktualną wersję oprogramowania.

Kamera

To ustawienie jest pomocne, gdy używasz HyperDecka do zapisu plików ISO z wielu kamer, które następnie edytujesz na osi czasu wielu kamer w DaVinci Resolve.

Identyfikator każdej kamery pojawi się w metadanych plików, dzięki czemu DaVinci Resolve bez problemu rozpozna każde ujęcie podczas korzystania z kosza synchronizacji.



Przypisz Twoją kamerę, używając liter od A do Z lub cyfr 1-9

Domyślny standard

Czasem HyperDeck Shuttle HD nie wie, jakiego standardu wideo chcesz użyć. To ustawienie poinformuje HyperDeck jakiego standardu chcesz używać w większości przypadków.

Dobrym przykładem jest sytuacja, w której włączasz HyperDeck Shuttle HD bez podłączonego wejścia wideo i podpinasz dysk z danymi w 2 różnych standardach wideo. Który standard wideo powinien odtworzyć HyperDeck? Domyślny standard wideo informuje urządzenie o preferowanym przez Ciebie standardzie wideo, więc przełączy się na niego i odtworzy pliki.

Domyślny standard wideo jest także przydatny, gdy uruchamiasz HyperDeck Shuttle HD po raz pierwszy bez wejścia wideo i bez podpiętego dysku z multimediami. W tym przypadku HyperDeck nie wie, którego standardu wideo użyć dla wyjścia monitorowania. Domyślny standard wideo odpowiednio pokieruje urządzenie.

Jednak stanowi on tylko wytyczną. Nie nadpisze żadnych danych. Jeśli na dysku znajduje się wyłącznie jeden rodzaj plików wideo i nacisnąłeś przycisk odtwarzania, HyperDeck przestawi się na ten standard wideo i rozpocznie odtwarzanie. Zignoruje domyślny standard wideo, ponieważ będzie oczywiste, że chcesz tylko odtworzyć pliki na dysku.

Sprawa wygląda podobnie podczas nagrywania. Jeśli uruchomisz nagrywanie, HyperDeck będzie po prostu zapisywał w standardzie wideo, który jest podłączony do wejścia wideo. Ponadto, gdy już zakończysz nagrywanie, HyperDeck Shuttle HD odtworzy pliki w tym samym standardzie wideo na dysku, nawet jeśli znajdują się na nim inne pliki, które mają format zgodny z domyślnym standardem wideo. Urządzenie zakłada, że chcesz odtworzyć ten sam standard wideo, jakiego używałeś podczas nagrywania. Tylko w sytuacji, gdy odłączysz dysk z multimediami i podłączysz go z powrotem, domyślny standard wideo zostanie użyty do odtworzenia plików.

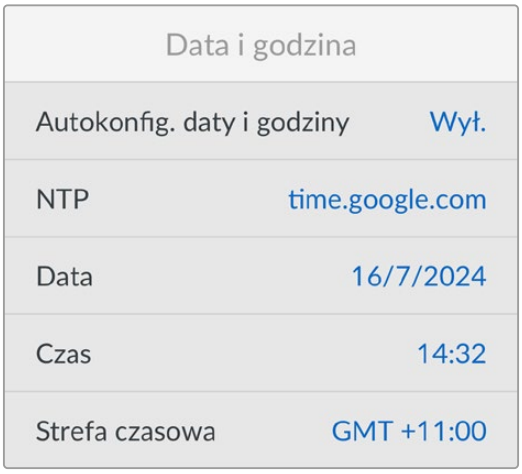
Domyślny standard wideo stanowi wyłącznie wytyczną, by pomóc HyperDeck Shuttle HD dokonać odpowiedniego wyboru, gdy urządzenie nie wie, jaką czynność wykonać. Dane nie zostaną nadpisane i dek nie będzie zmuszony do wykonania żadnych konkretnych działań.

Maks. prędkość Shuttle

Maksymalna prędkość Shuttle na HyperDeck Shuttle HD wynosi x50. Jeśli chcesz zmniejszyć tę prędkość, możesz wybrać jeden z innych presetów prędkości.

Data i godzina

Prawidłowe ustawienie daty i godziny zapewnia, że HyperDeck Shuttle ma tę samą godzinę i datę, co sieć, a także zapobiega konfliktom, które mogą wystąpić w przypadku niektórych systemów sieciowych.



Autokonfiguracja daty i godziny

Aby automatycznie ustawić datę i godzinę, wybierz opcję **Autokonfiguracja** na **Wł.**. Podczas automatycznego ustawiania daty i godziny Hyperdeck Shuttle będzie korzystał z serwera protokołu synchronizacji czasu ustawionego w polu NTP. Aby ręcznie zmienić datę i godzinę, wybierz opcję **Wył.**.

NTP

Domyślny serwer NTP to time.cloudflare.com, ale można też ręcznie wpisać alternatywny serwer NTP, używając HyperDeck Setup. Więcej informacji na temat ustawiania serwera NTP można znaleźć w rozdziale „HyperDeck Setup” w dalszej części niniejszej instrukcji.

Data

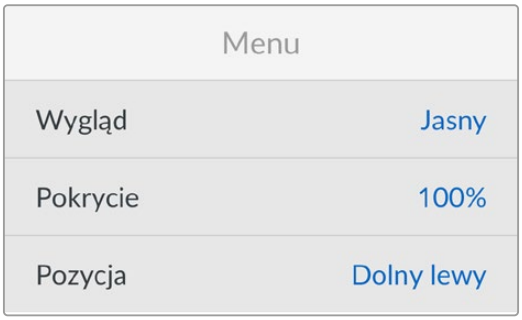
Aby wprowadzić datę ręcznie, wybierz pole daty i naciśnij przycisk **SET**. Za pomocą pokrętła menu można wybrać dzień, miesiąc i rok.

Czas

Aby ustawić godzinę, wybierz **Czas** i naciśnij przycisk **SET**. Za pomocą pokrętła menu ustaw godziny i minuty. Zegar wewnętrzny jest zegarem 24-godzinnym.

Ustawienia menu

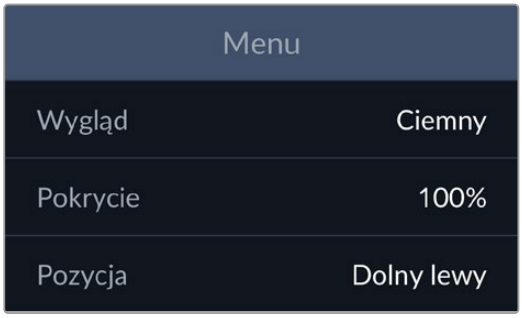
Korzystając z ustawień menu możesz ustawić pozycję i wygląd menu na podłączonym wyświetlaczu HDMI.



Wygląd

Ustaw menu ekranowe HyperDecka na tryb ciemny lub jasny. Tryb jasny oferuje większy kontrast, gdy multimedia będą ciemne lub gdy będziesz w trybie telepromptera.





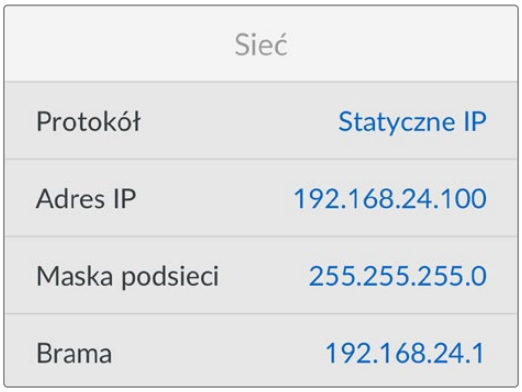
Pokrycie

Dostosuj, aby zmniejszyć nieprzezroczystość nakładki menu na podłączonym wyświetlaczu z domyślnej wartości 100% do 20%.

Pozycja

Nakładka menu domyślnie wyświetli się w lewym dolnym rogu ekranu. Aby przenieść menu w inne miejsce, wybierz **Pozycja** i naciśnij **SET**. Możesz wybrać górny lewy, górny prawy, dolny lewy lub dolny prawy róg ekranu.

Ustawienia sieci



Protokół

Blackmagic HyperDeck jest domyślnie ustawiony na DHCP. Po podłączeniu Twój serwer sieciowy automatycznie przypisze adres IP. Nie musisz zmieniać żadnych innych ustawień sieci. Jeśli musisz ustawić adres ręcznie, możesz połączyć się za pomocą statycznego IP.

Wybierz **Protokół**, naciśnij przycisk **SET**, aby zyskać dostęp do menu. Następnie przewiń do **Statyczne IP** i naciśnij **SET**.

Adres IP, maska podsieci, brama, główny i pomocniczy DNS.

Wybierając **Statyczne IP** możesz ręcznie wprowadzić dane Twojej sieci.

Aby zmienić adres IP:

1. Użyj pokrętła wyszukiwania, by zaznaczyć **Adres IP** i naciśnij przycisk **SET** na panelu sterowania HyperDecka.
2. Za pomocą pokrętła wyszukiwania dostosuj adres IP, przekręć pokrętło wyszukiwania, by dostosować Twój adres IP i potwierdź za pomocą przycisku **SET** zanim przejdziesz do ustawiania kolejnych wartości.
3. Naciśnij **SET**, by potwierdzić zmianę i przejdź do kolejnej wartości.

Gdy skończysz wprowadzać adres IP, możesz powtórzyć tę czynność, by dostosować maskę podsieci i bramę. Po zakończeniu naciśnij przycisk **MENU**, by wyjść i wrócić do ekranu startowego.

Ustawienia kodu czasowego

Ustaw opcje wejścia i wyjścia kodu czasowego, w tym wybór między nagrywaniem źródła kodu czasowego, kodu czasowego pory dnia lub ręcznym ustawieniem kodu czasowego.



Wejście

Podczas nagrywania dostępne są cztery opcje wejść kodu czasowego.

Wejście wideo	Wejście wideo przechwyci zapisany kod czasowy ze źródeł HDMI z zapisanymi metadanymi SMPTE RP 188. Pozwoli to zachować synchronizację między źródłami SDI lub HDMI oraz plikiem zapisanym na HyperDeck Shuttle HD.
Wewnętrzny	Użyj tej opcji, by nagrywać kod czasowy pory dnia za pomocą wbudowanego generatora kodu czasowego.
Uwzględnij poprzedni klip	Wybierając **Uwzględnij poprzedni klip** dla wejścia kodu czasowego, każdy plik rozpocznie się jedną klatkę po ostatniej klatce poprzedniego klipu. Na przykład, jeśli Twój pierwszy klip kończy się 10:28:30:10, kod czasowy następnego klipu rozpocznie się 10:28:30:11.
Preset	Jeśli chcesz ustawić kod czasowy ręcznie, wybierz opcję **Preset**. Zapisane klipy rozpoczną się od kodu czasowego ustawionego za pomocą opcji **Preset**, jak zobaczysz w dalszej części tego rozdziału.

Opuszczone klatki

Dla źródeł NTSC o klatkażu 29,97 lub 59,94 możesz wybrać kod czasu dla opcji **Opuszczone klatki** lub **Brak opuszczonych klatek**. Jeśli źródło jest nieznane, wybierz **Domyślne**. Pozwoli to zachować standard wejścia lub domyślne opuszczanie klatki, jeśli nie ma ważnego kodu czasowego.

Preset

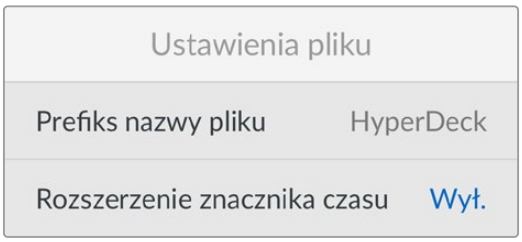
Możesz ustawić ręcznie kod czasowy, naciskając przycisk **SET** i wprowadzając początkowy kod czasowy za pomocą pokrętła wyszukiwania i przycisku **SET**. Upewnij się, że wybrałeś opcję **Preset** pod menu wejścia.

Wyjście

Wybierz opcje kodu czasowego dla Twoich wyjść.

Oś czasu	Aby przesłać jeden kod czasowy dla wszystkich klipów zapisanych na karcie lub nośniku, wybierz **Oś czasu**.
Klip	Wybierając opcję **Klip**, prześlesz kod czasowy każdego klipu z osobna.

Ustawienia pliku



Prefiks nazwy pliku

Po pierwszej konfiguracji HyperDeck Shuttle HD będzie zapisywać klipy na kartę SD lub dysk flash USB, stosując następującą konwencję nazewnictwa plików.

HyperDeck_0001	
HyperDeck_0001	**Prefiks**
HyperDeck_**0001**	**Numer klipu**

Możesz zmienić prefiks nazwy pliku w oprogramowaniu HyperDeck Setup. Więcej informacji znajdziesz w rozdziale „Konfiguracja Blackmagic HyperDeck” w dalszej części tej instrukcji.

Rozszerzenie znacznika czasu

Znacznik czasu dodany do nazwy pliku jest wyłączany domyślnie. Jeśli chcesz, by data i czas zostały ujęte w nazwie pliku, włącz opcję **Rozszerzenie znacznika czasu**.

HyperDeck_2201061438_0001	
HyperDeck_2201061438_0001	**Prefiks nazwy pliku**
HyperDeck_**22**01061438_0001	**Rok**
HyperDeck_22**01**061438_0001	**Miesiąc**
HyperDeck_2201**06**1438_0001	**Dzień**
HyperDeck_2201061438_0001	**Godzina**
HyperDeck_220106143**8**_0001	**Minuta**
HyperDeck_2201061438_**0001**	**Numer klipu**

Ustawienia zdalne

Ustawienia zdalne pozwalają sterować zdalnie HyperDeckiem za pomocą innego sprzętu wideo, na przykład miksera ATEM Mini Extreme.



Zdalne

Włącz **Sterowanie zdalne**, by umożliwić sterowanie zdalne za pomocą sieci Ethernet. Wyłącz **Sterowanie zdalne**, by sterować urządzeniem na miejscu.

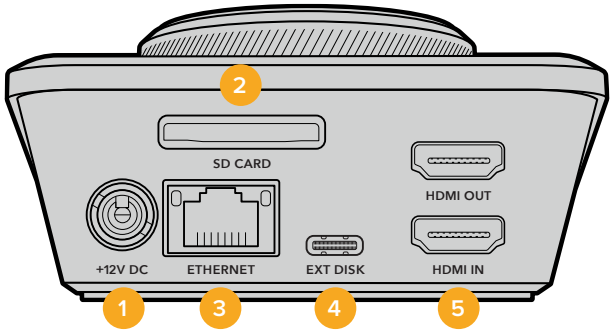
Resetuj ustawienia



Przywróć ustawienia fabryczne

Wybierz **Przywróć ustawienia fabryczne** w menu ustawień, by przywrócić ustawienia fabryczne HyperDecka. Po naciśnięciu **SET**, pojawi się komunikat z prośbą o potwierdzenie wyboru.

Panel tylny



1 Zasilanie

HyperDeck Shuttle HD jest zasilany za pomocą wtyczki. Kabel zasilający dołączony do urządzenia zawiera złącze blokujące, aby zapobiec odłączeniu urządzenia, ale możesz także użyć dowolnego kabla 36W 12V, by zasilić HyperDeck Shuttle HD.

2 Karta SD

Włóż karty SD do slotu w celu nagrywania i odtwarzania.

3 Ethernet

Port Ethernet umożliwia podłączenie do sieci w celu nagrywania do sieciowej pamięci masowej, szybkie przesyłanie plików za pomocą FTP i HTTP za pośrednictwem Web Media Managera. Ponadto można zdalnie sterować urządzeniem za pomocą interfejsu REST API lub protokołu HyperDeck Ethernet Protocol. Więcej informacji na temat przesyłania plików przez Web Media Managera lub klienta FTP znajdziesz w rozdziale „Przesyłanie plików przez sieć" w dalszej części tej instrukcji.

Jeśli jesteś podłączony do tej samej sieci, co mikser ATEM, możesz również sterować HyperDeckiem za pomocą miksera ATEM albo panelu sprzętowego ATEM.

4 Dysk zewnętrzny

Podłącz dysk flash do złącza USB typu C, by nagrywać na dyski zewnętrzne z prędkością do 5Gb/s. Możesz także podłączyć się przez wieloportowe huby USB typu C lub Blackmagic MultiDock 10G, by podłączyć jeden lub kilka dysków SSD.

5 HDMI

Podłącz wyjście HDMI do telewizji HDMI, monitorów a nawet i miksera, takiego jak ATEM Mini Extreme. Wyjście HDMI służy także do wyświetlania nakładki menu.

Nośnik pamięci

Karta SD

Do nagrań wysokiej jakości HD zalecamy szybkie karty UHS-I SD. Te karty muszą mieć możliwość zapisu z prędkością powyżej 220 MB/s przy nagrywaniu rozdzielczości aż do Ultra HD 2160p60.

Jeśli jednak nagrywasz przy niskim bitrate z większą kompresją, możesz użyć wolniejszych kart. Zasadniczo im szybsze karty, tym lepiej.

Warto regularnie sprawdzać najnowszą wersję tej instrukcji w celu uzyskania aktualnych informacji. Instrukcja jest zawsze gotowa do pobrania ze strony Blackmagic Design www.blackmagicdesign.com/pl/support

Jakich kart SD należy używać z HyperDeck Shuttle HD?

Przy rozdzielczości 1080p i klatkażu do 60 kl./s zalecane są następujące karty SD:

Marka	Model	Pojemność
Angelbird	AV PRO SD UHS-II 300MB/s V90 SDXC	256 GB
Angelbird	AV PRO SD UHS-II 260MB/s V60 SDXC	128 GB
Angelbird	AV PRO SD UHS-II 260MB/s V60 SDXC	64 GB
SanDisk	Extreme Pro UHS-I 95MB/s SDXC	64 GB
Wise	SD2-64U3 UHS-II 285MB/s SDXC	64 GB
Lexar	Professional 1000x UHS-II 150MB/s SDXC	128 GB
Sony	Tough SF-G128T	128 GB
Kingston	CANVAS GO! Plus 170MB/s V30	64 GB
Kingston	CANVAS GO! Plus 170MB/s V30	128 GB
Kingston	CANVAS GO! Plus 170MB/s V30	512 GB
ProGrade Digital	SDXC UHS-II V90 300R	64 GB
ProGrade Digital	SDXC UHS-II V90 300R	128 GB
Sony	Tough SF-G64T UHS-II SDXC	64 GB
Delkin Devices	Black UHS-II V90 SDXC	256 GB
Delkin Devices	Power UHS-II V90 SDXC	128 GB
Delkin Devices	Power UHS-II V90 SDXC	256 GB
Delkin Devices	Black UHS-II V90 SDXC	128 GB
ExAscend	Essential SDXC UHS-II V90 R 300MB/s	64 GB
ExAscend	Essential SDXC UHS-II V90 R 300MB/s	128 GB
ExAscend	Catalyst SDXC UHS-II V90 R 300MB/s	64 GB

Dysk zewnętrzny

Wszystkie modele HyperDeck mogą nagrywać bezpośrednio na dyski flash USB typu C. Te szybkie, wysokowydajne dyski umożliwiają nagrywanie wideo przez długi czas. Możesz następnie podłączyć dysk flash do komputera i montować bezpośrednio z dysku!

By zwiększyć ilość miejsca na dane, możesz podłączyć dok USB typu C lub zewnętrzny dysk twardy. Aby podłączyć Blackmagic MultiDock 10G lub dysk flash USB typu C, podłącz kabel USB typu C Twojego urządzenia do złącza **EXT DISK** z tyłu HyperDecka.

Jakich dysków USB typu C należy używać z HyperDeck Shuttle HD?

Do nagrywania w 1080p ProRes HQ i przy klatkażu do 60 kl./s zalecamy następujące dyski USB typu C:

Marka	Model	Pojemność
Wise	PTS-1024 Portable SSD 4K	256 GB
OWC	Envoy Pro Ex	240GB
BUFFALO	SSD-PHE500U3-BA	500 GB

Do nagrywania w 1080p ProRes HQ i przy klatkażu do 60 kl./s zalecamy następujące dyski USB typu C:

Marka	Model	Pojemność
OWC	Envoy Pro Ex	240GB

Do nagrywania w 1080p H.264 i przy klatkażu do 60 kl./s zalecamy następujące dyski USB typu C:

Marka	Model	Pojemność
OWC	Envoy Pro Ex	240GB

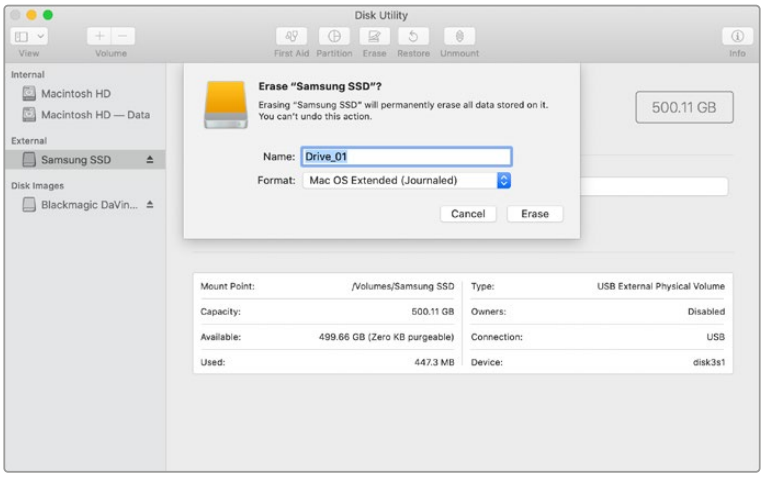
Formatowanie nośnika

Formatowanie nośnika na komputerach Mac

Aplikacja **Narzędzie dyskowe** na komputerze Mac umożliwia sformatowanie dysku w HFS+ lub exFAT.

Upewnij się, że wykonałeś kopię zapasową wszystkiego, co ważne na dysku, ponieważ stracisz wszystko, co się na nim znajduje, gdy zostanie sformatowany.

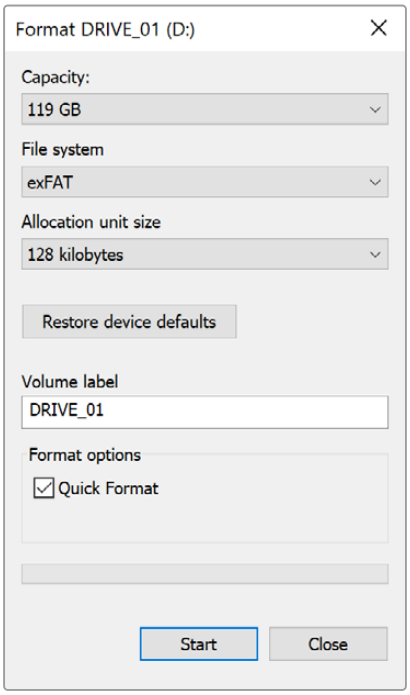
1. Podłącz dysk flash USB do komputera za pomocą zewnętrznej stacji dokującej lub adaptera kablowego i odrzuć wszelkie komunikaty proponujące użycie dysku SSD do tworzenia kopii zapasowych aplikacji **Time Machine**. By komputer odczytał karty SD, użyj zewnętrznego czytnika kart.
2. Przejdź do aplikacji/narzędzi i uruchom **Disk Utility**.
3. Kliknij ikonę karty SD lub dysku flash USB, po czym kliknij zakładkę usuwania.
4. Ustaw format Mac OS Extended (Journaled) lub exFAT.
5. Wpisz nazwę nowego woluminu i kliknij **Erase**. Nośnik zostanie szybko sformatowany i będzie gotowy do użycia z HyperDeck.



Formatowanie nośników na komputerach Windows

W oknie dialogowym **Format** można sformatować dysk w formacie exFAT na komputerze z systemem Windows. Upewnij się, że wykonałeś kopię zapasową wszystkiego, co ważne na dysku SSD lub karcie SD, ponieważ stracisz wszystko, co się na nim znajduje, gdy zostanie sformatowany.

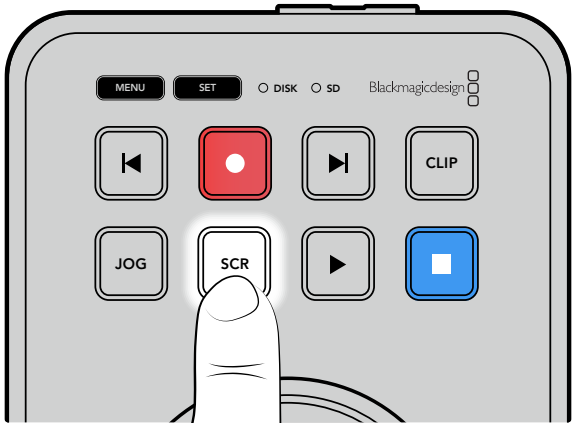
1. Podłącz dysk flash USB do komputera za pomocą zewnętrznej stacji dokującej lub adaptera kablowego. By komputer odczytał karty SD, użyj zewnętrznego czytnika kart.
2. Otwórz menu startowe lub ekran startowy i wybierz komputer. Kliknij prawym przyciskiem na Twój dysk flash USB lub kartę SD.
3. Z menu kontekstowego wybierz **Format**.
4. Ustaw system plików na exFAT, a rozmiar jednostki alokacji na 128 kilobajtów.
5. Wprowadź etykietę woluminu, wybierz **Quick Format** i kliknij **Start**.
6. Nośnik zostanie szybko sformatowany i będzie gotowy do użycia z HyperDeck.

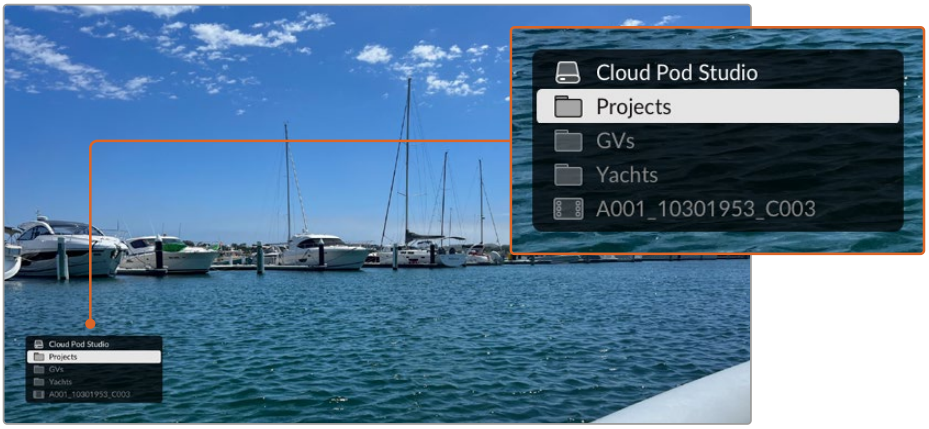


Przeglądanie woluminów

Opcja przeglądaniu woluminów pozwala otworzyć nakładkę ze ścieżką pliku, by ułatwić lokalizację klipów na kartach multimediów, dyskach fizycznych i sieciowych. Po uruchomieniu nakładka wyświetli się na wyjściu HDMI. Możesz przeglądać katalogi za pomocą przycisku **SCR**, **CLIP** oraz pokrętła jog.

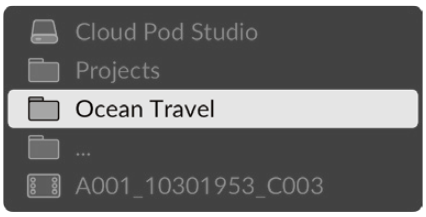
1 Otwórz okno przeglądania woluminów, naciskając przycisk **SCR**.





Naciśnij **SCR**, by wyświetlić okno przeglądania woluminów na wyjściu HDMI

2 Odrzuć lub pomiń materiały na wyświetlaczu aż znajdziesz klip z folderu, który Cię interesuje.



3 Naciśnij przycisk **SCR**, by przejść w dół woluminów i przycisk **CLIP**, by wrócić do góry.

Aby zamknąć okno przeglądania woluminów, naciśnij przycisk zatrzymania lub naciśnij przycisk odtwarzania, by zamknąć okno i natychmiast rozpocząć odtwarzanie.

UWAGA Aby wyświetlić klipy nagrane przy użyciu innego kodeku z inną rozdzielczością lub przy innym klatkażu, zmień ustawienia tak, by kodek HyperDecka i domyślny standard do siebie pasowały.

Korzystanie z funkcji telepromptera

Możesz użyć Blackmagic HyperDeck Shuttle HD jako telepromptera ze standardowymi plikami RTF lub TXT. Stwórz plik w TextEdit lub WordPad i zachowaj go jako format RTF (Rich Text Format) lub zwykły plik tekstowy w dowolnym z 13 obsługiwanych języków. Po otwarciu pliku z pomocą HyperDeck Shuttle HD możesz zmienić rozmiar czcionki i odstępy między wierszami w skrypcie.

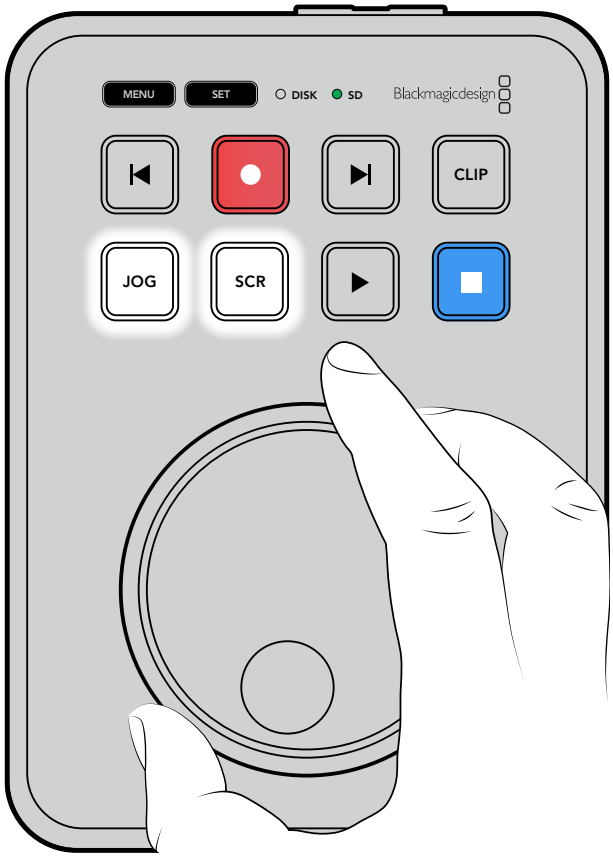
Aby użyć telepromptera:

1. Podłącz wyjście HDMI HyperDeck Shuttle HD do wyświetlacza HDMI, który chcesz wykorzystać.
2. Włóż kartę SD i podłącz zewnętrzny dysk flash USB zawierający Twój skrypt.
3. W menu nagrywania wybierz kodek. Przejdź do ustawienia **Teleprompter** i naciśnij **SET**.

Skrypt pojawi się na Twoim wyświetlaczu. Od tego momentu możesz automatycznie rozpocząć odtwarzanie za pomocą przycisku odtwarzania lub użyć pokrętła, by mieć więcej kontroli.

Sterowanie prędkością odtwarzania telepromptera

Duże pokrętło na HyperDeck Shuttle HD może być wykorzystane do sterowania prędkością odtwarzania w trybie telepromptera, tak samo jak w przypadku odtwarzania multimediów. Po załadowaniu skryptu naciśnij przycisk **JOG** i **SCR** jednocześnie, by uruchomić odtwarzanie ze zmienną prędkością. Następnie porusz pokrętłem. Skrypt będzie się poruszał z prędkością odpowiadającą ruchom pokrętła. Na przykład im szybciej poruszasz pokrętłem, tym szybciej będziesz przewijać skrypt.



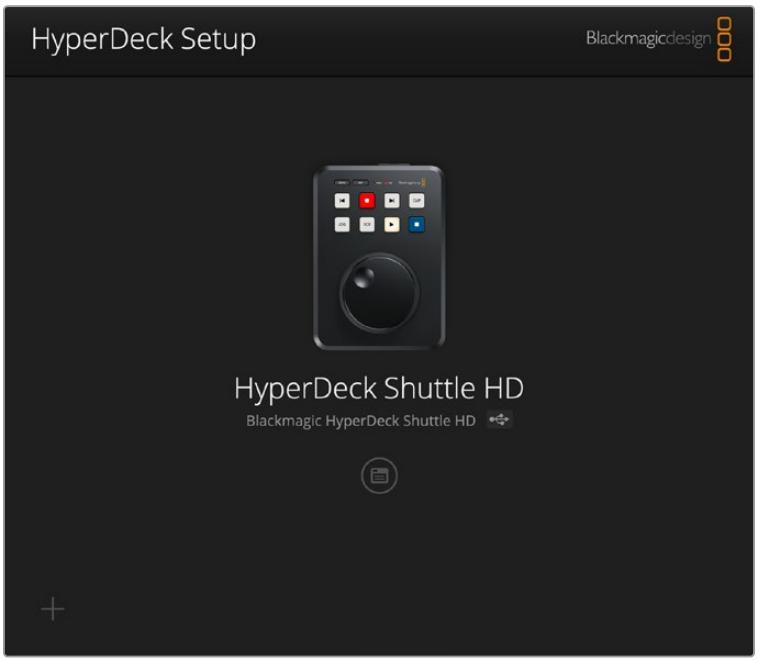
Przy stałych prędkościach możesz użyć przycisków **JOG** i **SCROLL** osobno. Po wybraniu przycisku pokrętło będzie przewijać skrypt ze stałą, niską prędkością w trybie jog lub z większą prędkością w trybie scroll.

Aby przeglądać pliki na Twojej karcie SD lub dysku zewnętrznym, użyj przycisków przewijania do przodu i do tyłu.

Teleprompter rozpozna wielkość czcionki, kolor i czy wybrano pogrubienie. Dodatkowo w menu monitora możesz dostosować wielkość czcionki, odstępy między wierszami, marginesy albo zmienić układ ekranu na pionowy lub poziomy podczas projekcji z rozdzieleniem wiązek. Więcej informacji znajdziesz w rozdziale „Ustawienia” we wcześniejszej części niniejszej instrukcji.

Konfiguracja Blackmagic HyperDeck

Blackmagic HyperDeck Setup to oprogramowanie narzędziowe, które umożliwia zmianę ustawień oraz aktualizację wewnętrznego oprogramowania w Twoim HyperDecku.

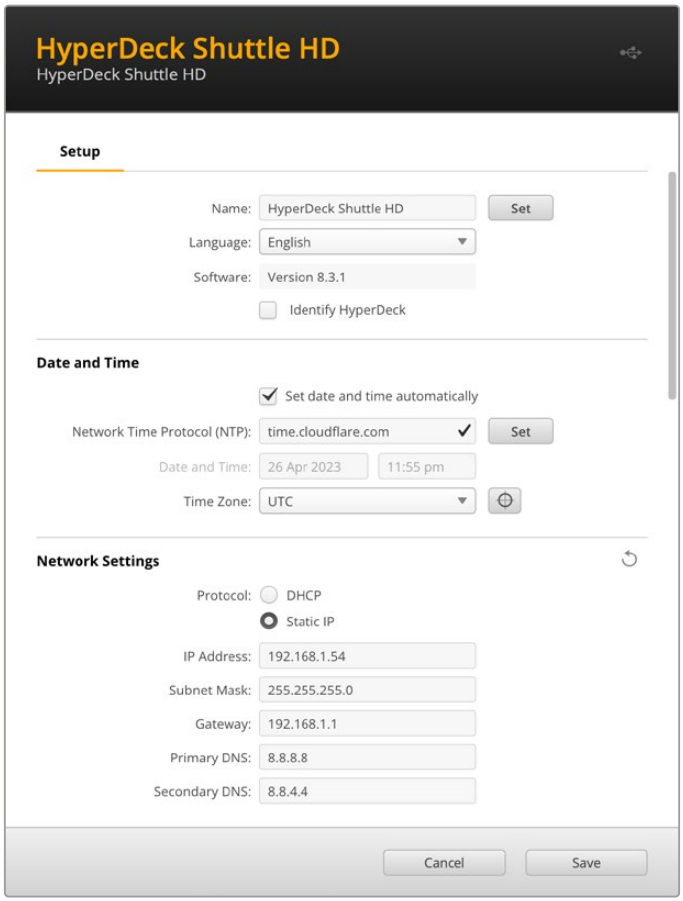


Aby zainstalować oprogramowanie:

1. Pobierz najnowszy instalator Blackmagic HyperDeck Setup z www.blackmagicdesign.com/pl/support.
2. Uruchom instalator Blackmagic HyperDeck Setup na komputerze i postępuj zgodnie z wyświetlanymi poleceniami.
3. Po zakończeniu instalacji podłącz HyperDeck Shuttle HD do komputera przez złącze USB lub złącze Ethernet na tylnym panelu.
4. Uruchom Blackmagic HyperDeck Setup i postępuj zgodnie z powiadomieniami na ekranie, by zaktualizować wewnętrzne oprogramowanie. Jeśli nie pojawia się żadne powiadomienie, wewnętrzne oprogramowanie jest aktualne i nie musisz już nic więcej robić.

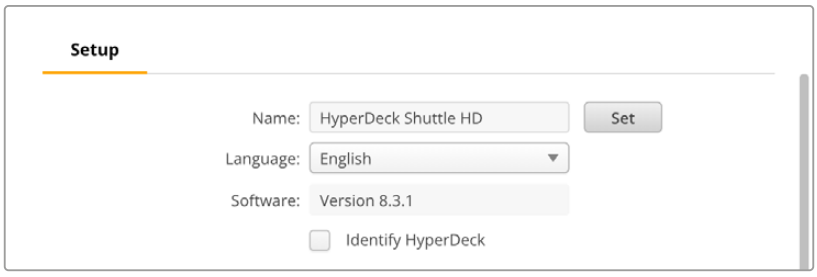
Kliknij na zdjęcie HyperDecka lub na ikonę ustawień, by otworzyć menu ustawień.

Ekran startowy wyświetli Twojego HyperDecka Shuttle HD oraz nazwę urządzenia. Ta nazwa pomaga zidentyfikować urządzenie, gdy więcej niż jeden HyperDeck jest podłączony do Twojego komputera. Nazwę można zmienić w menu ustawień oprogramowania.



Konfiguracja

Jeśli posiadasz więcej niż jeden HyperDeck Shuttle, możesz chcieć nadać każdemu urządzeniu osobną nazwę, by z łatwością je rozróżniać. Można to zrobić, wprowadzając nową nazwę w polu nazwy i klikając przycisk **SET**. Warto zauważyć, że zmiana nazwy HyperDeck spowoduje unieważnienie wszystkich używanych certyfikatów cyfrowych, dlatego warto zmienić nazwę przed wygenerowaniem żądania podpisania certyfikatu lub samodzielnie podpisanego certyfikatu.



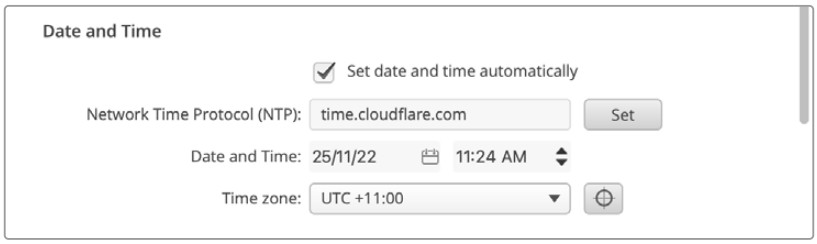
Rozpoznaj Hyperdeck

Kliknięcie pola **Identify HyperDeck** spowoduje, że przycisk zdalnego sterowania z przodu urządzenia HyperDeck Shuttle zacznie migać. Może to być przydatne, gdy masz więcej niż jeden HyperDeck Shuttle i chcesz zidentyfikować, z którym z nich jesteś połączony za pomocą oprogramowania HyperDeck Setup.

Data i godzina

Ustaw datę i godzinę automatycznie, zaznaczając pole. Podczas automatycznego ustawiania daty i godziny urządzenie HyperDeck Shuttle HD będzie korzystać z protokołu synchronizacji czasu ustawionego w polu NTP. Domyślnym serwerem NTP jest time.cloudflare.com, ale można też ręcznie wpisać alternatywny serwer NTP, a następnie kliknąć **Set**.

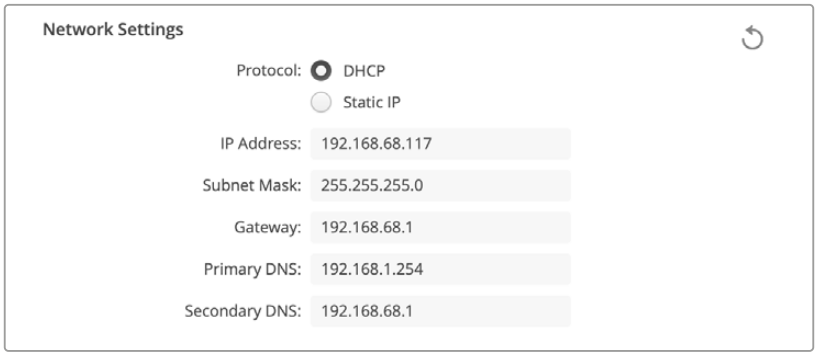
W przypadku ręcznego wprowadzania daty i godziny należy użyć pól do wprowadzenia daty, godziny i strefy czasowej. Prawidłowe ustawienie daty i godziny gwarantuje, że nagrania mają te same informacje o czasie i dacie co sieć, a także zapobiega konfliktom, które mogą wystąpić w przypadku niektórych sieciowych systemów pamięci masowej.



Ustawienia sieci

Protokół

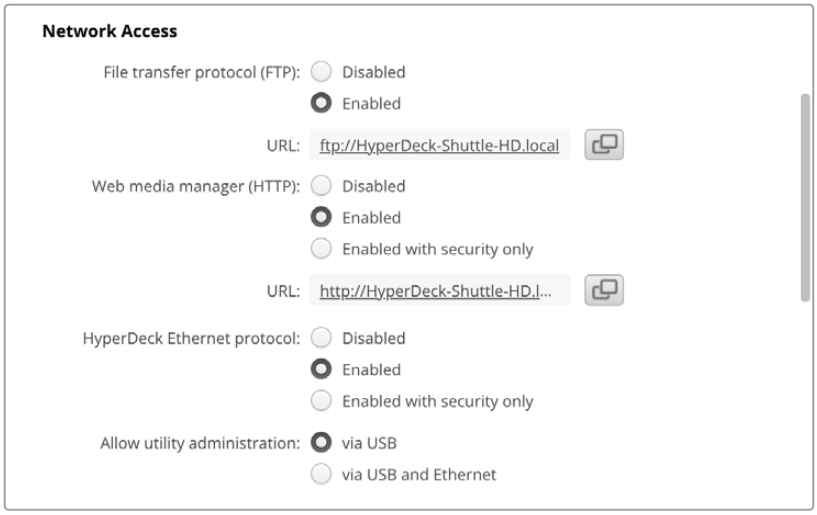
Aby sterować HyperDeck Shuttle HD za pomocą mikserów ATEM lub sterować nim zdalnie przy użyciu HyperDeck Ethernet Protocol, HyperDeck Shuttle HD musi znajdować się w tej samej sieci co inne urządzenia przy użyciu DHCP lub poprzez ręczne dodanie stałego adresu IP.



DHCP	Nagrywarki dyskowe HyperDeck Shuttle HD są fabrycznie ustawione na DHCP. Protokół dynamicznej konfiguracji hosta, w skrócie DHCP, jest usługą na serwerach sieciowych, która automatycznie wyszukuje nagrywarkę dyskową HyperDeck i przypisuje jej adres IP. DHCP to świetna usługa, która ułatwia podłączenie urządzeń przez Ethernet i dba, aby ich adresy IP nie kolidowały ze sobą. Większość komputerów i mikserów sieciowych obsługuje DHCP.
Static IP	Wybierając Static IP możesz ręcznie wprowadzić dane Twojej sieci. W przypadku ręcznego ustawiania adresów IP i umożliwienia komunikacji wszystkich urządzeń muszą one mieć tę samą maskę podsieci i ustawienia bramki.

Dostęp do sieci

Do HyperDeck Shuttle HD można uzyskać dostęp przez sieć w celu przesyłania plików i zdalnego sterowania za pośrednictwem HyperDeck Ethernet Protocol. Dostęp będzie domyślnie włączony, ale można wybrać indywidualne wyłączenie dostępu lub włączenie dostępu za pomocą nazwy użytkownika i hasła w celu zwiększenia bezpieczeństwa podczas korzystania z internetowego menedżera mediów lub HyperDeck Ethernet Protocol.



Protokół transferu plików

Włącz lub wyłącz dostęp przez FTP za pomocą pola wyboru. Jeśli udzielasz dostępu poprzez klienta FTP, takiego jak CyberDuck, kliknij ikonę, aby skopiować adres FTP. Więcej informacji można znaleźć w rozdziale „Przesyłanie plików przez sieć”.

Web Media Manager

Dane zapisane na kartach SD lub dyskach zewnętrznych mogą być udostępnione w przeglądarce za pomocą Web Media Managera. Klikając na link lub kopiując i wklejając go do przeglądarki otworzy się prosty interfejs, gdzie będziesz mógł przesyłać lub pobierać pliki bezpośrednio na karty SD przez Twoją sieć.

Dostęp jest domyślnie włączony przez HTTP, ale można go całkowicie wyłączyć lub wymagać certyfikatu bezpieczeństwa za pomocą opcji **Enabled with security only**. W przypadku korzystania z certyfikatu cyfrowego połączenia z menedżerem multimediów internetowych są szyfrowane za pomocą protokołu HTTPS. Więcej informacji na temat certyfikatów cyfrowych można znaleźć w sekcji „Certyfikat bezpieczeństwa”.

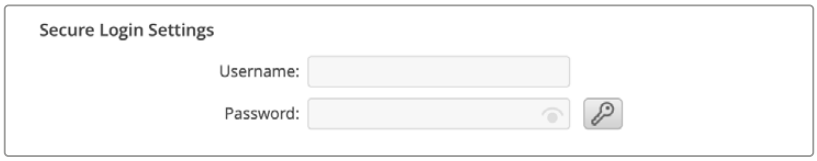
HyperDeck Ethernet Protocol

Z nagrywarką dyskową HyperDeck można połączyć się za pomocą Ethernet HyperDeck Protocol oraz programu wiersza poleceń na komputerze, takiego jak Terminal na komputerze Mac lub PuTTY na komputerze z systemem Windows. Dostęp może być włączony z nazwą użytkownika i hasłem lub bez nich, lub całkowicie wyłączony. Możesz użyć programu SSL do szyfrowania sesji podczas używania oprogramowania takiego jak netcat. Więcej informacji na temat dostępnych poleceń można znaleźć w rozdziale „Informacje dla deweloperów" w niniejszej instrukcji.

Zarządzanie oprogramowaniem

Dostęp do Blackmagic HyperDeck Setup można uzyskać, gdy nagrywarka dyskowa jest podłączona przez sieć lub przez USB. Aby uniemożliwić użytkownikom dostęp przez sieć, wybierz tylko opcję USB.

Ustawienia bezpiecznego logowania



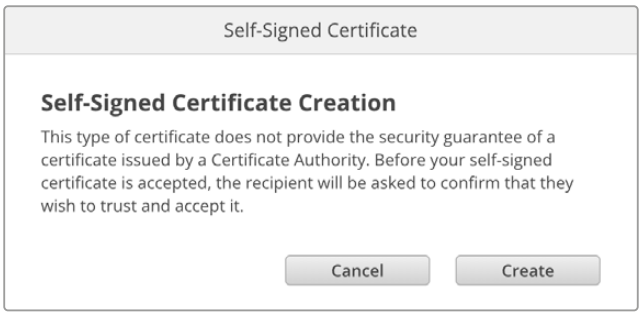
Jeśli wybrałeś **Enabled with security**, by zyskać dostęp do Web Media Managera lub protokołu Ethernet HyperDecka, będziesz musiał wprowadzić nazwę użytkownika oraz hasło. Wpisz nazwę użytkownika i hasło, a następnie kliknij **Save**. Pole hasła pozostanie puste po wpisaniu hasła. Po ustawieniu nazwy użytkownika i hasła należy je wprowadzić podczas uzyskiwania dostępu do Web Media Menagera, jeśli wybrano opcję **Enabled with security**.

Certyfikat bezpieczeństwa

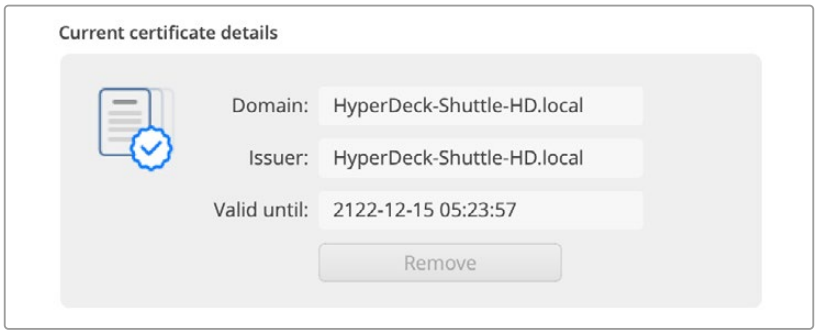
Aby włączyć dostęp do Web Media Managera przez HTTPS lub gdy protokół Ethernet HyperDecka został skonfigurowany na opcję tylko z zabezpieczeniem, wymagany jest certyfikat bezpieczeństwa. Ten cyfrowy certyfikat działa jak karta identyfikacyjna HyperDeck Shuttle HD, dzięki czemu wszelkie połączenia przychodzące mogą potwierdzić, że łączą się z właściwym urządzeniem. Oprócz potwierdzenia tożsamości urządzenia, użycie certyfikatu bezpieczeństwa zapewnia szyfrowanie danych przesyłanych między HyperDeck Shuttle HD a komputerem lub serwerem. Korzystając z ustawień bezpiecznego logowania, połączenie będzie nie tylko szyfrowane, ale będzie wymagało uwierzytelnienia w celu uzyskania dostępu.

Istnieją dwa typy certyfikatów, których można używać z HyperDeck Shuttle: certyfikat bezpieczeństwa podpisany przez urząd certyfikacji lub certyfikat samodzielnie podpisany. Certyfikat samodzielnie podpisany może być wystarczająco bezpieczny dla niektórych przepływów pracy użytkownika, na przykład uzyskując dostęp do HyperDeck Shuttle HD tylko za pośrednictwem sieci lokalnej.

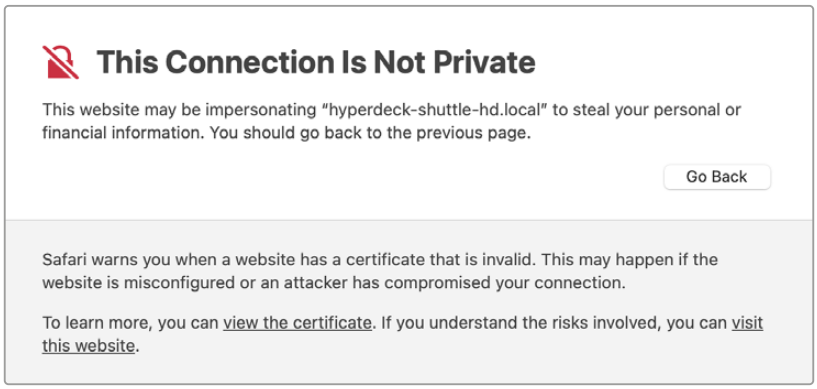
Aby wygenerować certyfikat samodzielnie podpisany, kliknij **Create certificate**. Zostaniesz poproszony o potwierdzenie, że rozumiesz ryzyko związane z korzystaniem z certyfikatu samodzielnie podpisanego. Po kliknięciu przycisku **Create** szczegóły certyfikatu automatycznie wypełnią pola **Domain**, **Issuer** i **Valid until** w oprogramowaniu HyperDeck Setup.



Po przywróceniu ustawień fabrycznych wszystkie bieżące certyfikaty zostaną usunięte, ale można je również usunąć w dowolnym momencie, klikając przycisk **Remove** i postępując zgodnie z instrukcjami.



Podczas korzystania z samodzielnie podpisanego certyfikatu w celu uzyskania dostępu do plików multimedialnych przy użyciu protokołu HTTPS, przeglądarka internetowa ostrzega o ryzyku związanym z dostępem do witryny. Niektóre przeglądarki pozwolą Ci przejść dalej po potwierdzeniu, że rozumiesz ryzyko, jednak inne przeglądarki mogą to całkowicie uniemożliwić.



Aby zapewnić dostęp do dowolnej przeglądarki internetowej, należy użyć podpisanego certyfikatu. Aby uzyskać podpisany certyfikat, należy najpierw wygenerować żądanie podpisania certyfikatu, czyli CSR, za pomocą Blackmagic HyperDeck Setup. To żądanie podpisania jest następnie wysyłane do urzędu certyfikacji, znanego również jako CA, lub do działu IT w celu podpisania. Po zakończeniu zostanie zwrócony podpisany certyfikat z rozszerzeniem .cert, .crt lub .pem, który można zaimportować do HyperDeck Shuttle HD.



Aby wygenerować żądanie podpisania certyfikatu CSR:

1 Kliknij **Generate signing request**.



2 Pojawi się okno z prośbą o wprowadzenie nazwy powszechnie stosowanej i alternatywnej nazwy podmiotu dla HyperDecka. Pozostałe szczegóły należy zmienić zgodnie z poniższą tabelą.

Informacja	Opis	Przykład
Nazwa powszechnie stosowana	Nazwa docelowo używanej domeny	hyperdeck.melbourne.com
Alternatywna nazwa podmiotu	Alternatywna nazwa domeny	hyperdeck.melbourne.net
Kraj	Kraj Twojej organizacji	Australia
Stan	Województwo, region, hrabstwo lub stan	Wiktoria
Lokalizacja	Nazwa miasta, miasteczka, wsi itp.	Port Melbourne
Nazwa organizacji	Nazwa Twojej organizacji	Blackmagic Design

3 Po wypełnieniu danych certyfikatu naciśnij przycisk **Generate**.

Kiedy wygenerujesz .csr, będziesz również tworzył jednocześnie klucz publiczny i klucz prywatny. Klucz publiczny zostanie dołączony do żądania podpisania, podczas gdy klucz prywatny pozostanie w urządzeniu. Po zweryfikowaniu przez CA lub dział IT informacji zawartych w CSR z Twoją organizacją, wygenerują oni podpisany certyfikat z powyższymi danymi wraz z Twoim kluczem publicznym.

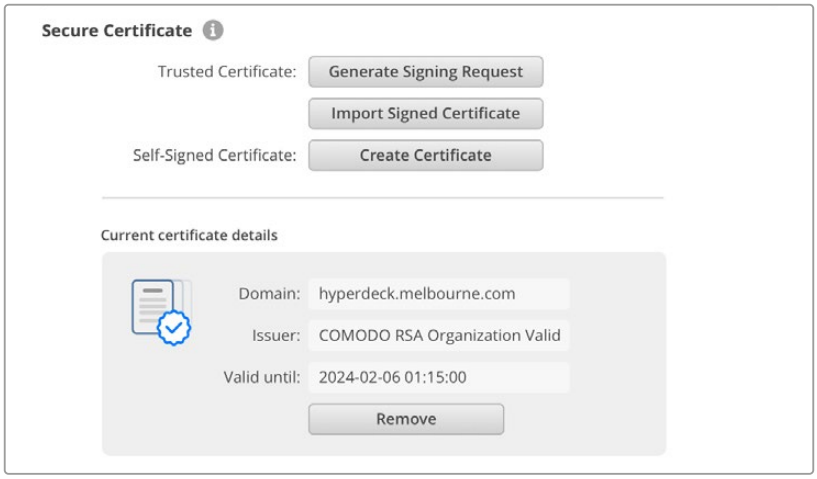
Po zaimportowaniu HyperDeck Shuttle HD użyje klucza publicznego i prywatnego w celu potwierdzenia identyfikacji HyperDecka oraz szyfrowania i odszyfrowywania danych udostępnianych przez HTTPS lub przez HyperDeck Ethernet Protocol, gdy używany jest program SSL.

Importowanie podpisanego certyfikatu:

1 Kliknij **Import signed certificate**.

2 Przejdź do lokalizacji podpisanego certyfikatu za pomocą przeglądarki plików i po wybraniu pliku kliknij **Open**.

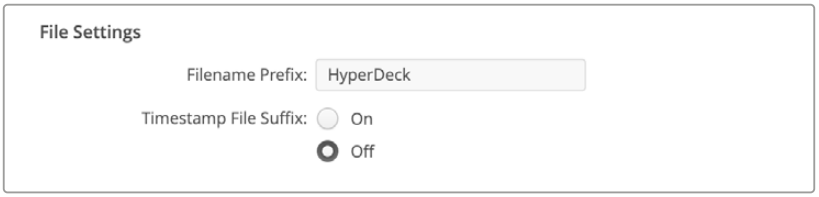
Pola **Domain**, **Issuer** i **Valid until** zostaną zaktualizowane o informacje z Twojego CA. Ogólnie rzecz biorąc, podpisany certyfikat będzie ważny przez około rok, więc po dacie wygaśnięcia proces będzie musiał zostać powtórzony.



Ponieważ wybrano nazwę domeny, należy porozmawiać z działem IT na temat uzgodnienia wpisu DNS dla urządzenia HyperDeck Shuttle HD. Spowoduje to skierowanie całego ruchu dla adresu IP HyperDeck Shuttle HD na adres domeny wybrany w żądaniu podpisania. Będzie to również adres HTTPS używany do uzyskiwania dostępu do plików za pośrednictwem Web Media Managera, na przykład https://hyperdeck.melbourne.com

Warto zauważyć, że certyfikat zostanie unieważniony po przywróceniu ustawień fabrycznych i konieczne będzie wygenerowanie i podpisanie nowego certyfikatu.

Ustawienia plików



Przy pierwszej konfiguracji urządzenie HyperDeck Shuttle HD będzie nagrywać klipy na kartę SD lub dysk flash USB, używając prefiksu **HyperDeck**. Wpisz nową nazwę pliku, by zmienić prefiks.

Znacznik czasu dodawany do nazwy pliku jest domyślnie wyłączony. Jeśli chcesz, aby data i godzina zostały zapisane w nazwie pliku, zaznacz opcję **On**. Ustawienia prefiksu nazwy pliku i znacznika czasu są również dostępne z menu ekranowego w HyperDeck Shuttle HD.

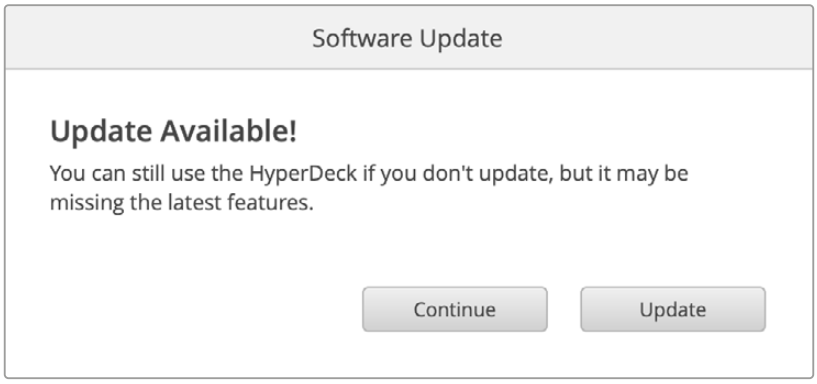
Resetowanie

Wybierz opcję **Factory reset**, aby przywrócić ustawienia fabryczne HyperDecka. Przywrócenie ustawień fabrycznych spowoduje unieważnienie bieżącego certyfikatu. Jeśli używany jest certyfikat bezpieczeństwa, będziesz musiał wygenerować nowe żądanie podpisania certyfikatu, które zostanie podpisane przez urząd certyfikacji lub dział IT.

Aktualizacja oprogramowania wewnętrznego

Aby zaktualizować oprogramowanie wewnętrzne:

1. Pobierz najnowszy instalator Blackmagic HyperDeck Setup ze strony www.blackmagicdesign.com/pl/support.
2. Uruchom na komputerze instalator Blackmagic HyperDeck Setup i postępuj zgodnie z instrukcjami na ekranie.
3. Po zakończeniu instalacji należy podłączyć HyperDeck Shuttle HD do komputera przez USB lub złącze Ethernet na tylnym panelu.
4. Uruchom Blackmagic HyperDeck Setup i postępuj zgodnie z wszelkimi komunikatami na ekranie, aby zaktualizować wewnętrzne oprogramowanie. Jeśli nie pojawi się żaden komunikat, oprogramowanie wewnętrzne jest aktualne i nie wymaga dalszego działania.



Przesyłanie plików przez sieć

HyperDeck Shuttle HD obsługuje przesyłanie plików zarówno za pomocą zabezpieczonej wersji protokołu, znanej jako HTTPS, jak i protokołu transferu plików znanego jako FTP. Umożliwia to kopiowanie plików bezpośrednio z komputera do HyperDecka za pośrednictwem sieci z dużą prędkością, jaką może zapewnić sieć lokalna. Przykładem może być kopiowanie nowych plików do HyperDecka używanego do odtwarzania wideo na ścianach wizyjnych i w systemach typu digital signage.

Można przesyłać dowolne pliki do i z HyperDecka, ale warto zauważyć, że wszelkie pliki, które mają być odtwarzane z HyperDeck Shuttle HD muszą być zgodne z kodekami i rozdzielczościami obsługiwanymi przez HyperDeck.

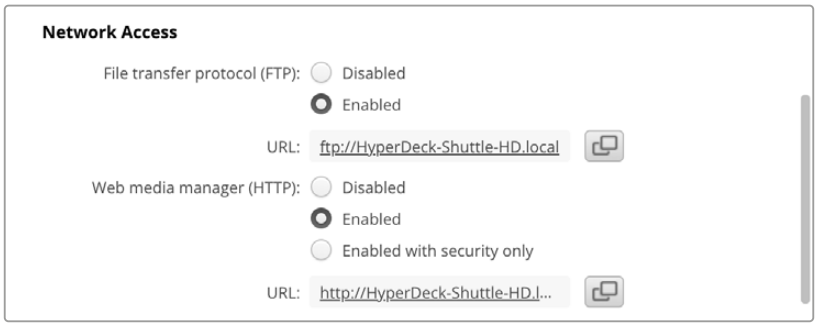
WSKAZÓWKA Możesz przesyłać pliki za pośrednictwem sieci podczas nagrywania przez HyperDecka. HyperDeck automatycznie dostosuje prędkość transferu, aby zapewnić brak zakłóceń podczas nagrywania.

Dostęp do HyperDeck Shuttle HD przez jeden z tych protokołów może być odblokowany lub zablokowany poprzez oprogramowanie HyperDeck Setup. Można na przykład wyłączyć dostęp FTP i jednocześnie włączyć dostęp HTTPS.

Łączenie z HyperDeck Shuttle HD przez HTTPS

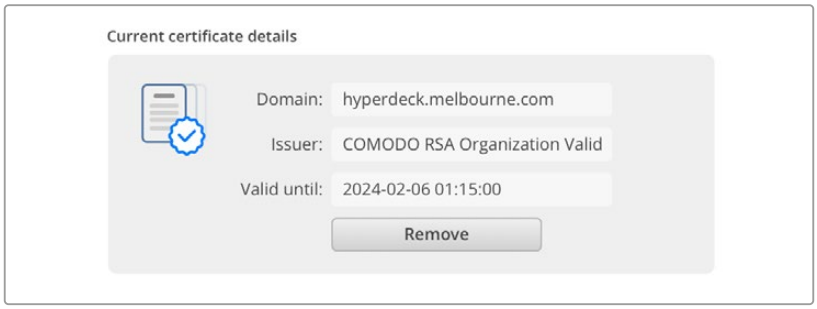
Aby uzyskać dostęp do HyperDeck Shuttle HD za pośrednictwem Web Media Managera należy podać adres URL dostępny w ustawieniach dostępu do sieci. Ustawienia dostępu do sieci pojawiają się w oprogramowaniu HyperDeck Setup, gdy komputer jest podłączony przez USB lub Ethernet, ale są wyłączone, gdy podłączona jest tylko sieć Ethernet.

1. Za pomocą kabla USB typu C podłącz komputer do HyperDeck Shuttle HD przez port USB na tylnym panelu i otwórz HyperDeck Setup. Obok nazwy urządzenia powinna pojawić się ikona połączenia USB. Kliknij okrągłą ikonę lub dowolne miejsce na zdjęciu produktu, aby otworzyć ustawienia.
2. W przypadku korzystania z certyfikatu samodzielnie podpisanego należy przejść do ustawień dostępu do sieci i kliknąć ikonę kopiowania obok adresu URL. To URL jest oparte o nazwę Twojego Hyperdecka. Aby zmodyfikować URL, zmień nazwę urządzenia.



W przypadku korzystania z certyfikatu samodzielnie podpisanego kliknij na link

3 Jeśli zaimportowałeś certyfikat podpisany przez organ certyfikujący lub dział IT, skopiuj i wklej adres w polu domeny dla aktualnego certyfikatu.



Skopiuj adres domeny i wklej go do przeglądarki

4 Otwórz przeglądarkę internetową i wklej adres w nowym oknie. Jeśli włączono dostęp tylko z zabezpieczeniem, zostanie wyświetlona prośba o wprowadzenie nazwy użytkownika i hasła ustawionych w oprogramowaniu HyperDeck Setup.

Podczas korzystania z samodzielnie podpisanego certyfikatu pojawi się ostrzeżenie przeglądarki dotyczące prywatności połączenia. Oznacza to, że zaufany podpisany certyfikat nie został zaimportowany za pomocą HyperDeck Setup.

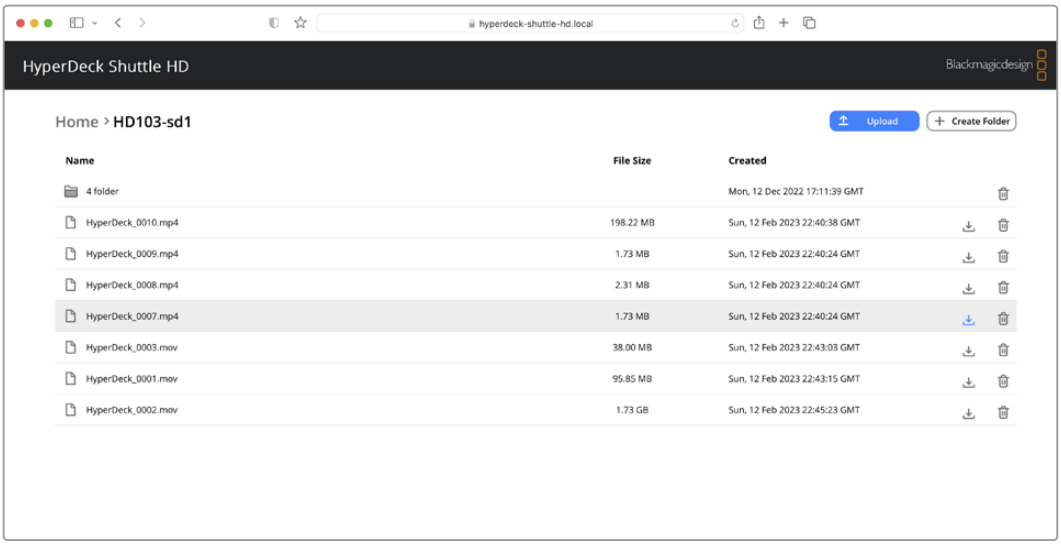
Aby kontynuować bez ważnego i zaufanego certyfikatu, postępuj zgodnie z informacjami przeglądarki, aby potwierdzić ryzyko i przejść do witryny.

Przesyłanie plików za pomocą Web Media Managera

Po pierwszym otwarciu okna przeglądarki Web Media Managera zobaczysz, że Twoje pliki będą uporządkowane według odpowiednich slotów na media.

sd1	Multimedia na kartach SD.
USB	Podłączone dyski USB będą wymienione z prefiksem USB/.

Kliknij dwukrotnie nośnik, aby wyświetlić zawartość karty SD lub dysku.



Kliknij przycisk **Upload**, aby dodać pliki

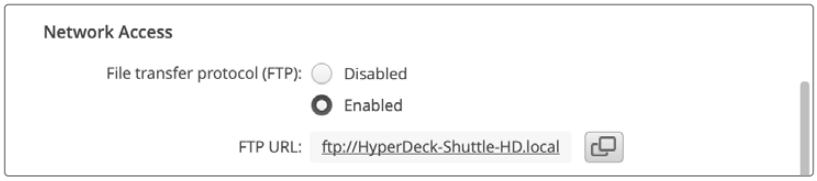
Aby zdalnie dodać pliki do odtwarzania, należy kliknąć przycisk **Upload**. Korzystając z przeglądarki plików, przejdź do swojego pliku i kliknij **Upload**. Podczas przesyłania pojawi się okno stanu. W razie potrzeby można również dodać foldery za pomocą przycisku **Create folder**.

Aby pobrać pliki, użyj ikony strzałki po prawej stronie. Przeglądarka może wyświetlić prośbę o zezwolenie na pobieranie plików z witryny. Kliknij **Allow**. Aby usunąć plik, kliknij ikonę kosza, a pojawi się okno usuwania pliku. Kliknij **Delete**, aby kontynuować.

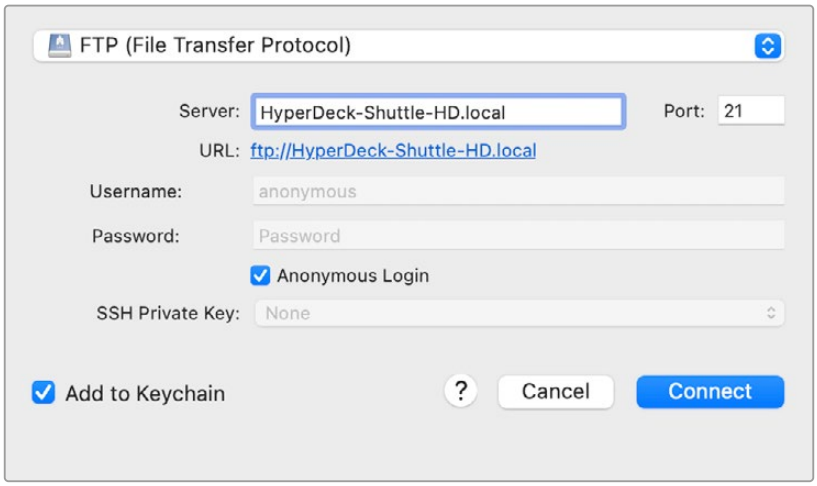
Przesyłanie plików przez FTP

Jeśli komputer i HyperDeck Shuttle HD znajdują się w tej samej sieci, wystarczy mieć oprogramowanie klienta FTP i adres IP urządzenia HyperDeck Shuttle HD lub adres URL FTP w HyperDeck Setup.

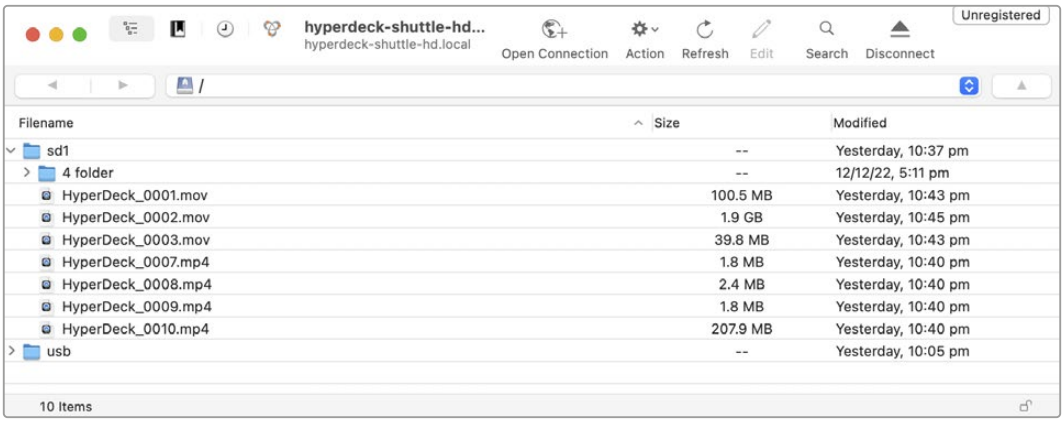
1. Pobierz i zainstaluj oprogramowanie klienta FTP na komputerze, do którego chcesz podłączyć HyperDeck Shuttle HD. Polecamy Cyberduck, FileZilla lub Transmit, jednak większość aplikacji FTP będzie kompatybilna. Cyberduck i FileZilla można pobrać za darmo.
2. Po podłączeniu HyperDeck Shuttle HD do sieci otwórz HyperDeck Setup i kliknij na **FTP URL** lub naciśnij ikonę kopiowania, aby wkleić go ręcznie. Jeśli program FTP nie otworzy połączenia, konieczne może być kliknięcie łącza po raz drugi.



3. Jeśli ręcznie otwierasz połączenie FTP, wklej adres URL w polu serwera. Zaznacz pole **Anonymous login**, jeśli jest dostępne.



4 Karty SD będą identyfikowane przez sd1.



Możesz teraz przeciągać i upuszczać pliki za pomocą interfejsu FTP.

Informacje dla deweloperów

Blackmagic HyperDeck Ethernet Protocol

The Blackmagic HyperDeck Ethernet Protocol is a text based protocol accessed by connecting to TCP port 9993 on HyperDeck models that have a built in Ethernet connection. If you are a software developer, you can use the protocol to construct devices that integrate with our products. Here at Blackmagic Design our approach is to open up our protocols and we eagerly look forward to seeing what you come up with!

You can connect to your HyperDeck recorder using the HyperDeck Ethernet Protocol using a command line program on your computer, such as Terminal on a Mac and putty on a Windows computer.

The HyperDeck Ethernet Protocol lets you schedule playlists and recordings. The following is an example of how to play 7 clips from clip number 5 onwards via the HyperDeck Ethernet Protocol.

On a Mac

1. Open the Terminal application which is located with the applications > utilities folder.
2. Type in “nc” and a space followed by the IP address of your HyperDeck disk recorder, another space and “9993” which is the HyperDeck Ethernet Protocol port number. For example type: nc 192.168.1.154 9993. The Protocol preamble will appear.
3. Type “playrange set: clip id: 5 count: 7” and press ‘return’.

   On HyperDeck disk recorders with a timeline view, you will see in and out points marked around clips 5 through the end of clip 11.
4. Type “play”. Clips 5 through 11 will now play back.
5. To clear the playrange, type “playrange clear”
6. To exit from the protocol, type ‘quit’.

Protocol Commands

Command	Command Description
help or ?	Provides help text on all commands and parameters
commands	return commands in XML format
device info	return device information
disk list	query clip list on active disk
disk list: slot id: {n}	query clip list on disk in slot {n}
quit	disconnect ethernet control
ping	check device is responding
preview: enable: {true/false}	switch to preview or output
play	play from current timecode
play: speed: {-5000 to 5000}	play at specific speed
play: loop: {true/false}	play in loops or stop-at-end
play: single clip: {true/false}	play current clip or all clips

Command	Command Description
play: {clip id/clip/timecode/timeline/...}	play from the specified position see “goto” command for description of parameters parameters can be combined with {speed/loop/single clip}
playrange	query playrange setting
playrange set: clip id: {n}	set play range to play clip {n} only
playrange set: clip id: {n} count: {m}	set play range to {m} clips starting from clip {n}
playrange set: in: {inT} out: {outT}	set play range to play between: - timecode {inT} and timecode {outT}
playrange set: timeline in: {in} timeline out: {out}	set play range in units of frames between: - timeline position {in} and position {out}
playrange clear	clear/reset play range setting
play on startup	query unit play on startup state
play on startup: enable: {true/false}	enable or disable play on startup
play on startup: single clip: {true/false}	play single clip or all clips on startup
play option	query play options
play option: stop mode: {lastframe/nextframe/black}	set output frame when playback stops
record	record from current input
record: name: {name}	record named clip
record spill	spill current recording to next slot
record: spill: slot id: {n}	spill current recording to specified slot use current id to spill to same slot
spill order	query the device order used for record spill
stop	stop playback or recording
clips count	query number of clips on timeline
clips get	query all timeline clips
clips get: clip id: {n}	query a timeline clip info
clips get: clip id: {n} count: {m}	query m clips starting from n
clips get: version: {1/2/3}	query clip info using specified output version: version 1: id: name startT duration version 1: id: name startT duration startT depends on “configuration: timecode output: {clip/timeline}” version 2: id: clipInT clipDuration inT outT filename version 3: id: clipInT clipDuration inT outT folder/filename
clips add: name: {name}	append a clip to timeline, name can include subfolders e.g. folder1/HyperDeck_0001.mp4
clips add: clip id: {n} name: {name}	insert clip before existing clip {n}
clips add: in: {inT} out: {outT} name: {name}	append the clip portion between clip timecodes {inT} to {outT}
clips add: frame in: {in} frame out: {out} name: {name}	append the clip portion between clip frame numbers {in} to {out}

Command	Command Description
clips remove: clip id: {n}	remove clip {n} from the timeline (invalidates clip ids following clip {n})
clips clear	empty timeline clip list
clips rebuild	rebuild timeline with default rules
clip info	query clip info for the current playing/recording clip
clip info: clip id: {n}	query clip info for timeline clip id {n}
clip info: name: {name}	query clip info for the clip named {name} on active disk
transport info	query current activity
slot info	query active slot
slot info: slot id: {n}	query slot {n}
slot info: device: {device}	query slot containing device USB/network devices can be queried without being active “device” and “slot id” parameters are mutually exclusive in all commands
slot select: slot id: {n}	switch to specified slot
slot select: device: {device}	switch to slot containing device
slot select: video format: {format}	load clips of specified format
slot unblock	unblock active slot
slot unblock: slot id: {n}	unblock slot {n}
slot unblock: device: {device}	unblock disk device
external drive list	list all available USB/network drives for use in external slot
external drive select: device: {device}	switch external slot to specified external drive
external drive selected	query the currently selected external drive
cache info	query cache status
dynamic range	query dynamic range settings
dynamic range: playback override: {off/Rec709/Rec2020_SDR/HLG/ ST2084_300/ST2084_500/ ST2084_800/ST2084_1000/ ST2084_2000/ST2084_4000/ST2084	set playback dynamic range override
dynamic range: record override: {off/Rec709/Rec2020_SDR/HLG/ ST2084_300/ST2084_500/ ST2084_800/ST2084_1000/ ST2084_2000/ST2084_4000/ST2048}	set record dynamic range override
notify	query notification status
notify: remote: {true/false}	set remote notifications
notify: transport: {true/false}	set transport notifications
notify: slot: {true/false}	set slot notifications
notify: configuration: {true/false}	set configuration notifications

Command	Command Description
notify: dropped frames: {true/false}	set dropped frames notifications (reported dropped frame count is approximate)
notify: display timecode: {true/false}	set display timecode notifications
notify: timeline position: {true/false}	set playback timeline position notifications
notify: playrange: {true/false}	set playrange notifications
notify: cache: {true/false}	set cache notifications
notify: dynamic range: {true/false}	set dynamic range settings notifications
notify: slate: {true/false}	set digital slate notifications
notify: clips: {true/false}	set timeline clips notifications where two types of changes can occur: add: partial update with list of clips and insert positions snapshot: complete update of all clips on timeline
notify: disk: {true/false}	set disk clips notifications where two types of changes can occur: add: partial update with list of clips and insert positions snapshot: complete update of all clips on timeline
notify: device info: {true/false}	set device info notifications
notify: nas: {true/false}	set nas notifications triggered by commands such as “nas add” or “nas remove”
goto: clip id: {start/end}	goto first clip or last clip
goto: clip id: {n}	goto clip id {n}
goto: clip id: +{n}	go forward {n} clips
goto: clip id: -{n}	go backward {n} clips
goto: clip: {start/end}	goto start or end of clip
goto: clip: {n}	goto frame position {n} within current clip
goto: clip: +{n}	go forward {n} frames within current clip
goto: clip: -{n}	go backward {n} frames within current clip
goto: timeline: {start/end}	goto start or end of timeline
goto: timeline: {n}	goto frame position {n} within timeline
goto: timeline: +{n}	go forward {n} frames within timeline
goto: timeline: -{n}	go backward {n} frames within timeline
goto: timecode: {timecode}	goto absolute timecode position in timeline
goto: timecode: +{timecode}	go forward {timecode} duration
goto: timecode: -{timecode}	go backward {timecode} duration
goto: slot id: {n}	goto slot id {n}
goto: clip id: {n} clip: {m}	goto clip id {n} and offset to frame position {m} within that clip
goto: clip id: {n} timeline: {m}	goto clip id {n} and offset to frame position {m} within the timeline

Command	Command Description
goto: clip id: {n} timecode: {timecode}	goto clip id {n} and offset {timecode} duration {clip id/clip/timeline/timecode} support absolute and relative offsets use “play” instead of “goto” to play from seeked position
jog: timecode: {timecode}	jog to timecode
jog: timecode: +{timecode}	jog forward {timecode} duration
jog: timecode: -{timecode}	jog backward {timecode} duration
shuttle: speed: {-5000 to 5000}	shuttle with speed
remote	query unit remote control state
remote: enable: {true/false}	enable or disable remote control
remote: override: {true/false}	session override remote control
configuration	query configuration settings
configuration: video input: {SDI/HDMI/component/composite}	change the video input source
configuration: audio input: {embedded/XLR/RCA}	change the audio input source
configuration: file format: {format}	switch to one of the supported formats: H.265High_422, H.264High, H.264Medium, H.264Low, H.264High10_422, H.265High, H.265Medium, H.265Low, QuickTimeProResHQ, QuickTimeProRes, QuickTimeProResLT, QuickTimeProResProxy DNxHR_HQX, QuickTimeDNxHR_HQX, DNxHR_SQ, QuickTimeDNxHR_SQ, DNxHR_LB, QuickTimeDNxHR_LB, DNxHD220x, QuickTimeDNxHD220x, DNxHD145, QuickTimeDNxHD145, DNxHD45, QuickTimeDNxHD45
configuration: audio codec: {PCM/AAC}	switch to specific audio codec
configuration: timecode input: {external/embedded/internal/preset/clip}	change the timecode input
configuration: timecode output: {clip/timeline}	change the timecode output
configuration: timecode preference: {default/dropframe/nondropframe}	whether or not to use drop frame timecodes when not otherwise specified
configuration: timecode preset: {timecode}	set the timecode preset
configuration: audio input channels: {n}	set the number of audio channels recorded to {n}
configuration: record trigger: {none/recordbit/timecoderun}	change the record trigger
configuration: record prefix: {name}	set the record prefix name (supports UTF-8 name)
configuration: record cache: {true/false}	enable or disable record cache, has no effect if cache is not supported/installed/formatted
configuration: append timestamp: {true/false}	append timestamp to recorded filename
configuration: usb spill: {true/false}	enable or disable spilling between usb disks

Command	Command Description
configuration: reference source: {auto/input/external}	set source for the reference signal
configuration: genlock input resync: {true/false}	enable or disable genlock input resync when enabled set reference source to auto/external
configuration: xlr input id: {n} xlr type: {line/mic}	configure xlr input type multiple xlr inputs can be configured in a single command
uptime	return time since last boot
format: slot id: {n} prepare: {exFAT/HFS+} name: {name}	prepare formatting operation filesystem type with volume name {name} “slot id” can be omitted for the current mounted slot “name” defaults to current volume name if mounted (supports UTF-8)
format: device: {device} prepare: {exFAT/HFS+} name: {name}	prepare formatting operation for {device}
format: confirm: {token}	perform a pre-prepared formatting operation using token
identify: enable: {true/false}	identify the device
watchdog: period: {period in seconds}	client connection timeout
reboot	reboot device
slate clips	slate clips information
slate project	slate project information
slate lens	slate lens information
nas list	list all NAS share bookmarks
nas discovered	list all NAS servers that have been discovered via mDNS
nas selected	currently selected NAS share
nas deselect	unmount the currently selected NAS share
connection protocol: response version: {version}	changes which do not affect other client connections change the output of “clips get”, “disk list” and related responses version 1 205 clips get id: filename startT duration startT depends on “configuration: timecode output: {clip/timeline}” 519 clips info id: clipInT clipDuration inT outT filename 206 disk list id: filename codec format duration 520 disk list info id: filename codec format duration version 2 205 clips get id: clipInT clipDuration inT outT folder/filename 519 clips info id: clipInT clipDuration inT outT folder/filename 206 disk list id: codec format duration folder/filename 520 disk list info id: codec format duration folder/filename

Multiline commands:	Command Description
authenticate:↵	authenticate user for secure access
username: {username}	case sensitive username
password: {password}	case sensitive password
slate clips↵	set slate clips information:
reel: {n}	slate reel number, where {n} is in [1, 999]
scene id: {id}	slate scene id value, where {id} is a string
shot type: {WS/MS/CU/BCU/MCU/ECU/none}	slate shot type
take: {n}	slate take number, where {n} is in [1, 99]
take scenario: {PU/VFX/SER/none}	slate take scenario
take auto inc: {true/false}	slate take auto increment
good take: {true/false}	slate good take
environment: {interior/exterior}	slate environment
day night: {day/night}	slate day or night
slate project:↵	set slate project information:
project name: {name}	project name (can be empty, supports UTF-8)
camera: {index}	set camera index e.g. A
director: {name}	director (can be empty, supports UTF-8)
camera operator: {name}	camera operator (can be empty, supports UTF-8)
slate lens:↵	set lens information:
lens type: {type}	lens type (can be empty, supports UTF-8)
iris: {type}	camera iris (can be empty, supports UTF-8)
focal length: {length}	focal length (can be empty, supports UTF-8)
distance: {distance}	lens distance (can be empty, supports UTF-8)
filter: {filter}	lens filter (can be empty, supports UTF-8)
nas add:↵	add a NAS share to the list of bookmarks
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share
username: {username}	username to connect as (optional, defaults to guest)
password: {password}	password to connect with (optional)
nas remove:↵	remove NAS share bookmark, does not unmount share if mounted
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share
nas select:↵	mount NAS share asynchronously. Uses credentials provided in matching bookmark, otherwise uses guest credentials
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share Use “nas selected” or “notify: slot: true” to determine when share is mounted.

Command Combinations

You can combine the parameters into a single command, for example:

```
play: clip id: 3 speed: 200 loop: true single clip: true
```

Or for configuration:

```
configuration: video input: SDI audio input: XLR
```

Or to switch to the second disk, but only play NTSC clips:

```
slot select: slot id: 2 video format: NTSC
```

Using XML

While you can use the Terminal to talk to HyperDeck, if you are writing software, you can use XML to confirm the existence of a specific command based on the firmware of the HyperDeck you are communicating with. This helps your software user interface adjust to the capabilities of the specific HyperDeck model and software version.

Protocol Details

Connection

The HyperDeck Ethernet server listens on TCP port 9993.

Basic syntax

The HyperDeck protocol is a line oriented text protocol. Lines from the server will be separated by an ascii CR LF sequence. Messages from the client may be separated by LF or CR LF.

New lines are represented in this document as a "↵" symbol.

Single line command syntax

Command parameters are usually optional. A command with no parameters is terminated with a new line:

```
{Command name}↵
```

If parameters are specified, the command name is followed by a colon, then pairs of parameter names and values. Each parameter name is terminated with a colon character:

```
{Command name}: {Parameter}: {Value} {Parameter}: {Value} ...↵
```

Multiline command syntax

The HyperDeck protocol also supports an equivalent multiline syntax where each parameter-value pair is entered on a new line. E.g.

```
{Command name}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
↵
```

Response syntax

Simple responses from the server consist of a three digit response code and descriptive text terminated by a new line:

```
{Response code} {Response text}↵
```

If a response carries parameters, the response text is terminated with a colon, and parameter name and value pairs follow on subsequent lines until a blank line is returned:

```
{Response code} {Response text}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
...
↵
```

Successful response codes

A simple acknowledgement of a command is indicated with a response code of 200:

```
200 ok↵
```

Other successful responses carry parameters and are indicated with response codes in the range of 201 to 299.

Failure response codes

Failure responses to commands are indicated with response codes in the range of 100 to 199:

```
100 syntax error
101 unsupported parameter
102 invalid value
103 unsupported
104 disk full
105 no disk
106 disk error
107 timeline empty
108 internal error
109 out of range
110 no input
111 remote control disabled
112 clip not found
120 connection failed
121 authentication failed
122 authentication required
150 invalid state
151 invalid codec
160 invalid format
161 invalid token
162 format not prepared
163 parameterized single line command not supported
```

Asynchronous response codes

The server may return asynchronous messages at any time. These responses are indicated with response codes in the range of 500 to 599:

```
5xx {Response Text}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
↵
```

Connection response

On connection, an asynchronous message will be delivered:

```
500 connection info:↵
protocol version: {Version}↵
model: {Model Name}↵
↵
```

Connection rejection

A limited number of clients may connect at a time. If too many clients attempt to connect concurrently, they will receive an error and be disconnected:

```
120 connection failed↵
```

Timecode syntax

Timecodes are expressed as non-drop-frame timecode in the format:

```
HH:MM:SS:FF
```

Handling of deck "remote" state

The “remote” command may be used to enable or disable the remote control of the deck. Any attempt to change the deck state over ethernet while remote access is disabled will generate an error:

```
111 remote control disabled↵
```

To enable or disable remote control:

```
remote: enable: {“true”, “false”} ↵
```

The current remote control state may be overridden allowing remote access over ethernet irrespective of the current remote control state:

```
remote: override: {“true”, “false”} ↵
```

The override state is only valid for the currently connected ethernet client and only while the connection remains open.

The “remote” command may be used to query the remote control state of the deck by specifying no parameters:

```
remote↵
```

The deck will return the current remote control state:

```
210 remote info:↵
enabled: {“true”, “false”}↵
override: {“true”, “false”}↵
↵
```

Asynchronous remote control information change notification is disabled by default and may be configured with the “notify” command. When enabled, changes in remote state will generate a “510 remote info:”asynchronous message with the same parameters as the “210 remote info:” message.

Closing connection

The "quit" command instructs the server to cleanly shut down the connection:

```
quit↵
```

Checking connection status

The "ping" command has no function other than to determine if the server is responding:

```
ping↵
```

Getting help

The "help" or "?" commands return human readable help text describing all available commands and parameters:

```
help↵
```

Or:

```
?↵
```

The server will respond with a list of all supported commands:

```
201 help:↵
{Help Text}↵
{Help Text}↵
↵
```

Switching to preview mode

The "preview" command instructs the deck to switch between preview mode and output mode:

```
preview: enable: {"true", "false"}↵
```

Playback will be stopped when the deck is switched to preview mode. Switching to playback is not permitted during record. Use the stop command to stop recording before switching to playback.

Controlling device playback

The “play” command instructs the deck to start playing:

```
play↵
```

The play command accepts a number of parameters which may be used together in most combinations.

By default, the deck will play all remaining clips on the timeline then stop.
The “single clip” parameter may be used to override this behavior:

```
play: single clip: {“true”, “false”}↵
```

By default, the deck will play at normal (100%) speed. An alternate speed may be specified in percentage between -5000 to 5000:

```
play: speed: {% normal speed}↵
```

By default, the deck will stop playing when it reaches to the end of the timeline. The “loop” parameter may be used to override this behavior:

```
play: loop: {“true”, “false”}↵
```

To play from the start of a particular clip:

```
play: clip id: {Clip Id}↵
```

To play from a position offset from the start of particular clip:

```
play: clip id: {Clid Id} timecode: +{timecode}↵
```

The “playrange” command returns the current playrange setting if any:

```
playrange↵
```

To override this behaviour and select a particular clip:

```
playrange set: clip id: {Clip ID}↵
```

To only play a certain number of clips starting at a particular clip:

```
playrange set: clip id: {n} count: {m}↵
```

To only play a certain timecode range:

```
playrange set: in: {in timecode} out: {out timecode}↵
```

To play a certain timeline range:

```
playrange set: timeline in: {in} timeline out: {out}↵
```

To clear a set playrange and return to the default value:

```
playrange clear↵
```

The “play on startup command” instructs the deck on what action to take on startup. By default, the deck will not play. Use the “enable” command to start playback after each power up.

```
play on startup: enable {“true”, “false”}↵
```

By default, the unit will play back all clips on startup. Use the “single clip” command to override.

```
play on startup: single clip: {“true”, “false”}↵
```

The “play option” command queries the output frame for when playback stops:

```
play option↵
```

By default, the deck will display the last frame when playback stops. To override this behaviour, the “stop mode” parameter can be used:

```
play option: stop mode: {“lastframe”, “nextframe”, “black”}↵
```

Stopping deck operation

The "stop" command instructs the deck to stop the current playback or capture:

```
stop↵
```

Changing timeline position

The "goto" command instructs the deck to switch to playback mode and change its position within the timeline.

To go to the start of a specific clip:

```
goto: clip id: {Clip ID}↵
```

To move forward/back {count} clips from the current clip on the current timeline:

```
goto: clip id: +/-{count}↵
```

Note that if the resultant clip id goes beyond the first or last clip on timeline, it will be clamp at the first or last clip.

To go to the start or end of the current clip:

```
goto: clip: {“start”, “end”}↵
```

To go to the start of the first clip or the end of the last clip:

```
goto: timeline: {“start”, “end”}↵
```

To go to a specified timecode:

```
goto: timecode: {timecode}↵
```

To move forward or back a specified duration in timecode:

```
goto: timecode: {“+”, “-”}{duration in timecode}↵
```

To specify between slot 1 and slot 2:

```
goto: slot id: {Slot ID}↵
```

Note that only one parameter/value pair is allowed for each goto command.

Enumerating supported commands and parameters

The "commands" command returns the supported commands:

```
commands↵
```

The command list is returned in a computer readable XML format:

```
212 commands:
<commands>↵
     <command name="…"><parameter name="…"/>…</command>↵
     <command name="…"><parameter name="…"/>…</command>↵
     …
</commands>↵
↵
```

More XML tokens and parameters may be added in later releases.

Controlling asynchronous notifications

The “notify” command may be used to enable or disable asynchronous notifications from the server.
To enable or disable transport notifications:

```
notify: transport: {“true”, “false”}↵
```

To enable or disable slot notifications:

```
notify: slot: {“true”, “false”}↵
```

To enable or disable remote notifications:

```
notify: remote: {“true”, “false”}↵
```

To enable or disable configuration notifications:

```
notify: configuration: {“true”, “false”}↵
```

Multiple parameters may be specified. If no parameters are specified, the server returns the current state of all notifications:

```
209 notify:↵
transport: {“true”, “false”}↵
slot: {“true”, “false”}↵
remote: {“true”, “false”}↵
configuration: {“true”, “false”}↵
dropped frames: {“true”, “false”}↵
display timecode: {“true”, “false”}↵
timeline position: {“true”, “false”}↵
playrange: {“true”, “false”}↵
cache: {“true”, “false”}↵
dynamic range: {“true”, “false”}↵
slate: {“true”, “false”}↵
clips: {“true”, “false”}↵
disk: {“true”, “false”}↵
device info: {“true”, “false”}↵
nas: {“true”, “false”}↵
↵
```

Retrieving device information

The "device info" command returns information about the connected deck device:

```
device info↵
```

The server will respond with:

```
204 device info:↵
protocol version: {Version}↵
model: {Model Name}↵
unique id: {unique alphanumeric identifier}↵
slot count: {number of storage slots}↵
software version: {software version}↵
name: {device name}↵
↵
```

Retrieving slot information

The "slot info" command returns information about a slot. Without parameters, the command returns information for the currently selected slot:

```
slot info↵
```

If a slot id is specified, that slot will be queried:

```
slot info: slot id: {Slot ID}↵
```

The server will respond with slot specific information:

```
202 slot info:↵
slot id: {Slot ID}↵
slot name: {“slot name”}↵
device name: {identifying name for disk device}↵
status: {"empty", "mounting", "error", "mounted"}↵
volume name: {Volume name}↵
recording time: {recording time available in seconds}↵
video format: {disk's default video format}↵
blocked: {“true”, “false”}↵
remaining size: {remaining size in bytes}↵
total size: {total size in bytes}↵
↵
```

A slot can also be specificed by its device. This is particularly useful when there are multiple drives connected via USB. First list the available external drives:

```
external drive list↵
226 external drive info:↵
device: {device}↵
```

Then use slot info with device to query the drive:

```
slot info: device: {device}↵
```

Asynchronous slot information change notification is disabled by default and may be configured with the "notify" command. When enabled, changes in slot state will generate a "502 slot info:" asynchronous message with the same parameters as the "202 slot info:" message.

Retrieving clip information

The “disk list” command returns the information for each playable clip on a given disk. Without parameters, the command returns information for the current active disk:

```
disk list↵
```

If a slot id is specified, the disk in that slot will be queried:

```
disk list: slot id: {Slot ID}↵
```

The server responds with the list of all playable clips on the disk in the format of: Index, name, formats, and duration in timecode:

```
206 disk list:↵
slot id: {Slot ID}↵
{clip index}: {name} {file format} {video format} {Duration timecode}↵
{clip index}: {name} {file format} {video format} {Duration timecode}↵
…
↵
```

Note that the *clip index* starts from 1.

Retrieving clip count

The "clips count" command returns the number of clips on the current timeline:

```
clips count ↵
```

The server responds with the number of clips:

```
214 clips count: ↵
clip count: {Count}↵
```

Retrieving timeline information

The "clips get" command returns information for each available clip on the current timeline. Without parameters, the command returns information for all clips on timeline:

```
clips get↵
```

In version 1, the start timecode reported is either a clip timecode or a timeline timecode depending on the configured output timecode.

The server responds with a list of clip IDs, names and timecodes:

```
205 clips info:↵
clip count: {Count}↵
{Clip ID}: {Name} {Start timecode} {Duration timecode}↵
{Clip ID}: {Name} {Start timecode} {Duration timecode}↵
…
↵
```

The “clips get” command provides a more detailed response when using the “version: 2” parameter:

```
clips get: version: 2↵
```

The server responds with a list of clip IDs, timecodes, in points, out points and names. Clip name is the last field making it simpler to parse when names have embedded spaces.

```
{Clip ID}: {Clip start timecode} {Duration timecode} {inTimecode}
{outTimecode}
{name}↵
{Clip ID}: {Clip start timecode} {Duration timecode} {inTimecode}
{outTimecode}
{name}↵
…
↵
```

For models that support recursive timelines “clips get: version: 3” replaces the {name} field with {path to clip name} where the {path to clip name} can include directories and subdirectories.

Retrieving transport information

The “transport info” command returns the state of the transport:

```
transport info ↵
```

The server responds with transport specific information:

```
208 transport info:

status: {“preview”, “stopped”, “play”, “forward”, “rewind”,
“jog”, “shuttle”,”record”}↵

speed: {Play speed between -5000 and 5000 %}↵

slot id: {Slot ID or “none”}↵

slot name: {“slot name”}↵

device name: {identifying name for disk device}↵

clip id: {Clip ID or “none”}↵

single clip: {“true”, “false”}↵

display timecode: {timecode}↵

timecode: {timecode}↵

video format: {Video format}↵

loop: {“true”, “false”}↵

timeline: {n}↵

input video format: {Video format”}↵

dynamic range: {“off”, “Rec709”, “Rec2020_SDR”, “HLG”,
“ST2084_300”, “ST2084_500”, “ST2084_800”, “ST2084_1000”,
“ST2084_2000”, “ST2084_4000”, “ST2048” or “none”}↵

reference locked: {“false”, “true”}

↵
```

The "timecode" value is the timecode within the current timeline for playback or the clip for record. The "display timecode" is the timecode displayed on the front of the deck. The two timecodes will differ in some deck modes.

Asynchronous transport information change notification is disabled by default and may be configured with the "notify" command. When enabled, changes in transport state will generate a "508 transport info:" asynchronous message with the same parameters as the "208 transport info:" message.

Video Formats

The following video formats are currently supported on HyperDeck Extreme, HyperDeck Studio and HyperDeck Shuttle:

720p50, 720p5994, 720p60

1080p23976, 1080p24, 1080p25, 1080p2997, 1080p30, 1080p60

1080i50, 1080i5994, 1080i60

HyperDeck Extreme HDR models also support the following formats:

NTSC, PAL, NTSCp, PALp

2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p30, 2160p50, 2160p59.94, 2160p60

4Kp23976, 4Kp24, 4Kp25, 4Kp2997, 4Kp30

4Kp50, 4Kp5994, 4Kp60

HyperDeckExtreme 8K HDR adds support for the following 8K formats:

4320p23.98, 4320p24, 4320p25, 4320p29.97, 4320p30, 4320p50, 4320p59.94, 4320p60

8Kp23976, 8Kp24, 8Kp25

HyperDeck Studio Pro and Plus models support these 4k formats:

4Kp23976, 4Kp24, 4Kp25, 4Kp2997, 4Kp30

HyperDeck Studio 4K Pro adds support for the following 4k formats:

4Kp50, 4Kp5994, 4Kp60

Video format support may depend on the file format selected and may vary between models and software releases.

File Formats

All HyperDeck models currently support the following file formats:

H.264High_SDI

H.264High

H.264Medium

H.264Low

QuickTimeProResHQ

QuickTimeProRes

QuickTimeProResLT

QuickTimeProResProxy

QuickTimeDNxHD220x

DNxHD220x

QuickTimeDNxHD145

DNxHD145

QuickTimeDNxHD45

DNxHD45

HyperDeck Studio 4K Pro and HyperDeck Extrme HDR models also support the following file formats:

H.265High_SDI

H.265High

H.265Medium

H.265Low

QuickTimeDNxHR_HQX

DNxHR_HQX

QuickTimeDNxHR_SQ

DNxHR_SQ

QuickTimeDNxHR_LB

DNxHR_LB

Supported file formats may vary between models and software releases.

Querying and updating configuration information

The "configuration" command may be used to query the current configuration of the deck:

```
configuration↵
```

The server returns the configuration of the deck:

```
211 configuration:↵
audio input: {“embedded”, “XLR”, “RCA”}↵
audio mapping: {n}↵
video input: {“SDI”, “HDMI”, “component”, “composite”}↵
file format: {format}↵
audio codec: {“PCM”, “AAC”}↵
timecode input: {“external”, “embedded”, “preset”, “clip”}↵
timecode output: {“clip”, “timeline”}↵
timecode preference: {“default”, “dropframe”, “nondropframe”}↵
timecode preset: {timecode}↵
audio input channels: {n}↵
record trigger: {“none”, “recordbit”, “timecoderun”}↵
record prefix: {name}↵
record cache: {“true”, “false”}↵
append timestamp: {“true”, “false”}↵
genlock input resync: {“true”, “false”}↵
reference source: {“auto”, “input”, “external”}↵
xlr input id: {“n”}↵
xlr type: {”line”, ”mic”}↵
usb spill: {“true”, “false”}↵
↵
```

One or more configuration parameters may be specified to change the configuration of the deck.

To change the current video input:

```
configuration: video input: {“SDI”, “HDMI”, “component”}↵
```

Valid video inputs may vary between models. To configure the current audio input:

```
configuration: audio input: {“embedded”, “XLR”, “RCA”}↵
```

Valid audio inputs may vary between models.

To configure the current file format:

```
configuration: file format: {File format}↵
```

Note that changes to the file format may require the deck to reset, which will cause the client connection to be closed. In such case, response code 213 will be returned (instead of 200) before the client connection is closed:

```
“213 deck rebooting”
```

Asynchronous configuration information change notification is disabled by default and may be configured with the “notify” command. When enabled, changes in configuration will generate a “511 configuration:” asynchronous message with the same parameters as the “211 configuration:” message.

Selecting active slot and video format

The "slot select" command instructs the deck to switch to a specified slot, or/and to select a specified output video format.

To switch to a specified slot:

```
slot select: slot id: {slot ID}↵
```

To switch to a disk device, including USB drives that are not yet made active:

```
slot select: device: {identifying name for disk device}↵
```

To select the output video format:

```
slot select: video format: {video format}↵
```

Either or all slot select parameters may be specified. Note that selecting video format will result in a rescan of the disk to reconstruct the timeline with all clips of the specified video format.

Clearing the current timeline

The "clips clear" command instructs the deck to empty the current timeline:

```
clips clear↵
```

The server responds with

```
200 ok↵
```

Adding a clip to the current timeline

The "clips add:" command instructs the deck to add a clip to the current timeline:

```
clips add: name: {clip name}↵
```

The server responds with

```
200 ok↵
```

or in case of error

```
1xx {error description}↵
```

Configuring the watchdog

The “watchdog” command instructs the deck to monitor the connected client and terminate the connection if the client is inactive for at least a specified period of time.

To configure the watchdog:

```
watchdog: period: {period in seconds}↵
```

To avoid disconnection, the client must send a command to the server at least every {period} seconds.
Note that if the period is set to 0 or less than 0, connection monitoring will be disabled.

Network Area Storage

On networks using multicast DNS the “nas discovered” command will list network servers the HyperDeck has discovered:

```
nas discovered↵
225 nas host info:
CloudStoreMini.local. CloudStoreMini
CloudStore80.local. CloudStore80
CloudStore320.local. CloudStore320
```

A network share can be added as a bookmark to the HyperDeck using ‘nas add’

```
nas add:
url: smb://CloudStore80.local/Studio1
```

For shares that require a username and password consider using the secure mode of the HyperDeck Ethernet protocol to avoid passwords being sent as plaintext.

```
nas add:
url: smb://192.168.1.1/Main
username: user1234
password: Password1234
```

A share can be made available for recording and playback using ‘nas select’. If a bookmark exists for that share, ‘nas select’ will use the credentials stored in the bookmark. Otherwise ‘nas select’ will connect using Guest credentials.

```
nas select:
url: smb://192.168.1.1/Main
```

Only one share can be mounted at a time using ‘nas select’.

You can query the currently selected nas share using the ‘nas selected’ command. If ‘notify: slot: true’ was used an asynchronous notification will be sent when the share is mounted.

HyperDeck Control REST API

Jeśli jesteś programistą, możesz tworzyć niestandardowe aplikacje lub korzystać z gotowych narzędzi, takich jak klient REST lub Postman, aby płynnie kontrolować i współdziałać z nagrywarkami dyskowymi HyperDeck za pomocą HyperDeck Control REST API. Ten interfejs API umożliwia wykonywanie szerokiego zakresu operacji, takich jak uruchamianie lub zatrzymywanie nagrań, zarządzanie odtwarzaniem, uzyskiwanie dostępu do informacji o dysku i wiele innych. Niezależnie od tego, czy opracowujesz niestandardową aplikację dostosowaną do Twoich konkretnych potrzeb, czy też korzystasz z istniejących narzędzi, ten interfejs API umożliwia łatwe odblokowanie pełnego potencjału nagrywarek dyskowych HyperDeck. Nie możemy się doczekać, aby zobaczyć, co stworzyłeś!

Transport Control API

API for controlling Transport on Blackmagic Design products.

GET /transports/0

Get device's basic transport status.

Response

200 - Transport status.
The response is a JSON object.

Name	Type	Description
mode	string	Transport mode. Possible values are: InputPreview, InputRecord, Output.

PUT /transports/0

Set device's basic transport status.

Parameters

Name	Type	Description
mode	string	Transport mode. Possible values are: InputPreview, Output.

Response

204 - Transport mode was set.

GET /transports/0/stop

Determine if transport is stopped.

Response

200 - Transport stop response.
The response is a JSON object.

PUT /transports/0/stop

Stop transport. Deprecated, use POST /tranports/0/stop instead.

Response

204 - Transport stopped.

POST /transports/0/stop

Stop transport.

Response

204 - Transport stopped.

GET /transports/0/play

Determine if transport is playing.

Response

200 - Transport play response.
The response is a JSON object.

PUT /transports/0/play

Start playing on transport. Deprecated, use POST /tranports/0/play instead.

Response

204 - Transport playing.

POST /transports/0/play

Start playing on transport.

Response

204 - Transport playing.

GET /transports/0/playback

Get playback state.

Response

200 - OK
The response is a JSON object.

Name	Type	Description
type	string	Possible values are: Play, Jog, Shuttle, Var.
loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
speed	number	Playback Speed, 1.0 for normal forward playback
position	integer	Playback position on the timeline in units of video frames

PUT /transports/0/playback

Set playback state.

Parameters

Name	Type	Description
type	string	Possible values are: Play, Jog, Shuttle, Var.
loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
speed	number	Playback Speed, 1.0 for normal forward playback
position	integer	Playback position on the timeline in units of video frames

Response

204 - No Content

GET /transports/0/record

Get record state.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
recording	boolean	Is transport in Input Record mode

PUT /transports/0/record

Set record state. Deprecated, use POST /transports/0/record instead.

Parameters

Name	Type	Description
recording	boolean	Is transport in Input Record mode
clipName	string	Used to set the requested clipName to record to, when specifying “recording” attribute to True

Response

204 - Recording started.

POST /transports/0/record

Start recording.

Parameters

Name	Type	Description
clipName	string	Specific name of clip to record to.

Response

204 - Recording started.

GET /transports/0/clipIndex

Get the clip index of the currently playing clip on the timeline.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clipIndex	number	The 0-based index of the clip being played on the timeline. null when there is no timeline or an empty timeline.

GET /transports/0/timecode

Get device's timecode.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
display	string	The display timecode serialised as a string.
timeline	string	The timeline timecode serialised as a string.

GET /transports/0/timecode/source

Get timecode source selected on device

Response

200 - OK

The response is a JSON object.

Name	Type	Description
timecode	string	Possible values are: Timeline, Clip.

GET /transports/0/clip

Get clip information about the currently recording (or transferring) clip, if it exists

Response

200 - Information about the clip currently being recorded.

The response is a JSON object.

Name	Type	Description
clip	object	
clip.clipUniqueId	integer	Unique ID used to identify this clip
clip.filePath	string	Path to the file relative to the root of a mount
clip.fileSize	integer	Size of file on disk in bytes
clip.codecFormat	object	
clip.codecFormat.codec	string	Currently selected codec.
clip.codecFormat.container	string	Multimedia container format.
clip.videoFormat (required)	object	Video format configuration.
clip.videoFormat.name	string	Video format serialised as a string.
clip.videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
clip.videoFormat.height	number	Height dimension of video format.
clip.videoFormat.width	number	Width dimension of video format.
clip.videoFormat.interlaced	boolean	Is the display format interlaced?
clip.startTimecode	string	Start timecode of the clip serialised as string
clip.durationTimecode	string	Duration of the clip in timecode format serialised as string
clip.frameCount	integer	Number of frames in clip; duration of the clip in frames

System Control API

API for controlling the System Modes on Blackmagic Design products.

GET /system

Get device system information.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codecFormat	object	
codecFormat.codec	string	Currently selected codec.
codecFormat.container	string	Multimedia container format.
videoFormat (required)	object	Video format configuration.
videoFormat.name	string	Video format serialised as a string.
videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
videoFormat.height	number	Height dimension of video format.
videoFormat.width	number	Width dimension of video format.
videoFormat.interlaced	boolean	Is the display format interlaced?

GET /system/product

Get device product information.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
deviceName	string	Name of device as displayed in Setup
productName	string	Device's product name
softwareVersion	string	Software version running on device

GET /system/supportedCodecFormats

Get the list of supported codecs.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codecs	array	
codecs[i]	object	
codecs[i].codec	string	Currently selected codec.
codecs[i].container	string	Multimedia container format.

GET /system/codecFormat

Get the currently selected codec.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codec	string	Currently selected codec.
container	string	Multimedia container format.

PUT /system/codecFormat

Set the codec.

Parameters

Name	Type	Description
codec	string	Currently selected codec.
container	string	Multimedia container format.

Response

204 - The codec updated successfully.

GET /system/videoFormat

Get the currently selected video format.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
name	string	Video format serialised as a string.
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

PUT /system/videoFormat

Set the timeline video format. Deprecated, use PUT /timelines/0/videoFormat instead.

Parameters

This parameter can be one of the following types:

Name	Type	Description
name	string	Video format serialised as a string.

Name	Type	Description
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

Response

204 - The video format updated successfully.

400 - Invalid request.

409 - Operation unsupported in the current state.

Media Control API

API for controlling media devices in Blackmagic Design products.

GET /media/workingset

Get the list of media devices currently in the working set.

Response

200 - The list of media devices in the working set. Entries are null if there is no media device in that slot.

The response is a JSON object.

Name	Type	Description
size	integer	The fixed size of this device's working set
workingset (required)	array	
workingset[i]	object	
workingset[i].index	integer	Index of this media in the working set
workingset[i].activeDisk	boolean	Is this current item the active disk
workingset[i].volume	string	Volume name
workingset[i].deviceName	string	Internal device name of this media device
workingset[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
workingset[i].totalSpace	integer	Total space on media device in bytes
workingset[i].remainingSpace	integer	Remaining space on media device in bytes
workingset[i].clipCount	integer	Number of clips currently on the device

GET /media/active

Get the currently active media device.

Response

200 - The current active media device.

The response is a JSON object.

Name	Type	Description
workingsetIndex	integer	Working set index of the active media device
deviceName	string	Internal device name of this media device

204 - No media is currently active

PUT /media/active

Set the currently active media device.

Parameters

Name	Type	Description
workingsetIndex	integer	Working set index of the media to become active

Response

204 - The active media device was set successfully.

400 - Setting the currently active media device is not possible in the current state.

GET /media/devices/doformatSupportedFilesystems

Get the list of filesystems available to format the device.

Response

200 - The list of filesystems permitted for formatting.

The response is a JSON object.

GET /media/devices/{deviceName}

Get information about a requested device.

Parameters

Name	Type	Description
{deviceName}	string	

Response

200 - Information about the requested device.

The response is a JSON object.

Name	Type	Description
state	string	The current state of the media device. Possible values are: None, Scanning, Mounted, Uninitialised, Formatting, RaidComponent.

400 - Invalid device name

404 - Device not found

GET /media/devices/{deviceName}/doformat

Get a format key, used to format the device with a PUT request.

Parameters

Name	Type	Description
{deviceName}	string	

Response

200 - Format prepared

The response is a JSON object.

Name	Type	Description
deviceName	string	Internal device name of this media device
key	string	The key used to format this device, it must be fetched with the GET request and then provided back with a PUT request

400 - Cannot format the device

404 - Device not found

PUT /media/devices/{deviceName}/doformat

Perform a format of the media device.

Parameters

Name	Type	Description
{deviceName}	string	

Name	Type	Description
key	string	The key used to format this device, it must be fetched with the GET request and then provided back with a PUT request
filesystem	string	Filesystem to format to. GET doFormatSupportedFilesystems returns list of supported filesystems.
volume	string	Volume name to set for the disk after format

Response

204 - Format successful

400 - Cannot format the device, invalid filesystem or key

404 - Device not found

Timeline Control API

API for controlling playback timeline.

GET /timelines/0

Get the playback timeline.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clips	array	
clips[i]	object	
clips[i].clipUniqueId	integer	Unique identifier used to identify this media clip. If the same media clip is added to the timeline multiple times, each timeline clip has the same clipUniqueId
clips[i].frameCount	integer	Duration of timeline clip in frames, the number of frames in this clip on the timeline
clips[i].durationTimecode	string	Duration of the timeline clip in timecode format serialised as string. This will differ to durationTimecode reported in /clips for this clipUniqueId if clipIn or frameCount was specified when adding this clip to the timeline.
clips[i].clipIn	string	In frame offset for the clip on the timeline, where 0 is the first frame of the on-disk clip
clips[i].inTimecode	string	Clip timecode of the first frame of this timeline clip serialised as string (clip startTimecode + clipIn frames)
clips[i].timelineIn	string	Timeline position of the first frame of this clip, where 0 is the first frame of the timeline

clips[i].timelineInTimecode	string	Timeline timecode of the first frame of this timeline clip serialised as string

Response

404 - No timeline / disk available.

DELETE /timelines/0

Clear the current playback timeline. Deprecated, prefer to use POST /timelines/0/clear

Response

204 - The timeline was cleared.

POST /timelines/0

Add a clip to the timeline.

Parameters

Name	Type	Description
insertBefore	integer	Clip(s) will be inserted before this timeline clip index. If omitted, inserts to the end of the timeline. 0 inserts to the beginning of the timeline.
clips		

Response

204 - The clip was added to the timeline as specified.

POST /timelines/0/add

Add a clip to the end of the timeline. Deprecated, use POST /timelines/0 to add clips within the timeline.

Parameters

This parameter can be one of the following types:

Name	Type	Description
clips	integer	Unique ID (clipUniqueId) of the clip to add to the timeline

Name	Type	Description
clips	array	
clips[i]	integer	Unique ID (clipUniqueId) of the clip to add to the timeline

Response

204 - The clip was added to the end of the timeline.

DELETE /timelines/0/clear

Clear the playback timeline.

Response

204 - The timeline was cleared.

DELETE /timelines/0/clips/{timelineClipIndex}

Remove the specified clip from the timeline.

Parameters

Name	Type	Description
{timelineClipIndex}	integer	

Response

204 - The specified clip was removed from the timeline.

Event Control API

API For working with built-in websocket.

GET /event/list

Get the list of events that can be subscribed to using the websocket API.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
events	array	
events[i]	string	List of events that can be subscribed to using the websocket API

Clips Control API

API for listing clips on disk.

GET /clips

Get the list of clips on the active disk.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clips	array	
clips[i]	object	
clips[i].clipUniqueId	integer	Unique ID used to identify this clip
clips[i].filePath	string	Path to the file relative to the root of a mount
clips[i].fileSize	integer	Size of file on disk in bytes
clips[i].codecFormat	object	
clips[i].codecFormat.codec	string	Currently selected codec.
clips[i].codecFormat.container	string	Multimedia container format.
clips[i].videoFormat (required)	object	Video format configuration.
clips[i].videoFormat.name	string	Video format serialised as a string.
clips[i].videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
clips[i].videoFormat.height	number	Height dimension of video format.
clips[i].videoFormat.width	number	Width dimension of video format.
clips[i].videoFormat.interlaced	boolean	Is the display format interlaced?
clips[i].startTimecode	string	Start timecode of the clip serialised as string
clips[i].durationTimecode	string	Duration of the clip in timecode format serialised as string
clips[i].frameCount	integer	Number of frames in clip; duration of the clip in frames

Response

404 - There is no active disk

HyperDeck Control API

API for controlling HyperDecks.

POST /system/reboot

Reboots the device.

Response

204 - The device will reboot immediately.

409 - Rebooting is not possible in the current state.

GET /system/uptime

Gets the current system uptime.

Response

200 - The current system uptime

The response is a JSON object.

Name	Type	Description
uptimeSeconds	integer	The system uptime in seconds

PUT /system/identify

Sets the identify mode. If set to true, will exit identify mode after 10 seconds.

Parameters

Name	Type	Description
enabled	boolean	Is the device identifying itself?

Response

204 - Identify updated successfully.

GET /transports/0/recordCache

Gets information about the recording cache.

Response

200 - Current information about the recording cache

The response is a JSON object.

Name	Type	Description
status	string	The current status of the cache. “none” means no cache is detected by the device. Possible values are: undetected, unformatted, idle, transferring, queued, recording, disabled.
remainingRecordingTime	integer	The remaining recording time in seconds.
transferringDevice	string	The device name of the disk the cache is currently transferring to.

GET /transports/0/recordCache/enabled

Checks if the record cache is enabled.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
enabled	boolean	Is the record cache enabled?

PUT /transports/0/recordCache/enabled

Enables or disables the record cache. Has no effect if cache is not supported / installed / formatted.

Parameters

Name	Type	Description
enabled	boolean	Is the record cache enabled?

Response

204 - Record cache enabled / disabled was changed.

GET /transports/0/record/spillOrder

Gets media devices in order of which will next be spilled to.

Response

200 - The media device spill order

The response is a JSON object.

Name	Type	Description
devices	array	
devices[i]	object	
devices[i].deviceName	string	Internal device name of the drive.

POST /transports/0/record/spillToNewFile

Spills to a new file.

Response

204 - Spilled to a new file.

POST /transports/0/record/spillToNextDevice

Spills to the next media device

Response

204 - Spilled to the specified drive.

GET /transports/0/inputVideoFormat

Gets the video format of the input video signal.

Response

200 - The video format of the input video signal. “inputVideoFormat” is null when there is no timeline.

The response is a JSON object.

Name	Type	Description
inputVideoFormat (required)	object	Video format configuration.
inputVideoFormat.name	string	Video format serialised as a string.
inputVideoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
inputVideoFormat.height	number	Height dimension of video format.
inputVideoFormat.width	number	Width dimension of video format.
inputVideoFormat.interlaced	boolean	Is the display format interlaced?

GET /transports/0/supportedInputVideoSources

Gets the currently supported input video signal sources.

Response

200 - The supported input video signal sources.

The response is a JSON object.

Name	Type	Description
supportedInputVideoSources	array	
supportedInputVideoSources[i]	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

GET /transports/0/inputVideoSource

Gets the source of the input video signal.

Response

200 - The input video signal source. The source will be one in the list from GET /transports/0/supportedInputVideoSources.

The response is a JSON object.

Name	Type	Description
inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

PUT /transports/0/inputVideoSource

Sets the source of the input video signal.

Parameters

Name	Type	Description
inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

Response

204 - The source of the input video signal was set successfully.

400 - The source specified was invalid or unsupported.

GET /timelines/0/playRange

Gets the current timeline play range. playRange is null if playing the whole timeline, or there is no play range.

Response

200 - The current timeline play range.

The response is a JSON object.

Name	Type	Description
playRange		

PUT /timelines/0/playRange

Sets the timeline play range.

Parameters

Name	Type	Description
playRange		

Response

204 - The timeline play range was set successfully.

POST /timelines/0/playRange/clear

Clears the timeline play range, sets the play range to be the whole timeline.

Response

204 - The timeline play range was cleared successfully.

GET /timelines/0/videoFormat

Gets the video format of the timeline.

Response

200 - The video format of the timeline. “videoFormat” is null when there is no timeline.

The response is a JSON object.

Name	Type	Description
videoFormat (required)	object	Video format configuration.
videoFormat.name	string	Video format serialised as a string.
videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
videoFormat.height	number	Height dimension of video format.
videoFormat.width	number	Width dimension of video format.
videoFormat.interlaced	boolean	Is the display format interlaced?

PUT /timelines/0/videoFormat

Sets the video format of the timeline.

Parameters

This parameter can be one of the following types:

Name	Type	Description
name	string	Video format serialised as a string.

Name	Type	Description
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

Response

204 - The timeline video format was set successfully.

400 - The requested video format was invalid.

409 - The video format cannot be changed at this time.

POST /timelines/0/rebuild

Rebuilds the timeline with default rules in the current timeline format.

Response

204 - The timeline was rebuilt with default rules.

GET /media/external

Gets the list of present external media devices.

Response

200 - The list of present external media devices

The response is a JSON object.

Name	Type	Description
devices	array	
devices[i] (required)	object	
devices[i].volume	string	Volume name
devices[i].deviceName	string	Internal device name of this media device
devices[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
devices[i].totalSpace	integer	Total space on media device in bytes
devices[i].remainingSpace	integer	Remaining space on media device in bytes
devices[i].clipCount	integer	Number of clips currently on the device

GET /media/external/selected

Gets the current selected external media device.

Response

200 - The selected external media device

The response is a JSON object.

Name	Type	Description
selected	object	
selected.deviceName	string	Internal device name of the drive.

404 - No selected external media has been selected

PUT /media/external/selected

Sets the current selected external media device.

Parameters

Name	Type	Description
selected	object	
selected.deviceName	string	Internal device name of the drive.

Response

204 - The selected external media device was set successfully.

GET /media/nas/discovered

Gets the NAS hosts discoverable by the device.

Response

200 - The list of discovered NAS hosts

The response is a JSON object.

Name	Type	Description
hosts	array	
hosts[i]	object	
hosts[i].hostName	string	The hostname of the NAS host
hosts[i].friendlyName	string	The friendly name of the NAS host
hosts[i].ip	string	The IP address of the NAS host

GET /media/nas/bookmarks

Gets all NAS share bookmarks.

Response

200 - The list of NAS share bookmarks

The response is a JSON object.

Name	Type	Description
hosts	array	
hosts[i] (required)	object	
hosts[i].url	string	URL of the NAS share

POST /media/nas/bookmarks

Add a new NAS share bookmarks.

Parameters

Response

204 - The NAS bookmark was added successfully.

400 - The NAS bookmark could not be added.

GET /media/nas/bookmarks/{url}

Get information about a requested network share bookmark.

Parameters

Name	Type	Description
{url}	string	

Response

200 - Information about the requested network share bookmark.

The response is a JSON object.

Name	Type	Description
url	string	URL of the NAS share

404 - Network share bookmark not found

PUT /media/nas/bookmarks/{url}

Adds a bookmark with the requested URL.

Parameters

Name	Type	Description
{url}	string	

Name	Type	Description
username	string	Default value is: guest.
password	string	

Response

204 - The NAS bookmark has been created.

400 - The NAS bookmark could not be created.

DELETE /media/nas/bookmarks/{url}

Deletes a bookmark with the requested URL.

Parameters

Name	Type	Description
{url}	string	

Response

204 - The NAS bookmark has been deleted.

GET /media/nas/selected

Gets the currently selected share bookmark.

Response

200 - Information about the selected network share bookmark.

The response is a JSON object.

Name	Type	Description
selected	object	
selected.url	string	URL of the NAS share

404 - No NAS drive has been selected.

PUT /media/nas/selected

Sets the selected share bookmark to the requested bookmark, or clears the bookmark.

Parameters

Name	Type	Description
selected	object	
selected.url	string	URL of the NAS share

Response

204 - The selected NAS bookmark was set.

400 - The selected NAS bookmark could not be set.

Notification websocket - 1.0.0

Service that notifies subscribers of device state changes.

messages

Subscribe (The messages from the server/device)

Response Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: subscribe, unsubscribe, listSubscriptions, listProperties, websocketOpened .
.data.properties	array	
.data.properties[i]	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.values	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.data.success	boolean	
.type	string	Possible values are: response .
.id	number	Optional parameter that repeats the id in the output for tracking messages

Event Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: propertyValueChanged .
.data.property	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.value	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.type	string	Possible values are: event .

Publish (The messages that user can send to the server/device)

Response Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: subscribe, unsubscribe, listSubscriptions, listProperties, websocketOpened .
.data.properties	array	
.data.properties[i]	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.values	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.data.success	boolean	
.type	string	Possible values are: response .
.id	number	Optional parameter that repeats the id in the output for tracking messages

Device Properties

/media/workingset

The value JSON returned via the eventResponse when the /media/workingset property changes on the device:

Name	Type	Description
size	integer	The fixed size of this device's working set
workingset (required)	array	
workingset[i]	object	
workingset[i].index	integer	Index of this media in the working set
workingset[i].activeDisk	boolean	Is this current item the active disk
workingset[i].volume	string	Volume name
workingset[i].deviceName	string	Internal device name of this media device
workingset[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
workingset[i].totalSpace	integer	Total space on media device in bytes
workingset[i].remainingSpace	integer	Remaining space on media device in bytes
workingset[i].clipCount	integer	Number of clips currently on the device

/media/active

The value JSON returned via the eventResponse when the /media/active property changes on the device:

Name	Type	Description
.workingsetIndex	integer	Working set index of the active media device
.deviceName	string	Internal device name of this media device

/system

The value JSON returned via the eventResponse when the /system property changes on the device:

Name	Type	Description
.codecFormat	object	Currently selected codec
.codecFormat.codec	string	Currently selected codec
.codecFormat.container	string	Multimedia container format
.videoFormat	string	Name of the video format

/system/codecFormat

Currently selected codec

The value JSON returned via the eventResponse when the /system/codecFormat property changes on the device:

Name	Type	Description
.codec	string	Currently selected codec
.container	string	Multimedia container format

/system/videoFormat

Name of the video format

The value JSON returned via the eventResponse when the /system/videoFormat property changes on the device:

Name	Type	Description

/timelines/0

The value JSON returned via the eventResponse when the /timelines/0 property changes on the device:

Name	Type	Description
.clips	array	
.clips[i]	object	
.clips[i].clipUniqueId	integer	Unique identifier used to identify this media clip. If the same media clip is added to the timeline multiple times, each timeline clip has the same clipUniqueId
.clips[i].frameCount	integer	Duration of timeline clip in frames, the number of frames in this clip on the timeline
.clips[i].durationTimecode	string	Duration of the timeline clip in timecode format serialised as string. This will differ to durationTimecode reported in /clips for this clipUniqueId if clipIn or frameCount was specified when adding this clip to the timeline.
.clips[i].clipIn	string	In frame offset for the clip on the timeline, where 0 is the first frame of the on-disk clip
.clips[i].inTimecode	string	Clip timecode of the first frame of this timeline clip serialised as string (clip startTimecode + clipIn frames)
.clips[i].timelineIn	string	Timeline position of the first frame of this clip, where 0 is the first frame of the timeline
.clips[i].timelineInTimecode	string	Timeline timecode of the first frame of this timeline clip serialised as string

/transports/0

The value JSON returned via the eventResponse when the /transports/0 property changes on the device:

Name	Type	Description
.mode	string	Transport mode Possible values are: InputPreview, InputRecord, Output .

/transports/0/stop

true when transport mode is InputPreview or when in Output mode and speed is 0

The value JSON returned via the eventResponse when the /transports/0/stop property changes on the device:

Name	Type	Description

/transports/0/play

True when transport is in Output mode and speed is non-zero

The value JSON returned via the eventResponse when the /transports/0/play property changes on the device:

Name	Type	Description

/transports/0/playback

The value JSON returned via the eventResponse when the /transports/0/playback property changes on the device:

Name	Type	Description
.type	string	Possible values are: Play, Jog, Shuttle, Var .
.loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
.singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
.speed	number	Playback speed, 1.0 for normal forward playback
.position	integer	Playback position on the timeline in units of video frames

/transports/0/record

The value JSON returned via the eventResponse when the /transports/0/record property changes on the device:

Name	Type	Description
.recording	boolean	Is transport in Input Record mode

/transports/0/timecode

The value JSON returned via the eventResponse when the /transports/0/timecode property changes on the device:

Name	Type	Description
display	string	The display timecode serialised as a string.
timeline	string	The timeline timecode serialised as a string.

/transports/0/timecode/source

The value JSON returned via the eventResponse when the /transports/0/timecode/source property changes on the device:

Name	Type	Description
.timecode	string	Possible values are: Timeline, Clip .

/transports/0/clipIndex

The value JSON returned via the eventResponse when the /transports/0/clipIndex property changes on the device:

Name	Type	Description
.clipIndex	number	The 0-based index of the clip being played on the timeline. null when there is no timeline or an empty timeline.

/media/external

The value JSON returned via the eventResponse when the /media/external property changes on the device:

Name	Type	Description
.volume	string	Volume name
.deviceName	string	Name of media device
.remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
.totalSpace	integer	Total space on media device in bytes
.remainingSpace	integer	Remaining space on media device in bytes
.clipCount	integer	Number of clips currently on the device

/media/external/selected

The value JSON returned via the eventResponse when the /media/external/selected property changes on the device:

Name	Type	Description
.deviceName	string	Internal device name of this media device

/transports/0/inputVideoSource

The value JSON returned via the eventResponse when the /transports/0/inputVideoSource property changes on the device:

Name	Type	Description
.inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite .

/transports/0/inputVideoFormat

The value JSON returned via the eventResponse when the /transports/0/inputVideoFormat property changes on the device:

Name	Type	Description
.inputVideoFormat	string	Name of the video format

/timelines/0/videoFormat

The value JSON returned via the eventResponse when the /timelines/0/videoFormat property changes on the device:

Name	Type	Description
.videoFormat	string	Name of the video format

/media/nas/discovered

The value JSON returned via the eventResponse when the /media/nas/discovered property changes on the device:

Name	Type	Description
.hostName	string	Hostname of external network drive
.friendlyName	string	Name of external network drive
.ip	string	IP Address of external network drive

/media/nas/bookmarks

The value JSON returned via the eventResponse when the /media/nas/bookmarks property changes on the device:

Name	Type	Description
.hosts	array	
.hosts[i]	object	
.hosts[i].url	string	URL associated with bookmark

Pomoc

Uzyskiwanie pomocy

Najszybszym sposobem uzyskania pomocy jest wejście na strony wsparcia technicznego online Blackmagic Design i sprawdzenie najnowszych materiałów pomocniczych dostępnych dla nagrywarki dyskowej Blackmagic HyperDeck.

Strony wsparcia technicznego online Blackmagic Design

Najnowsza instrukcja obsługi, oprogramowanie i noty informacyjne można znaleźć w centrum wsparcia technicznego na stronie www.blackmagicdesign.com/pl/support.

Forum Blackmagic Design

Forum Blackmagic Design na naszej stronie internetowej jest pomocnym źródłem dalszych informacji i kreatywnych pomysłów. Może to być też szybszy sposób uzyskania pomocy. Być może istnieją już odpowiedzi na podobne pytania od innych doświadczonych użytkowników i pracowników Blackmagic Design, którzy mogą Ci pomóc. Forum znajdziesz pod adresem https://forum.blackmagicdesign.com

Kontakt z obsługą techniczną Blackmagic Design

Jeśli nie możesz znaleźć potrzebnej pomocy w naszych materiałach na forum, użyj przycisku **Wyślij do nas e-mail** na stronie wsparcia technicznego, aby wysłać zgłoszenie dotyczące pomocy technicznej. Alternatywnie kliknij na stronie przycisk **Znajdź lokalną pomoc techniczną** i zadzwoń do najbliższego biura pomocy technicznej Blackmagic Design.

Sprawdzanie aktualnie zainstalowanej wersji oprogramowania

Aby sprawdzić, jaka wersja oprogramowania Blackmagic HyperDeck jest zainstalowana na Twoim komputerze, otwórz okno **Informacje o Blackmagic HyperDeck Setup**.

- W systemie Mac OS otwórz oprogramowanie **Blackmagic HyperDeck Setup** w folderze **Aplikacje**. Wybierz **Informacje o Blackmagic HyperDeck Setup** w **Menu aplikacji**, aby wyświetlić numer wersji.
- W systemie Windows otwórz oprogramowanie **Blackmagic HyperDeck Setup** z menu **Start** lub na ekranie startowym. Kliknij na **Pomoc** na pasku menu i wybierz **Informacje o Blackmagic HyperDeck Setup**, aby wyświetlić numer wersji.

Jak uzyskać najnowsze aktualizacje oprogramowania

Po sprawdzeniu wersji oprogramowania Blackmagic HyperDeck Setup zainstalowanego na komputerze odwiedź centrum wsparcia technicznego Blackmagic Design na stronie www.blackmagicdesign.com/pl/support, aby sprawdzić najnowsze aktualizacje. Zazwyczaj zaleca się instalację najnowszych aktualizacji. Mądrą praktyką jest jednak unikanie aktualizacji oprogramowania w trakcie realizacji ważnego projektu.

Wymogi prawne

Utylizacja zużytego sprzętu elektrycznego i elektronicznego na terenie Unii Europejskiej.

Symbol na produkcie oznacza, że tego urządzenia nie wolno utylizować razem z innymi odpadami. Aby zutylizować zużyty sprzęt, należy przekazać go do wyznaczonego punktu zbiórki w celu recyklingu. Oddzielna zbiórka i recykling zużytego sprzętu w czasie utylizacji pomoże oszczędzić zasoby naturalne i zapewni, że zostanie on poddany recyklingowi w sposób chroniący zdrowie ludzi i środowisko. Więcej informacji na temat miejsc, w których można oddać zużyty sprzęt do recyklingu można uzyskać w lokalnym biurze ds. recyklingu w Twoim mieście lub u sprzedawcy, od którego zakupiłeś produkt.

Niniejsze urządzenie zostało przetestowane i uznane za zgodne z ograniczeniami dla urządzeń cyfrowych klasy A, zgodnie z częścią 15 przepisów FCC. Ograniczenia te zostały opracowane w celu zapewnienia rozsądnej ochrony przed szkodliwymi zakłóceniami podczas pracy urządzenia w środowisku komercyjnym. Tego typu sprzęt generuje, wykorzystuje i może wypromieniować energię o częstotliwości radiowej. Jeśli nie jest zainstalowany i używany zgodnie z instrukcją, może powodować szkodliwe zakłócenia w komunikacji radiowej. Użytkowanie tego produktu na terenach zamieszkałych może powodować szkodliwe zakłócenia, w którym to przypadku użytkownik będzie zobowiązany do usunięcia zakłóceń na własny koszt.

Działanie podlega dwóm następującym warunkom:

1. Niniejsze urządzenie nie może powodować szkodliwych zakłóceń.
2. Niniejsze urządzenie musi odbierać wszelkie zakłócenia zewnętrzne, w tym zakłócenia mogące powodować niepożądane funkcjonowanie.

R-R-BMD-20211410001

Certyfikacja ISED na rynek kanadyjski

ICES-3 (A)
NMB-3 (A)

Niniejsze urządzenie jest zgodne z kanadyjskimi normami dla urządzeń cyfrowych klasy A.

Wszelkie modyfikacje lub użycie tego produktu niezgodnie z jego przeznaczeniem może unieważnić zgodność z tymi normami.

Podłączenie do interfejsów HDMI musi być wykonane przy użyciu wysokiej jakości ekranowanych kabli HDMI.

Niniejsze urządzenie zostało przetestowane pod kątem zgodności z przeznaczeniem do użytku w środowisku komercyjnym. Jeśli urządzenie jest używane w środowisku domowym, może powodować zakłócenia radiowe.

Informacje dotyczące bezpieczeństwa

Produkt nadaje się do użytku na obszarach tropikalnych o temperaturze otoczenia do 40°C.

Upewnij się, że wokół produktu zapewniona jest odpowiednia, nieograniczona wentylacja.

Produkt nie zawiera żadnych części, które mogą być naprawiane przez użytkownika. Serwisowanie należy zlecić lokalnemu centrum serwisowemu Blackmagic Design.



Stosować wyłącznie na wysokościach nie większych niż 2000 m n.p.m.

Kalifornijskie ostrzeżenie Prop 65

Niniejszy produkt może narażać użytkownika na działanie substancji chemicznych, takich jak śladowe ilości polibromowanych bifenyli w częściach plastikowych uznanych w stanie Kalifornia za powodujące raka i uszkodzenia płodu lub działające szkodliwie dla rozrodczości.

Więcej informacji na stronie www.P65Warnings.ca.gov

Oddział europejski

Blackmagic Design B.V, Amsterdam
Sloterdijk Teleport Towers Office 2.17,
Kingsfordweg 151,
Amsterdam, 1043GR.

Gwarancja

12 miesięcy ograniczonej gwarancji

Firma Blackmagic Design gwarantuje, że niniejszy produkt będzie wolny od wad materiałowych i produkcyjnych przez okres 12 miesięcy od daty zakupu. Jeśli produkt okaże się wadliwy w okresie gwarancyjnym, Blackmagic Design, według własnego uznania albo naprawi wadliwy produkt bez opłat za części i koszty naprawy, albo zapewni wymianę na produkt zastępczy w zamian za wadliwy produkt.

W celu uzyskania usługi w ramach niniejszej gwarancji, klient musi powiadomić Blackmagic Design o wadzie przed upływem okresu gwarancyjnego i dokonać odpowiednich przygotowań do wykonania usługi. Klient jest odpowiedzialny za zapakowanie i opłacenie wysyłki wadliwego produktu do wyznaczonego centrum serwisowego wskazanego przez Blackmagic Design. Klient jest odpowiedzialny za opłacenie wszystkich kosztów wysyłki, ubezpieczenia, ceł, podatków i innych opłat za produkty zwrócone do nas z jakiegokolwiek powodu.

Niniejsza gwarancja nie obowiązuje w przypadku wad, awarii lub uszkodzeń spowodowanych niewłaściwym użytkowaniem lub niewłaściwą lub niedostateczną konserwacją i pielęgnacją. W ramach niniejszej gwarancji firma Blackmagic Design nie jest zobowiązana do świadczenia następujących usług serwisowych: a) naprawy uszkodzeń wynikających z prób instalacji, naprawy lub serwisowania produktu przez personel inny niż przedstawiciele Blackmagic Design, b) naprawy uszkodzeń wynikających z niewłaściwego użytkowania lub podłączenia do niekompatybilnego sprzętu, c) naprawy wszelkich uszkodzeń lub nieprawidłowego działania spowodowanego użyciem części lub materiałów eksploatacyjnych innych niż Blackmagic Design, lub d) serwisowania produktu, który został zmodyfikowany lub zintegrowany z innymi produktami, jeśli w wyniku takiej modyfikacji lub integracji zwiększa się czas lub trudność serwisowania produktu. NINIEJSZA GWARANCJA UDZIELANA PRZEZ BLACKMAGIC DESIGN ZASTĘPUJE WSZELKIE INNE GWARANCJE, WYRAŹNIE OKREŚLONE LUB DOROZUMIANE. BLACKMAGIC DESIGN I JEJ DOSTAWCY WYŁĄCZAJĄ WSZELKIE DOROZUMIANE GWARANCJE PRZYDATNOŚCI HANDLOWEJ LUB PRZYDATNOŚCI DO OKREŚLONEGO CELU. ODPOWIEDZIALNOŚĆ BLACKMAGIC DESIGN ZA NAPRAWĘ LUB WYMIANĘ WADLIWYCH PRODUKTÓW JEST JEDYNYM I WYŁĄCZNYM ZADOŚĆUCZYNIENIEM ZAPEWNIONYM KLIENTOWI ZA WSZELKIE SZKODY POŚREDNIE, SZCZEGÓLNE, PRZYPADKOWE LUB WYNIKOWE, NIEZALEŻNIE OD TEGO, CZY BLACKMAGIC DESIGN LUB DOSTAWCA ZOSTALI WCZEŚNIEJ POWIADOMIENI O MOŻLIWOŚCI WYSTĄPIENIA TAKICH SZKÓD. BLACKMAGIC DESIGN NIE PONOSI ODPOWIEDZIALNOŚCI ZA JAKIEKOLWIEK NIELEGALNE UŻYCIE SPRZĘTU PRZEZ KLIENTA. FIRMA BLACKMAGIC NIE PONOSI ODPOWIEDZIALNOŚCI ZA JAKIEKOLWIEK SZKODY WYNIKAJĄCE Z UŻYTKOWANIA NINIEJSZEGO PRODUKTU. UŻYTKOWNIK OBSŁUGUJE TEN PRODUKT NA WŁASNE RYZYKO.

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Липень 2024 р.

Посібник зі встановлення та експлуатації

Blackmagicdesign

HyperDeck
Shuttle HD



HyperDeck Shuttle HD



Шановний користувачу!

Дякуємо вам за покупку пристрою Blackmagic HyperDeck Shuttle HD.

Коли ми розробляли перші дискові рекордери Blackmagic HyperDeck, то прагнули спростити запис і відтворення відео за допомогою швидкісних SSD-накопичувачів. Зараз ця лінійка поповнилася новою моделлю HyperDeck Shuttle HD.

Цей компактний настільний HDMI-рекордер має велику ручку пошуку та знайомі органи керування відтворенням, що в комбінації з відеомікшером ATEM Mini дозволяє швидко виконувати операції однією рукою під час створення контенту в реальному часі. HyperDeck Shuttle HD можна навіть використовувати як телесуфлер.

Пристрій дозволяє записувати контент на SD-карти та зовнішні флеш-диски в кодеку ProRes, DNxHD або H.264, а також відтворювати збережений матеріал.

Останню версію посібника та програмного забезпечення для HyperDeck можна знайти в розділі підтримки на вебсайті www.blackmagicdesign.com/ua. Використання актуальної версії ПЗ гарантує доступ до всіх наявних функцій. Щоб дізнатися про вихід оновлень, зареєструйтесь під час завантаження ПЗ. Ми постійно працюємо над удосконаленням наших продуктів, тому ваші відгуки допоможуть нам зробити їх ще кращими.



Ґрант Петті
Генеральний директор Blackmagic Design

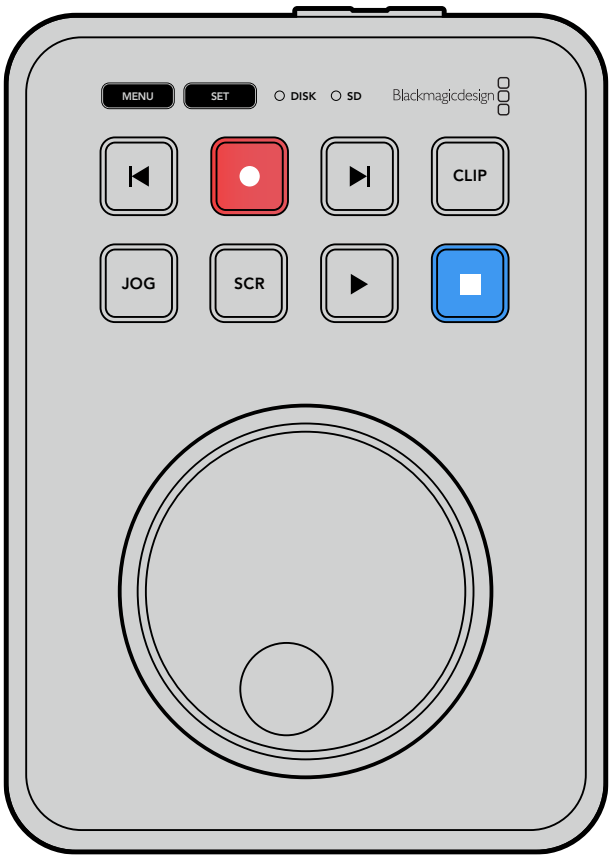
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Підготовка до роботи

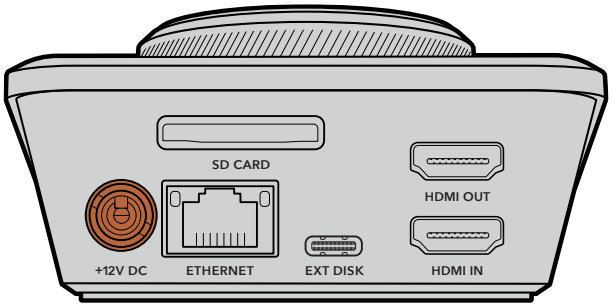
Щоб розпочати роботу з рекордером HyperDeck Shuttle HD, достатньо підключити живлення, під'єднати джерело HDMI-відео, встановити SD-карту або зовнішній накопичувач і натиснути кнопку запису.

У цьому розділі описано порядок підготовки до роботи з рекордером HyperDeck Shuttle HD.



Підключення живлення

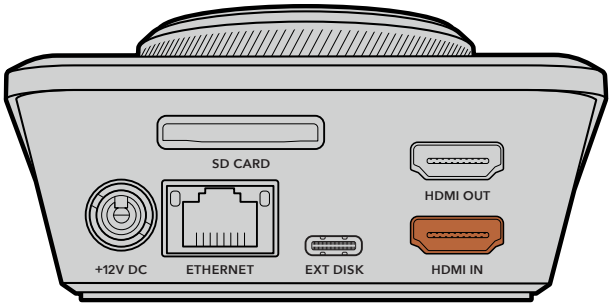
Підключіть блок живлення з комплекту постачання до відповідного входу на задній панелі. Щоб запобігти випадковому від'єднанню кабелю, затягніть фіксувальне кільце.



Підключіть блок живлення до відповідного входу на HyperDeck Shuttle HD

Підключення джерела відео- та аудіосигналу

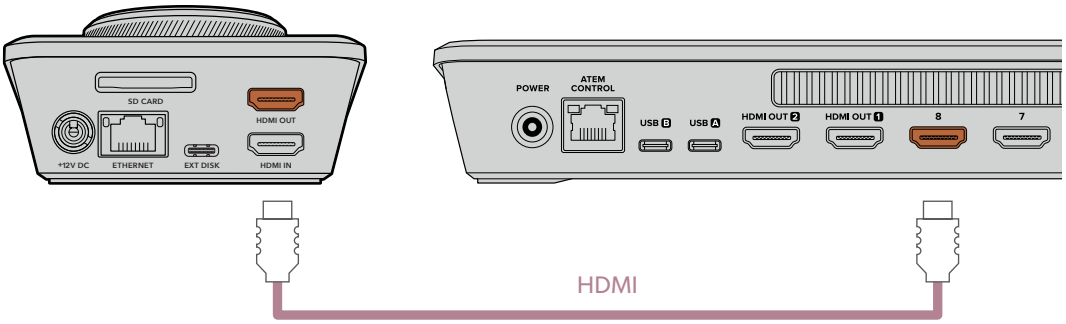
Щоб отримати відеосигнал, підключіть джерело до HDMI-входу на задній панелі рекордера.



Для виведення зображення під'єднайте до HDMI-виходу відповідне устаткування, наприклад мікшер ATEM Mini або HDMI-телевізор.

Роз'єм HDMI OUT також використовується для показу меню налаштувань, яке відображається поверх відео. Докладні відомості див. в розділі «Зміна налаштувань» нижче.

ПОРАДА. Якщо вхідне відео на дисплеї не відображається, можливо включено режим відтворення. Щоб активувати запис, натисніть відповідну кнопку.



Підключіть до HDMI-виходу необхідне устаткування, наприклад HDMI-телевізор або мікшер ATEM Mini

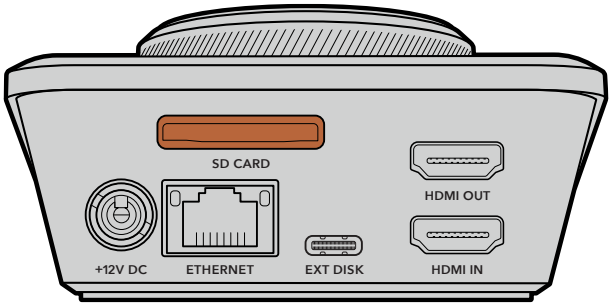
Підключення накопичувачів

Рекордери HyperDeck Shuttle HD постачаються готовими до роботи й не вимагають додаткового встановлення налаштувань. Усе, що потрібно, — це відформатована SD-карта або зовнішній диск.

Носії легко відформатувати за допомогою меню налаштувань. Також це можна зробити на комп'ютері. Докладні відомості див. в розділі «Форматування накопичувачів». Там також наводиться інформація про типи носіїв, які найкраще підходять для запису відео, і список рекомендованих SD-карт і зовнішніх дисків.

Порядок установлення SD-карти

1 Візьміть SD-карту так, щоб позолочені контакти були спрямовані вгору, і вставте її в слот. Обережно натисніть на карту, щоб вона ввійшла в слот до кінця.



2 Рекордер виконає перевірку SD-карти. У цей час на верхній панелі індикатор SD горітиме зеленим кольором. Після завершення перевірки він згасне.



Це все, що потрібно для того, щоб підготувати HyperDeck Shuttle HD для запису та відтворення.

Докладні відомості про зберігання та програвання кліпів, а також зміну налаштувань див. в розділах нижче.

Запис відео

Насамперед переконайтеся, що на HDMI-обладнанні відображається відео з потрібного джерела. Після цього можна відразу розпочинати запис контенту.

Для початку запису натисніть відповідну кнопку. При зберіганні на SD-карту індикатор SD та кнопка запису горітимуть червоним кольором, а кнопка відтворення — білим. Під час запису на зовнішній диск індикатор його слота також горітиме червоним кольором.

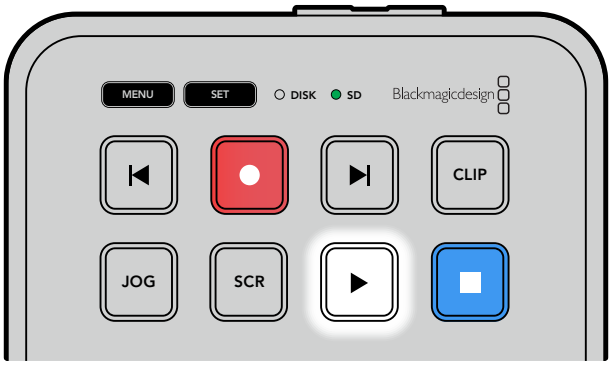


Щоб завершити зберігання, натисніть кнопку зупинки.

Відтворення

Для відтворення натисніть відповідну кнопку. Під час програвання кнопка відтворення горітиме білим кольором, а індикатор SD або DISK — зеленим.

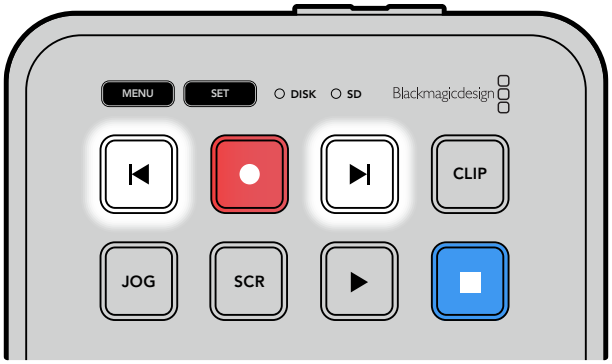
Якщо записано декілька кліпів, по них можна швидко пройти за допомогою кнопок перемотування вперед і назад.



Кнопки перемотування

Щоб перейти до початку поточного кліпу, натисніть кнопку перемотування назад один раз, а до попередніх кліпів — кілька разів.

Для переходу до наступних кліпів, натисніть кнопку перемотування вперед. Кнопки перемотування також блиматимуть, коли в утиліті HyperDeck Setup встановлено прапорець Identify HyperDeck.



Кнопки перемотування вперед і назад слугують для переходу до початку кліпів

ПОРАДА. Для забезпечення правильного відтворення відеофайлів на рекордері потрібно вибрати кодек, який використали для запису. Це можна зробити за допомогою меню. Докладні відомості див. в розділі «Зміна налаштувань».

Циклічне відтворення кліпів

Якщо під час перегляду знову натиснути кнопку відтворення, HyperDeck Shuttle HD програватиме всі кліпи циклом, доки не буде натиснуто кнопку зупинки.

Для одноразового програвання окремого кліпу виберіть CLIP і натисніть кнопку відтворення один раз, а для циклічного — ще раз.

Усі кліпи циклом	Щоб переглянути всі записані кліпи в циклічному режимі, під час програвання натисніть кнопку відтворення ще раз.
Поточний кліп циклом	Щоб активувати циклічний перегляд поточного кліпу в режимі CLIP, натисніть кнопку відтворення ще раз.

Режим CLIP

У режимі CLIP усі операції відтворення стосуватимуться лише одного кліпу. Наприклад, у цьому режимі можна виконати перемотування або перехід до певного кліпу, а потім натиснути кнопку відтворення, знаючи, що воно зупиниться в кінці кліпу.



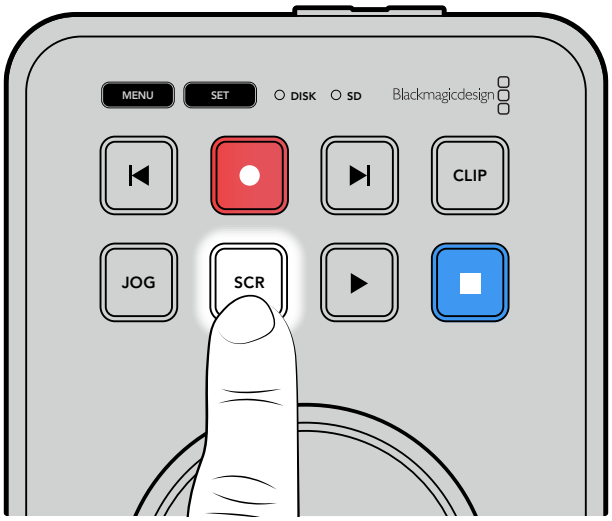
Якщо в режимі CLIP натиснути кнопку відтворення ще раз, поточний кліп програватиметься циклічно

Кругла ручка пошуку

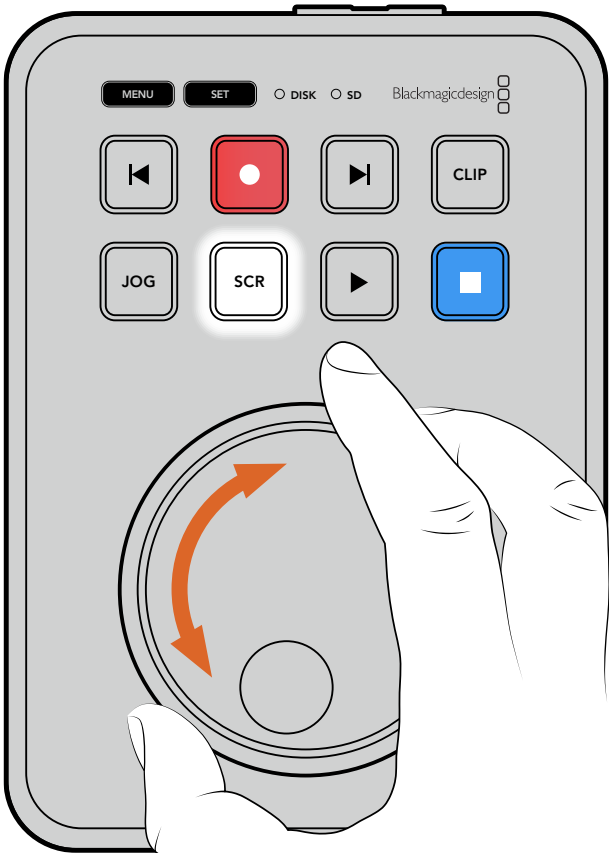
Ручка пошуку дозволяє швидко переходити від одного кліпу до іншого, а також вибирати окремі фрагменти та виконувати покадровий перегляд. Це дає можливість оперативно знаходити потрібну ділянку візуально та встановлювати точку початку відтворення кліпу для виведення його в ефір під час потокового мовлення.

На пристрої доступні режими протягування, прокручування та перемотування.

JOG	**Протягування**	Відтворення кліпу на покадровому рівні.
SCR	**Прокручування**	Режим прокручування дозволяє швидко переходити вперед або назад по записаному матеріалу. Прокручування виконують за допомогою ручки пошуку, яка дозволяє точно вибирати, з якого місця починати відтворення. При натисканні кнопки SCR також з'явиться вікно навігації по сховищах, яке показуватиме місце, де збережено даний відеофайл. Докладні відомості див. в розділі «Навігація по сховищах» нижче.
JOG SCR	**Перемотка**	Для ввімкнення цього режиму натисніть водночас кнопки JOG і SCR. Тепер обертанням ручки вліво чи вправо можна перемотувати матеріал відповідно назад або вперед. При повороті ручки швидкість перемотки збільшуватиметься, поки не буде досягнуто максимального, 50-кратного прискорення. Для уповільнення перемотки до повної зупинки поверніть ручку в початкове положення. Щоб зупинитися в певному місці, натисніть кнопку зупинки, а щоб відновити відтворення з поточного положення — кнопку відтворення. Слід зазначити, що максимальну швидкість перемотки можна зменшити в меню налаштувань. Докладні відомості див. в розділі «Налаштування» нижче.



Для вибору режимів протягування та прокручування використовують відповідно кнопки JOG і SCR

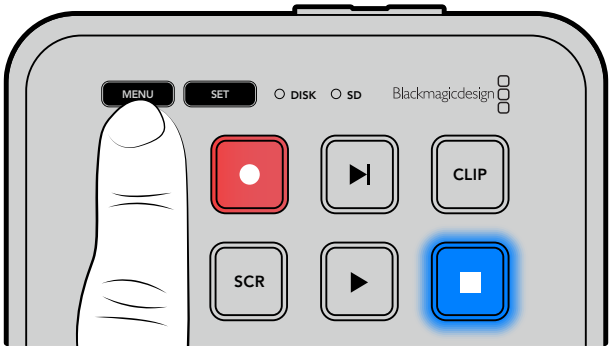


Після ввімкнення режиму поверніть ручку пошуку

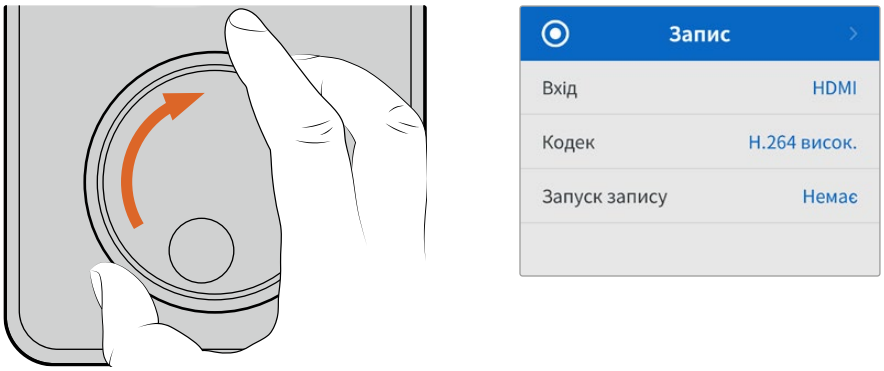
ПОРАДА. Щоб повернутися до звичайного режиму програвання, натисніть кнопку відтворення або зупинки.

Зміна налаштувань

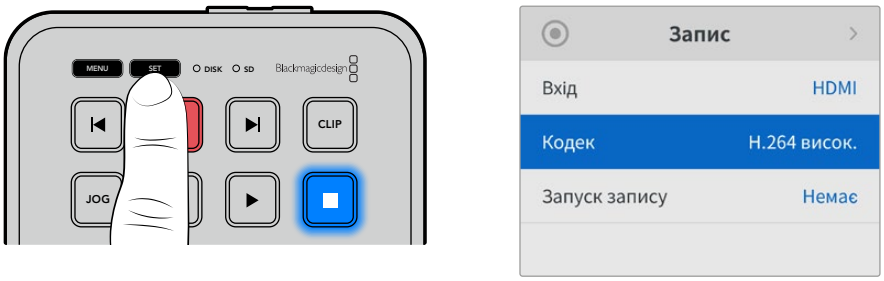
Якщо натиснути кнопку MENU, у нижньому лівому кутку підключеного HDMI-дисплея поверх відео з'явиться меню налаштувань.



Натисніть кнопку MENU, щоб відкрити налаштування



За допомогою ручки пошуку перейдіть до потрібного підменю або налаштування



Натисніть кнопку SET для вибору підменю або налаштування

Змініть налаштування за допомогою ручки пошуку або кнопок перемотування вперед і назад. Натисніть кнопку SET, щоб підтвердити вибір.

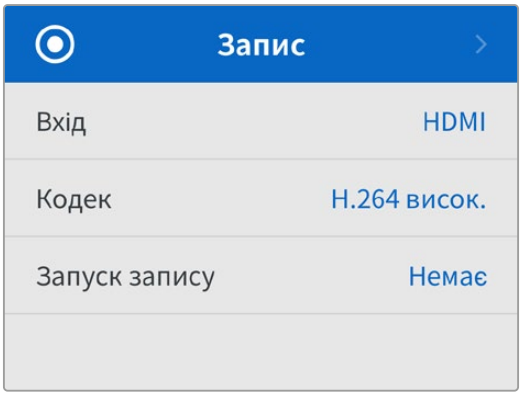
Для виходу з меню та повернення до головної сторінки натисніть кнопку MENU.

ПОРАДА. За допомогою налаштувань меню можна розташувати в будь-якому з чотирьох кутків дисплея. Після завершення настройки радимо вимикати меню, щоб на HDMI-мікшер, наприклад ATEM Mini Extreme, виводився чистий сигнал.

Налаштування

Меню налаштувань розділене на п'ять головних секцій: «Запис», «Моніторинг», «Аудіо», «Зберігання» та «Налаштування». Кожна з них містить відповідні параметри, більшість яких можна змінити за допомогою панелі керування. Деякі з налаштувань, наприклад префікс імені файлу, призначені лише для відображення. Їх можна змінити за допомогою утиліти HyperDeck Setup.

Меню «Запис»



Вхід

Відображає HDMI-вхід на HyperDeck Shuttle HD.

Кодек

HyperDeck Shuttle HD дозволяє записувати відео з компресією, використовуючи кодеки H.264, Apple ProRes і DNxHD. Крім того, передбачено функцію телесуфлера.

Запуск запису

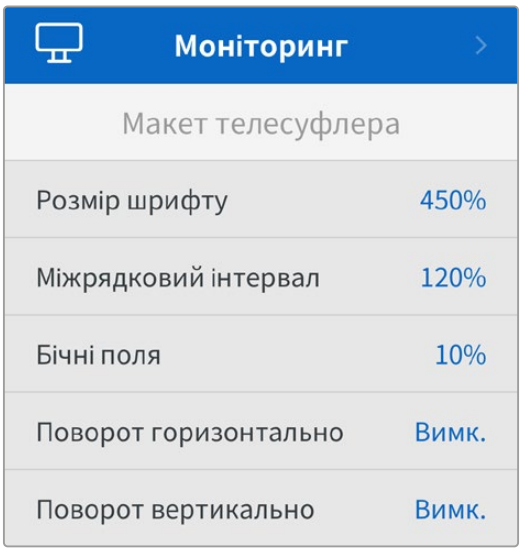
Для цього налаштування доступні дві опції: «Відео старт/стоп» і «За тайм-кодом».

Деякі камери (наприклад, Blackmagic Pocket Cinema Camera 4K) використовують HDMI-інтерфейс для передачі сигналу про запуск і зупинку запису на зовнішніх рекордерах. Опція «Відео старт/стоп» дозволяє починати та припиняти зберігання на HyperDeck натисканням кнопки запису на камері.

При виборі параметра «За тайм-кодом» запис на рекордері вмикається при передачі на його HDMI-вхід дійсного тайм-коду. За відсутності сигналу зберігання зупиниться. Для вимкнення даного налаштування потрібно вибрати «Немає».

ПРИМІТКА. При записі з HDMI-камери переконайтеся, що використовується чистий сигнал, оскільки в іншому випадку разом із зображенням будуть записані параметри, що виводяться.

Меню «Моніторинг»



Макет телесуфлера

Меню «Моніторинг» має всі налаштування, необхідні для використання рекордера HyperDeck Shuttle HD як телесуфлера.

Розмір шрифту

Щоб змінити розмір тексту, виберіть значення розміру шрифту та натисніть кнопку SET. Для збільшення потрібно повернути ручку за годинниковою стрілкою, для зменшення — проти неї.

Міжрядковий інтервал

Збільшити або зменшити міжрядковий інтервал можна за допомогою ручки.

Бічні поля

Це налаштування дозволяє змінити ширину бічних полів з обох сторін дисплея телесуфлера.

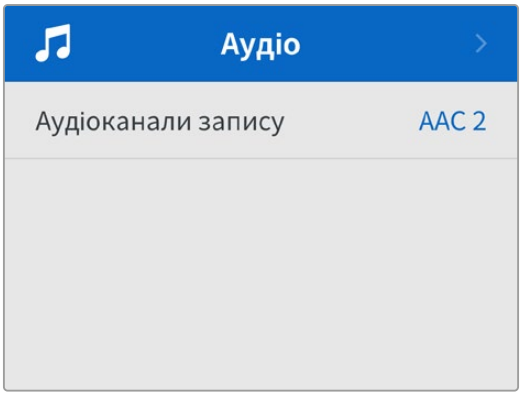
Поворот

Якщо з монітора телесуфлера текст відображається на скло перед камерою або трибуною доповідача, то потрібно вибрати правильне налаштування повороту тексту. Передбачено два режими повороту.

Поворот горизонтально. Використовується, коли нижня частина монітору телесуфлера розташована поблизу від основи скла.

Поворот вертикально. Використовується, коли нижня частина монітору телесуфлера розташована далеко від основи скла.

Меню «Аудіо»



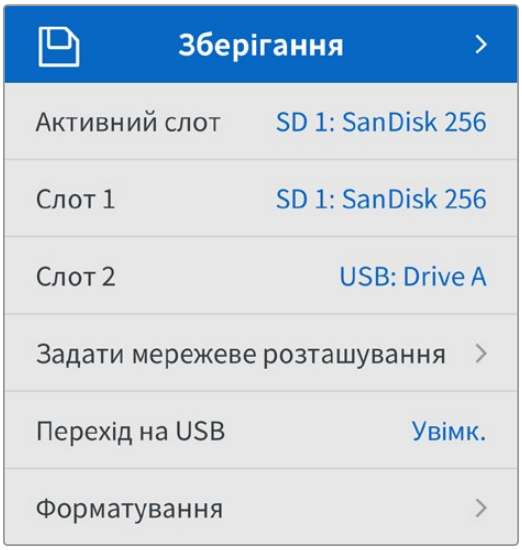
Аудіоканали запису

HyperDeck Shuttle HD дозволяє водночас записувати до 8 каналів звуку PCM. Щоб задати кількість каналів запису, відкрийте список цього налаштування та виберіть значення 2, 4 або 8.

Якщо використовується кодек H.264, можна також вибрати два канали AAC-аудіо, що дозволить напряму вивантажувати записаний матеріал на платформу YouTube.

Меню «Зберігання»

Тут відображатимуться підключені накопичувачі. У слоті 1 буде показано ім'я вставленої SD-карти, а в слоті 2 — USB-диск, під'єднаний до роз'єму EXT DISK. При використанні USB-концентратора, такого як Blackmagic MultiDock 10G, тут відображається активний диск.



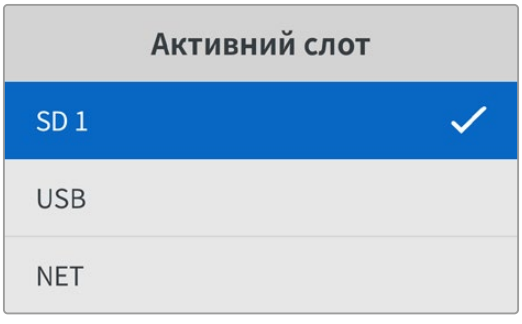
Активний слот

До моделі HyperDeck Shuttle можна водночас підключати SD-карту, кілька зовнішніх дисків і мережеве сховище. Це дозволяє за допомогою одного рекордера HyperDeck Shuttle записувати терабайти даних.

Якщо підключено лише один носій, саме він буде активним. При роботі з двома або більше накопичувачами можна вибрати той, який слугуватиме для запису та відтворення.

Порядок вибору активного накопичувача

1. За допомогою ручки пошуку виберіть у меню «Зберігання» опцію «Активний слот» і натисніть блимаючу кнопку SET.
2. З'явиться список із доступними носіями. За допомогою ручки пошуку виберіть накопичувач для запису.



Вибір мережевого розташування

HyperDeck Shuttle може відтворювати HD-контент із сервера Blackmagic Cloud та інших мережевих сховищ через Ethernet.

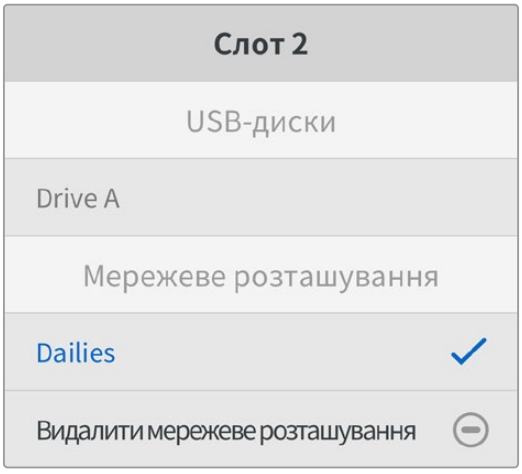
Порядок підключення до папки мережевого сховища

1. За допомогою ручки пошуку перейдіть до налаштування «Задати мережеве розташування» та виберіть його, натиснувши кнопку SET. Відкриється діалогове вікно пошуку по локальній мережі.
2. З'явиться список з усіма доступними в локальній мережі серверами. Виберіть ім'я потрібного сервера за допомогою ручки пошуку та натисніть SET. З'явиться список із папками спільного доступу. За допомогою круглої ручки виберіть потрібну мережеву папку та натисніть SET. Продовжуйте допоки папка для зберігання не відображатиметься у верхній частині екрана.
3. Ім'я папки з'явиться у верхній частині екрана. Щоб призначити цю папку для запису та відтворення, за допомогою ручки пошуку виберіть «Задати це розташування» та натисніть SET. Праворуч з'явиться прапорець.



4. Після підключення задане розташування з'явиться в списку меню «Слот 2» під опцією «Мережеве розташування».

Другий слот на рекордерах HyperDeck Shuttle призначений як для USB-диска, так і під'єднаних мережевих папок. Щоб використовувати підключений USB-носій або мережеве сховище, виберіть «Слот 2» в меню «Зберігання» і натисніть блимаючу кнопку SET. Зі списку «Слот 2» виберіть накопичувач і натисніть SET. Пристрій повернеться до меню «Зберігання». Крім того, у меню «Слот 2» можна видалити мережеве сховище, вибравши внизу екрана опцію «Видалити мережеве розташування».



ПРИМІТКА. При відтворенні з мережевого сховища рекордер HyperDeck Shuttle HD припускає гостьове підключення до сервера. Доступ, який потребує ім'я та пароль, у даний момент не підтримується при використанні кнопок MENU та SET, але можна ввести облікові дані, застосовуючи HyperDeck Ethernet Protocol.

Перехід на USB

Якщо для запису на кілька дисків використовується Blackmagic MultiDock 10G або інший подібний пристрій, підключений до роз'єму EXT DISK, при ввімкнутій опції «Перехід на USB» після заповнення одного зовнішнього накопичувача матеріал зберігатиметься на наступному.

Форматування носія

SD-карти та накопичувачі, підключені до заднього роз'єму EXT DISK, можна відформатувати на рекордері або на комп'ютері з операційною системою Mac або Windows.

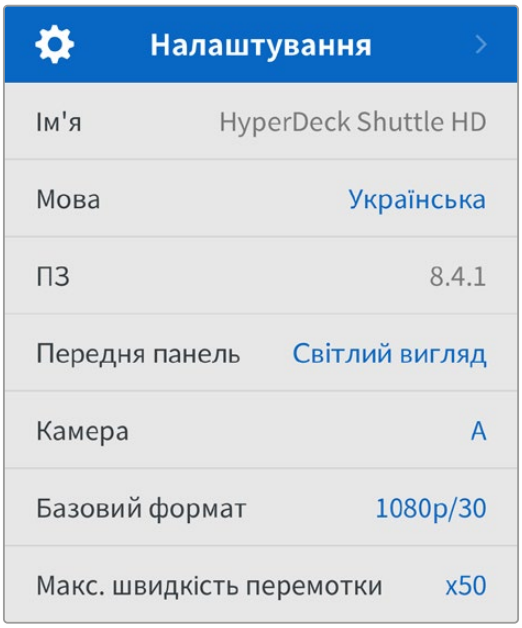
Підготовка накопичувача на рекордері HyperDeck Shuttle HD

1. За допомогою ручки пошуку перейдіть до налаштування «Форматування» та виберіть його, натиснувши кнопку SET.
2. Зі списку виберіть накопичувач для форматування та натисніть SET.
3. Укажіть бажаний формат і натисніть SET.
4. З'явиться підтвердження, яке містить ім'я карти та заданий формат. Виберіть «Форматувати».
5. Після завершення процедури з'явиться вікно форматування. Виберіть «OK».

Формат HFS+ також відомий як Mac OS X Extended і є рекомендованим, оскільки він підтримує протоколювання. У цьому випадку при пошкодженні носія дані, що містяться на ньому, буде простіше відновити. Формат HFS+ сумісний із операційною системою Mac, а exFat можна використовувати на платформах Mac і Windows без додаткового програмного забезпечення, проте він не передбачає протоколювання. Інструкції з форматування накопичувачів у ОС Mac і Windows наведено в розділі «Форматування накопичувачів».

Меню «Налаштування»

Це меню дозволяє вибирати мову інтерфейсу й базовий формат, а також вигляд меню, налаштування мережі та параметри тайм-коду.



Ім'я

Коли до мережі підключено декілька рекордерів HyperDeck Shuttle HD, їм слід надати окремі імена, щоб пристрої було легше ідентифікувати. Для цього можна використовувати утиліту Blackmagic HyperDeck Setup або Blackmagic HyperDeck Ethernet Protocol. Ім'я буде показано в меню налаштувань.

Мова

HyperDeck Shuttle HD має інтерфейс користувача 13 мовами, зокрема англійською, китайською, японською, корейською, іспанською, німецькою, французькою, російською, італійською, португальською, турецькою, польською та українською.

Вибір мови

1. Виберіть меню «Налаштування» та натисніть SET.
2. Перейдіть до опції Language за допомогою ручки пошуку та натисніть кнопку SET.
3. Виберіть потрібну мову та натисніть SET. На екрані знову з'явиться меню «Налаштування».

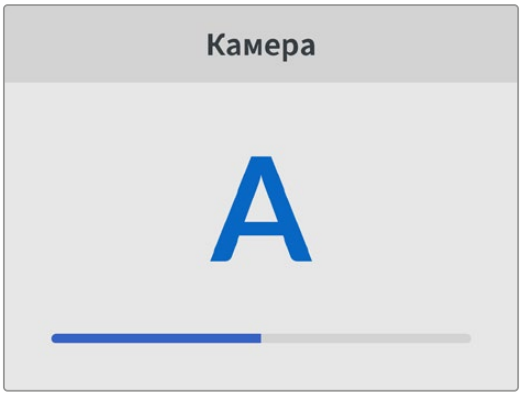
Програмне забезпечення

Відображає поточну версію програмного забезпечення.

Камера

Це налаштування використовують при записі багаторакурсного контенту у вигляді окремих файлів, які потім редагують на спеціальній часовій шкалі в додатку DaVinci Resolve.

У метаданих файлів кожна з камер матиме своє позначення, що дозволить легко визначити всі доступні ракурси за допомогою синхрокошика.



Для найменування камер можна використовувати знаки A-Z або 1-9

Базовий формат

Іноді HyperDeck Shuttle HD не в змозі визначити, який відеоформат слід використовувати. Дане налаштування допоможе рекордеру вибрати формат, який найчастіше застосовується.

Для прикладу візьмемо ситуацію, коли при ввімкненні пристрою HyperDeck Shuttle HD до нього не підключено джерело відео, а на вставленому диску записано файли двох форматів. Який із них слід рекордеру відтворити? У цьому разі пристрій використовуватиме базовий формат.

Ця функція також застосовується, коли під час увімкнення рекордера до нього не підключено джерело відео та не вставлено диск. У даному разі для виведення сигналу моніторингу HyperDeck Shuttle HD використовує формат за замовчуванням.

Базовий формат є лише рекомендованим, а не обов'язковим. Якщо на диску містяться файли лише одного типу, при відтворенні HyperDeck переключиться на їхній формат. Рекордер не використовуватиме базовий формат, оскільки в цьому разі вибір є очевидним.

Те саме відбувається й під час зберігання контенту. Використовуваний під час запису формат відповідає формату відеосигналу. Він використовуватиметься рекордером при відтворенні цього матеріалу, навіть якщо на диску є інші файли, які мають формат, котрий вибирається за замовчуванням. Вважається, що під час запису та відтворення формати мають бути однаковими. Якщо диск вийняти, а потім знову вставити, лише тоді для відтворення пристрій переключиться на формат за замовчуванням.

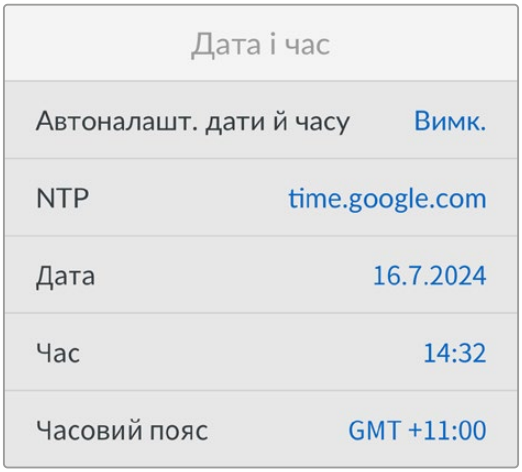
Базовий формат є лише рекомендованим, а не обов'язковим, і призначений лише для тих випадків, коли автоматичний вибір ускладнений.

Максимальна швидкість перемотки

На рекордері HyperDeck Shuttle HD максимальне прискорення перемотки є 50-кратним. Для зменшення швидкості достатньо вибрати один з інших пресетів.

Дата і час

Правильне встановлення цих параметрів забезпечує синхронізацію дати й часу на рекордері HyperDeck Shuttle із мережею, а також дозволяє уникнути потенційних конфліктів при роботі з деякими мережевими системами.



Автоналаштування дати й часу

Щоб автоматично задати дату і час, виберіть опцію «Увімк.» для поля «Автоналашт. дати й часу». При цьому HyperDeck використовуватиме сервер мережевого протоколу часу, указаний у полі NTP. Щоб змінити дату і час вручну, виберіть опцію «Вимк.».

NTP

За замовчуванням задано time.cloudflare.com, проте можна ввести адресу іншого сервера за допомогою утиліти HyperDeck Setup. Докладні відомості див. в розділі «Blackmagic HyperDeck Setup» нижче.

Дата

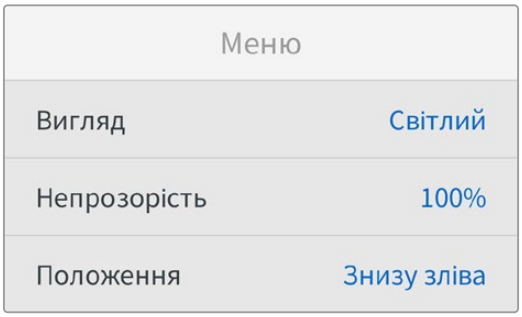
Щоб ввести дату вручну, виберіть потрібне поле та натисніть кнопку SET. За допомогою круглої ручки встановіть день, місяць і рік.

Час

Щоб змінити час, виберіть відповідне поле та натисніть кнопку SET. За допомогою круглої ручки встановіть години та хвилини. На цьому пристрої використовується 24-годинний формат.

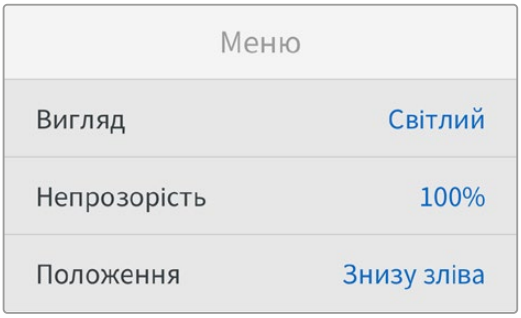
Налаштування «Меню»

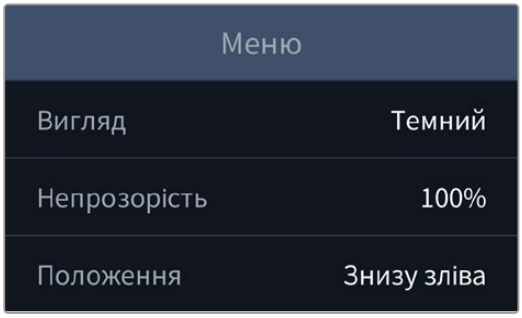
За допомогою налаштувань меню можна змінити його положення та вигляд на підключеному HDMI-дисплеї.



Вигляд

Для екранного меню HyperDeck можна вибрати темний або світлий вигляд. Другий має підвищений контраст і краще підходить для темного контенту або режиму телесуфлера.





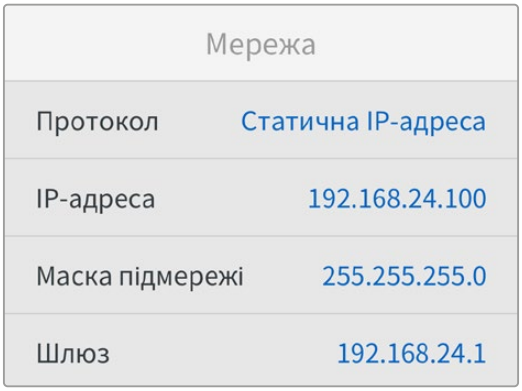
Непрозорість

Щоб змінити непрозорість меню, що виводиться на підключений дисплей, виберіть значення між 100% і 20%.

Положення

За замовчуванням вікно меню виводиться в нижньому лівому кутку екрана. Щоб пересунути його в інше місце, виберіть «Положення» та натисніть кнопку SET. Вікно меню можна переміщати у верхній лівий, верхній правий, нижній лівий або нижній правий куток екрана.

Параметри мережі



Протокол

У рекордерах Blackmagic HyperDeck за замовчуванням використовується протокол DHCP. При підключенні пристрою до мережі сервер автоматично надасть йому IP-адресу. Виконувати додаткове налаштування не потрібно. Щоб внести адресу вручну, слід вибрати статичну IP-адресу.

Виділіть налаштування «Протокол» і натисніть кнопку SET. Перейдіть до параметра «Статична IP-адреса» та натисніть SET.

IP-адреса, маска підмережі, шлюз, первинний DNS і вторинний DNS

Коли вибрано опцію «Статична IP-адреса», параметри мережі можна задати вручну.

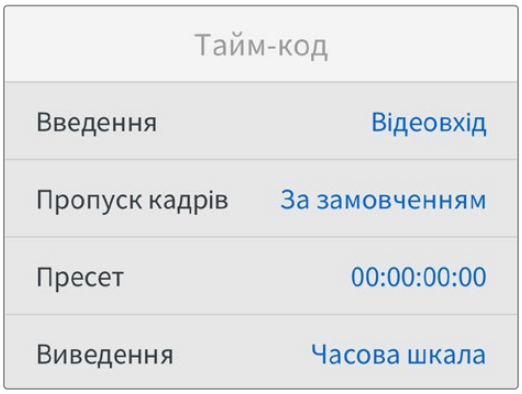
Порядок зміни IP-адреси

1. Виділіть налаштування «IP-адреса» за допомогою ручки пошуку й натисніть кнопку SET на панелі керування рекордера.
2. Внесіть зміни в IP-адресу поворотом ручки пошуку. Для підтвердження значення одного сегмента та переходу до наступного натисніть кнопку SET.
3. Щоб підтвердити зміну та перейти до наступного значення, натисніть кнопку SET.

Після введення IP-адреси виконайте ті самі операції для налаштування маски підмережі та шлюзу. Після завершення встановлення параметрів натисніть кнопку MENU, щоб повернутися до головної сторінки.

Налаштування тайм-коду

Тут можна задати параметри введення та виведення тайм-коду, у тому числі вибрати запис тайм-коду джерела, часу доби або встановити тайм-код вручну.



Введення

При записі є чотири опції використання тайм-коду.

Відеовхід	Ця опція дозволяє використовувати вбудований тайм-код із HDMI-джерел із метаданими SMPTE RP 188. Вона забезпечує синхронізацію HDMI-сигналу з файлом, що зберігається на HyperDeck Shuttle HD.
Внутрішній	Цю опцію використовують для запису часу доби, що отримується від вбудованого генератора тайм-коду.
Відновлення	При виборі цієї опції тайм-код кожного наступного файлу продовжуватиметься з того значення, на якому закінчився попередній кліп. Наприклад, якщо перший кліп зупинився на 10:28:30:10, то другий почнеться з 10:28:30:11.
Пресет	Щоб ввести тайм-код вручну, виберіть опцію «Пресет». Запис контенту розпочнеться за тайм-кодом, який встановлено в наведеному нижче розділі «Пресет».

Пропуск кадрів

При роботі з відео в NTSC на частоті 29,97 або 59,94 fps можна використовувати опцію «З пропуском» або «Без пропуску». Якщо параметри джерела невідомі, виберіть «За замовчуванням». У цьому разі зберігається формат вхідного сигналу, а за відсутності дійсного тайм-коду виконується пропуск кадрів.

Пресет

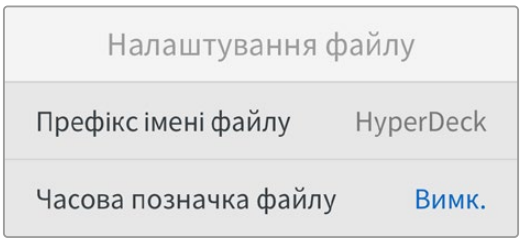
Щоб ввести тайм-код вручну, натисніть кнопку SET, встановіть значення за допомогою ручки пошуку й знову натисніть SET. Переконайтеся, що в меню «Введення» вибрано опцію «Пресет».

Виведення

Це налаштування задає виведення тайм-коду.

Часова шкала	Це налаштування дозволяє виводити безперервний тайм-код для всіх кліпів, які записуються на карту або диск.
Кліп	При виборі цієї опції виводиться тайм-код кожного окремого кліпу.

Налаштування файлу



Префікс імені файлу

Після початкового налаштування рекордера HyperDeck Shuttle HD при записі кліпів на SD-карту або USB-диск файлам надаються імена за наведеним нижче зразком.

HyperDeck_0001	
HyperDeck_0001	**Префікс**
HyperDeck_**0001**	**Номер кліпу**

Префікс імені файлу можна змінити за допомогою утиліти Blackmagic HyperDeck Setup. Докладні відомості див. в розділі «Blackmagic HyperDeck Setup».

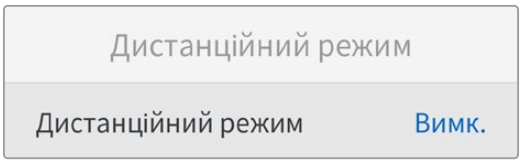
Часова позначка файлу

За замовчуванням індекс із мітками часу не додається до імені файлу. Щоб активувати цю функцію, її потрібно ввімкнути.

HyperDeck_2201061438_0001	
HyperDeck_2201061438_0001	**Префікс імені файлу**
HyperDeck_**22**01061438_0001	**Рік**
HyperDeck_22**01**061438_0001	**Місяць**
HyperDeck_2201**06**1438_0001	**День**
HyperDeck_220106**14**38_0001	**Години**
HyperDeck_22010614**38**_0001	**Хвилини**
HyperDeck_2201061438_**0001**	**Номер кліпу**

Налаштування дистанційного режиму

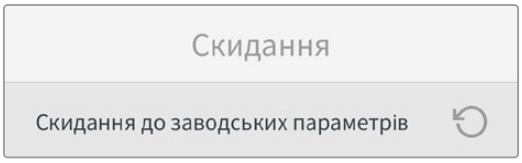
Цей режим дозволяє віддалено керувати рекордером за допомогою іншого пристрою, наприклад відеомікшера ATEM Mini Extreme.



Дистанційний режим

Щоб активувати віддалене керування через мережу Ethernet, необхідно увімкнути дистанційний режим. Щоб перейти до звичайного способу керування, дистанційний режим слід вимкнути.

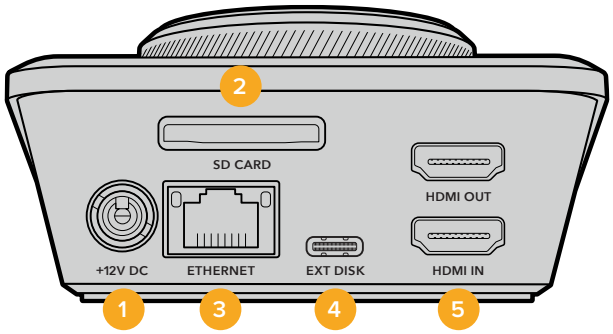
Налаштування скидання



Скидання до заводських параметрів

Щоб повернути пристрій до початкового стану, виберіть «Скидання до заводських параметрів». Після натискання кнопки SET з'явиться повідомлення із запитом підтвердити дію.

Задня панель



1 Живлення

На HyperDeck Shuttle HD живлення надходить через адаптер змінного струму. У комплект постачання входить силовий кабель із фіксуючим роз'ємом, який дозволяє запобігти випадковому від'єднанню. Для живлення пристрою можна також використовувати будь-який інший електричний кабель (потужність 36 Вт, напруга 12 В).

2 SD CARD

Дозволяє використовувати SD-карти для запису та відтворення.

3 ETHERNET

Порт Ethernet дозволяє підключатися до мережі, щоб записувати контент у мережеве сховище, а також швидко передавати файли за протоколами FTP та HTTP, використовуючи вебдиспетчер даних. Крім того, пристроєм можна віддалено керувати, застосовуючи REST API або HyperDeck Ethernet Protocol. Докладні відомості про передачу файлів за допомогою вебдиспетчера даних або FTP-клієнта див. в розділі «Передача файлів через мережу» нижче.

Рекордером HyperDeck також можна керувати за допомогою відеомікшера ATEM або пульта ATEM, якщо вони підключені до однієї мережі.

4 EXT DISK

Через цей роз'єм USB-C можна вести запис на зовнішній диск зі швидкістю до 5 Гбіт/с. Допускається також підключення до концентраторів USB-C та до станції MultiDock 10G для зберігання матеріалу на один або кілька твердотільних накопичувачів.

5 HDMI

HDMI-вихід застосовують для підключення до телевізорів, моніторів або навіть відеомікшерів, наприклад ATEM Mini Extreme. Він також використовується для виведення меню.

Робота з накопичувачами

SD-карта

Для HD-відео високої якості рекомендується використовувати швидкісні SD-карти класу UHS-I. Ці носії здатні працювати на швидкості понад 220 Мб/с при зберіганні Ultra HD відео в форматах аж до 2160p/60.

При записі з нижчим бітрейтом і високим стисненням можна працювати з іншими носіями, проте швидкісні накопичувачі зазвичай забезпечують найкращий результат.

Ця інформація регулярно оновлюється, тому ми радимо звертатися до останньої версії цього посібника, яку можна завантажити на сайті Blackmagic Design за адресою www.blackmagicdesign.com/ua/support

Вибір SD-карт при роботі з HyperDeck Shuttle HD

Рекомендовані SD-карти для запису у форматі 1080p з частотою до 60 кадрів/с

Виробник	Модель	Ємність
Angelbird	AV PRO SD UHS-II 300MB/s V90 SDXC	256 ГБ
Angelbird	AV PRO SD UHS-II 260MB/s V60 SDXC	128 ГБ
Angelbird	AV PRO SD UHS-II 260MB/s V60 SDXC	64 ГБ
SanDisk	Extreme Pro UHS-I 95MB/s SDXC	64 ГБ
Wise	SD2-64U3 UHS-II 285MB/s SDXC	64 ГБ
Lexar	Professional 1000x UHS-II 150MB/s SDXC	128 ГБ
Sony	Tough SF-G128T	128 ГБ
Kingston	CANVAS GO! Plus 170MB/s V30	64 ГБ
Kingston	CANVAS GO! Plus 170MB/s V30	128 ГБ
Kingston	CANVAS GO! Plus 170MB/s V30	512 ГБ
ProGrade Digital	SDXC UHS-II V90 300R	64 ГБ
ProGrade Digital	SDXC UHS-II V90 300R	128 ГБ
Sony	Tough SF-G64T UHS-II SDXC	64 ГБ
Delkin Devices	Black UHS-II V90 SDXC	256 ГБ
Delkin Devices	Power UHS-II V90 SDXC	128 ГБ
Delkin Devices	Power UHS-II V90 SDXC	256 ГБ
Delkin Devices	Black UHS-II V90 SDXC	128 ГБ
Exascend	Essential SDXC UHS-II V90 R 300MB/s	64 ГБ
Exascend	Essential SDXC UHS-II V90 R 300MB/s	128 ГБ
Exascend	Catalyst SDXC UHS-II V90 R 300MB/s	64 ГБ

Зовнішній диск

Усі моделі HyperDeck дозволяють вести запис безпосередньо на флеш-диски USB-C. Ці носії мають велику ємність і забезпечують зберігання протягом тривалого часу. Далі їх можна підключити до комп'ютера і відразу розпочати монтаж.

Щоб отримати більше місця для зберігання відео, можна підключити док-станцію з портом USB-C або зовнішній жорсткий диск. Для підключення станції Blackmagic MultiDock 10G або флеш-диска USB-C використовують кабель USB-C, який з'єднують із роз'ємом EXT DISK на задній панелі рекордера HyperDeck.

Вибір накопичувачів USB-C при роботі з HyperDeck Shuttle HD

Рекомендовані накопичувачі USB-C для запису у форматі 1080p ProRes HQ з частотою до 60 кадрів/с

Виробник	Модель	Ємність
Wise	PTS-256 Portable SSD 4K	256 ГБ
OWC	Envoy Pro Ex	240 ГБ
Buffalo	SSD-PHE500U3-BA	500 ГБ

Рекомендовані накопичувачі USB-C для запису у форматі 1080p DNxHD 220x з частотою до 60 кадрів/с

Виробник	Модель	Ємність
OWC	Envoy Pro Ex	240 ГБ

Рекомендовані накопичувачі USB-C для запису у форматі 1080p H.264 з частотою до 60 кадрів/с

Виробник	Модель	Ємність
OWC	Envoy Pro Ex	240 ГБ

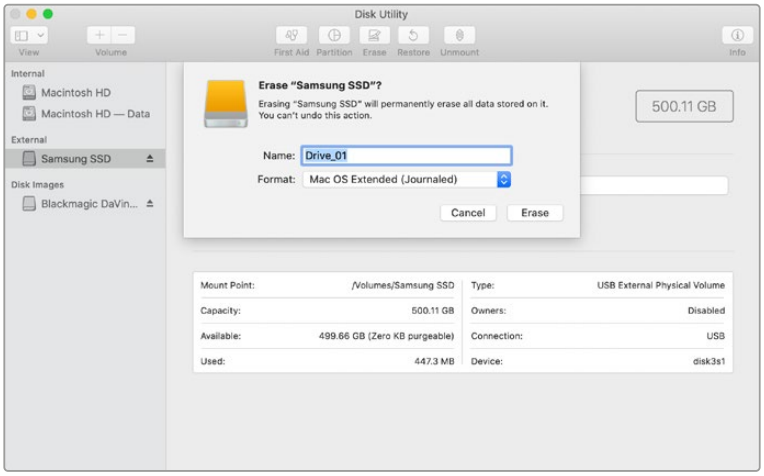
Форматування накопичувачів

Форматування накопичувача на Mac

Для форматування накопичувача під систему HFS+ або exFAT скористайтесь дисковою утилітою, яка входить до пакету Mac.

Виконайте резервне копіювання всіх важливих даних, тому що вони будуть видалені під час форматування носія.

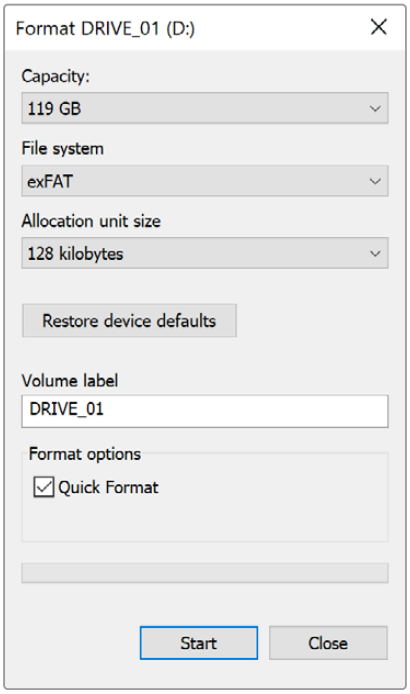
1. Під'єднайте USB-диск до комп'ютера за допомогою зовнішньої док-станції або перехідного кабелю та пропустіть повідомлення, що пропонує використовувати диск для створення резервної копії Time Machine. При роботі з SD-картами підключіть їх до комп'ютера через зовнішній картридер.
2. Виберіть «Програми» > «Утиліти» та запустіть додаток «Дискова утиліта».
3. Клацніть піктограму SD-карти або USB-диска та виберіть вкладку «Стерти».
4. Виберіть формат Mac OS Extended (журнальована) або exFat.
5. Введіть назву нового тому та виберіть «Стерти». Після закінчення форматування носій буде готовий до використання на HyperDeck.



Форматування накопичувача на Windows

На комп'ютері під керуванням Windows форматування накопичувача під систему exFat виконується за допомогою діалогового вікна «Форматувати». Виконайте резервне копіювання всіх важливих даних, тому що вони будуть видалені під час форматування SSD-диска або SD-карти.

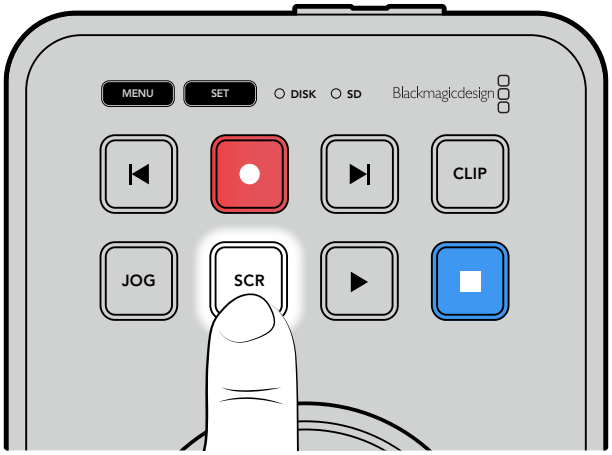
1. Під'єднайте USB-диск до комп'ютера за допомогою зовнішньої док-станції або перехідного кабелю. При роботі з SD-картами підключіть їх до комп'ютера через зовнішній картридер.
2. У меню «Пуск» або на початковому екрані виберіть «Комп'ютер». Клацніть правою кнопкою миші USB-диск або SD-карту.
3. У контекстному меню виберіть «Форматувати».
4. Виберіть файлову систему exFat і для розміру кластера встановіть значення 128 кБ.
5. Укажіть позначку тому, виберіть «Швидке форматування» та натисніть «Почати».
6. Після закінчення форматування носій буде готовий до використання на HyperDeck.

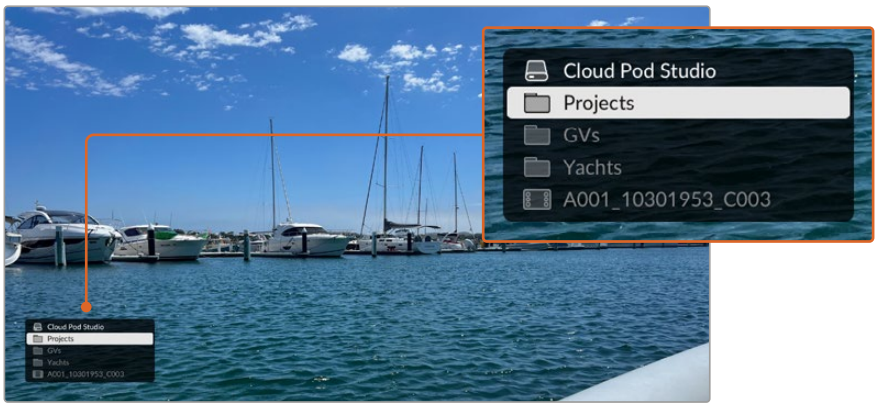


Навігація по сховищах

Ця функція дозволяє відкрити вікно браузера для пошуку кліпів на картах пам'яті, дисках і мережевих сховищах. Коли її ввімкнено, на зображенні, що виводиться через HDMI, з'явиться вікно, у якому можна переходити між папками за допомогою кнопок SCR і CLIP, а також ручки пошуку.

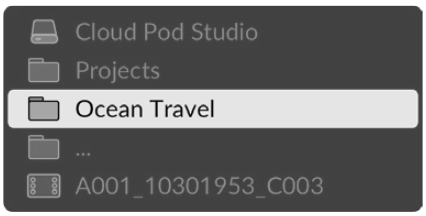
1 Відкрийте вікно навігації по сховищах, натиснувши кнопку SCR.





Натисніть кнопку SCR, щоб відкрити вікно навігації по сховищах на зображенні, що виводиться через HDMI

2 Проходячи по папках і промотуючи відео на дисплеї, відшукайте потрібний кліп.



3 Для переходу вниз за списком натисніть кнопку SCR, а для переміщення вверх — CLIP.

Щоб закрити вікно навігації по сховищах, натисніть кнопку зупинки, а щоб виконати цю дію та відразу розпочати програвання — кнопку відтворення.

ПРИМІТКА. Для перегляду кліпів, записаних із застосуванням інших кодеків, роздільної здатності або частоти кадрів, виберіть на рекордері відповідні кодек і базовий формат.

Функція телесуфлера

Використовуючи стандартний RTF- або звичайний TXT-файл, HyperDeck Shuttle HD можна перетворити на телесуфлер. Створіть файл у додатку TextEdit або WordPad і збережіть його у форматі RTF або TXT однією з 13 підтримуваних мов. Відкривши сценарій в HyperDeck Shuttle HD, можна змінювати розмір шрифту та міжрядковий інтервал тексту.

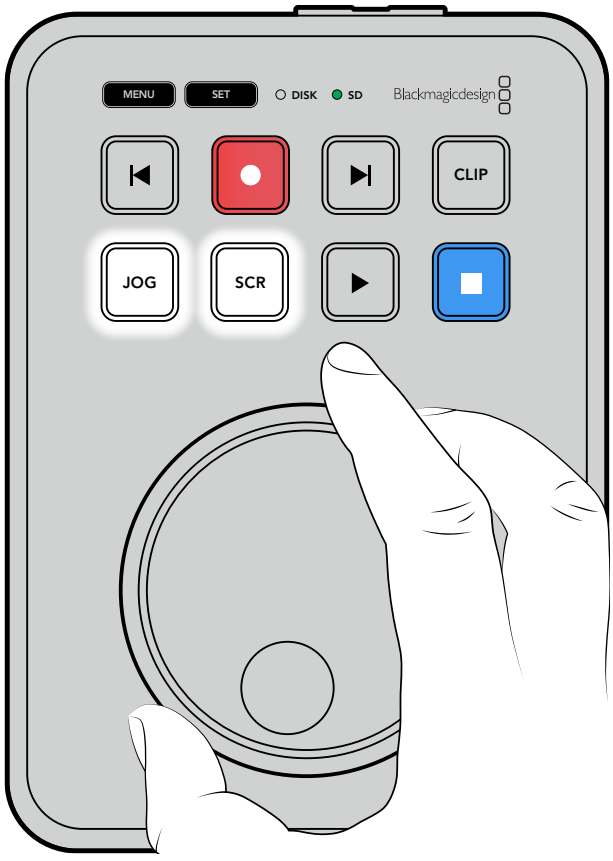
Порядок роботи з телесуфлером

1. З'єднайте HDMI-вихід рекордера HyperDeck Shuttle HD з HDMI-дисплеєм.
2. Вставте SD-карту чи підключіть зовнішній USB-диск зі сценарієм.
3. У меню запису виберіть кодек. Знайдіть налаштування «Телесуфлер» і натисніть кнопку SET.

На дисплеї з'явиться сценарій. Його переміщення можна ввімкнути кнопкою відтворення, а для додаткового керування використати ручку пошуку.

Керування швидкістю відтворення на телесуфлері

Велика ручка пошуку на HyperDeck Shuttle HD дозволяє керувати відтворенням тексту на телесуфлері таким же чином, як і відеоматеріалу. Щоб увімкнути відтворення зі змінною швидкістю після того, як сценарій завантажено, натисніть одночасно кнопки JOG і SCR. Почніть повертати ручку пошуку. Сценарій рухатиметься відповідно до швидкості обертання. Що швидше повертається ручка, то швидше прокручується сценарій.



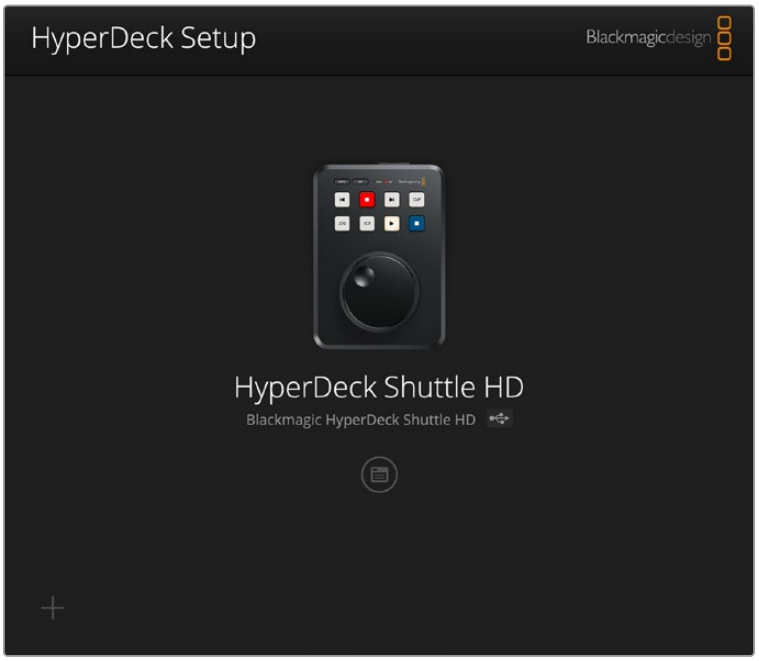
Для відтворення з постійною швидкістю використовуйте окремо кнопку JOG або SCR. При обертанні ручки в режимі протягування (JOG) сценарій рухатиметься повільніше, а в режимі прокручування (SCR) — швидше.

Для переходу між файлами на SD-карті або зовнішньому диску скористайтеся кнопками перемотування вперед або назад.

Телесуфлер розпізнає розмір, колір та товщину шрифту тексту у файлі. Крім того, за допомогою меню моніторингу можна налаштувати й інші параметри, такі як міжрядковий інтервал і межі, а також повернути текст горизонтально або вертикально при проекціюванні його на світлорозділовому склі. Докладні відомості див. в розділі "Налаштування «Меню»" вище.

Blackmagic HyperDeck Setup

Утиліта Blackmagic HyperDeck Setup дозволяє змінювати налаштування та оновлювати прошивку рекордера.

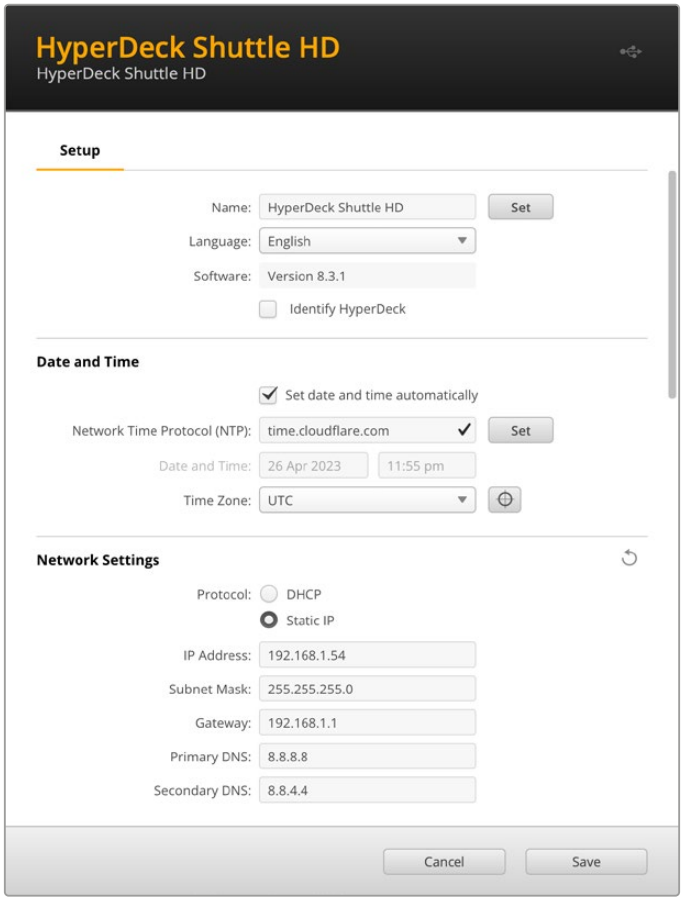


Порядок інсталяції програмного забезпечення

1. Завантажте останню версію утиліти Blackmagic HyperDeck Setup у розділі підтримки за адресою www.blackmagicdesign.com/ua/support
2. Запустіть інсталятор Blackmagic HyperDeck Setup і дотримуйтесь інструкцій на екрані.
3. Після інсталяції підключіть HyperDeck Shuttle HD до комп'ютера через порт USB або роз'єм Ethernet на задній панелі пристрою.
4. Для оновлення ПЗ запустіть утиліту Blackmagic HyperDeck Setup і дотримуйтесь інструкцій на екрані. Якщо вони не з'являться, поточна версія є актуальною.

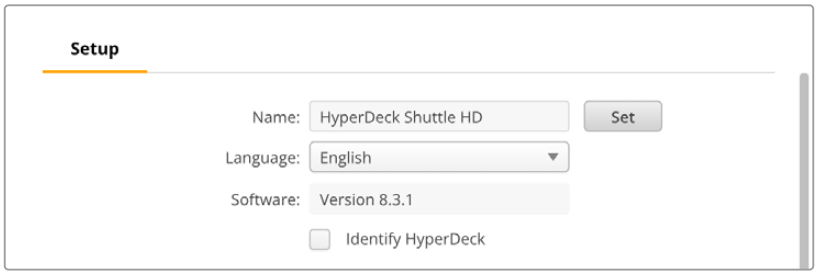
Щоб відкрити меню налаштувань, клацніть зображення HyperDeck або піктограму налаштувань.

На головній сторінці відображатиметься рекордер HyperDeck Shuttle HD та його ім'я. Воно дозволяє ідентифікувати пристрій, коли до комп'ютера підключено кілька одиниць HyperDeck. Ім'я можна легко змінити за допомогою утиліти.



Налаштування

За наявності кількох дискових рекордерів HyperDeck із ними буде легше працювати за присвоєними ідентифікаторами. Для цього потрібно ввести нове ім'я у відповідне поле та натиснути кнопку SET. Слід пам'ятати, що зміна імені рекордера HyperDeck зробить наявні цифрові сертифікати недійсними, отже цю дію треба виконувати до створення запиту на підписання сертифіката або генерації сертифіката з власним підписом.



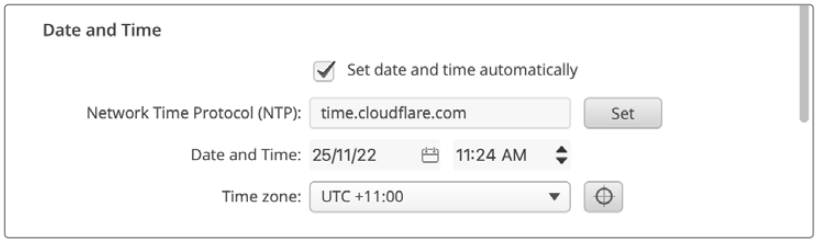
Опція Identify HyperDeck

При виборі цієї опції кнопки перемотування на верхній панелі моделі HyperDeck Shuttle почнуть блимати. Це може знадобитися, якщо в мережі є кілька рекордерів HyperDeck Shuttle і потрібно ідентифікувати пристрій, із яким встановлено підключення за допомогою утиліти HyperDeck Setup.

Дата і час

Дату і час можна задати автоматично, встановивши відповідний прапорець. При цьому пристрій використовуватиме NTP-сервер, указаний у полі Network Time Protocol (NTP). За замовчуванням це time.cloudflare.com, проте можна ввести адресу іншого сервера, а потім натиснути кнопку Set.

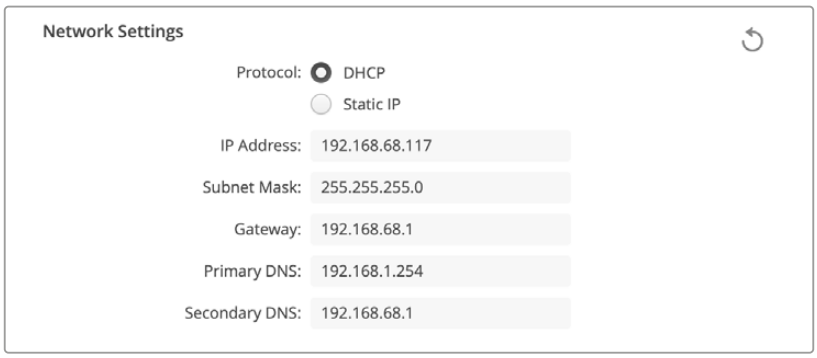
Дату і час також можна задати вручну. Правильне встановлення цих параметрів забезпечує синхронізацію дати й часу записаного матеріалу з мережею, а також дозволяє уникнути потенційних конфліктів при роботі з деякими мережевими сховищами.



Параметри мережі

Протокол

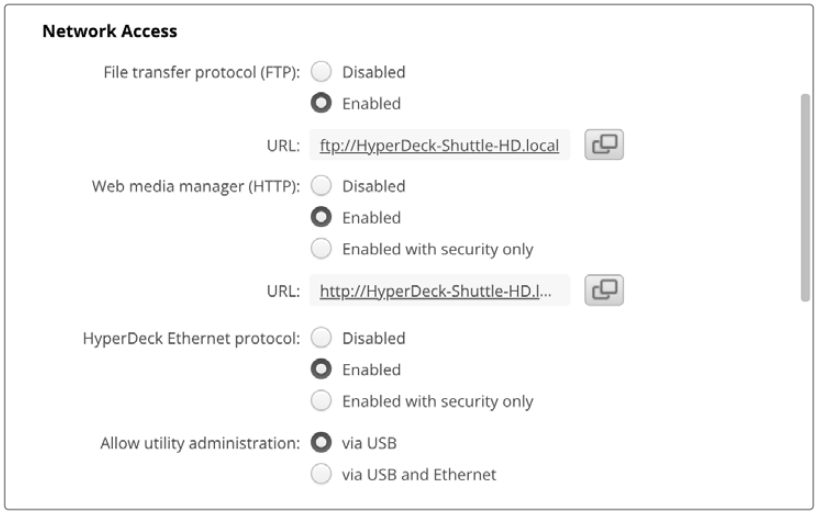
Для використання HyperDeck Shuttle HD з відеомікшерами ATEM або його дистанційного керування через HyperDeck Ethernet Protocol рекордер потрібно підключити до локальної мережі із застосуванням протоколу DHCP або фіксованої IP-адреси.



DHCP	Рекордери HyperDeck Shuttle HD за замовчуванням використовують протокол DHCP. DHCP — це протокол динамічного налаштування вузла, який використовується мережевими серверами для автоматичного виявлення пристрою HyperDeck і надання йому IP-адреси. Ця функція значно полегшує підключення обладнання через Ethernet і не допускає конфліктів IP-адрес. Більшість комп'ютерів і мережевих відеомікшерів підтримують протокол DHCP.
Static IP	Коли вибрано опцію Static IP, параметри мережі можна задати вручну. Щоб між пристроями існував канал зв'язку, вони повинні мати однакові налаштування маски підмережі та шлюзу.

Доступ через мережу

Для передачі файлів рекордера HyperDeck Shuttle HD через мережу, а також дистанційного керування використовують HyperDeck Ethernet Protocol. За замовчуванням доступ увімкнуто. Його, однак, можна вимкнути або використати опцію підвищеного рівня безпеки при застосуванні вебдиспетчера даних або протоколу HyperDeck Ethernet.



Протокол передавання файлів

Щоб увімкнути чи вимкнути доступ через FTP-протокол, встановіть відповідний прапорець. При використанні FTP-клієнта, наприклад CyberDuck, клацніть відповідну піктограму, щоб скопіювати FTP-адресу. Докладні відомості див. в розділі «Передача файлів через мережу».

Вебдиспетчер даних

Доступ до записаних файлів, що містяться на SD-картах або зовнішніх дисках, можна отримати через браузер за допомогою вебдиспетчера даних. Якщо клацнути посилання або скопіювати та вставите його в браузер, з'явиться вікно, у якому можна через мережу завантажувати файли безпосередньо на SD-карти.

За замовчуванням доступ увімкнуто через HTTP, але його можна повністю вимкнути або вимагати сертифікат безпеки, вибравши опцію Enabled with security only. При застосуванні цифрового сертифіката підключення до вебдиспетчера даних буде зашифровано через HTTPS. Докладні відомості див. в розділі «Сертифікат безпеки».

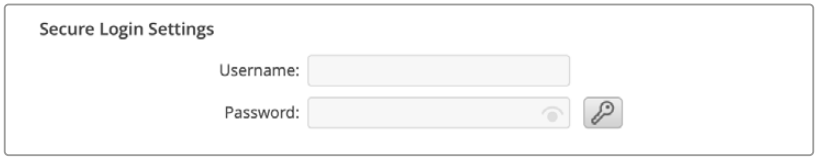
HyperDeck Ethernet Protocol

До рекордера HyperDeck можна підключитися через HyperDeck Ethernet Protocol за допомогою утиліти «Термінал» (Mac) або клієнта PuTTY (Windows). Доступ можна увімкнути для всіх, захистити паролем або вимкнути. Крім того, є можливість шифрувати сеанс за допомогою SSL-програми при використанні утиліти на зразок netcat. Докладні відомості про доступні команди див. в розділі «Інформація для розробників».

Дозвіл користування утилітою

Доступ до програми Blackmagic HyperDeck Setup можливий при підключенні дискового рекордера через мережу або USB. Щоб вимкнути мережевий доступ, виберіть опцію via USB.

Налаштування безпечного входу



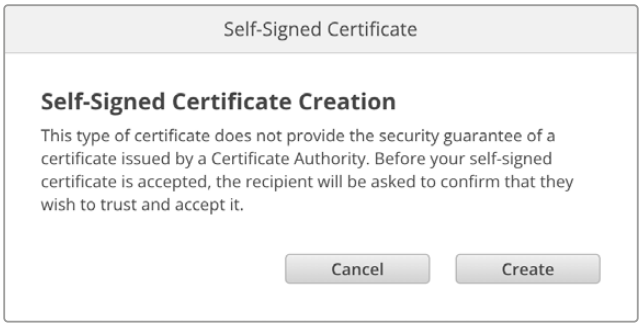
Якщо в налаштуваннях HyperDeck Ethernet Protocol вибрано опцію Enable with security only, доступ надаватиметься лише при введенні імені користувача та пароля. Введіть відповідні дані в поля Username і Password, а потім натисніть кнопку Save. Після введення пароля, його поле виглядатиме пустим. Якщо в налаштуваннях вебдиспетчера даних вибрано Enable with security only, доступ надаватиметься лише при введенні імені користувача та пароля.

Сертифікат безпеки

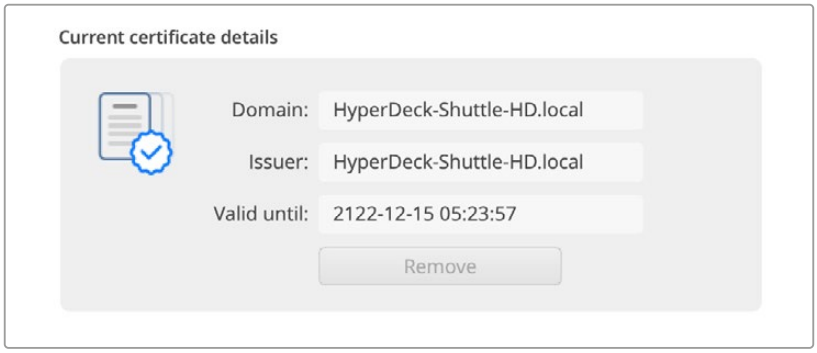
Для ввімкнення доступу через HTTPS за допомогою вебдиспетчера даних або коли в налаштуваннях HyperDeck Ethernet Protocol вибрано опцію Enable with security only, потрібен сертифікат безпеки. Він є своєрідним ідентифікатором рекордера, який допомагає надсилати дані на правильний пристрій. Крім того, сертифікат безпеки забезпечує шифрування інформації, що передається між HyperDeck Shuttle HD та комп'ютером або сервером. До того ж, якщо активовано безпечний вхід, для отримання доступу знадобиться автентифікація.

Для роботи з рекордером HyperDeck Shuttle можна використовувати сертифікати двох типів: із власним підписом або підписаний у центрі сертифікації. Перший забезпечує достатній рівень безпеки для деяких робочих процесів, наприклад, для доступу до HyperDeck Shuttle HD через локальну мережу.

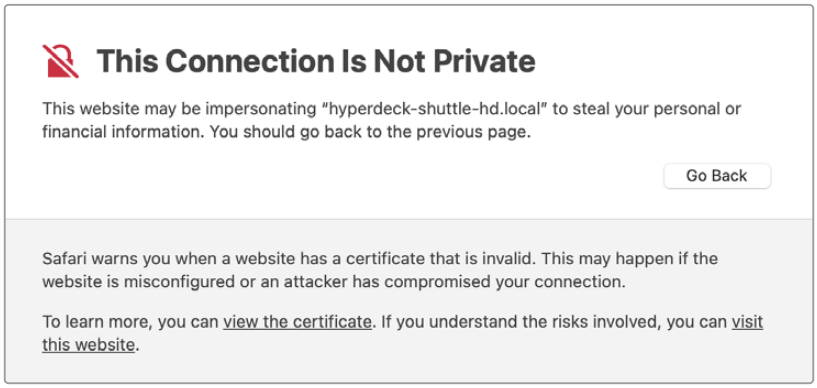
Для створення сертифіката з власним підписом, натисніть кнопку Create Certificate. З'явиться повідомлення із запитом підтвердити усвідомлення ризиків, асоційованих із використанням сертифіката з власним підписом. Після натискання кнопки Create дані сертифіката буде автоматично внесено в поля Domain, Issuer і Valid until утиліти HyperDeck Setup.



При скиданні до заводських налаштувань поточний сертифікат буде видалено. Його також можна вилучити в будь-який час. Для цього натисніть кнопку Remove і дотримуйтеся інструкцій на екрані.



При використанні сертифіката з власним підписом для доступу до медіафайлів за HTTPS-протоколом у браузері може з'явитися застереження про ризики перегляду сайту. Деякі браузери дозволяють виконати дію після підтвердження користувачем усвідомлення ризиків, проте інші можуть заборонити доступ.



Щоб мати доступ із будь-якого браузера, необхідно використовувати підписаний сертифікат. Щоб його отримати, потрібно створити запит на підписання сертифіката (CSR) за допомогою утиліти Blackmagic HyperDeck Setup. Цей запит буде відправлено в центр сертифікації (CA) або IT-відділ для підписання. Після отримання підписаного сертифіката з розширенням .cert, .crt або .pem його можна завантажити в рекордер HyperDeck Shuttle HD.



Порядок оформлення запиту на підписання сертифіката (CSR)

1 Натисніть кнопку Generate Signing Request.



2 Відкриється вікно з пропозицією ввести дані в поля Common Name і Subject Alternative Name для рекордера HyperDeck. Відкоригуйте інші відомості згідно з таблицею, наведеною нижче.

Інформація	Опис	Приклад
Common Name	Ім'я домену, який використовуватиметься	hyperdeck.melbourne.com
Subject Alternative Name	Альтернативне ім'я домену	hyperdeck.melbourne.net
Country	Країна організації	AU
State	Провінція, регіон, округ або штат	Victoria
Location	Населений пункт	Port Melbourne
Organization Name	Назва організації	Blackmagic Design

3 Після внесення даних сертифіката натисніть кнопку Generate.

При генеруванні файлу .csr створюються відкритий і закритий ключі. Відкритий ключ входитиме в запит на підписання, а закритий зберігатиметься в пристрою. Після перевірки надісланої інформації центр CA або IT-відділ згенерує підписаний сертифікат, який міститиме вказані дані та відкритий ключ.

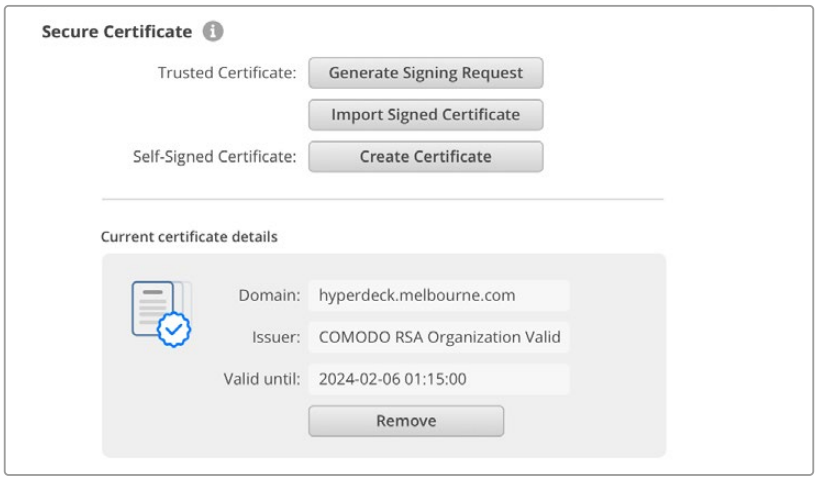
Після імпорту сертифіката ключі слугуватимуть для ідентифікації рекордера, а також для шифрування та дешифрування даних при їх передачі через HTTPS або HyperDeck Ethernet Protocol за допомогою SSL-програми.

Порядок імпорту підписаного сертифіката

1 Натисніть кнопку Import Signed Certificate.

2 У файловому провіднику виберіть підписаний сертифікат і клацніть Open.

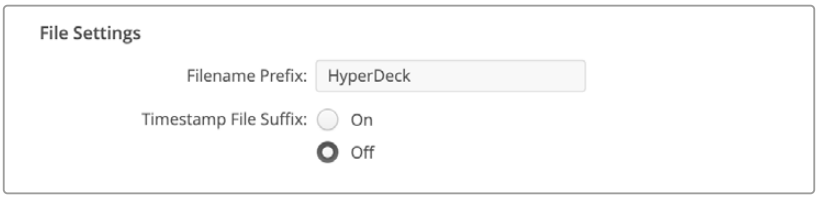
Інформація в полях Domain, Issuer і Valid оновиться згідно з даними сертифіката. Зазвичай термін дії підписаного сертифіката становить один рік, після чого процес потрібно повторити.



Оскільки було вибрано ім'я домену, потрібно звернутися до IT-відділу для налаштування значення DNS для моделі HyperDeck Shuttle HD. Після цього весь трафік, призначений для IP-адреси рекордера HyperDeck Shuttle HD, надходитиме на адресу домену, вказану в запиті на підписання. Вона також буде HTTPS-адресою, що використовують для доступу до файлів через вебдиспетчер даних, наприклад https://hyperdeck.melbourne.com

Варто зазначити, що після скидання до заводських параметрів сертифікат стає недійсним, тому його потрібно буде заново згенерувати й підписати.

Налаштування файлу



Після початкового налаштування рекордера HyperDeck Shuttle HD при записі кліпів на SD-карту або USB-диск файлам надається ім'я з префіксом HyperDeck. Щоб його змінити, введіть нове ім'я файлу.

За замовчуванням індекс із мітками часу не додається до імені файлу. Щоб активувати цю функцію, виберіть опцію On. Налаштування префікса імені файлу та індексу часу також доступні через екранне меню.

Скидання

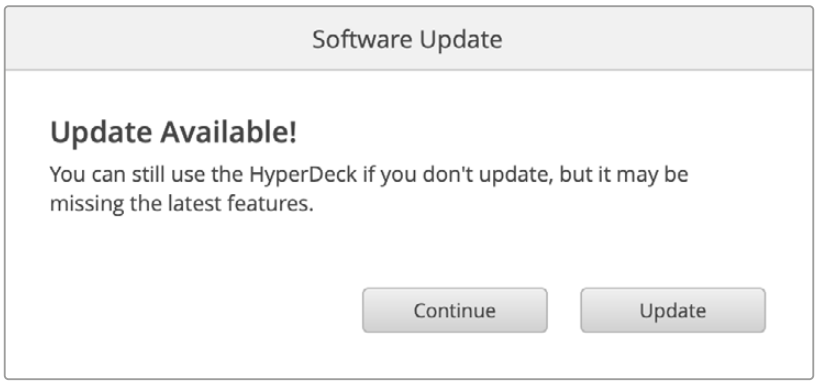
Щоб повернути пристрій до початкового стану, виберіть «Скидання до заводських параметрів». Дана операція зробить наявний сертифікат недійсним. У цьому випадку буде потрібно згенерувати запит на підписання нового сертифіката в центрі CA або IT-відділі.

Оновлення вбудованого програмного забезпечення

Порядок оновлення вбудованого ПЗ

1. Завантажте останню версію утиліти Blackmagic HyperDeck Setup у розділі підтримки за адресою www.blackmagicdesign.com/ua/support
2. Запустіть інсталятор Blackmagic HyperDeck Setup і дотримуйтесь інструкцій на екрані.
3. Після інсталяції підключіть HyperDeck Shuttle HD до комп'ютера через порт USB або роз'єм Ethernet на задній панелі пристрою.

4 Для оновлення ПЗ запустіть утиліту Blackmagic HyperDeck Setup і дотримуйтесь інструкцій на екрані. Якщо вони не з'являться, поточна версія є актуальною.



Передача файлів через мережу

HyperDeck Shuttle HD підтримує передачу файлів як за протоколом HTTPS, який забезпечує підвищений рівень безпеки, так і через FTP. Це дозволяє швидко копіювати матеріали з комп'ютера безпосередньо на рекордер через локальну мережу. Наприклад, можна перенести зображення на рекордер HyperDeck, який використовується для виведення на відеостіни та цифрові рекламно-інформаційні панелі.

HyperDeck дозволяє імпортувати та експортувати будь-які файли, проте їх відтворення можливе лише в тому разі, якщо рекордер підтримує використовувані кодек і роздільну здатність.

ПОРАДА. Передавати файли через мережу можна і тоді, коли HyperDeck веде запис. У цьому випадку швидкість обміну даними коригується автоматично.

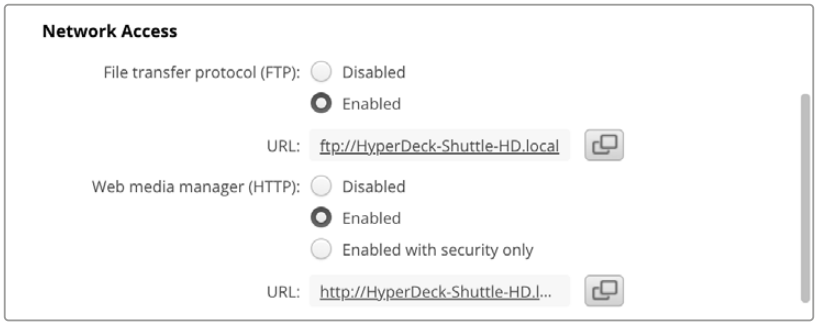
Доступ до рекордера HyperDeck Shuttle HD за будь-яким із цих протоколів можна ввімкнути або вимкнути за допомогою утиліти HyperDeck Setup. Наприклад, можна одночасно вимкнути доступ через FTP та ввімкнути доступ через HTTPS.

Підключення до рекордера HyperDeck Shuttle HD через HTTPS

Щоб отримати доступ до рекордера HyperDeck Shuttle HD через вебдиспетчер даних, потрібна URL-адреса, яку можна знайти в налаштуваннях доступу через мережу. Вони відображаються в утиліті HyperDeck Setup при підключенні комп'ютера через USB або Ethernet, але будуть вимкнені, коли використовується лише Ethernet.

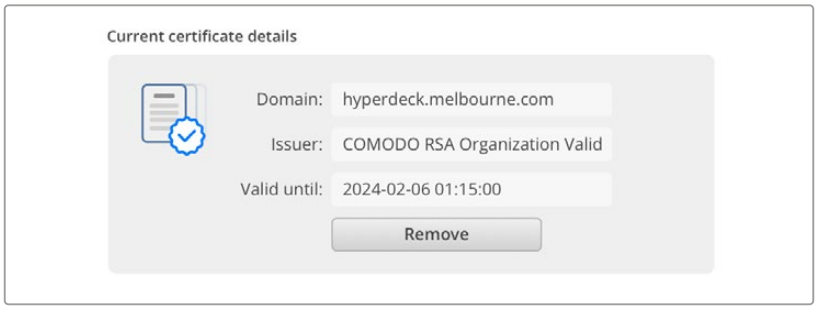
1 Підключіть комп'ютер до USB-порту на задній панелі HyperDeck Shuttle HD за допомогою кабелю USB-C та відкрийте утиліту HyperDeck Setup. Поруч з іменем пристрою з'явиться піктограма USB-з'єднання. Клацніть круглу піктограму або зображення пристрою, щоб відкрити налаштування.

2 При використанні сертифіката з власним підписом перейдіть до налаштувань Network Access і в полі URL клацніть піктограму копіювання. URL-адреса містить ім'я, присвоєне пристрою HyperDeck. Щоб її змінити, потрібно модифікувати ім'я рекордера.



При використанні сертифіката з власним підписом клацніть посилання

3 Після імпорту сертифіката, підписаного в центрі CA або IT-відділі, скопіюйте та вставте адресу в поле Domain наявного сертифіката.



Скопіюйте адресу домену та вставте її в браузер

4 Відкрийте браузер і вставте адресу в нове вікно. Якщо в налаштуваннях вибрано Enable with security only, доступ надаватиметься лише при введенні імені користувача та пароля.

Якщо при використанні сертифіката з власним підписом у браузері з'явиться застереження про незахищеність з'єднання, значить підписаний сертифікат не було імпортовано за допомогою утиліти HyperDeck Setup.

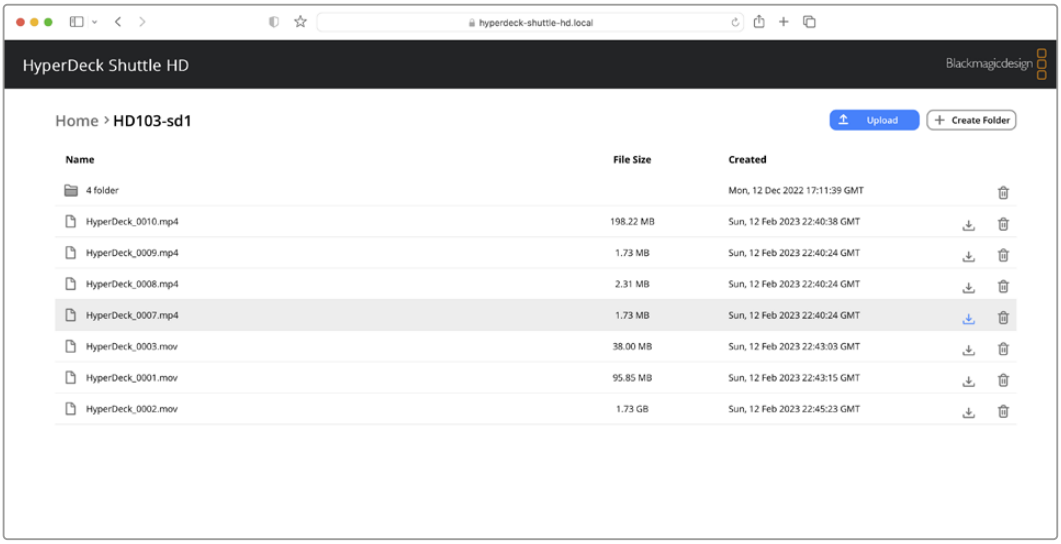
Щоб продовжити роботу без дійсного й довіреного сертифіката, підтвердьте розуміння ризиків у браузері та перейдіть до вебсайту.

Передача файлів за допомогою вебдиспетчера даних

При першому відкритті вебдиспетчера у вікні браузера файли буде упорядковано за відповідними слотами накопичувачів.

sd1	Медіафайли на SD-картах.
USB	Підключені USB-диски відображатимуться з префіксом USB/.

Щоб переглянути вміст SD-карти або диска, двічі клацніть носій.



Щоб додати файли, натисніть кнопку Upload

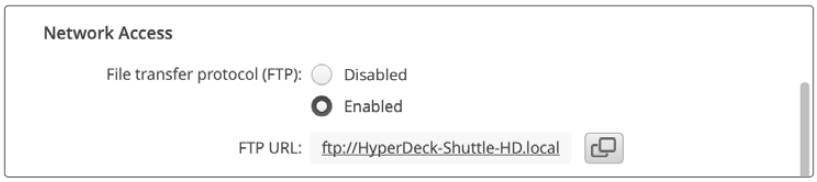
Щоб у дистанційному режимі додати файл для відтворення, натисніть кнопку Upload. Виберіть файл у провіднику та клацніть Upload. Під час вивантаження з'явиться вікно статусу. За потреби можна додавати папки натисканням кнопки Create folder.

Щоб завантажити файл, натисніть піктограму стрілки праворуч. У браузері може з'явитися повідомлення із запитом дозволити завантаження з даного вебсайту. Клацніть Allow. Щоб видалити файл, натисніть піктограму кошика, після чого з'явиться відповідне діалогове вікно. Клацніть Delete.

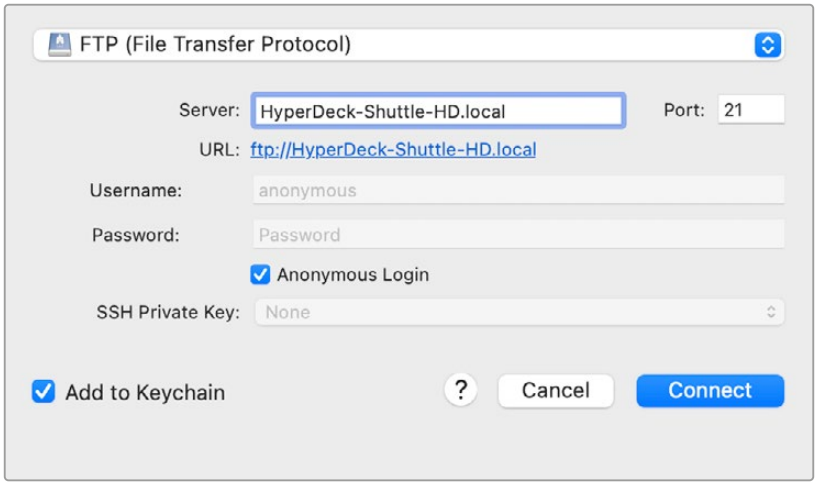
Передача файлів через FTP

Для обміну файлами між комп'ютером і HyperDeck Shuttle HD в одній локальній мережі потрібен FTP-клієнт та IP-адреса рекордера або URL-адреса FTP з утиліти HyperDeck Setup.

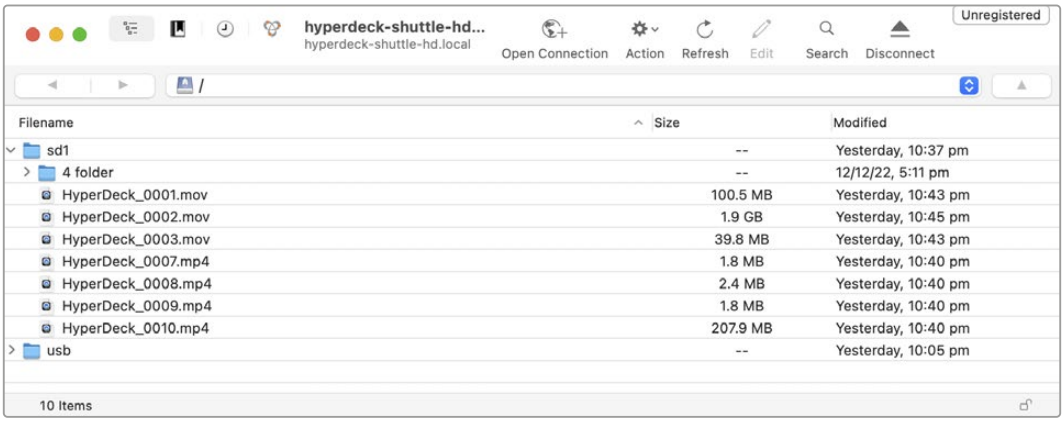
1. Завантажте та інсталюйте FTP-клієнт на комп'ютер, який буде підключено до рекордера. Радимо використовувати Cyberduck, FileZilla або Transmit, проте підійдуть й інші аналогічні програми. Cyberduck та FileZilla пропонуються безкоштовно.
2. Підключіть HyperDeck Shuttle HD до локальної мережі, запустіть утиліту HyperDeck Setup і клацніть URL-адресу FTP або піктограму копіювання, щоб вставити вручну. Якщо FTP-клієнт не виконує з'єднання, клацніть посилання ще раз.



3. Щоб встановити з'єднання вручну, вставте веб-адресу FTP в поле Server. Установіть прапорець Anonymous Login.



4 SD-карти ідентифікуватимуться позначкою sd1.



Тепер за допомогою FTP-інтерфейсу можна перетягувати файли.

Інформація для розробників

Blackmagic HyperDeck Ethernet Protocol

The Blackmagic HyperDeck Ethernet Protocol is a text based protocol accessed by connecting to TCP port 9993 on HyperDeck models that have a built in Ethernet connection. If you are a software developer, you can use the protocol to construct devices that integrate with our products. Here at Blackmagic Design our approach is to open up our protocols and we eagerly look forward to seeing what you come up with!

You can connect to your HyperDeck recorder using the HyperDeck Ethernet Protocol using a command line program on your computer, such as Terminal on a Mac and putty on a Windows computer.

The HyperDeck Ethernet Protocol lets you schedule playlists and recordings. The following is an example of how to play 7 clips from clip number 5 onwards via the HyperDeck Ethernet Protocol.

On a Mac

1. Open the Terminal application which is located with the applications > utilities folder.
2. Type in “nc” and a space followed by the IP address of your HyperDeck disk recorder, another space and “9993” which is the HyperDeck Ethernet Protocol port number. For example type: nc 192.168.1.154 9993. The Protocol preamble will appear.
3. Type “playrange set: clip id: 5 count: 7” and press ‘return’.

   On HyperDeck disk recorders with a timeline view, you will see in and out points marked around clips 5 through the end of clip 11.
4. Type “play”. Clips 5 through 11 will now play back.
5. To clear the playrange, type “playrange clear”
6. To exit from the protocol, type ‘quit’.

Protocol Commands

Command	Command Description
help or ?	Provides help text on all commands and parameters
commands	return commands in XML format
device info	return device information
disk list	query clip list on active disk
disk list: slot id: {n}	query clip list on disk in slot {n}
quit	disconnect ethernet control
ping	check device is responding
preview: enable: {true/false}	switch to preview or output
play	play from current timecode
play: speed: {-5000 to 5000}	play at specific speed
play: loop: {true/false}	play in loops or stop-at-end
play: single clip: {true/false}	play current clip or all clips

Command	Command Description
play: {clip id/clip/timecode/timeline/...}	play from the specified position see “goto” command for description of parameters parameters can be combined with {speed/loop/single clip}
playrange	query playrange setting
playrange set: clip id: {n}	set play range to play clip {n} only
playrange set: clip id: {n} count: {m}	set play range to {m} clips starting from clip {n}
playrange set: in: {inT} out: {outT}	set play range to play between: - timecode {inT} and timecode {outT}
playrange set: timeline in: {in} timeline out: {out}	set play range in units of frames between: - timeline position {in} and position {out}
playrange clear	clear/reset play range setting
play on startup	query unit play on startup state
play on startup: enable: {true/false}	enable or disable play on startup
play on startup: single clip: {true/false}	play single clip or all clips on startup
play option	query play options
play option: stop mode: {lastframe/nextframe/black}	set output frame when playback stops
record	record from current input
record: name: {name}	record named clip
record spill	spill current recording to next slot
record: spill: slot id: {n}	spill current recording to specified slot use current id to spill to same slot
spill order	query the device order used for record spill
stop	stop playback or recording
clips count	query number of clips on timeline
clips get	query all timeline clips
clips get: clip id: {n}	query a timeline clip info
clips get: clip id: {n} count: {m}	query m clips starting from n
clips get: version: {1/2/3}	query clip info using specified output version: version 1: id: name startT duration version 1: id: name startT duration startT depends on “configuration: timecode output: {clip/timeline}” version 2: id: clipInT clipDuration inT outT filename version 3: id: clipInT clipDuration inT outT folder/filename
clips add: name: {name}	append a clip to timeline, name can include subfolders e.g. folder1/HyperDeck_0001.mp4
clips add: clip id: {n} name: {name}	insert clip before existing clip {n}
clips add: in: {inT} out: {outT} name: {name}	append the clip portion between clip timecodes {inT} to {outT}
clips add: frame in: {in} frame out: {out} name: {name}	append the clip portion between clip frame numbers {in} to {out}

Command	Command Description
clips remove: clip id: {n}	remove clip {n} from the timeline (invalidates clip ids following clip {n})
clips clear	empty timeline clip list
clips rebuild	rebuild timeline with default rules
clip info	query clip info for the current playing/recording clip
clip info: clip id: {n}	query clip info for timeline clip id {n}
clip info: name: {name}	query clip info for the clip named {name} on active disk
transport info	query current activity
slot info	query active slot
slot info: slot id: {n}	query slot {n}
slot info: device: {device}	query slot containing device USB/network devices can be queried without being active “device” and “slot id” parameters are mutually exclusive in all commands
slot select: slot id: {n}	switch to specified slot
slot select: device: {device}	switch to slot containing device
slot select: video format: {format}	load clips of specified format
slot unblock	unblock active slot
slot unblock: slot id: {n}	unblock slot {n}
slot unblock: device: {device}	unblock disk device
external drive list	list all available USB/network drives for use in external slot
external drive select: device: {device}	switch external slot to specified external drive
external drive selected	query the currently selected external drive
cache info	query cache status
dynamic range	query dynamic range settings
dynamic range: playback override: {off/Rec709/Rec2020_SDR/HLG/ ST2084_300/ST2084_500/ ST2084_800/ST2084_1000/ ST2084_2000/ST2084_4000/ST2084	set playback dynamic range override
dynamic range: record override: {off/Rec709/Rec2020_SDR/HLG/ ST2084_300/ST2084_500/ ST2084_800/ST2084_1000/ ST2084_2000/ST2084_4000/ST2048}	set record dynamic range override
notify	query notification status
notify: remote: {true/false}	set remote notifications
notify: transport: {true/false}	set transport notifications
notify: slot: {true/false}	set slot notifications
notify: configuration: {true/false}	set configuration notifications

Command	Command Description
notify: dropped frames: {true/false}	set dropped frames notifications (reported dropped frame count is approximate)
notify: display timecode: {true/false}	set display timecode notifications
notify: timeline position: {true/false}	set playback timeline position notifications
notify: playrange: {true/false}	set playrange notifications
notify: cache: {true/false}	set cache notifications
notify: dynamic range: {true/false}	set dynamic range settings notifications
notify: slate: {true/false}	set digital slate notifications
notify: clips: {true/false}	set timeline clips notifications where two types of changes can occur: add: partial update with list of clips and insert positions snapshot: complete update of all clips on timeline
notify: disk: {true/false}	set disk clips notifications where two types of changes can occur: add: partial update with list of clips and insert positions snapshot: complete update of all clips on timeline
notify: device info: {true/false}	set device info notifications
notify: nas: {true/false}	set nas notifications triggered by commands such as “nas add” or “nas remove”
goto: clip id: {start/end}	goto first clip or last clip
goto: clip id: {n}	goto clip id {n}
goto: clip id: +{n}	go forward {n} clips
goto: clip id: -{n}	go backward {n} clips
goto: clip: {start/end}	goto start or end of clip
goto: clip: {n}	goto frame position {n} within current clip
goto: clip: +{n}	go forward {n} frames within current clip
goto: clip: -{n}	go backward {n} frames within current clip
goto: timeline: {start/end}	goto start or end of timeline
goto: timeline: {n}	goto frame position {n} within timeline
goto: timeline: +{n}	go forward {n} frames within timeline
goto: timeline: -{n}	go backward {n} frames within timeline
goto: timecode: {timecode}	goto absolute timecode position in timeline
goto: timecode: +{timecode}	go forward {timecode} duration
goto: timecode: -{timecode}	go backward {timecode} duration
goto: slot id: {n}	goto slot id {n}
goto: clip id: {n} clip: {m}	goto clip id {n} and offset to frame position {m} within that clip
goto: clip id: {n} timeline: {m}	goto clip id {n} and offset to frame position {m} within the timeline

Command	Command Description
goto: clip id: {n} timecode: {timecode}	goto clip id {n} and offset {timecode} duration {clip id/clip/timeline/timecode} support absolute and relative offsets use “play” instead of “goto” to play from seeked position
jog: timecode: {timecode}	jog to timecode
jog: timecode: +{timecode}	jog forward {timecode} duration
jog: timecode: -{timecode}	jog backward {timecode} duration
shuttle: speed: {-5000 to 5000}	shuttle with speed
remote	query unit remote control state
remote: enable: {true/false}	enable or disable remote control
remote: override: {true/false}	session override remote control
configuration	query configuration settings
configuration: video input: {SDI/HDMI/component/composite}	change the video input source
configuration: audio input: {embedded/XLR/RCA}	change the audio input source
configuration: file format: {format}	switch to one of the supported formats: H.265High_422, H.264High, H.264Medium, H.264Low, H.264High10_422, H.265High, H.265Medium, H.265Low, QuickTimeProResHQ, QuickTimeProRes, QuickTimeProResLT, QuickTimeProResProxy DNxHR_HQX, QuickTimeDNxHR_HQX, DNxHR_SQ, QuickTimeDNxHR_SQ, DNxHR_LB, QuickTimeDNxHR_LB, DNxHD220x, QuickTimeDNxHD220x, DNxHD145, QuickTimeDNxHD145, DNxHD45, QuickTimeDNxHD45
configuration: audio codec: {PCM/AAC}	switch to specific audio codec
configuration: timecode input: {external/embedded/internal/preset/clip}	change the timecode input
configuration: timecode output: {clip/timeline}	change the timecode output
configuration: timecode preference: {default/dropframe/nondropframe}	whether or not to use drop frame timecodes when not otherwise specified
configuration: timecode preset: {timecode}	set the timecode preset
configuration: audio input channels: {n}	set the number of audio channels recorded to {n}
configuration: record trigger: {none/recordbit/timecoderun}	change the record trigger
configuration: record prefix: {name}	set the record prefix name (supports UTF-8 name)
configuration: record cache: {true/false}	enable or disable record cache, has no effect if cache is not supported/installed/formatted
configuration: append timestamp: {true/false}	append timestamp to recorded filename
configuration: usb spill: {true/false}	enable or disable spilling between usb disks

Command	Command Description
configuration: reference source: {auto/input/external}	set source for the reference signal
configuration: genlock input resync: {true/false}	enable or disable genlock input resync when enabled set reference source to auto/external
configuration: xlr input id: {n} xlr type: {line/mic}	configure xlr input type multiple xlr inputs can be configured in a single command
uptime	return time since last boot
format: slot id: {n} prepare: {exFAT/HFS+} name: {name}	prepare formatting operation filesystem type with volume name {name} “slot id” can be omitted for the current mounted slot “name” defaults to current volume name if mounted (supports UTF-8)
format: device: {device} prepare: {exFAT/HFS+} name: {name}	prepare formatting operation for {device}
format: confirm: {token}	perform a pre-prepared formatting operation using token
identify: enable: {true/false}	identify the device
watchdog: period: {period in seconds}	client connection timeout
reboot	reboot device
slate clips	slate clips information
slate project	slate project information
slate lens	slate lens information
nas list	list all NAS share bookmarks
nas discovered	list all NAS servers that have been discovered via mDNS
nas selected	currently selected NAS share
nas deselect	unmount the currently selected NAS share
connection protocol: response version: {version}	changes which do not affect other client connections change the output of “clips get”, “disk list” and related responses version 1 205 clips get id: filename startT duration startT depends on “configuration: timecode output: {clip/timeline}” 519 clips info id: clipInT clipDuration inT outT filename 206 disk list id: filename codec format duration 520 disk list info id: filename codec format duration version 2 205 clips get id: clipInT clipDuration inT outT folder/filename 519 clips info id: clipInT clipDuration inT outT folder/filename 206 disk list id: codec format duration folder/filename 520 disk list info id: codec format duration folder/filename

Multiline commands:	Command Description
authenticate:↵	authenticate user for secure access
username: {username}	case sensitive username
password: {password}	case sensitive password
slate clips↵	set slate clips information:
reel: {n}	slate reel number, where {n} is in [1, 999]
scene id: {id}	slate scene id value, where {id} is a string
shot type: {WS/MS/CU/BCU/MCU/ECU/none}	slate shot type
take: {n}	slate take number, where {n} is in [1, 99]
take scenario: {PU/VFX/SER/none}	slate take scenario
take auto inc: {true/false}	slate take auto increment
good take: {true/false}	slate good take
environment: {interior/exterior}	slate environment
day night: {day/night}	slate day or night
slate project:↵	set slate project information:
project name: {name}	project name (can be empty, supports UTF-8)
camera: {index}	set camera index e.g. A
director: {name}	director (can be empty, supports UTF-8)
camera operator: {name}	camera operator (can be empty, supports UTF-8)
slate lens:↵	set lens information:
lens type: {type}	lens type (can be empty, supports UTF-8)
iris: {type}	camera iris (can be empty, supports UTF-8)
focal length: {length}	focal length (can be empty, supports UTF-8)
distance: {distance}	lens distance (can be empty, supports UTF-8)
filter: {filter}	lens filter (can be empty, supports UTF-8)
nas add:↵	add a NAS share to the list of bookmarks
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share
username: {username}	username to connect as (optional, defaults to guest)
password: {password}	password to connect with (optional)
nas remove:↵	remove NAS share bookmark, does not unmount share if mounted
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share
nas select:↵	mount NAS share asynchronously. Uses credentials provided in matching bookmark, otherwise uses guest credentials
url: {url}	URL of the NAS share e.g. smb://server.local/path/to/share Use “nas selected” or “notify: slot: true” to determine when share is mounted.

Command Combinations

You can combine the parameters into a single command, for example:

```
play: clip id: 3 speed: 200 loop: true single clip: true
```

Or for configuration:

```
configuration: video input: SDI audio input: XLR
```

Or to switch to the second disk, but only play NTSC clips:

```
slot select: slot id: 2 video format: NTSC
```

Using XML

While you can use the Terminal to talk to HyperDeck, if you are writing software, you can use XML to confirm the existence of a specific command based on the firmware of the HyperDeck you are communicating with. This helps your software user interface adjust to the capabilities of the specific HyperDeck model and software version.

Protocol Details

Connection

The HyperDeck Ethernet server listens on TCP port 9993.

Basic syntax

The HyperDeck protocol is a line oriented text protocol. Lines from the server will be separated by an ascii CR LF sequence. Messages from the client may be separated by LF or CR LF.

New lines are represented in this document as a "↵" symbol.

Single line command syntax

Command parameters are usually optional. A command with no parameters is terminated with a new line:

```
{Command name}↵
```

If parameters are specified, the command name is followed by a colon, then pairs of parameter names and values. Each parameter name is terminated with a colon character:

```
{Command name}: {Parameter}: {Value} {Parameter}: {Value} ...↵
```

Multiline command syntax

The HyperDeck protocol also supports an equivalent multiline syntax where each parameter-value pair is entered on a new line. E.g.

```
{Command name}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
↵
```

Response syntax

Simple responses from the server consist of a three digit response code and descriptive text terminated by a new line:

```
{Response code} {Response text}↵
```

If a response carries parameters, the response text is terminated with a colon, and parameter name and value pairs follow on subsequent lines until a blank line is returned:

```
{Response code} {Response text}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
...
↵
```

Successful response codes

A simple acknowledgement of a command is indicated with a response code of 200:

```
200 ok↵
```

Other successful responses carry parameters and are indicated with response codes in the range of 201 to 299.

Failure response codes

Failure responses to commands are indicated with response codes in the range of 100 to 199:

```
100 syntax error
101 unsupported parameter
102 invalid value
103 unsupported
104 disk full
105 no disk
106 disk error
107 timeline empty
108 internal error
109 out of range
110 no input
111 remote control disabled
112 clip not found
120 connection failed
121 authentication failed
122 authentication required
150 invalid state
151 invalid codec
160 invalid format
161 invalid token
162 format not prepared
163 parameterized single line command not supported
```

Asynchronous response codes

The server may return asynchronous messages at any time. These responses are indicated with response codes in the range of 500 to 599:

```
5xx {Response Text}:↵
{Parameter}: {Value}↵
{Parameter}: {Value}↵
↵
```

Connection response

On connection, an asynchronous message will be delivered:

```
500 connection info:↵
protocol version: {Version}↵
model: {Model Name}↵
↵
```

Connection rejection

A limited number of clients may connect at a time. If too many clients attempt to connect concurrently, they will receive an error and be disconnected:

```
120 connection failed↵
```

Timecode syntax

Timecodes are expressed as non-drop-frame timecode in the format:

```
HH:MM:SS:FF
```

Handling of deck "remote" state

The “remote” command may be used to enable or disable the remote control of the deck. Any attempt to change the deck state over ethernet while remote access is disabled will generate an error:

```
111 remote control disabled↵
```

To enable or disable remote control:

```
remote: enable: {“true”, “false”} ↵
```

The current remote control state may be overridden allowing remote access over ethernet irrespective of the current remote control state:

```
remote: override: {“true”, “false”} ↵
```

The override state is only valid for the currently connected ethernet client and only while the connection remains open.

The “remote” command may be used to query the remote control state of the deck by specifying no parameters:

```
remote↵
```

The deck will return the current remote control state:

```
210 remote info:↵
enabled: {“true”, “false”}↵
override: {“true”, “false”}↵
↵
```

Asynchronous remote control information change notification is disabled by default and may be configured with the “notify” command. When enabled, changes in remote state will generate a “510 remote info:”asynchronous message with the same parameters as the “210 remote info:” message.

Closing connection

The "quit" command instructs the server to cleanly shut down the connection:

```
quit↵
```

Checking connection status

The "ping" command has no function other than to determine if the server is responding:

```
ping↵
```

Getting help

The "help" or "?" commands return human readable help text describing all available commands and parameters:

```
help↵
```

Or:

```
?↵
```

The server will respond with a list of all supported commands:

```
201 help:↵
{Help Text}↵
{Help Text}↵
↵
```

Switching to preview mode

The "preview" command instructs the deck to switch between preview mode and output mode:

```
preview: enable: {"true", "false"}↵
```

Playback will be stopped when the deck is switched to preview mode. Switching to playback is not permitted during record. Use the stop command to stop recording before switching to playback.

Controlling device playback

The “play” command instructs the deck to start playing:

```
play↵
```

The play command accepts a number of parameters which may be used together in most combinations.

By default, the deck will play all remaining clips on the timeline then stop.
The “single clip” parameter may be used to override this behavior:

```
play: single clip: {“true”, “false”}↵
```

By default, the deck will play at normal (100%) speed. An alternate speed may be specified in percentage between -5000 to 5000:

```
play: speed: {% normal speed}↵
```

By default, the deck will stop playing when it reaches to the end of the timeline. The “loop” parameter may be used to override this behavior:

```
play: loop: {“true”, “false”}↵
```

To play from the start of a particular clip:

```
play: clip id: {Clip Id}↵
```

To play from a position offset from the start of particular clip:

```
play: clip id: {Clid Id} timecode: +{timecode}↵
```

The “playrange” command returns the current playrange setting if any:

```
playrange↵
```

To override this behaviour and select a particular clip:

```
playrange set: clip id: {Clip ID}↵
```

To only play a certain number of clips starting at a particular clip:

```
playrange set: clip id: {n} count: {m}↵
```

To only play a certain timecode range:

```
playrange set: in: {in timecode} out: {out timecode}↵
```

To play a certain timeline range:

```
playrange set: timeline in: {in} timeline out: {out}↵
```

To clear a set playrange and return to the default value:

```
playrange clear↵
```

The “play on startup command” instructs the deck on what action to take on startup. By default, the deck will not play. Use the “enable” command to start playback after each power up.

```
play on startup: enable {“true”, “false”}↵
```

By default, the unit will play back all clips on startup. Use the “single clip” command to override.

```
play on startup: single clip: {“true”, “false”}↵
```

The “play option” command queries the output frame for when playback stops:

```
play option↵
```

By default, the deck will display the last frame when playback stops. To override this behaviour, the “stop mode” parameter can be used:

```
play option: stop mode: {“lastframe”, “nextframe”, “black”}↵
```

Stopping deck operation

The "stop" command instructs the deck to stop the current playback or capture:

```
stop↵
```

Changing timeline position

The "goto" command instructs the deck to switch to playback mode and change its position within the timeline.

To go to the start of a specific clip:

```
goto: clip id: {Clip ID}↵
```

To move forward/back {count} clips from the current clip on the current timeline:

```
goto: clip id: +/-{count}↵
```

Note that if the resultant clip id goes beyond the first or last clip on timeline, it will be clamp at the first or last clip.

To go to the start or end of the current clip:

```
goto: clip: {“start”, “end”}↵
```

To go to the start of the first clip or the end of the last clip:

```
goto: timeline: {“start”, “end”}↵
```

To go to a specified timecode:

```
goto: timecode: {timecode}↵
```

To move forward or back a specified duration in timecode:

```
goto: timecode: {“+”, “-”}{duration in timecode}↵
```

To specify between slot 1 and slot 2:

```
goto: slot id: {Slot ID}↵
```

Note that only one parameter/value pair is allowed for each goto command.

Enumerating supported commands and parameters

The "commands" command returns the supported commands:

```
commands↵
```

The command list is returned in a computer readable XML format:

```
212 commands:
<commands>↵
     <command name="…"><parameter name="…"/>…</command>↵
     <command name="…"><parameter name="…"/>…</command>↵
     …
</commands>↵
↵
```

More XML tokens and parameters may be added in later releases.

Controlling asynchronous notifications

The “notify” command may be used to enable or disable asynchronous notifications from the server.
To enable or disable transport notifications:

```
notify: transport: {“true”, “false”}↵
```

To enable or disable slot notifications:

```
notify: slot: {“true”, “false”}↵
```

To enable or disable remote notifications:

```
notify: remote: {“true”, “false”}↵
```

To enable or disable configuration notifications:

```
notify: configuration: {“true”, “false”}↵
```

Multiple parameters may be specified. If no parameters are specified, the server returns the current state of all notifications:

```
209 notify:↵
transport: {“true”, “false”}↵
slot: {“true”, “false”}↵
remote: {“true”, “false”}↵
configuration: {“true”, “false”}↵
dropped frames: {“true”, “false”}↵
display timecode: {“true”, “false”}↵
timeline position: {“true”, “false”}↵
playrange: {“true”, “false”}↵
cache: {“true”, “false”}↵
dynamic range: {“true”, “false”}↵
slate: {“true”, “false”}↵
clips: {“true”, “false”}↵
disk: {“true”, “false”}↵
device info: {“true”, “false”}↵
nas: {“true”, “false”}↵
↵
```

Retrieving device information

The "device info" command returns information about the connected deck device:

```
device info↵
```

The server will respond with:

```
204 device info:↵
protocol version: {Version}↵
model: {Model Name}↵
unique id: {unique alphanumeric identifier}↵
slot count: {number of storage slots}↵
software version: {software version}↵
name: {device name}↵
↵
```

Retrieving slot information

The "slot info" command returns information about a slot. Without parameters, the command returns information for the currently selected slot:

```
slot info↵
```

If a slot id is specified, that slot will be queried:

```
slot info: slot id: {Slot ID}↵
```

The server will respond with slot specific information:

```
202 slot info:↵
slot id: {Slot ID}↵
slot name: {“slot name”}↵
device name: {identifying name for disk device}↵
status: {"empty", "mounting", "error", "mounted"}↵
volume name: {Volume name}↵
recording time: {recording time available in seconds}↵
video format: {disk's default video format}↵
blocked: {“true”, “false”}↵
remaining size: {remaining size in bytes}↵
total size: {total size in bytes}↵
↵
```

A slot can also be specificed by its device. This is particularly useful when there are multiple drives connected via USB. First list the available external drives:

```
external drive list↵
226 external drive info:↵
device: {device}↵
```

Then use slot info with device to query the drive:

```
slot info: device: {device}↵
```

Asynchronous slot information change notification is disabled by default and may be configured with the "notify" command. When enabled, changes in slot state will generate a "502 slot info:" asynchronous message with the same parameters as the "202 slot info:" message.

Retrieving clip information

The “disk list” command returns the information for each playable clip on a given disk. Without parameters, the command returns information for the current active disk:

```
disk list↵
```

If a slot id is specified, the disk in that slot will be queried:

```
disk list: slot id: {Slot ID}↵
```

The server responds with the list of all playable clips on the disk in the format of: Index, name, formats, and duration in timecode:

```
206 disk list:↵
slot id: {Slot ID}↵
{clip index}: {name} {file format} {video format} {Duration timecode}↵
{clip index}: {name} {file format} {video format} {Duration timecode}↵
…
↵
```

Note that the *clip index* starts from 1.

Retrieving clip count

The "clips count" command returns the number of clips on the current timeline:

```
clips count ↵
```

The server responds with the number of clips:

```
214 clips count: ↵
clip count: {Count}↵
```

Retrieving timeline information

The "clips get" command returns information for each available clip on the current timeline. Without parameters, the command returns information for all clips on timeline:

```
clips get↵
```

In version 1, the start timecode reported is either a clip timecode or a timeline timecode depending on the configured output timecode.

The server responds with a list of clip IDs, names and timecodes:

```
205 clips info:↵
clip count: {Count}↵
{Clip ID}: {Name} {Start timecode} {Duration timecode}↵
{Clip ID}: {Name} {Start timecode} {Duration timecode}↵
…
↵
```

The “clips get” command provides a more detailed response when using the “version: 2” parameter:

```
clips get: version: 2↵
```

The server responds with a list of clip IDs, timecodes, in points, out points and names. Clip name is the last field making it simpler to parse when names have embedded spaces.

```
{Clip ID}: {Clip start timecode} {Duration timecode} {inTimecode}
{outTimecode}
{name}↵
{Clip ID}: {Clip start timecode} {Duration timecode} {inTimecode}
{outTimecode}
{name}↵
…
↵
```

For models that support recursive timelines “clips get: version: 3” replaces the {name} field with {path to clip name} where the {path to clip name} can include directories and subdirectories.

Retrieving transport information

The “transport info” command returns the state of the transport:

```
transport info ↵
```

The server responds with transport specific information:

```
208 transport info:

status: {“preview”, “stopped”, “play”, “forward”, “rewind”,
“jog”, “shuttle”,”record”}↵

speed: {Play speed between -5000 and 5000 %}↵

slot id: {Slot ID or “none”}↵

slot name: {“slot name”}↵

device name: {identifying name for disk device}↵

clip id: {Clip ID or “none”}↵

single clip: {“true”, “false”}↵

display timecode: {timecode}↵

timecode: {timecode}↵

video format: {Video format}↵

loop: {“true”, “false”}↵

timeline: {n}↵

input video format: {Video format”}↵

dynamic range: {“off”, “Rec709”, “Rec2020_SDR”, “HLG”,
“ST2084_300”, “ST2084_500”, “ST2084_800”, “ST2084_1000”,
“ST2084_2000”, “ST2084_4000”, “ST2048” or “none”}↵

reference locked: {“false”, “true”}

↵
```

The "timecode" value is the timecode within the current timeline for playback or the clip for record. The "display timecode" is the timecode displayed on the front of the deck. The two timecodes will differ in some deck modes.

Asynchronous transport information change notification is disabled by default and may be configured with the "notify" command. When enabled, changes in transport state will generate a "508 transport info:" asynchronous message with the same parameters as the "208 transport info:" message.

Video Formats

The following video formats are currently supported on HyperDeck Extreme, HyperDeck Studio and HyperDeck Shuttle:

720p50, 720p5994, 720p60

1080p23976, 1080p24, 1080p25, 1080p2997, 1080p30, 1080p60

1080i50, 1080i5994, 1080i60

HyperDeck Extreme HDR models also support the following formats:

NTSC, PAL, NTSCp, PALp

2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p30, 2160p50, 2160p59.94, 2160p60

4Kp23976, 4Kp24, 4Kp25, 4Kp2997, 4Kp30

4Kp50, 4Kp5994, 4Kp60

HyperDeckExtreme 8K HDR adds support for the following 8K formats:

4320p23.98, 4320p24, 4320p25, 4320p29.97, 4320p30, 4320p50, 4320p59.94, 4320p60

8Kp23976, 8Kp24, 8Kp25

HyperDeck Studio Pro and Plus models support these 4k formats:

4Kp23976, 4Kp24, 4Kp25, 4Kp2997, 4Kp30

HyperDeck Studio 4K Pro adds support for the following 4k formats:

4Kp50, 4Kp5994, 4Kp60

Video format support may depend on the file format selected and may vary between models and software releases.

File Formats

All HyperDeck models currently support the following file formats:

H.264High_SDI

H.264High

H.264Medium

H.264Low

QuickTimeProResHQ

QuickTimeProRes

QuickTimeProResLT

QuickTimeProResProxy

QuickTimeDNxHD220x

DNxHD220x

QuickTimeDNxHD145

DNxHD145

QuickTimeDNxHD45

DNxHD45

HyperDeck Studio 4K Pro and HyperDeck Extrme HDR models also support the following file formats:

H.265High_SDI

H.265High

H.265Medium

H.265Low

QuickTimeDNxHR_HQX

DNxHR_HQX

QuickTimeDNxHR_SQ

DNxHR_SQ

QuickTimeDNxHR_LB

DNxHR_LB

Supported file formats may vary between models and software releases.

Querying and updating configuration information

The "configuration" command may be used to query the current configuration of the deck:

```
configuration↵
```

The server returns the configuration of the deck:

```
211 configuration:↵
audio input: {“embedded”, “XLR”, “RCA”}↵
audio mapping: {n}↵
video input: {“SDI”, “HDMI”, “component”, “composite”}↵
file format: {format}↵
audio codec: {“PCM”, “AAC”}↵
timecode input: {“external”, “embedded”, “preset”, “clip”}↵
timecode output: {“clip”, “timeline”}↵
timecode preference: {“default”, “dropframe”, “nondropframe”}↵
timecode preset: {timecode}↵
audio input channels: {n}↵
record trigger: {“none”, “recordbit”, “timecoderun”}↵
record prefix: {name}↵
record cache: {“true”, “false”}↵
append timestamp: {“true”, “false”}↵
genlock input resync: {“true”, “false”}↵
reference source: {“auto”, “input”, “external”}↵
xlr input id: {“n”}↵
xlr type: {”line”, ”mic”}↵
usb spill: {“true”, “false”}↵
↵
```

One or more configuration parameters may be specified to change the configuration of the deck.

To change the current video input:

```
configuration: video input: {“SDI”, “HDMI”, “component”}↵
```

Valid video inputs may vary between models. To configure the current audio input:

```
configuration: audio input: {“embedded”, “XLR”, “RCA”}↵
```

Valid audio inputs may vary between models.

To configure the current file format:

```
configuration: file format: {File format}↵
```

Note that changes to the file format may require the deck to reset, which will cause the client connection to be closed. In such case, response code 213 will be returned (instead of 200) before the client connection is closed:

```
“213 deck rebooting”
```

Asynchronous configuration information change notification is disabled by default and may be configured with the “notify” command. When enabled, changes in configuration will generate a “511 configuration:” asynchronous message with the same parameters as the “211 configuration:” message.

Selecting active slot and video format

The "slot select" command instructs the deck to switch to a specified slot, or/and to select a specified output video format.

To switch to a specified slot:

```
slot select: slot id: {slot ID}↵
```

To switch to a disk device, including USB drives that are not yet made active:

```
slot select: device: {identifying name for disk device}↵
```

To select the output video format:

```
slot select: video format: {video format}↵
```

Either or all slot select parameters may be specified. Note that selecting video format will result in a rescan of the disk to reconstruct the timeline with all clips of the specified video format.

Clearing the current timeline

The "clips clear" command instructs the deck to empty the current timeline:

```
clips clear↵
```

The server responds with

```
200 ok↵
```

Adding a clip to the current timeline

The "clips add:" command instructs the deck to add a clip to the current timeline:

```
clips add: name: {clip name}↵
```

The server responds with

```
200 ok↵
```

or in case of error

```
1xx {error description}↵
```

Configuring the watchdog

The “watchdog” command instructs the deck to monitor the connected client and terminate the connection if the client is inactive for at least a specified period of time.

To configure the watchdog:

```
watchdog: period: {period in seconds}↵
```

To avoid disconnection, the client must send a command to the server at least every {period} seconds.
Note that if the period is set to 0 or less than 0, connection monitoring will be disabled.

Network Area Storage

On networks using multicast DNS the “nas discovered” command will list network servers the HyperDeck has discovered:

```
nas discovered↵
225 nas host info:
CloudStoreMini.local. CloudStoreMini
CloudStore80.local. CloudStore80
CloudStore320.local. CloudStore320
```

A network share can be added as a bookmark to the HyperDeck using ‘nas add’

```
nas add:
url: smb://CloudStore80.local/Studio1
```

For shares that require a username and password consider using the secure mode of the HyperDeck Ethernet protocol to avoid passwords being sent as plaintext.

```
nas add:
url: smb://192.168.1.1/Main
username: user1234
password: Password1234
```

A share can be made available for recording and playback using ‘nas select’. If a bookmark exists for that share, ‘nas select’ will use the credentials stored in the bookmark. Otherwise ‘nas select’ will connect using Guest credentials.

```
nas select:
url: smb://192.168.1.1/Main
```

Only one share can be mounted at a time using ‘nas select’.

You can query the currently selected nas share using the ‘nas selected’ command. If ‘notify: slot: true’ was used an asynchronous notification will be sent when the share is mounted.

HyperDeck Control REST API

Розробники програмного забезпечення можуть створювати власні додатки для керування та роботи з дисковими рекордерами HyperDeck, використовуючи такий інструментарій, як REST або Postman, та інтерфейс HyperDeck Control REST API. Він дає змогу виконувати цілу низку операцій, наприклад розпочинати та зупиняти запис, керувати відтворенням і отримувати доступ до інформації на диску. Незалежно від того, створюється додаток для конкретного проекту чи використовуються наявні інструменти, за допомогою інтерфейсу API можна з легкістю відкрити повний потенціал дискових рекордерів HyperDeck. Варіантів застосування надзвичайно багато!

Transport Control API

API for controlling Transport on Blackmagic Design products.

GET /transports/0

Get device's basic transport status.

Response

200 - Transport status.

The response is a JSON object.

Name	Type	Description
mode	string	Transport mode. Possible values are: InputPreview, InputRecord, Output.

PUT /transports/0

Set device's basic transport status.

Parameters

Name	Type	Description
mode	string	Transport mode. Possible values are: InputPreview, Output.

Response

204 - Transport mode was set.

GET /transports/0/stop

Determine if transport is stopped.

Response

200 - Transport stop response.

The response is a JSON object.

PUT /transports/0/stop

Stop transport. Deprecated, use POST /tranports/0/stop instead.

Response

204 - Transport stopped.

POST /transports/0/stop

Stop transport.

Response

204 - Transport stopped.

GET /transports/0/play

Determine if transport is playing.

Response

200 - Transport play response.
The response is a JSON object.

PUT /transports/0/play

Start playing on transport. Deprecated, use POST /tranports/0/play instead.

Response

204 - Transport playing.

POST /transports/0/play

Start playing on transport.

Response

204 - Transport playing.

GET /transports/0/playback

Get playback state.

Response

200 - OK
The response is a JSON object.

Name	Type	Description
type	string	Possible values are: Play, Jog, Shuttle, Var.
loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
speed	number	Playback Speed, 1.0 for normal forward playback
position	integer	Playback position on the timeline in units of video frames

PUT /transports/0/playback

Set playback state.

Parameters

Name	Type	Description
type	string	Possible values are: Play, Jog, Shuttle, Var.
loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
speed	number	Playback Speed, 1.0 for normal forward playback
position	integer	Playback position on the timeline in units of video frames

Response

204 - No Content

GET /transports/0/record

Get record state.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
recording	boolean	Is transport in Input Record mode

PUT /transports/0/record

Set record state. Deprecated, use POST /transports/0/record instead.

Parameters

Name	Type	Description
recording	boolean	Is transport in Input Record mode
clipName	string	Used to set the requested clipName to record to, when specifying “recording” attribute to True

Response

204 - Recording started.

POST /transports/0/record

Start recording.

Parameters

Name	Type	Description
clipName	string	Specific name of clip to record to.

Response

204 - Recording started.

GET /transports/0/clipIndex

Get the clip index of the currently playing clip on the timeline.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clipIndex	number	The 0-based index of the clip being played on the timeline. null when there is no timeline or an empty timeline.

GET /transports/0/timecode

Get device's timecode.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
display	string	The display timecode serialised as a string.
timeline	string	The timeline timecode serialised as a string.

GET /transports/0/timecode/source

Get timecode source selected on device

Response

200 - OK

The response is a JSON object.

Name	Type	Description
timecode	string	Possible values are: Timeline, Clip.

GET /transports/0/clip

Get clip information about the currently recording (or transferring) clip, if it exists

Response

200 - Information about the clip currently being recorded.

The response is a JSON object.

Name	Type	Description
clip	object	
clip.clipUniqueId	integer	Unique ID used to identify this clip
clip.filePath	string	Path to the file relative to the root of a mount
clip.fileSize	integer	Size of file on disk in bytes
clip.codecFormat	object	
clip.codecFormat.codec	string	Currently selected codec.
clip.codecFormat.container	string	Multimedia container format.
clip.videoFormat (required)	object	Video format configuration.
clip.videoFormat.name	string	Video format serialised as a string.
clip.videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
clip.videoFormat.height	number	Height dimension of video format.
clip.videoFormat.width	number	Width dimension of video format.
clip.videoFormat.interlaced	boolean	Is the display format interlaced?
clip.startTimecode	string	Start timecode of the clip serialised as string
clip.durationTimecode	string	Duration of the clip in timecode format serialised as string
clip.frameCount	integer	Number of frames in clip; duration of the clip in frames

System Control API

API for controlling the System Modes on Blackmagic Design products.

GET /system

Get device system information.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codecFormat	object	
codecFormat.codec	string	Currently selected codec.
codecFormat.container	string	Multimedia container format.
videoFormat (required)	object	Video format configuration.
videoFormat.name	string	Video format serialised as a string.
videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
videoFormat.height	number	Height dimension of video format.
videoFormat.width	number	Width dimension of video format.
videoFormat.interlaced	boolean	Is the display format interlaced?

GET /system/product

Get device product information.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
deviceName	string	Name of device as displayed in Setup
productName	string	Device's product name
softwareVersion	string	Software version running on device

GET /system/supportedCodecFormats

Get the list of supported codecs.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codecs	array	
codecs[i]	object	
codecs[i].codec	string	Currently selected codec.
codecs[i].container	string	Multimedia container format.

GET /system/codecFormat

Get the currently selected codec.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
codec	string	Currently selected codec.
container	string	Multimedia container format.

PUT /system/codecFormat

Set the codec.

Parameters

Name	Type	Description
codec	string	Currently selected codec.
container	string	Multimedia container format.

Response

204 - The codec updated successfully.

GET /system/videoFormat

Get the currently selected video format.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
name	string	Video format serialised as a string.
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

PUT /system/videoFormat

Set the timeline video format. Deprecated, use PUT /timelines/0/videoFormat instead.

Parameters

This parameter can be one of the following types:

Name	Type	Description
name	string	Video format serialised as a string.

Name	Type	Description
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

Response

204 - The video format updated successfully.

400 - Invalid request.

409 - Operation unsupported in the current state.

Media Control API

API for controlling media devices in Blackmagic Design products.

GET /media/workingset

Get the list of media devices currently in the working set.

Response

200 - The list of media devices in the working set. Entries are null if there is no media device in that slot.

The response is a JSON object.

Name	Type	Description
size	integer	The fixed size of this device's working set
workingset (required)	array	
workingset[i]	object	
workingset[i].index	integer	Index of this media in the working set
workingset[i].activeDisk	boolean	Is this current item the active disk
workingset[i].volume	string	Volume name
workingset[i].deviceName	string	Internal device name of this media device
workingset[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
workingset[i].totalSpace	integer	Total space on media device in bytes
workingset[i].remainingSpace	integer	Remaining space on media device in bytes
workingset[i].clipCount	integer	Number of clips currently on the device

GET /media/active

Get the currently active media device.

Response

200 - The current active media device.

The response is a JSON object.

Name	Type	Description
workingsetIndex	integer	Working set index of the active media device
deviceName	string	Internal device name of this media device

204 - No media is currently active

PUT /media/active

Set the currently active media device.

Parameters

Name	Type	Description
workingsetIndex	integer	Working set index of the media to become active

Response

204 - The active media device was set successfully.

400 - Setting the currently active media device is not possible in the current state.

GET /media/devices/doformatSupportedFilesystems

Get the list of filesystems available to format the device.

Response

200 - The list of filesystems permitted for formatting.

The response is a JSON object.

GET /media/devices/{deviceName}

Get information about a requested device.

Parameters

Name	Type	Description
{deviceName}	string	

Response

200 - Information about the requested device.

The response is a JSON object.

Name	Type	Description
state	string	The current state of the media device. Possible values are: None, Scanning, Mounted, Uninitialised, Formatting, RaidComponent.

400 - Invalid device name

404 - Device not found

GET /media/devices/{deviceName}/doformat

Get a format key, used to format the device with a PUT request.

Parameters

Name	Type	Description
{deviceName}	string	

Response

200 - Format prepared

The response is a JSON object.

Name	Type	Description
deviceName	string	Internal device name of this media device
key	string	The key used to format this device, it must be fetched with the GET request and then provided back with a PUT request

400 - Cannot format the device

404 - Device not found

PUT /media/devices/{deviceName}/doformat

Perform a format of the media device.

Parameters

Name	Type	Description
{deviceName}	string	

Name	Type	Description
key	string	The key used to format this device, it must be fetched with the GET request and then provided back with a PUT request
filesystem	string	Filesystem to format to. GET doFormatSupportedFilesystems returns list of supported filesystems.
volume	string	Volume name to set for the disk after format

Response

204 - Format successful

400 - Cannot format the device, invalid filesystem or key

404 - Device not found

Timeline Control API

API for controlling playback timeline.

GET /timelines/0

Get the playback timeline.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clips	array	
clips[i]	object	
clips[i].clipUniqueId	integer	Unique identifier used to identify this media clip. If the same media clip is added to the timeline multiple times, each timeline clip has the same clipUniqueId
clips[i].frameCount	integer	Duration of timeline clip in frames, the number of frames in this clip on the timeline
clips[i].durationTimecode	string	Duration of the timeline clip in timecode format serialised as string. This will differ to durationTimecode reported in /clips for this clipUniqueId if clipIn or frameCount was specified when adding this clip to the timeline.
clips[i].clipIn	string	In frame offset for the clip on the timeline, where 0 is the first frame of the on-disk clip
clips[i].inTimecode	string	Clip timecode of the first frame of this timeline clip serialised as string (clip startTimecode + clipIn frames)
clips[i].timelineIn	string	Timeline position of the first frame of this clip, where 0 is the first frame of the timeline
clips[i].timelineInTimecode	string	Timeline timecode of the first frame of this timeline clip serialised as string

Response

404 - No timeline / disk available.

DELETE /timelines/0

Clear the current playback timeline. Deprecated, prefer to use POST /timelines/0/clear

Response

204 - The timeline was cleared.

POST /timelines/0

Add a clip to the timeline.

Parameters

Name	Type	Description
insertBefore	integer	Clip(s) will be inserted before this timeline clip index. If omitted, inserts to the end of the timeline. 0 inserts to the beginning of the timeline.
clips		

Response

204 - The clip was added to the timeline as specified.

POST /timelines/0/add

Add a clip to the end of the timeline. Deprecated, use POST /timelines/0 to add clips within the timeline.

Parameters

This parameter can be one of the following types:

Name	Type	Description
clips	integer	Unique ID (clipUniqueId) of the clip to add to the timeline

Name	Type	Description
clips	array	
clips[i]	integer	Unique ID (clipUniqueId) of the clip to add to the timeline

Response

204 - The clip was added to the end of the timeline.

DELETE /timelines/0/clear

Clear the playback timeline.

Response

204 - The timeline was cleared.

DELETE /timelines/0/clips/{timelineClipIndex}

Remove the specified clip from the timeline.

Parameters

Name	Type	Description
{timelineClipIndex}	integer	

Response

204 - The specified clip was removed from the timeline.

Event Control API

API For working with built-in websocket.

GET /event/list

Get the list of events that can be subscribed to using the websocket API.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
events	array	
events[i]	string	List of events that can be subscribed to using the websocket API

Clips Control API

API for listing clips on disk.

GET /clips

Get the list of clips on the active disk.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
clips	array	
clips[i]	object	
clips[i].clipUniqueId	integer	Unique ID used to identify this clip
clips[i].filePath	string	Path to the file relative to the root of a mount
clips[i].fileSize	integer	Size of file on disk in bytes
clips[i].codecFormat	object	
clips[i].codecFormat.codec	string	Currently selected codec.
clips[i].codecFormat.container	string	Multimedia container format.
clips[i].videoFormat (required)	object	Video format configuration.
clips[i].videoFormat.name	string	Video format serialised as a string.
clips[i].videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
clips[i].videoFormat.height	number	Height dimension of video format.
clips[i].videoFormat.width	number	Width dimension of video format.
clips[i].videoFormat.interlaced	boolean	Is the display format interlaced?
clips[i].startTimecode	string	Start timecode of the clip serialised as string
clips[i].durationTimecode	string	Duration of the clip in timecode format serialised as string
clips[i].frameCount	integer	Number of frames in clip; duration of the clip in frames

Response

404 - There is no active disk

HyperDeck Control API

API for controlling HyperDecks.

POST /system/reboot

Reboots the device.

Response

204 - The device will reboot immediately.

409 - Rebooting is not possible in the current state.

GET /system/uptime

Gets the current system uptime.

Response

200 - The current system uptime

The response is a JSON object.

Name	Type	Description
uptimeSeconds	integer	The system uptime in seconds

PUT /system/identify

Sets the identify mode. If set to true, will exit identify mode after 10 seconds.

Parameters

Name	Type	Description
enabled	boolean	Is the device identifying itself?

Response

204 - Identify updated successfully.

GET /transports/0/recordCache

Gets information about the recording cache.

Response

200 - Current information about the recording cache

The response is a JSON object.

Name	Type	Description
status	string	The current status of the cache. “none” means no cache is detected by the device. Possible values are: undetected, unformatted, idle, transferring, queued, recording, disabled.
remainingRecordingTime	integer	The remaining recording time in seconds.
transferringDevice	string	The device name of the disk the cache is currently transferring to.

GET /transports/0/recordCache/enabled

Checks if the record cache is enabled.

Response

200 - OK

The response is a JSON object.

Name	Type	Description
enabled	boolean	Is the record cache enabled?

PUT /transports/0/recordCache/enabled

Enables or disables the record cache. Has no effect if cache is not supported / installed / formatted.

Parameters

Name	Type	Description
enabled	boolean	Is the record cache enabled?

Response

204 - Record cache enabled / disabled was changed.

GET /transports/0/record/spillOrder

Gets media devices in order of which will next be spilled to.

Response

200 - The media device spill order

The response is a JSON object.

Name	Type	Description
devices	array	
devices[i]	object	
devices[i].deviceName	string	Internal device name of the drive.

POST /transports/0/record/spillToNewFile

Spills to a new file.

Response

204 - Spilled to a new file.

POST /transports/0/record/spillToNextDevice

Spills to the next media device

Response

204 - Spilled to the specified drive.

GET /transports/0/inputVideoFormat

Gets the video format of the input video signal.

Response

200 - The video format of the input video signal. “inputVideoFormat” is null when there is no timeline.

The response is a JSON object.

Name	Type	Description
inputVideoFormat (required)	object	Video format configuration.
inputVideoFormat.name	string	Video format serialised as a string.
inputVideoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
inputVideoFormat.height	number	Height dimension of video format.
inputVideoFormat.width	number	Width dimension of video format.
inputVideoFormat.interlaced	boolean	Is the display format interlaced?

GET /transports/0/supportedInputVideoSources

Gets the currently supported input video signal sources.

Response

200 - The supported input video signal sources.

The response is a JSON object.

Name	Type	Description
supportedInputVideoSources	array	
supportedInputVideoSources[i]	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

GET /transports/0/inputVideoSource

Gets the source of the input video signal.

Response

200 - The input video signal source. The source will be one in the list from GET /transports/0/supportedInputVideoSources.

The response is a JSON object.

Name	Type	Description
inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

PUT /transports/0/inputVideoSource

Sets the source of the input video signal.

Parameters

Name	Type	Description
inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite.

Response

204 - The source of the input video signal was set successfully.

400 - The source specified was invalid or unsupported.

GET /timelines/0/playRange

Gets the current timeline play range. playRange is null if playing the whole timeline, or there is no play range.

Response

200 - The current timeline play range.

The response is a JSON object.

Name	Type	Description
playRange		

PUT /timelines/0/playRange

Sets the timeline play range.

Parameters

Name	Type	Description
playRange		

Response

204 - The timeline play range was set successfully.

POST /timelines/0/playRange/clear

Clears the timeline play range, sets the play range to be the whole timeline.

Response

204 - The timeline play range was cleared successfully.

GET /timelines/0/videoFormat

Gets the video format of the timeline.

Response

200 - The video format of the timeline. “videoFormat” is null when there is no timeline.

The response is a JSON object.

Name	Type	Description
videoFormat (required)	object	Video format configuration.
videoFormat.name	string	Video format serialised as a string.
videoFormat.frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
videoFormat.height	number	Height dimension of video format.
videoFormat.width	number	Width dimension of video format.
videoFormat.interlaced	boolean	Is the display format interlaced?

PUT /timelines/0/videoFormat

Sets the video format of the timeline.

Parameters

This parameter can be one of the following types:

Name	Type	Description
name	string	Video format serialised as a string.

Name	Type	Description
frameRate	string	Frame rate. Possible values are: 23.98, 24.00, 24, 25.00, 25, 29.97, 30.00, 30, 47.95, 48.00, 48, 50.00, 50, 59.94, 60.00, 60, 119.88, 120.00, 120.
height	number	Height dimension of video format.
width	number	Width dimension of video format.
interlaced	boolean	Is the display format interlaced?

Response

204 - The timeline video format was set successfully.

400 - The requested video format was invalid.

409 - The video format cannot be changed at this time.

POST /timelines/0/rebuild

Rebuilds the timeline with default rules in the current timeline format.

Response

204 - The timeline was rebuilt with default rules.

GET /media/external

Gets the list of present external media devices.

Response

200 - The list of present external media devices

The response is a JSON object.

Name	Type	Description
devices	array	
devices[i] (required)	object	
devices[i].volume	string	Volume name
devices[i].deviceName	string	Internal device name of this media device
devices[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
devices[i].totalSpace	integer	Total space on media device in bytes
devices[i].remainingSpace	integer	Remaining space on media device in bytes
devices[i].clipCount	integer	Number of clips currently on the device

GET /media/external/selected

Gets the current selected external media device.

Response

200 - The selected external media device

The response is a JSON object.

Name	Type	Description
selected	object	
selected.deviceName	string	Internal device name of the drive.

404 - No selected external media has been selected

PUT /media/external/selected

Sets the current selected external media device.

Parameters

Name	Type	Description
selected	object	
selected.deviceName	string	Internal device name of the drive.

Response

204 - The selected external media device was set successfully.

GET /media/nas/discovered

Gets the NAS hosts discoverable by the device.

Response

200 - The list of discovered NAS hosts

The response is a JSON object.

Name	Type	Description
hosts	array	
hosts[i]	object	
hosts[i].hostName	string	The hostname of the NAS host
hosts[i].friendlyName	string	The friendly name of the NAS host
hosts[i].ip	string	The IP address of the NAS host

GET /media/nas/bookmarks

Gets all NAS share bookmarks.

Response

200 - The list of NAS share bookmarks

The response is a JSON object.

Name	Type	Description
hosts	array	
hosts[i] (required)	object	
hosts[i].url	string	URL of the NAS share

POST /media/nas/bookmarks

Add a new NAS share bookmarks.

Parameters

Response

204 - The NAS bookmark was added successfully.

400 - The NAS bookmark could not be added.

GET /media/nas/bookmarks/{url}

Get information about a requested network share bookmark.

Parameters

Name	Type	Description
{url}	string	

Response

200 - Information about the requested network share bookmark.

The response is a JSON object.

Name	Type	Description
url	string	URL of the NAS share

404 - Network share bookmark not found

PUT /media/nas/bookmarks/{url}

Adds a bookmark with the requested URL.

Parameters

Name	Type	Description
{url}	string	

Name	Type	Description
username	string	Default value is: guest.
password	string	

Response

204 - The NAS bookmark has been created.

400 - The NAS bookmark could not be created.

DELETE /media/nas/bookmarks/{url}

Deletes a bookmark with the requested URL.

Parameters

Name	Type	Description
{url}	string	

Response

204 - The NAS bookmark has been deleted.

GET /media/nas/selected

Gets the currently selected share bookmark.

Response

200 - Information about the selected network share bookmark.

The response is a JSON object.

Name	Type	Description
selected	object	
selected.url	string	URL of the NAS share

404 - No NAS drive has been selected.

PUT /media/nas/selected

Sets the selected share bookmark to the requested bookmark, or clears the bookmark.

Parameters

Name	Type	Description
selected	object	
selected.url	string	URL of the NAS share

Response

204 - The selected NAS bookmark was set.

400 - The selected NAS bookmark could not be set.

Notification websocket - 1.0.0

Service that notifies subscribers of device state changes.

messages

Subscribe (The messages from the server/device)

Response Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: subscribe, unsubscribe, listSubscriptions, listProperties, websocketOpened .
.data.properties	array	
.data.properties[i]	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.values	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.data.success	boolean	
.type	string	Possible values are: response .
.id	number	Optional parameter that repeats the id in the output for tracking messages

Event Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: propertyValueChanged .
.data.property	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.value	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.type	string	Possible values are: event .

Publish (The messages that user can send to the server/device)

Response Message (JSON)

Name	Type	Description
.data	object	
.data.action	string	Possible values are: subscribe, unsubscribe, listSubscriptions, listProperties, websocketOpened .
.data.properties	array	
.data.properties[i]	string	Device property that the user can subscribe to. The user can either choose a value from the predefined enum, or provide a wildcard string. Possible values are: /media/workingset, /media/active, /system, /system/codecFormat, /system/videoFormat, /timelines/0, /transports/0, /transports/0/stop, /transports/0/play, /transports/0/playback, /transports/0/record, /transports/0/timecode, /transports/0/timecode/source, /transports/0/clipIndex, /media/external, /media/external/selected, /transports/0/inputVideoSource, /transports/0/inputVideoFormat, /timelines/0/videoFormat, /media/nas/discovered, /media/nas/bookmarks .
.data.values	object	An object with property names as the key and a property value as json. Check the next section for a the device properties and their return values.
.data.success	boolean	
.type	string	Possible values are: response .
.id	number	Optional parameter that repeats the id in the output for tracking messages

Device Properties

/media/workingset

The value JSON returned via the eventResponse when the /media/workingset property changes on the device:

Name	Type	Description
size	integer	The fixed size of this device's working set
workingset (required)	array	
workingset[i]	object	
workingset[i].index	integer	Index of this media in the working set
workingset[i].activeDisk	boolean	Is this current item the active disk
workingset[i].volume	string	Volume name
workingset[i].deviceName	string	Internal device name of this media device
workingset[i].remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
workingset[i].totalSpace	integer	Total space on media device in bytes
workingset[i].remainingSpace	integer	Remaining space on media device in bytes
workingset[i].clipCount	integer	Number of clips currently on the device

/media/active

The value JSON returned via the eventResponse when the /media/active property changes on the device:

Name	Type	Description
.workingsetIndex	integer	Working set index of the active media device
.deviceName	string	Internal device name of this media device

/system

The value JSON returned via the eventResponse when the /system property changes on the device:

Name	Type	Description
.codecFormat	object	Currently selected codec
.codecFormat.codec	string	Currently selected codec
.codecFormat.container	string	Multimedia container format
.videoFormat	string	Name of the video format

/system/codecFormat

Currently selected codec

The value JSON returned via the eventResponse when the /system/codecFormat property changes on the device:

Name	Type	Description
.codec	string	Currently selected codec
.container	string	Multimedia container format

/system/videoFormat

Name of the video format

The value JSON returned via the eventResponse when the /system/videoFormat property changes on the device:

Name	Type	Description

/timelines/0

The value JSON returned via the eventResponse when the /timelines/0 property changes on the device:

Name	Type	Description
.clips	array	
.clips[i]	object	
.clips[i].clipUniqueId	integer	Unique identifier used to identify this media clip. If the same media clip is added to the timeline multiple times, each timeline clip has the same clipUniqueId
.clips[i].frameCount	integer	Duration of timeline clip in frames, the number of frames in this clip on the timeline
.clips[i].durationTimecode	string	Duration of the timeline clip in timecode format serialised as string. This will differ to durationTimecode reported in /clips for this clipUniqueId if clipIn or frameCount was specified when adding this clip to the timeline.
.clips[i].clipIn	string	In frame offset for the clip on the timeline, where 0 is the first frame of the on-disk clip
.clips[i].inTimecode	string	Clip timecode of the first frame of this timeline clip serialised as string (clip startTimecode + clipIn frames)
.clips[i].timelineIn	string	Timeline position of the first frame of this clip, where 0 is the first frame of the timeline
.clips[i].timelineInTimecode	string	Timeline timecode of the first frame of this timeline clip serialised as string

/transports/0

The value JSON returned via the eventResponse when the /transports/0 property changes on the device:

Name	Type	Description
.mode	string	Transport mode Possible values are: InputPreview, InputRecord, Output .

/transports/0/stop

true when transport mode is InputPreview or when in Output mode and speed is 0

The value JSON returned via the eventResponse when the /transports/0/stop property changes on the device:

Name	Type	Description

/transports/0/play

True when transport is in Output mode and speed is non-zero

The value JSON returned via the eventResponse when the /transports/0/play property changes on the device:

Name	Type	Description

/transports/0/playback

The value JSON returned via the eventResponse when the /transports/0/playback property changes on the device:

Name	Type	Description
.type	string	Possible values are: Play, Jog, Shuttle, Var .
.loop	boolean	When true playback loops from the end of the timeline to the beginning of the timeline
.singleClip	boolean	When true playback loops from the end of the current clip to the beginning of the current clip
.speed	number	Playback speed, 1.0 for normal forward playback
.position	integer	Playback position on the timeline in units of video frames

/transports/0/record

The value JSON returned via the eventResponse when the /transports/0/record property changes on the device:

Name	Type	Description
.recording	boolean	Is transport in Input Record mode

/transports/0/timecode

The value JSON returned via the eventResponse when the /transports/0/timecode property changes on the device:

Name	Type	Description
display	string	The display timecode serialised as a string.
timeline	string	The timeline timecode serialised as a string.

/transports/0/timecode/source

The value JSON returned via the eventResponse when the /transports/0/timecode/source property changes on the device:

Name	Type	Description
.timecode	string	Possible values are: Timeline, Clip .

/transports/0/clipIndex

The value JSON returned via the eventResponse when the /transports/0/clipIndex property changes on the device:

Name	Type	Description
.clipIndex	number	The 0-based index of the clip being played on the timeline. null when there is no timeline or an empty timeline.

/media/external

The value JSON returned via the eventResponse when the /media/external property changes on the device:

Name	Type	Description
.volume	string	Volume name
.deviceName	string	Name of media device
.remainingRecordTime	integer	Remaining record time using current codec and video format in seconds
.totalSpace	integer	Total space on media device in bytes
.remainingSpace	integer	Remaining space on media device in bytes
.clipCount	integer	Number of clips currently on the device

/media/external/selected

The value JSON returned via the eventResponse when the /media/external/selected property changes on the device:

Name	Type	Description
.deviceName	string	Internal device name of this media device

/transports/0/inputVideoSource

The value JSON returned via the eventResponse when the /transports/0/inputVideoSource property changes on the device:

Name	Type	Description
.inputVideoSource	string	Source of video input, use GET /transports/0/supportedInputVideoSources to obtain currently supported options. Possible values are: SDI, HDMI, Component, Composite .

/transports/0/inputVideoFormat

The value JSON returned via the eventResponse when the /transports/0/inputVideoFormat property changes on the device:

Name	Type	Description
.inputVideoFormat	string	Name of the video format

/timelines/0/videoFormat

The value JSON returned via the eventResponse when the /timelines/0/videoFormat property changes on the device:

Name	Type	Description
.videoFormat	string	Name of the video format

/media/nas/discovered

The value JSON returned via the eventResponse when the /media/nas/discovered property changes on the device:

Name	Type	Description
.hostName	string	Hostname of external network drive
.friendlyName	string	Name of external network drive
.ip	string	IP Address of external network drive

/media/nas/bookmarks

The value JSON returned via the eventResponse when the /media/nas/bookmarks property changes on the device:

Name	Type	Description
.hosts	array	
.hosts[i]	object	
.hosts[i].url	string	URL associated with bookmark

Допомога

Отримання допомоги

Найшвидший спосіб отримати допомогу — звернутися до сторінок підтримки на сайті Blackmagic Design і перевірити наявність останніх довідкових матеріалів для рекордерів HyperDeck.

Розділ підтримки на сайті Blackmagic Design

Останні версії посібника з експлуатації, програмного забезпечення та додаткову інформацію можна знайти в центрі підтримки Blackmagic Design на сторінці www.blackmagicdesign.com/ua/support

Форум Blackmagic Design

Відвідайте форум спільноти Blackmagic Design на нашому вебсайті, щоб отримати додаткову інформацію та дізнатися про цікаві творчі ідеї. На ньому можна поділитись своїми ідеями, а також отримати допомогу від персоналу підтримки та інших користувачів. Адреса форуму https://forum.blackmagicdesign.com

Звернення до Служби підтримки Blackmagic Design

Якщо за допомогою доступних довідкових матеріалів і форуму вирішити проблему не вдалося, скористайтесь формою «Надіслати імейл» на сторінці підтримки. Також можна зателефонувати до найближчого представництва Blackmagic Design, телефон якого ви знайдете на нашому вебсайті.

Перевірка інстальованої версії програмного забезпечення

Щоб дізнатися, яку версію утиліти Blackmagic HyperDeck Setup інстальовано на комп'ютері, відкрийте вікно About Blackmagic HyperDeck Setup.

- На комп'ютері з операційною системою Mac відкрийте Blackmagic HyperDeck Setup у папці «Програми». У меню виберіть About Blackmagic HyperDeck Setup, щоб побачити номер версії.
- На комп'ютері з операційною системою Windows відкрийте Blackmagic HyperDeck Setup у меню «Пуск» або клацніть піктограму утиліти на початковому екрані. У меню «Довідка» виберіть About Blackmagic HyperDeck Setup, щоб побачити номер версії.

Завантаження останніх версій програмного забезпечення

Дізнавшись версію інстальованої утиліти Blackmagic HyperDeck Setup, перейдіть до центру підтримки Blackmagic Design на сторінці www.blackmagicdesign.com/ua/support, щоб перевірити наявність оновлень. Рекомендується завжди використовувати останню версію програмного забезпечення, однак оновлення найкраще виконувати після завершення поточного проекту.

Дотримання нормативних вимог

Утилізація електрообладнання та електронної апаратури в країнах Європейського Союзу



Виріб містить маркування, яке означає, що його забороняється утилізувати разом із побутовими відходами. Непридатне для експлуатації обладнання необхідно передати до пункту вторинної переробки. Роздільний збір відходів та їх повторне використання дозволяють зберігати природні ресурси, охороняти довкілля та захищати здоров'я людей. Щоб отримати докладнішу інформацію про порядок утилізації, зверніться до місцевих муніципальних органів або дилера, у якого ви придбали цей виріб.



Дане обладнання протестовано за вимогами для цифрових пристроїв класу A (розділ 15 специфікацій FCC) та визнано відповідним усім критеріям. Дотримання згаданих нормативів забезпечує достатній захист від шкідливого випромінювання під час роботи обладнання в нежитлових приміщеннях. Так як цей виріб генерує та випромінює радіохвилі, при неправильній установці він може стати джерелом радіоперешкод. Якщо обладнання експлуатується в житлових приміщеннях, підвищується ймовірність виникнення перешкод, вплив яких у цьому випадку користувач повинен усунути самостійно.

До експлуатації допускаються пристрої, що відповідають двом основним вимогам.

1. Обладнання не повинно бути джерелом шкідливих перешкод.
2. Обладнання має бути стійким до перешкод, включаючи ті, що можуть спричинити збій у роботі.



R-R-BMD-20211410001

Відповідність вимогам ISED (Канада)



Дане обладнання відповідає канадським стандартам для цифрових пристроїв класу A.

Будь-яка модифікація або використання виробу не за призначенням може анулювати заяву про відповідність цим стандартам.

Підключення до HDMI-інтерфейсу повинно виконуватись за допомогою якісного екранованого кабелю.

Це обладнання протестовано за вимогами, що висуваються до роботи пристроїв у нежитлових приміщеннях. При використанні в побутових умовах воно може стати джерелом перешкод для радіосигналу.

Правила безпеки

Допускається експлуатація в умовах тропічного клімату із температурою навколишнього середовища до 40 °C.

Для роботи пристрою необхідно забезпечити достатню вентиляцію.

Всередині корпусу не містяться деталі, що підлягають обслуговуванню. Для виконання ремонтних робіт зверніться до місцевого сервісного центру Blackmagic Design.



Допускається експлуатація в місцях не вище 2000 метрів над рівнем моря.

Сповіщення для мешканців штату Каліфорнія

При роботі з цим обладнанням існує можливість контакту з мікродомішками багатобромистого біфеніла, що містяться в пластмасі. У штаті Каліфорнія цей елемент визнано канцерогеном, він збільшує ризик вроджених дефектів і пороків репродуктивної системи.

Додаткову інформацію див. на сайті www.P65Warnings.ca.gov

Представництво в Європі

Blackmagic Design B.V, Amsterdam
Sloterdijk Teleport Towers Office 2.17,
Kingsfordweg 151,
Amsterdam, 1043GR.

Гарантія

Обмежена гарантія терміном 12 місяців

Компанія Blackmagic Design гарантує відсутність у цьому виробі дефектів матеріалу та виробничого браку протягом 12 місяців від дати продажу. Якщо під час гарантійного терміну будуть виявлені дефекти, Blackmagic Design на власний розсуд виконає ремонт несправного виробу без оплати вартості запчастин і трудовитрат або замінить такий виріб на новий.

Щоб скористатися цією гарантією, споживач зобов'язаний повідомити компанію Blackmagic Design про дефект до закінчення гарантійного терміну та забезпечити умови для надання необхідних послуг. Споживач несе відповідальність за упаковку та доставку несправного виробу до відповідного сервісного центру Blackmagic Design, а також за оплату поштових витрат. Споживач зобов'язаний сплатити всі витрати на доставку, страхування, мита, податки та інші збори щодо повернення виробу незалежно від причини повернення.

Дана гарантія не поширюється на дефекти, відмови та пошкодження, що виникли через неналежне використання, неправильний догляд чи обслуговування. Компанія Blackmagic Design не зобов'язана надавати послуги за цією гарантією: а) для усунення пошкоджень, що виникли внаслідок дій із встановлення, ремонту або обслуговування виробу особами, які не є персоналом Blackmagic Design; б) для усунення пошкоджень, що виникли внаслідок неналежного використання або підключення до несумісного обладнання; в) для усунення пошкоджень або дефектів, спричинених використанням запчастин або матеріалів інших виробників; г) якщо виріб було модифіковано або інтегровано з іншим обладнанням, коли така модифікація або інтеграція збільшує час або підвищує складність обслуговування виробу. ДАНА ГАРАНТІЯ НАДАЄТЬСЯ КОМПАНІЄЮ BLACKMAGIC DESIGN ЗАМІСТЬ БУДЬ-ЯКИХ ІНШИХ ПРЯМИХ АБО ОПОСЕРЕДКОВАНИХ ГАРАНТІЙ. КОМПАНІЯ BLACKMAGIC DESIGN І ЇЇ ДИЛЕРИ ВІДМОВЛЯЮТЬСЯ ВІД БУДЬ-ЯКИХ ОПОСЕРЕДКОВАНИХ ГАРАНТІЙ КОМЕРЦІЙНОЇ ЦІННОСТІ АБО ПРИДАТНОСТІ ДЛЯ БУДЬ-ЯКОЇ ВИЗНАЧЕНОЇ ЦІЛІ. ВІДПОВІДАЛЬНІСТЬ BLACKMAGIC DESIGN ЗА РЕМОНТ АБО ЗАМІНУ НЕСПРАВНИХ ВИРОБІВ Є ПОВНИМ І ВИНЯТКОВИМ ЗАСОБОМ ВІДШКОДУВАННЯ, ЩО НАДАЄТЬСЯ СПОЖИВАЧЕВІ У ЗВ'ЯЗКУ З НЕПРЯМИМИ, ФАКТИЧНИМИ, ВИПАДКОВИМИ АБО ПОСЛІДУЮЧИМИ ЗБИТКАМИ НЕЗАЛЕЖНО ВІД ТОГО, БУЛА КОМПАНІЯ BLACKMAGIC DESIGN (АБО ЇЇ ДИЛЕР) ПОПЕРЕДНЬО ПОВІДОМЛЕНА ПРО МОЖЛИВІСТЬ ТАКИХ ЗБИТКІВ. BLACKMAGIC DESIGN НЕ НЕСЕ ВІДПОВІДАЛЬНОСТІ ЗА ПРОТИПРАВНЕ ВИКОРИСТАННЯ ОБЛАДНАННЯ СПОЖИВАЧЕМ. BLACKMAGIC DESIGN НЕ НЕСЕ ВІДПОВІДАЛЬНОСТІ ЗА БУДЬ-ЯКІ ЗБИТКИ ВНАСЛІДОК ВИКОРИСТАННЯ ЦЬОГО ВИРОБУ. РИЗИКИ, ПОВ'ЯЗАНІ З ЙОГО ЕКСПЛУАТАЦІЄЮ, ПОКЛАДАЮТЬСЯ НА СПОЖИВАЧА.

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