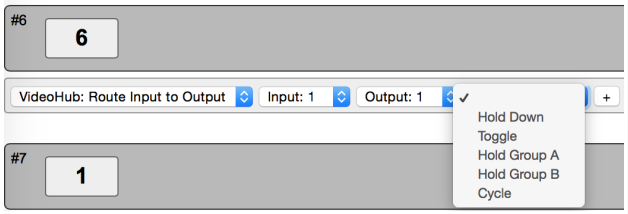
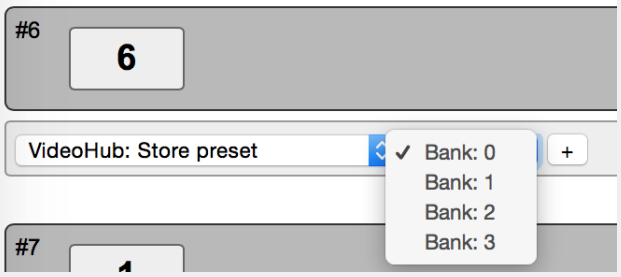
Device: BMD Videohub

Introduction

A number of parameters on the Blackmagic Design Videohub series can be controlled from a SKAARHOJ control panel via IP. The Device Core "BMD VideoHub" is used to both control the Videohub series and the Smart Videohub CleanSwitch 12 x 12. You can control up to 72 inputs and 72 outputs, but it will be compatible with larger routers, however not able to address I/O above 72. The routers labels for inputs and outputs up to 72 are used in displays.

The implementation is done on Videohub V. 6.4.1

This is a table of actions for Blackmagic Design VideoHubs

Route Input to Output 	Route a given input to a given output *Binary triggers:* Sets the selected routing. If Hold Down is selected, the routing will fall back to the previous route whenever the trigger is released. Toggle will select the routing, but on a second trigger, it will fall back to the previous routing. Hold Groups will fall back to previous routing for a group of triggers using a queue system and finally to the first previous value before any trigger in the group as activated. If Cycle mode is selected, a trigger will set the next Input, while maintaining the selected Output (corresponds to a single pulse input) *Pulse inputs:* Will cycle through the Inputs while maintaining the selected Output. If Cycle mode is selected, it will cycle up to the selected output, otherwise all the way up to the last available output. *Binary outputs:* On when actual Input matches Output (or when trigger is held in Cycle mode) *Button colors:* Will be highlighted when Input matches Output, otherwise dim. In Cycle mode color will be highlighted when button is held down. Will blink if a lock is set for the selected view. Outputs: Can be selected from 1-72 or Mem A-D. If Mem AA or BB is selected, the output is a group of values. In this case anywhere from 0 to 10 outputs can receive a route of the same input. *Displays: Shows the output in the title bar (N/A if none, "(Multiple)" if many) and the input source in one or two text lines (depends on Large Labels configuration option)*
Store Presets 	Saves the input to output routing of the Videohub *Please note presets are a global parameter and **not** linked to the Device Core itself. Therefore using presets at this present time on multiple VideoHub Device Cores are not recommended* *Binary triggers:* Store routings to specified Bank *Pulse inputs:* Will select the bank and on press and hold (binary trigger) it will store routings to specified bank. *Button colors:* Highlighted when pressed. *Displays:* Shows the Bank number and "Save" as text. If "Label" is different from "Label: 0" it will use that label to override the individual labels parts (or show an image)

Recall Presets

Recall preset while defining the range of Outputs affected
*Please note presets are a global parameter and **not** linked to the Device Core itself. Therefore using presets at this present time on multiple VideoHub Device Cores are not recommended*

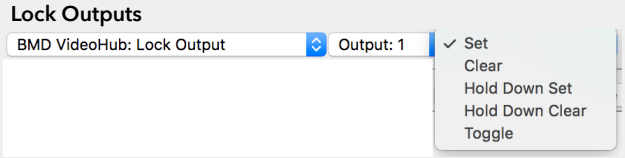
Binary triggers: Recall preset from selected bank. The range "From" and "To" defines the Outputs which should be recalled. Outputs outside this range will not be affected by the "Recall" action.

Pulse inputs: Will select the bank and on press and hold (binary trigger) it will recall routings from the specified bank.

Button colors: Highlighted when preset recalled. Otherwise dimmed. Off it no preset exists.

Displays: Shows the bank number and the text "Recal". If "Label" is different from "Label: 0" it will use that label to override the individual labels parts (or show an image)

Lock Outputs



Locks output on video hub

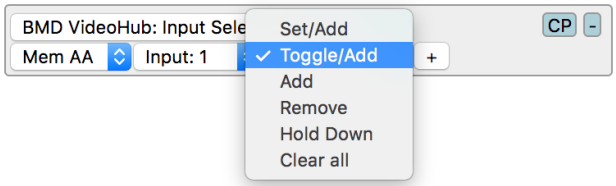
Binary triggers: If Set, it sets the lock. If Clear it clears the lock. Hold Down Set and Clear will Set or Clear the lock for as long as the button is held down. Toggle will Set/Clear the lock based on the current state.

Pulse inputs: Will cycle through sources from 1 to the selected view. When the pulse input is held down for 1 second it will send a binary trigger (and if set to toggle, it will turn lock on and off)

Button colors: Highlighted when locked, dimmed when not (unless Clear or Hold Down Clear is used in which case it's reversed). Blinking if externally locked.

Displays: Shows the output name in the header line and the state of the lock in the main display: Open, Lockd or Lck-E (Locked Externally - another user). If the HWc is a trigger not in toggle mode, a label for the function ("Lock" / "Unlck") will be shown.

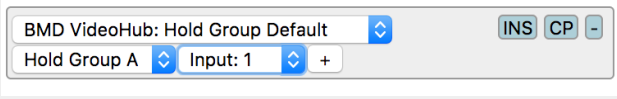
Output Select



See "Memory Groups" from System Device core for functionality except noted below:

Display text: For displays and smart switches, the value will be shown as the output label from the VideoHub. The title bar till show "Output Sel". In case "Clear all" is selected, "Clear all" will be shown in the display.

Hold Group Defaults

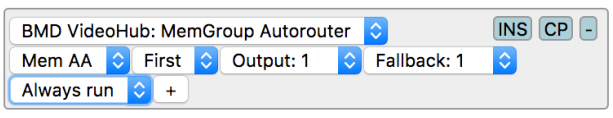


Configuration of a fixed Hold Group default input - the input that a Hold Group queue will fall back to.

If you are using Hold Groups with very quick triggers you may experience that the original input was not correctly picked up due to the timing gap between a command is sent and to the videohub reports back the new value. With this configuration value you are guaranteed that the fall back will always be a particular input.

This action does not depend on any trigger from the HWC, it will always be evaluated if inside the proper state and shift levels.
Has a transparent return value.

MemGroup Auto Router



Will monitor the selected memory group for its values (first or last) and if it changes it will set this value as the input for the selected output. If the value in the memory group is 0 (the group is empty) it will set the fall back value as input on the output.
The Memory Group Auto Router will run either always or when a particular selected system flag is set.

This action does not depend on any trigger from the HWC, it will always be evaluated if inside the proper state and shift levels.
Has a transparent return value.
This action is well suited to be placed in the Controller virtual HWC.

Device Configurations

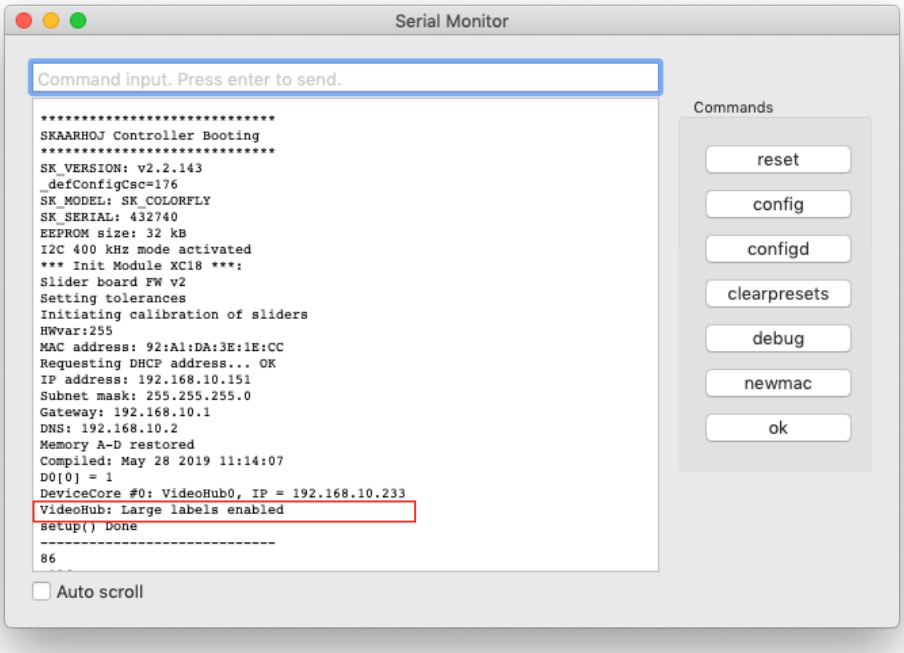
Device configuration options exist:

- Index 0: **Large Labels**: If "1", labels in displays will be max 5 chars and big font.

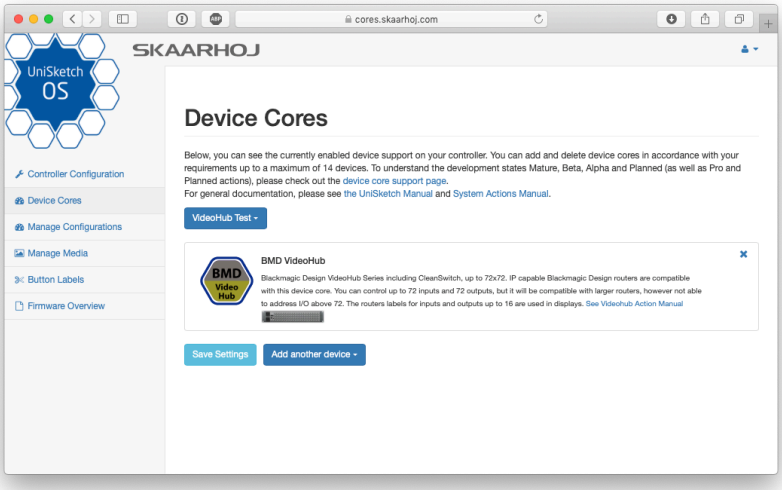
Example I:

Enabling "Large Labels" could look like this device configuration code: "D0:0=1" where the general form would be "Dx:y=z" where "x" is the number of the device core as installed on the controller (starting with zero for the first device core), "y" the index number and "z" the value for that index.

To confirm that a device configuration is in fact detected by the controller, please check it out on the serial monitor where it will be mentioned:



If the BMD Videohub device core is the first like below:



Then setting the “Large Labels” would be set by this configuration under “Manage Media” on your configuration page for your controller on cores.skaarhoj.com