

HyperDeck FAQ

How long does the supplied battery in The HyperDeck Shuttle last?

1 hour when recording
1.5 hours during playback
2.5 hours in converter mode.(with the SSD drive removed)

Battery performance also depends on the power consumption of the SSD drives used. Some drives consume twice as much power as other similar capacity ones from other brands.

What happens when the internal battery runs out?

You can use the included 240v plug pack or utilise your camera's power outlet (if available).

Can the HyperDeck Shuttle be powered externally?

Yes. A 12V power adapter is provided but you can also power it off an external power supply such as a camera battery as HyperDeck Shuttle supports an input voltage range of 12V to 18V.

What happens if the HyperDeck completely loses power during a recording? Is the entire capture corrupt and irretrievable or can you still access what was recorded up to the point of power loss?

You will lose some portion of the recording but not completely. The file is closed off every so often to cater for situations where someone pulls out the SSD accidentally or if there is a power loss.

What inputs do the HyperDeck devices have?

SD/HD SDI and HDMI. Note that the SDI input on the HyperDeck Shuttle is Din 1.0/2.3, and may require an adapter cable (din to BNC). Din to BNC cables can be purchased from your reseller.

If I am recording SDI, will the HDMI output be available for preview?

Yes, all outputs are live during recording.

Will the HyperDeck devices accept SD footage via SDI?

Yes. SD PAL and NTSC. If you want to do progressive SD, then it can only be captured via HDMI.

Do the HyperDeck devices have looped playback as an option?

Yes they do.

Can you fast forward with the HyperDeck Shuttle?

Yes. Hold down the "Next Clip" and "Previous Clip" button. This will fast forward/rewind the clip in 2x, 4x and 8x speeds with every successive press.

What does the DISP button do?

This button isn't currently used but will soon be enabled via a software update. You will be able to download this for free at www.blackmagic-design.com

Can I use normal SATA discs with spinning platters?

No, they will not be fast enough to sustain uncompressed 10-bit video capture.

Which SSDs have been approved for use with the HyperDeck devices?

The following 2.5" SSDs have been approved for uncompressed 10-bit video capture:

- OCZ 240GB Vertex 3 (VTX3-25SAT3-240G)
- OCZ 480GB Vertex 3 (VTX3-25SAT3-480G)
- OCZ 240GB Deneva 2 (firmware 2.22) (D2CSTK251M21-0240)
- Crucial 256GB C300 (CTFDDAC256MAG-1G1) - *discontinued*
- Crucial 512GB M4 (firmware 009 or later) (CT512M4SSD2)
- Intel 335 Series 240GB SSD (SSDSC2CT240A4K5)
- Intel 520 Series 240GB SSD (SSDSC2CW240A3K5)
- Intel 520 Series 480GB SSD (SSDSC2CW480A3)
- Kingston 64GB SSDNow V+100 (SVP100S2/64G) - *discontinued*
- Kingston 128GB SSDNow V+100 (SVP100S2/128G) - *discontinued*
- Kingston 512GB SSDNow V+100 (SVP100S2/512G) - *discontinued*
- Kingston 120GB SSDNow V+200 (SVP200S3/120G)
- Kingston 240GB SSDNow V+200 (SVP200S3/240G)
- Kingston HyperX 240GB (SH100S3/240G)
- Sandisk Extreme 480GB (SDSSDX-480G-G25)
- PNY 240GB Prevail SSD (firmware 5.0.2) (SSD9SC240GCDA-PVL)
- OWC Mercury Extreme Pro 6G SSD (firmware 5.0.2) (OWCSSDMX6G240T)

The following 2.5" SSDs have been approved for compressed video capture:

- Crucial M4 256GB (with 000F or above firmware) (CT256M4SSD2)
- OCZ Agility 3 240GB (AGT3-25SAT3-240G)
- Sandisk Extreme 120GB (SDSSDX-120G-G25)

How do you format the SSD drives?

Drives used in HyperDecks needs to be formatted as HFS+ or ExFAT.

HFS+ and ExFAT are both supported natively on Mac OSX and you can format them using Disk Utility.

ExFAT is supported natively on Windows, but HFS+ requires additional third party software [MacDrive](http://www.macdrive.com).

Please consult the section "Preparing SSDs for HyperDeck" in the HyperDeck manual for detailed step-by-step instructions.

Can you copy files onto the SSD from a Mac or PC for playback in the HyperDeck devices?

Yes, if the file is in the supported codec.

What is the format of the recorded file?

Files can be recorded as uncompressed 10-bit 4:2:2 in a QuickTime .MOV wrapper. This is exactly the same kind of file captured on a Mac with the DeckLink card using the Uncompressed 10-bit 4:2:2 settings. Alternately, you can record in Avid DNxHD 220x or ProRes422 HQ (HyperDeck Studio only). In DNxHD, the Data rate is dependent on frame rate. For example, 220Mbps is the data rate for 1920 x 1080 30fps interlace sources (60 fields) while progressive sources at 24fps will be 175Mbps. DNxHD can be captured in either native .mxf for Media Composer or QuickTime .mov for other NLEs.

How do I choose the recording format?

HyperDeck Studio, and the latest model of HyperDeck Shuttle, let you select from a choice of uncompressed and compressed recording formats. Simply connect HyperDeck to your computer via USB and launch HyperDeck Utility software. Set the recording format to the desired codec from the pulldown menu and save the setting. All subsequent clips will be captured in the compressed format. If you want to switch back to uncompressed video, repeat the procedure and choose "Uncompressed 10 Bit" from the pulldown menu.

Note: Setting the recording format also sets the playback format so you will only be able to play back clips that match the current recording format. Any other clips will be hidden which helps prevent slow SSD's from being accidentally used to play back high data rate uncompressed clips which they might not be fast enough to play.

How much recording time will I get for uncompressed recording?

128 Gb = 12.5 minutes in HD

512 Gb = 50 minutes in HD

For SD, multiply the times by a factor of 4.

What are the bit rates for uncompressed?

The answer depends upon which format you are using. Here are a few rates to give you some idea of disk space requirements:

525 NTSC uncompressed 10 bit @ 720 x 486 @ 29.97fps = 27 MB per/sec, or 94 GB per/hr.

625 PAL uncompressed 10 bit @ 720 x 576 @ 25fps = 26 MB per/sec, or 93 GB per/hr.

720p HDTV uncompressed 10 bit @ 1280 x 720 @ 59.94 = 140 MB per/sec, or 494 GB per/hr.

1080i and 1080p HDTV uncompressed:

10 bit @ 1920 x 1080 @ 24fps = 127 MB per/sec, or 445 GB per/hr.

10 bit @ 1920 x 1080 @ 25fps = 132 MB per/sec, or 463 GB per/hr.

10 bit @ 1920 x 1080 @ 29.97fps = 158 MB per/sec, or 556 GB per/hr.

What are the bit rates for compressed DNxHD files?

The bit rate is locked depending on the input resolution. The HyperDeck models will only record to 10-bit DNxHD formats in the chart below.

NOTE: Only 2 tracks of audio are recorded when using the Avid DNxHD codec.

Project Format	Resolution	Frame Size	Bits	FPS		min/GB
1080i/59.94	Avid DNxHD 220x	1920 x 1080	10	29.97	220	0.651
1080i/59.94	Avid DNxHD 220	1920 x 1080	8	29.97	220	0.651
1080i/59.94	Avid DNxHD 145	1920 x 1080	8	29.97	145	0.985
1080i/50	Avid DNxHD 185x	1920 x 1080	10	25	184	0.780
1080i/50	Avid DNxHD 185	1920 x 1080	8	25	184	0.780
1080i/50	Avid DNxHD 120	1920 x 1080	8	25	121	1.181
1080p/25	Avid DNxHD 185x	1920 x 1080	10	25	184	0.780
1080p/25	Avid DNxHD 185	1920 x 1080	8	25	184	0.780
1080p/25	Avid DNxHD 120	1920 x 1080	8	25	121	1.181
1080p/25	Avid DNxHD 36	1920 x 1080	8	25	36	3.98
1080p/24	Avid DNxHD 175x	1920 x 1080	10	24	176	0.814
1080p/24	Avid DNxHD 175	1920 x 1080	8	24	176	0.814
1080p/24	Avid DNxHD 115	1920 x 1080	8	24	116	1.231
1080p/24	Avid DNxHD 36	1920 x 1080	8	24	36	3.98
1080p/23.976	Avid DNxHD 175x	1920 x 1080	10	23.976	176	0.814
1080p/23.976	Avid DNxHD 175	1920 x 1080	8	23.976	176	0.814
1080p/23.976	Avid DNxHD 115	1920 x 1080	8	23.976	116	1.231
1080p/23.976	Avid DNxHD 36	1920 x 1080	8	23.976	36	3.98
1080p/29.97	Avid DNxHD 220x	1920 x 1080	10	29.97	220	0.651
1080p/29.97	Avid DNxHD 220	1920 x 1080	8	29.97	220	0.651
1080p/29.97	Avid DNxHD 145	1920 x 1080	8	29.97	145	0.985
1080p/29.97	Avid DNxHD 45	1920 x 1080	8	29.97	45	3.18
720p/59.94	Avid DNxHD 220x	1280 x 720	10	59.94	220	0.651
720p/59.94	Avid DNxHD 220	1280 x 720	8	59.94	220	0.651
720p/59.94	Avid DNxHD 145	1280 x 720	8	59.94	145	0.985
720p/50	Avid DNxHD 175x	1280 x 720	10	50	175	.818
720p/50	Avid DNxHD 175	1280 x 720	8	50	175	.818
720p/50	Avid DNxHD 115	1280 x 720	8	50	175	1.244
720p/29.97	Avid DNxHD 110x	1280 x 720	10	29.97	110	1.30
720p/29.97	Avid DNxHD 110	1280 x 720	8	29.97	110	1.30
720p/29.97	Avid DNxHD 75	1280 x 720	8	29.97	72	2.05
720p/25	Avid DNxHD 90x	1280 x 720	10	25	92	1.59
720p/25	Avid DNxHD 90	1280 x 720	8	25	92	1.59
720p/25	Avid DNxHD 60	1280 x 720	8	25	60	2.39
720p/23.976	Avid DNxHD 90x	1280 x 720	10	23.976	88	1.566
720p/23.976	Avid DNxHD 90	1280 x 720	8	23.976	88	1.566
720p/23.976	Avid DNxHD 60	1280 x 720	8	23.976	58	2.381

HyperDeck will only record to the highlighted 10 bit DNxHD profiles.

Are the DNxHD files op1a or op-atom MXF files?

Op-atom.

What are the bit rates for ProRes 422 HQ files?

	576i PAL	720p50	720p60	1080i50	1080i59.94	1080p23.98	1080p25	1080p30
Target Video Bitrate (Mbits/s)	60	183	220	183	220	176	183	220
64GB SSD capacity (minutes)	97	37	31	37	31	38	37	31
Space per minute (GB)	0.61	1.61	1.92	1.61	1.92	1.57	1.61	1.92
64GB SSD capacity (minutes)	97	37	31	37	31	38	37	31
128GB SSD capacity (minutes)	194	74	62	74	62	76	74	62
256GB SSD capacity (minutes)	388	149	125	149	125	153	149	125
512GB SSD capacity (minutes)	776	296	248	296	248	304	296	248

Notes:

All data drives format to 93% ("lose" 7%) of their advertised space. A 64GB SSD formats to roughly 59GB of usable space. Audio bitrate is 18.4 Mbits/s, 24-bit 48khz

The ProRes target bitrates above do not include the audio bitrate, but the calculations do.

Will future firmware allow playback of all clips on the disk, or only the last recorded video format?

Currently, only files recorded in the last recorded video format will be playable. For example, if you capture PAL, then capture NTSC, you will only be able to playback the NTSC clips. The PAL clips will still be on disk though, you just won't be able to play them back... This limitation will be solved in future updates.

Are there any camera mounting options available for the HyperDeck Shuttle?

Yes, the HyperDeck Shuttle Mounting Plate is available from your reseller. It simply replaces the bottom foot on your HyperDeck Shuttle, so you can easily secure it to a camera rig with your choice of rail mounts, cold shoe mounts, articulated arms and a whole lot more. HyperDeck Shuttle Mounting Plate features a variety of pre-drilled 1/4" and 3/8" holes, making it compatible with a wide array of mount accessories. In addition you can power your HyperDeck Shuttle from an external battery. Simply attach a V-Mount or Anton Bauer style battery plate and you're good to go.

Can all HyperDeck Shuttles record to a Compressed Format?

The original HyperDeck Shuttle exclusively records in an uncompressed recording format. The HyperDeck Shuttle 2 can record to uncompressed and compressed recording formats. To check if you have a HyperDeck Shuttle 2, connect the HyperDeck unit via USB and then launch the latest version of the HyperDeck utility. The title bar of the HyperDeck Utility will report either HyperDeck Shuttle 2 or HyperDeck Shuttle. If it reports a HyperDeck Shuttle 2, then the menu options to set the recording format should also be present. The serial sticker on the base of the unit will also indicate if the unit is a Version 2.

Can the HyperDeck Shuttle be used as a mini converter?

Yes. Pressing the STOP when it is idle allows for SDI to HDMI or HDMI to SDI conversion.

Will the HyperDeck Shuttle/Studio record from a digital still camera with HDMI output?

Some digital still cameras have information overlays on their HDMI output which cannot be disabled. Other cameras switch to a different resolution when in record mode. Please check with the camera manufacturer for more information. If your camera outputs a 'clean' HDMI signal, then you should have no problems recording it with the HyperDecks.

Detailed specs can be found here:

<http://www.blackmagic-design.com/au/products/hyperdeckshuttle/techspecs/>

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