

# Device: BMD HyperDeck



## Introduction

The Device Core "BMD HyperDeck" can be used to control

- HyperDeck Studio Mini
- HyperDeck Studio
- HyperDeck Studio Pro

A number of parameters on the Blackmagic HyperDeck series can be controlled from a SKAARHOJ control panel via IP. The Device Core "BMD HyperDeck" is used to control the different models.

## Gang Recording:

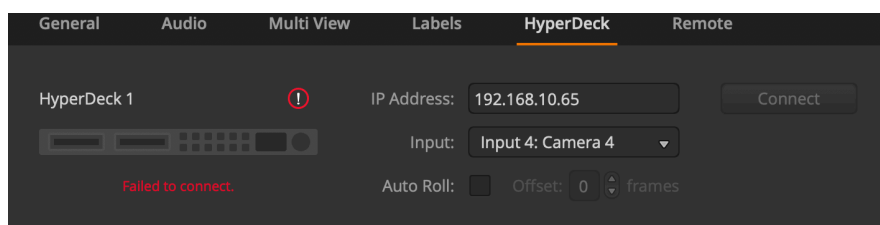
We have only tested with up to 4 x HyperDecks (**see video**). In theory our units can control up to 8 Devices but performance on our units might decrease each time you add a Device Core. For gang recording we cannot guarantee frame accuracy start/stop of recordings. It depends when the command reaches the HyperDeck and there might be an offset resulting in recording not starting/stopping at the exact same time.

The implementation is done on HyperDeck V. 6.0

## Number of Clients

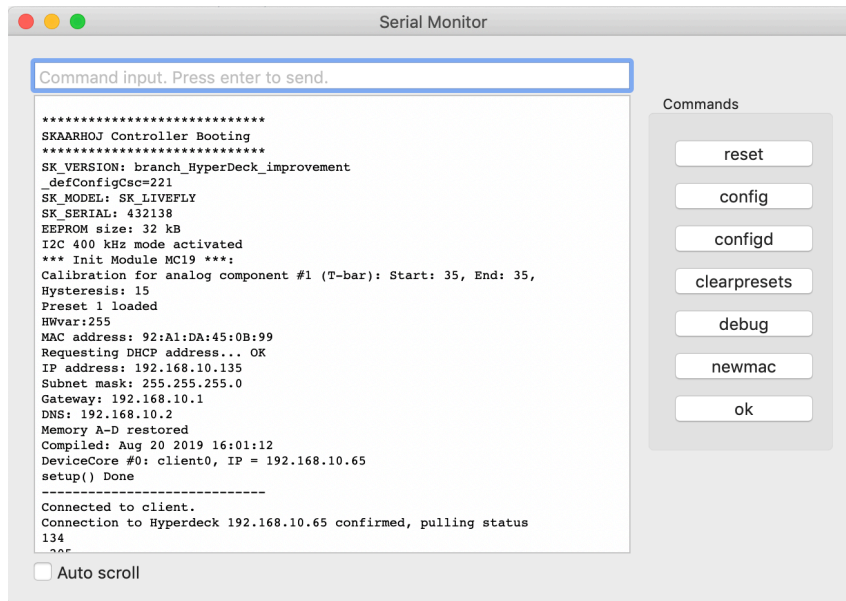
Please notice. In general the HyperDeck will only accept a single client connection (for HyperDeck Studio + HyperDeck Studio Pro). This means two SKAARHOJ controllers will not be able to connect to the same HyperDeck.

Please also observe if the HyperDeck is controlled from the ATEM Switcher directly, it will *not* be possible to control from our panel as well. This is the case for the HyperDeck Studio and HyperDeck Studio Pro. With the HyperDeck Studio Mini we have successfully observed control from ATEM and our panel at the same time, however with some instability.



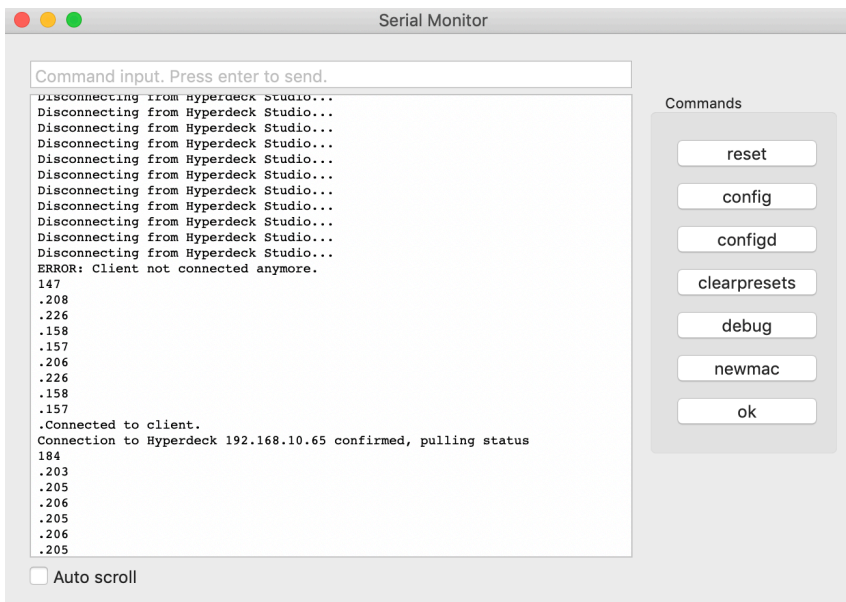
## Connection

When a SKAARHOJ controller have successfully connected to the HyperDeck the serial monitor will report:


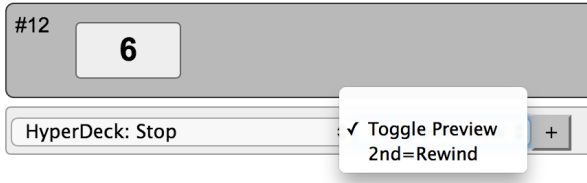
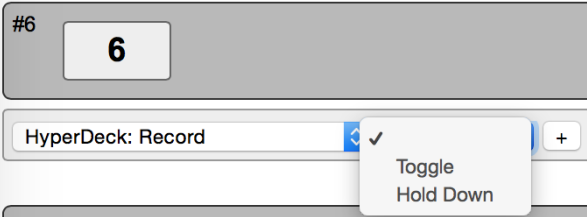

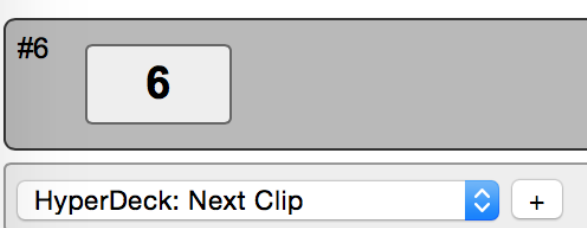



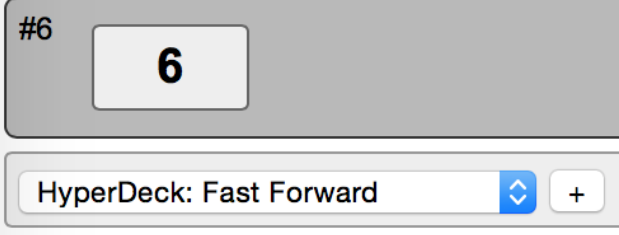

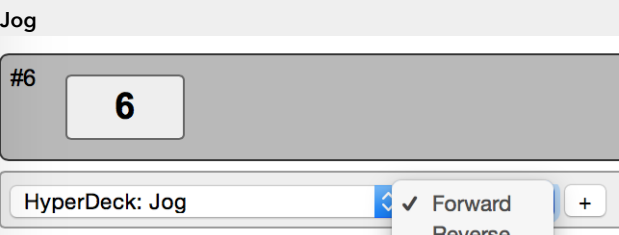
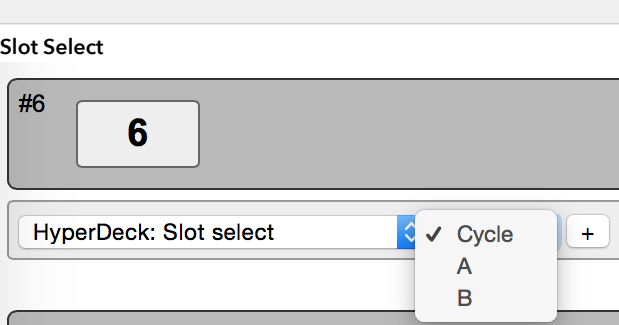
If the SKAARHOJ device is unable to locate the HyperDeck on the network there are no immediate feedback in the serial monitor.

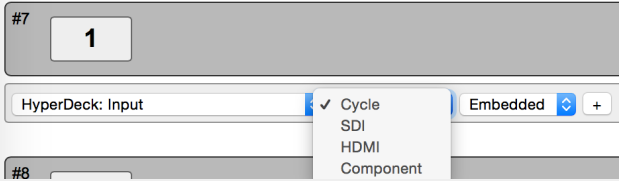
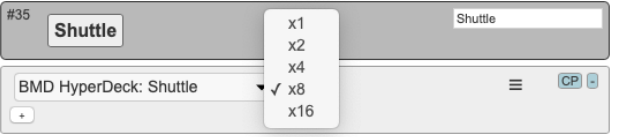
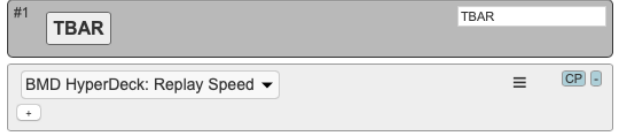
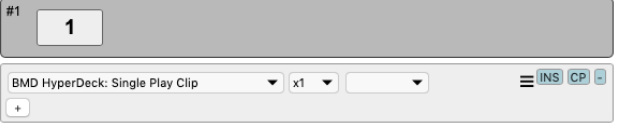
If the SKAARHOJ device losses connection to the HyperDeck and then reconnect the serial monitor will report:



This is a table of actions for Blackmagic Design HyperDeck Studio Recording decks.

<p><b>Play</b></p> 	<p>Starts playback on the HyperDeck</p> <p><i>Binary triggers:</i> Activates playback at the selected speed. If Toggle is selected, playback is stopped if it is already running. If Hold Down is selected, playback will stop again when the trigger is released.</p> <p><i>Pulse inputs:</i> Will turn on/off playback</p> <p><i>Binary outputs:</i> On when hyperdeck is playing at selected speed.</p> <p><i>Button colors:</i> Green when playing at the selected speed.</p> <p><i>Displays:</i> "Hyperdeck/Play/Filename"</p>
<p><b>Stop</b></p> 	<p>Stops the deck.</p> <p><i>Binary triggers:</i> Stop the deck. If "Toggle Preview" is enabled, the deck will fall into preview mode immediately after stopping. If "2nd=Rewind" is select, a subsequent trigger will rewind the current clip.</p> <p><i>Pulse inputs:</i> Will stop deck.</p> <p><i>Binary outputs:</i> On when hyperdeck is stopped.</p> <p><i>Button colors:</i> Yellow when stopped.</p> <p><i>Displays:</i> Shows "Stopped" if deck is stopped, otherwise "Running".</p>
<p><b>Record</b></p> 	<p>Starts Recording on the HyperDeck</p> <p><i>Binary triggers:</i> Activates Recording. If Toggle is selected, Recording is stopped if it is already running. If Hold Down is selected, Record will stop again when the trigger is released.</p> <p><i>Pulse inputs:</i> Will start/stop recording.</p> <p><i>Binary outputs:</i> On when HyperDeck is recording.</p> <p><i>Button colors:</i> Red when recording.</p> <p><i>Displays:</i> Shows "Recording" if the deck is recording, otherwise "Stopped"</p>
<p><b>Preview</b></p> 	<p>Brings the HyperDeck to preview mode</p> <p><i>Binary triggers:</i> Puts the HyperDeck into "Preview" mode. Press again will deactivate "Preview" mode and put the HyperDeck into "Output" mode.</p> <p><i>Pulse inputs:</i> Turn on/off Preview mode</p> <p><i>Binary outputs:</i> On when HyperDeck is in preview mode.</p> <p><i>Button colors:</i> Yellow highlighted when in preview mode. Otherwise dimmed yellow.</p> <p><i>Displays:</i> Shows "Preview Mode" or "Output Mode" given the Preview mode is on/off.</p>
<p><b>Next Clip</b></p> 	<p>Goes to next clip</p> <p><i>Binary triggers:</i> Select next clip.</p> <p><i>Pulse inputs:</i> Select next/prev clip</p> <p><i>Binary outputs:</i> Activated when button is pressed</p> <p><i>Button colors:</i> Yellow highlighted when next clip activated. Otherwise dimmed yellow</p> <p><i>Displays:</i> Shows "Next Clip"</p>

<p><b>Previous Clip</b></p> 	<p>Goes to previous clip</p> <p><i>Binary triggers:</i> Select previous clip.</p> <p><i>Pulse inputs:</i> Select next/prev clip</p> <p><i>Binary outputs:</i> Activated when button is pressed</p> <p><i>Button colors:</i> Yellow highlighted when previous clip activated. Otherwise dimmed yellow</p> <p><i>Displays:</i> Shows "Previous Clip"</p>
<p><b>Fast Forward</b></p> 	<p>Play through the clip at 2x speed</p> <p><i>Binary triggers:</i> Starts playback at 2x speed. When pressed again 4x speed. When pressed again 8x speed.</p> <p><i>Pulse inputs:</i> Cycles through the available speeds (2x, 4x &amp; 8x).</p> <p><i>Binary outputs:</i> Activated when playback is at 2x, 4x or 8x speed.</p> <p><i>Button colors:</i> Yellow blinking at increasing rate when 2x, 4x or 8x speed is selected. Otherwise dimmed yellow</p> <p><i>Displays:</i> Shows "Fast Forward"</p>
<p><b>Reverse</b></p> 	<p>Rewind through the clip at 2x speed</p> <p><i>Binary triggers:</i> Reverse at 2x speed. When pressed again 4x speed. When pressed again 8x speed.</p> <p><i>Pulse inputs:</i> Cycles through the available speeds (2x, 4x &amp; 8x).</p> <p><i>Binary outputs:</i> Activated when reverse is at 2x, 4x or 8x speed.</p> <p><i>Button colors:</i> Yellow blinking at increasing rate when 2x, 4x or 8x speed is selected. Otherwise dimmed yellow</p> <p><i>Displays:</i> Shows "Fast Reverse"</p>
<p><b>Jog</b></p> 	<p>Jog through video frame by frame</p> <p><i>Binary triggers:</i> Moves forward/backwards frame by frame. When press and hold continuously jog (forward/reverse)</p> <p><i>Pulse inputs:</i> Moves forward/backwards frame by frame</p> <p><i>Binary outputs:</i> Activated when the button is held.</p> <p><i>Button colors:</i> Yellow highlighted when a frame is skipped. Otherwise dimmed yellow</p> <p><i>Displays:</i> Shows "Jog"</p>
<p><b>Slot Select</b></p> 	<p>Selects slot in the HyperDeck</p> <p><i>Binary triggers:</i> Selects the specified slots. If Cycle is selected, it will cycle between slot "A" and "B".</p> <p><i>Pulse inputs:</i> Sets the select slot. If Cycle mode is selected it will cycle between slot "A" and "B"</p> <p><i>Binary outputs:</i> Activated when switching slots.</p> <p><i>Button colors:</i> Slot A = Green. Slot B = Red</p> <p><i>Displays:</i> Shows "Slot A" or "Slot B"</p>

<p><b>Input</b></p> 	<p>Configure video/audio input</p> <p><i>Binary triggers:</i> Selects the specified video input and audio input. If Cycle is selected, it will cycle between the options.</p> <p><i>Pulse inputs:</i> Sets the select video/input option. If Cycle mode is selected it will cycle between the options.</p> <p><i>Binary outputs:</i> Activated when input mode have been selected.</p> <p><i>Button colors:</i> Yellow highlighted when a option is set or yellow highlight when cycling through options. Otherwise dimmed yellow</p> <p><i>Displays:</i> Shows the selected option</p>
<p><b>Shuttle</b></p> 	<p>Activates shuttle with the maximum value defined from the drop down selection. If "x16" is selected the maximum shuttle speed is x16</p> <p><i>Binary triggers:</i> Not implemented, but can used on a 4-way button by using the action: Force HWC Type Speed and then the Shuttle command. Left/Right press on button will then engage forward/backward shuttle with increasing speed with the limit set on the action itself.</p> <p><i>Pulse inputs:</i> Not implemented, but can be accomplished by using the action: Force HWC Type Speed and then the Shuttle command. Encoder action will then engage forward/backward shuttle with increasing speed with the limit set on the action itself.</p> <p><i>Analog inputs:</i> At center position no shuttle. Moving to either position will increase/decrease speed to the maximum speed set in the action.</p> <p><i>Speed inputs:</i> Activate shuttle</p> <p><i>Binary outputs:</i> Not implemented</p> <p><i>Button colors:</i> Not implemented</p> <p><i>Displays:</i> Shows "Shuttle/Speed"</p>
<p><b>Replay Speed</b></p> 	<p>Sets the Replay Speed</p> <p><i>Binary triggers:</i> Not implemented</p> <p><i>Pulse inputs:</i> Not implemented</p> <p><i>Analog inputs:</i> Sets playback speed between 0% and 100%</p> <p><i>Binary outputs:</i> Not implemented</p> <p><i>Button colors:</i> Not implemented</p> <p><i>Displays:</i> "Repl.Speed/0.00-1.00"</p>
<p><b>Single Play Clip</b></p> 	<p>Starts playback on the HyperDeck but only playing a single clip</p> <p><i>Binary triggers:</i> Activates playback at the selected speed. If Toggle is selected, playback is stopped if it is already running. If Hold Down is selected, playback will stop again when the trigger is released.</p> <p><i>Pulse inputs:</i> Will turn on/off playback</p> <p><i>Binary outputs:</i> On when hyperdeck is playing at selected speed.</p> <p><i>Button colors:</i> Green when playing at the selected speed.</p> <p><i>Displays:</i> "Hyperdeck/Play Clip/Filename"</p>