

Ethereal CS-4X1MVU 4in 1out HDMI Multi-Viewer Driver

The CS-4X1MVU is a 4x1 HDMI multi-viewer that shows up to four sources with different content on one display while being able to choose between multiple split-screen viewing modes. For example, viewers can watch multiple sports games on one screen, look at a computer display and a Blu-ray player at the same time, or show both a video game and a cable box on their TV. One key feature is the ability to select which input's audio is sent to the display.

- View up to 4 sources simultaneously on one display
- Multiple split screen viewing modes
- Selectable audio with included IR remote
- Supports HDMI® 1.4
- Inputs supports 720p, 1080p, 1440p & 4K@30Hz
- Output supports 720p, 1080p, 1440p & 4K@30Hz

CONNECTIONS:

Configure the Multi-Viewer connections as per standard Control4 Practice. It is necessary to make connections to the IR Connection (for control) and as many HDMI Input/Output ports as the project uses.

POWER:

There is a Power Toggle Command that can be used in custom programming, however the driver is designed to assume the power is always on.

DEVICE SPECIFIC COMMANDS:

1X1: Enables side by side or top and bottom view

1X3: Enables 1 large image to the left and 3 smaller to the right

2X2: Enables a 4 image grid of equal sizes

AUDIO 1: Selects input 1 as audio source

AUDIO 2: Selects input 2 as audio source

AUDIO 3: Selects input 3 as audio source

AUDIO 4: Selects input 4 as audio source

FULL SCREEN: Changes aspect ratio of images with excess space to stretch/fill or to stay native

MODIFY: This is selected first before selecting which inputs should be displayed in which position (More information below)


Mute Toggle: Toggles mute

OSD: Displays on screen layout and resolution information



PIP: Enables Picture-In-Picture mode


Scaler: Cycles through resolutions of Multi-Viewer output



Special Function Description

For 2x2  mode, the four HDMI input sources are displayed in 2x2 on one screen, press this key and it will be displayed with the below layout:



IN1	IN2
IN3	IN4

Press  +  (modify key) + Input 1~4. This will place the selected input in the top left quadrant. (You can choose the mode desire within 5s after pressing the 'modify' key, if no number is selected after 5s, the system will time out until the modify key is pressed again).



Note: If in the desired viewing mode, you only need to press  (modify key) + Input 1~4. If the current mode is in a different display mode you will need to press full key button combination as below.

Press  +  (modify key) + Input 1, then the layout will be:



IN1	IN2
IN3	IN4

Press  +  (modify key) + Input 2, then the layout will be:

IN2	IN1
IN4	IN3

Press  +  (modify key) + Input 3, then the layout will be:



IN3	IN4
IN1	IN2


Press  +  (modify key) + Input 3, then the layout will be:



IN4	IN3
IN2	IN1

For 1x1  left /right mode, press this key once and it will display the below layout mode:





Press  +  (modify key) + Input 1~4 (for left)+ Input 1~4 (for right). (You can choose the mode desire within 5s after pressing the 'modify' key, if no number is selected after 5s, the system will time out until the modify key is pressed again).



Note: If in the desired viewing mode, you only need to press  (modify key) + Input 1~4 (for left) + Input 1~4 (for right). If the current mode is in a different display mode you will need to press full key button combination as below.

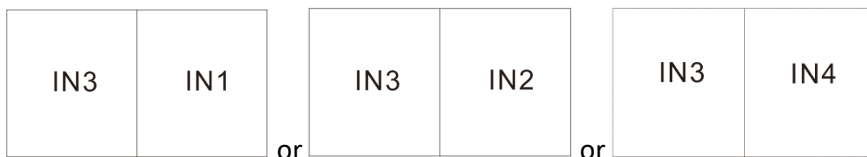
Press  +  (modify key) + Input 1+ Input 2 or 3 or 4, then the layout will be:





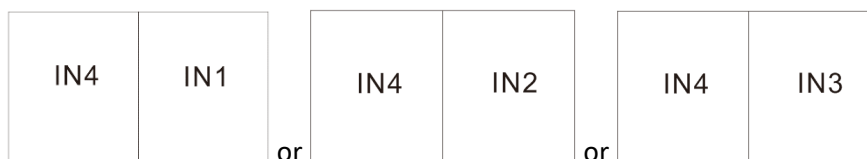
Press  +  (modify key) + Input 2+ Input 1 or 3 or 4, then the layout will be:



Press  +  (modify key) + Input 3+ Input 1 or 2 or 4, then the layout will be:






Press  +  (modify key) + Input 4+ Input 1 or 2 or 3, then the layout will be:





For 1x1  up /down mode, press this key twice and it will display the below layout:



IN1
IN2

Press  +  (modify key) twice + Input 1~4 (for left)+ Input 1~4 (for right). (You can choose the mode desire within 5s after pressing the 'modify' key, if no number is selected after 5s, the system will time out until the modify key is pressed again).



Note: If in the desired viewing mode, you only need to press  (modify key) + Input 1~4 (for left) + Input 1~4 (for right). If the current mode is in a different display mode you will need to press full key button combination as below.

Press  twice +  (modify key) + Input 1 and Input 2 or 3 or 4, then the layout will be:



IN1	IN1	IN1
IN2	IN3	IN4

Press  twice +  (modify key) + Input 2 and Input 1 or 3 or 4, then the layout will be:



IN2	IN2	IN2
IN1	IN3	IN4

Press  twice +  (modify key) + Input 3 and Input 1 or 2 or 4, then the layout will be:



IN3	IN3	IN3
IN1	IN2	IN4


Press  twice +  (modify key) + Input 4 and Input 1 or 2 or 3, then the layout will be:



IN4	IN4	IN4
IN1	IN2	IN3

For 1x3  with one big and three small pictures, press the 1x3  and it will be displayed with the below layout:



IN1	IN2
	IN3
	IN4

Press  +  (modify key) + Input 1~4. (You can choose the mode desire within 5s after pressing the 'modify' key, if no number is selected after 5s, the system will time out until the modify key is pressed again).



Note: If in the desired viewing mode, you only need to press  (modify key) + Input 1~4 (for left) + Input 1~4 (for right). If the current mode is in a different display mode you will need to press full key button combination as below.

Press  +  (modify key) + Input 1, the output layout will be:



IN1	IN2
	IN3
	IN4

Press  +  (modify key) + Input 2, the output layout will be:


IN2	IN1
	IN3
	IN4

Press  +  (modify key) + Input 3, the output layout will be:



IN3	IN1
	IN2
	IN4


Press  +  (modify key) + Input 4, the output layout will be:



IN4	IN1
	IN2
	IN3

For PIP mode, press  and it will be displayed with the below layout:



IN1	
	IN2

Press PiP  +  (modify key) + Input 1~4 (for large video)+ Input 1~4 (for small video). (You can choose the mode desire within 5s after pressing the ‘modify’ key, if no number is selected after 5s, the system will time out until the modify key is pressed again).



Note: If in the desired viewing mode, you only need to press  (modify key) + Input 1~4 (for large video) + Input 1~4 (for small video). If the current mode is in a different display mode you will need to press full key button combination as below.

Press  +  (modify key) + Input 1 + number 2 or 3 or 4, the output layout will be:





Press  +  (modify key) + Input 2 + number 1 or 3 or 4, the output layout will be:




Press  +  (modify key) + Input 3 + number 1 or 2 or 4, the output layout will be:



Press  +  (modify key) + Input 4 + number 1 or 2 or 3, the output layout will be:



Note: Press the PiP  button to cycle control the location of the PiP small video shown below:



Note: the PiP location is saved when video selection is changed, and vice versa.

Programming Example:

Using the PiP mode to show a camera feed when a doorbell is pressed.

Assumptions:

- Input 1 on Multi-Viewer is the original Source (Cable TV)
- Input 4 on Multi-Viewer is the camera feed source.

Programming:

1. Setup all connections as required by the Control4 project.
2. When the Doorbell is pressed
 - a. IF the video device selected is (Cable TV)
 - i. Emit IR Code: PIP on Multi-Viewer
 - ii. Delay 100 Milliseconds (**You may need to modify this delay**)
 - iii. Emit IR Code: MODIFY on Multi-Viewer
 - iv. Delay 100 Milliseconds (**You may need to modify this delay**)
 - v. Emit IR Code: Input 1 on Multi-Viewer
 - vi. Delay 100 Milliseconds (**You may need to modify this delay**)
 - vii. Emit IR Code: Input 4 on Multi-Viewer
 - viii. Delay 30 seconds (**Modify this delay to your liking or insert a button press to return to original viewing mode**)
 - ix. Emit IR Code: Input 1 on Multi-Viewer