

MX-0808-SCL



User Manual

v1.0.4

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Overview

This product is an 8 x 8 seamless switching HDMI matrix with 5K@30Hz and 4K@60Hz scalers built-in on each HDMI output. It supports resolutions up to 5K ultra wide and super wide resolutions and HDCP 2.3 across all inputs and outputs. It includes one multi-function USB-C input that features AV, 1G network and PD 3.0 host charging up to 60W. It also provides independent audio routing between eight inputs to four analog outputs.

The device also supports advanced multiview processing with six most common layout modes: Full Screen, Dual View, PIP, Pyramid, 1Left_3Right, and Quad, allowing users to display multiple sources on a single screen with flexible configurations.

Furthermore, the device can simultaneously create up to three independent video walls, such as two 2x2 video walls, or a combination like one large 2x3 video wall plus two standalone HDMI outputs. This provides exceptional flexibility for large-scale display setups and dynamic visual presentations. This allows users to tailor content layouts for different scenarios, for example focusing audience attention on a single source in one scene while displaying both content and live camera images in another.

Designed for 1U rackmount and stand-alone installation, this product provides perfect A/V switching and distribution solutions for professional markets, such as corporate training rooms, hotel conference rooms, university classrooms, etc.

Features

- All inputs and outputs support resolutions up to 5K ultra wide and super wide resolutions.
- HDCP 2.3 and backwards compatible.
- Each HDMI output has a full-range scaler built-in and supports scaling output resolutions up to 4K@60Hz and 5K@30Hz.
- Seamless switching between HDMI inputs and outputs.
- EDID management including EDID presets, EDID copy and custom EDID.
- HDMI outputs 1–4 support duplicated multiview functionality, with six layout modes: Full Screen, Dual View, PIP, Pyramid, 1Left_3Right, and Quad.
- Advanced video wall capabilities:
 - Supports M x N standard video wall configurations ($M \leq 6$, $N \leq 6$, and $M \times N \leq 8$);
 - Output label OSD supported;
 - Multiple windows can be created on a video wall, each displaying different sources;
 - Supports video wall layout switching.
- USB-C input port supports 4K@60Hz, 1G network, and PD 3.0 host laptop charging up to 60W.
- Supports independent audio switching:
 - Provides audio de-embedding of 1 x USB-C and 7 x HDMI inputs, and each input supports sampling frequencies up to 192KHz.
 - Supports 4 x analog line audio outputs.
 - Supports independent switching between de-embedding audio and analog line audio outputs.
- Supports simple KVM switching with 4-port USB hub built-in:
 - Provides USB host switching among one USB 3.0 Type-C port as well as two USB 3.0 Type-B ports.
 - Provides four USB 3.0 Type-A ports for connection with USB peripherals.

- Multiple control options, including front panel buttons, RS-232 and LAN (Web UI & Telnet).

Package Contents

- 1 x Matrix Switcher
- 1 x AC Power Cord with US Pins
- 1 x AC Power Cord with EU Pins
- 1 x AC Power Cord with AU Pins
- 1 x AC Power Cord with UK Pins
- 1 x USB 3.1 Gen 1 Type-C to Type-C Cable (2 meters, 5Gbps per lane)
- 1 x 3.5mm 3-Pin Phoenix Male Connector
- 4 x 3.5mm 5-Pin Phoenix Male Connector
- 2 x 1U Rack Mounting Brackets
- 8 x M3*L7 Mounting Screws
- 1 x Quick Start Guide

Specifications

Technical

Input Video Ports	1 x USB-C, 7 x HDMI
Input Video Type	4K@60Hz and 5K@30Hz
Input Resolutions Supported	VESA: 800x600 ⁸ , 1024x768 ⁸ , 1280x768 ⁸ , 1280x800 ⁸ , 1280x960 ⁸ , 1280x1024 ⁸ , 1360x768 ⁸ , 1366x768 ⁸ , 1440x900 ⁸ , 1600x900 ⁸ , 1600x1200 ⁸ , 1680x1050 ⁸ , 1920x1200 ⁸ , 5120x2160 ⁵ , 5120x1440 ⁸ SMPTE: 720x576P ⁶ , 1280x720P ^{6,7,8} , 1920x1080P ^{2,5,6,7,8} , 3840x2160 ^{2,3,5,6,8} , 4096x2160 ^{2,3,5,6,8} 2 = at 24 Hz, 3 = at 25 Hz, 5 = at 30 Hz, 6 = at 50 Hz, 7 = at 59.94 Hz, 8 = 60 Hz
Output Video Ports	8 x HDMI
Output Video Type	4K@60Hz and 5K@30Hz
Output Resolutions Supported	3840x2160 ⁸ , 3840x2160 ⁶ , 3840x2160 ⁵ , 3840x2160 ³ , 3840x2160 ² , 1920x1200 ⁸ , 1920x1080 ⁸ , 1920x1080 ⁶ , 1680x1050 ⁸ , 1600x1200 ⁸ , 1600x900 ⁸ , 1440x900 ⁸ , 1366x768 ⁸ , 1360x768 ⁸ , 1280x1024 ⁸ , 1280x960 ⁸ , 1280x800 ⁸ , 1280x768 ⁸ , 1280x720 ⁸ , 1280x720 ⁶ , 1024x768 ⁸ , 800x600 ⁸ The device also supports setting 3 customized resolution via web UI or API commands, detail information, please refer to "Web UI Control" section or the separate document "API Command Set_MX-0808-SCL". 2 = at 24 Hz, 3 = at 25 Hz, 5 = at 30 Hz, 6 = at 50 Hz, 7 = at 59.94 Hz, 8 = 60 Hz
Audio Format	USB-C/HDMI/LINE OUT: PCM 2.0

Maximum Data Rate	- HDMI: 18Gbps - USB-C: 5Gbps (per lane) - USB 3.0 Type-B: 5Gbps - USB 3.0 Type-A: 5Gbps
Control Method	Front panel buttons, RS-232, LAN (Telnet API & Web UI)

General

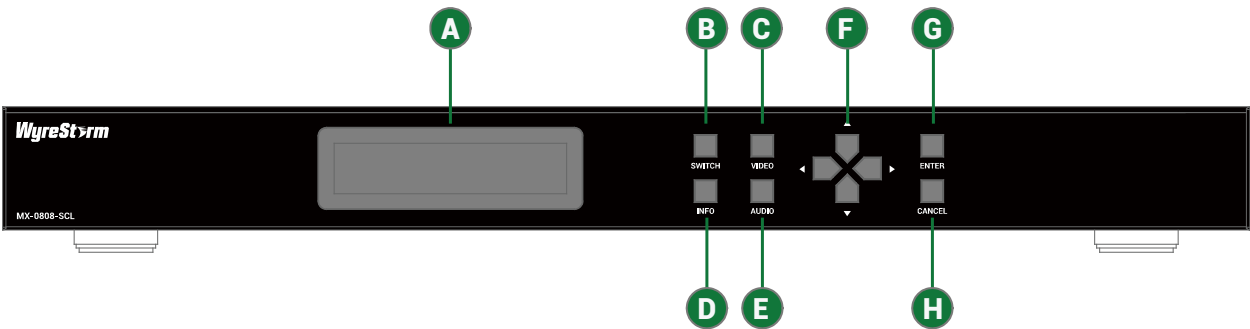
Operating Temperature/RH	0°C ~ 45°C (32°F ~ 113°F)
Storage Temperature/RH	-20°C ~ 70°C (-4°F ~ 158°F)
Humidity	10% ~ 90%, non-condensing
ESD Protection	Human-body model: ±8kV (air-gap discharge)/ ±4kV (contact discharge)
Power Supply	AC 100~240V 50/60Hz
Power Consumption (max)	128W
Dimensions (W x H x D)	440mm x 43.5mm x 330mm/17.32" x 1.71" x 12.99" (Brackets not included)
Weight	4.68kg/10.3lbs
Rack Space Required	1U

Transmission Distance

HDMI	Input/Output: 15m/49ft	1080P@60Hz
	Input/Output: 10m/33ft	4K@30Hz 4:4:4 24bpp
	Input/Output: 5m/16ft	4K@60Hz 4:4:4 24bpp 5120x2160@30Hz 4:4:4 24bpp
USB Type-C	2m/7ft	4K@60Hz 4:4:4 24bpp 5120x2160@30Hz 4:4:4 24bpp

Panel Description

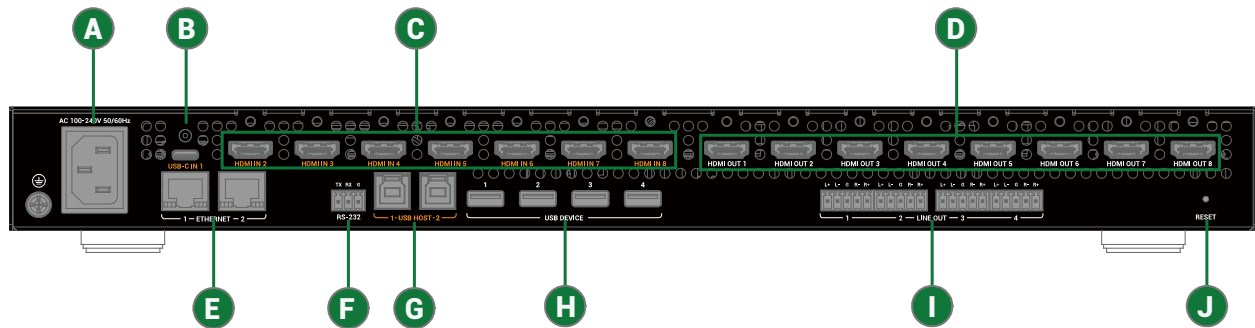
Front Panel



A	LCD Indicator	Displays the information of the button operation.
B	SWITCH Button	Press the button to enter input channel selection mode.
C	VIDEO Button	Press to display the video information of the selected input port on LCD screen, including resolution, color space and HDCP encrypted status.
D	INFO Button	Press to display the device's information on the LCD screen, including IP address, fan speed, physical address, firmware version and temperature.
E	AUDIO Button	Press to enter the volume adjustment mode.
F	Selection Buttons	- INFO: Press the four selection buttons to turn the page to display the information. - AUDIO: Press the left/right button to switch audio output ports and the up/down button to increase/decrease volume. - SWITCH: Press the left/right button to switch output and the up/down button to select input for the selected output. - VIDEO: Press the left/right button to switch input port and the up/down button to turn the page to display video information.
G	ENTER Button	Press to perform the button operation.
H	CANCEL Button	Press to cancel the button operation or exit current mode.

Note: For more information about the button operation, refer to the "Front Panel Control" section.

Rear Panel



A	AC 100~240V 50/60Hz Port and Power Button	Connect to the power source using the AC power cord provided..
B	USB-C IN1	USB 3.0 Type-C port; connect to a laptop. It provides the following functions: • Supports audio, video and USB 3.0 (data rate up to 5Gbps) / 2.0 transmission; • Charges the USB-C source (that supports USB PD 3.0) up to 60W; • Supports 1GbE connection for the connected laptop to access 1G network. Tip: A USB Type-C to Type-C cable (USB 3.0 or above) is recommended.
C	HDMI IN 2~8	Connect to HDMI sources.
D	HDMI OUT 1~8	Connect to HDMI displays.
E	LAN 1~2	Connect to Ethernet devices for LAN control (Web UI/Telnet).
F	RS232	Connect to an RS232 device for bi-directional serial communication.
G	USB HOST	2 x USB 3.0 Type-B ports. Connect to USB hosts. Note: The selected USB host is associated with the four USB DEVICE ports. For more information about USB host selection, refer to USB Routing section.
H	USB DEVICE	4 x USB 3.0 Type-A ports. Connect to USB peripherals. Note: The four USB DEVICE ports are associated with the selected USB host.
I	LINE OUT (1~4)	Connect to audio receivers for outputting audio of associated input source.
J	RESET	Reset button. Use a pointed stylus to press and hold the recessed button for the following: • Less than 5 seconds: Nothing will happen. • 5 to 15 seconds: Reset the IP addressing mode of the device to DHCP and the login passwords of telnet-TLS session & web UI to factory defaults. Tip: The default login password for telnet-TLS session is "wyrestorm" and for web UI is "admin". • More than 15 seconds: Reset the device to factory defaults.

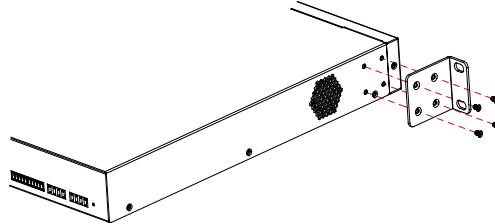
Installation

Note: Before installation, please ensure the matrix is disconnected from the power supply.

The matrix occupies 1U space and can be installed on a standard equipment rack, see following:

To install the matrix on an equipment rack:

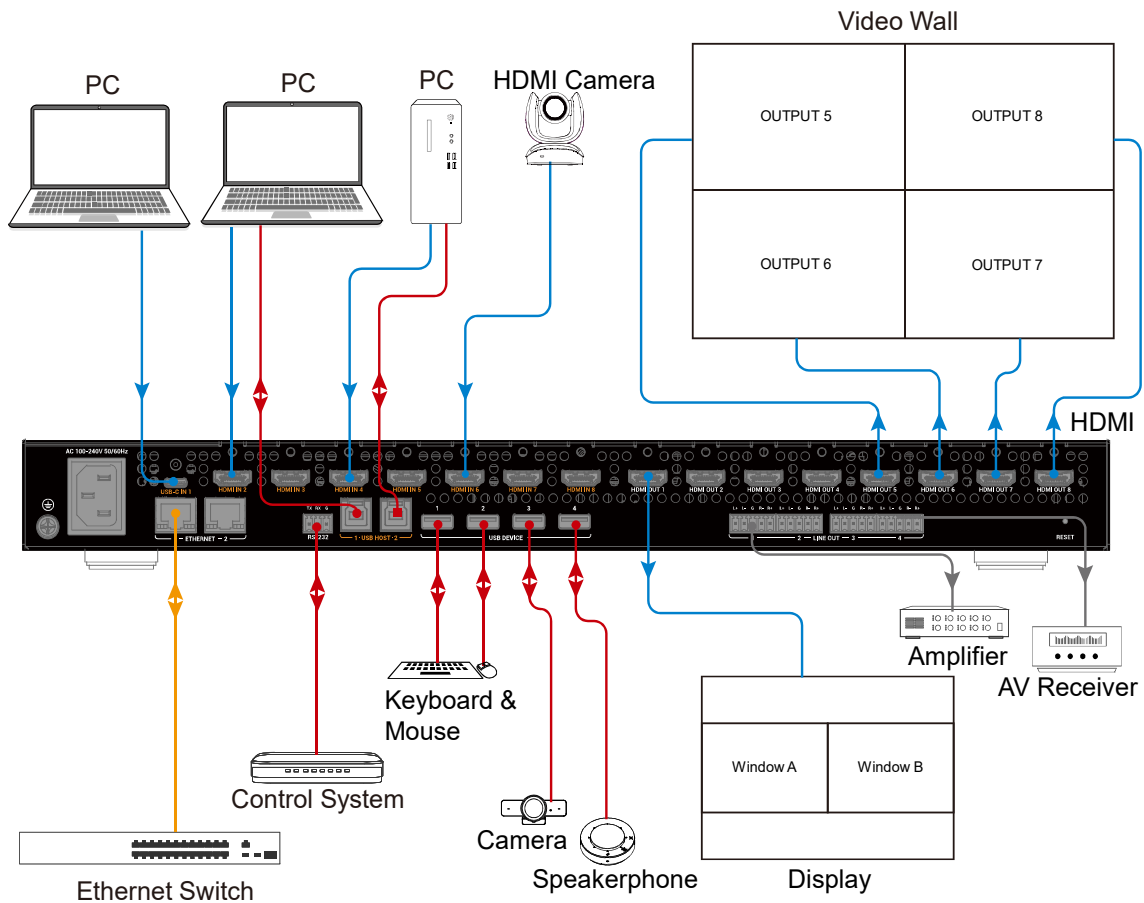
1. Position and secure the rack mounting brackets to the panels on two sides with screws (four on each side) provided.



2. Screw the unit to the equipment rack (screws are not included in the package).

Application

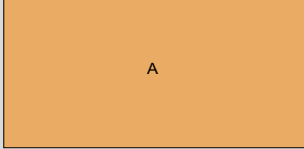
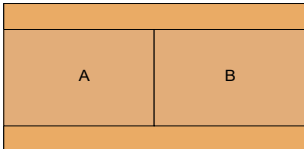
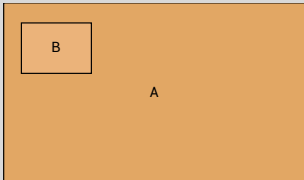
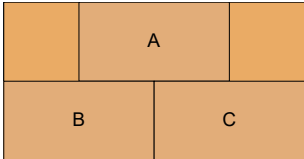
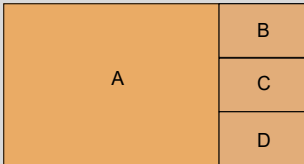
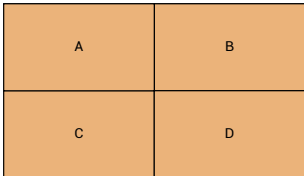
Wiring Diagram



Introduction of Multiview

The matrix supports 6 multiple view layout modes, including Full Screen, Dual view, PIP, Pyramid, 1Left_3Right and Quad.

The table below provides a brief description of each supported layout.

 Full Screen	Only one input signal source without image processing is selected to be shown on the connected display. In this mode, HDMI output 1, 2, 3 and 4 simultaneously display the same image.
 Dual view	Two input signals are selected simultaneously to be shown as two windows with same size on the displays connected with HDMI output 1, 2, 3 and 4.
 PIP Mode	Two input signals are selected simultaneously to be shown as two windows on the displays connected with HDMI output 1, 2, 3 and 4. The smaller window covers on the lower right corner above the larger one by default. The size (default: 1/4) and position (default: top left) of the smaller screen can be set through API commands or web UI.
 Pyramid	Three input signals are selected simultaneously to be shown as three windows with same size on the displays connected with HDMI output 1, 2, 3 and 4.
 1Left_3Right	The four HDMI input sources are shown as 4 windows simultaneously on the displays connected with HDMI output 1, 2, 3 and 4. The master input can be selected from HDMI IN 1~8, and the slave screens are in same size.
 Quad Mode	The four HDMI input sources are shown as 4 windows in same size simultaneously on the displays connected with HDMI output 1 and HDMI output 2.

Introduction of Video Wall

The matrix supports creating and configuring M x N standard video wall ($M \leq 6$, $N \leq 6$, and $M \times N \leq 8$):

- Supports large video wall creation up to 2x4, or two simultaneous 2x2 layouts.
- Supports picture-in-wall effects within video walls, such as embedding a 2x2 window inside a 2x3 video wall.
- Supports intuitive drag-and-drop assignment of matrix outputs to individual video wall panels for easy configuration.
- Supports bezel correction in both horizontal and vertical directions, ideal for setups like 2x2, 2x3 or 2x4 video walls using displays with thin top bezels and thicker bottom bezels.
- Enables fast and flexible layout switching, allowing quick reconfiguration of video wall layouts to emphasize different content zones. For example, a 2x4 video wall can be reconfigured to:
 - 2+2x2+2 (2x2 PIP in the center);



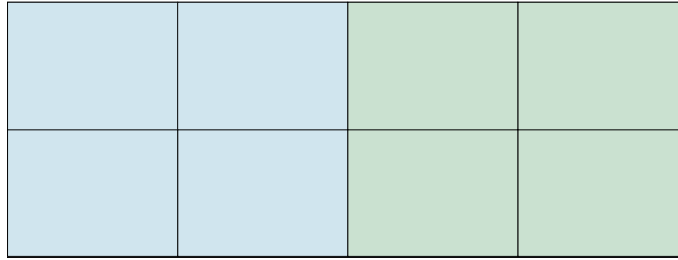
- 2x3+2 (2x3 PIP on the left);



- Full 2x4 layout;



- Dual 2x2 layouts.



Control of the Matrix

The matrix can be controlled through front panel buttons, RS-232 or LAN (Web UI or Telnet).

Front Panel Control

Basic switching of input sources to output displays, audio volume adjustment, and device information can be achieved through front panel buttons.

Power on the device, the LCD window shows "Starting..." followed by the device's model No. and IP address, indicating that the device is ready for operation.

1. Switch input sources for the output

- 1) Press "SWITCH" button to enter input and output selection mode.
- 2) Press the Left (◀) or Right (▶) button to select the output port number from 1 to 8. The ">" icon moves to the currently selected output port number.
- 3) Press the Up (▲) or Down (▼) button to select the input port number in ascending or descending order from 1 to 8.

For example,

OUT: > 1 2 3 4 5 6 7 8

IN: 3 2 3 4 5 6 7 8

- 4) Press "ENTER" button to implement the selection or press "CANCEL" to exit current mode and return to the main page.

2. To adjust output audio volume

- 1) Press "AUDIO" to enter volume adjustment mode.
- 2) Press the Left (◀) or Right (▶) button to select audio output port number from 1 to 4.
- 3) Press the Up (▲) or Down (▼) button to adjust volume of the selected channel from 0dB to -99dB, or mute.

For example,

Audio Out1 Volume

0dB

- 4) Press "CANCEL" to exit current mode and return to the main page.

3. To view video information

- 1) Press "VIDEO" button to enter input video information display mode.

- 2) Press the Left (◀) or Right (▶) button to select the input port.
- 3) Press the Up (▲) or Down (▼) button to view the selected input port's video information.

For example,

HDMI IN2 Info

3840x2160 60, 8 bit

RGB, NO HDCP

- 4) Press "CANCEL" to exit the current mode and return the main page.

4. To view device information

- 1) Press "INFO" button to enter device information display mode.
- 2) Press the Left (◀), Right (▶), Up (▲) or Down (▼) button to view the device information.
- 3) For example,

Device info

192.168.5.120

00:6f:90:11:20:1f

Temp: 45

Fan speed: 3990

Version: v1.0.2

- 4) Press "CANCEL" to exit the current mode and return the main page.

Command Control

Advanced users may need to control the device via API commands. For more information about API commands, refer to the separate document "*API Command Set_MX-0808-SCL*"

Two methods are provided for controlling this device through API commands:

RS232 Control

Connect a PC to the RS232 port of the device. Before sending API commands to the device, ensure the serial ports between this device and the PC are configured correctly. A professional RS-232 serial interface software (e.g., Serial Assist) may be needed as well.

Baud Rate	9600 bps
Data bits	8 bits
Parity	None
Stop bits	1 bit
Flow control	None

Telnet Control

By default, Telnet protocol is enabled on the matrix. Before sending commands to the LAN port of the matrix through telnet, establish a telnet session between it and the PC.

The format of the command for establishing a telnet connection is as below:

```
telnet ip (port)
```

- **ip**: The device's IP address.
- **port**: The device's port number, this is non-required for some telnet client tools. Default port number is 23.

For example, if the device's IP address is 192.168.11.143, the command for establishing telnet session with the device shall be the following:

```
telnet 192.168.11.143 23
```

Web UI Control

The Web UI is an intuitive software interface for users to manage and control the device with ease through a browser. A Chrome, Safari, Microsoft Edge or Firefox browser is recommended.

Accessing the Web UI

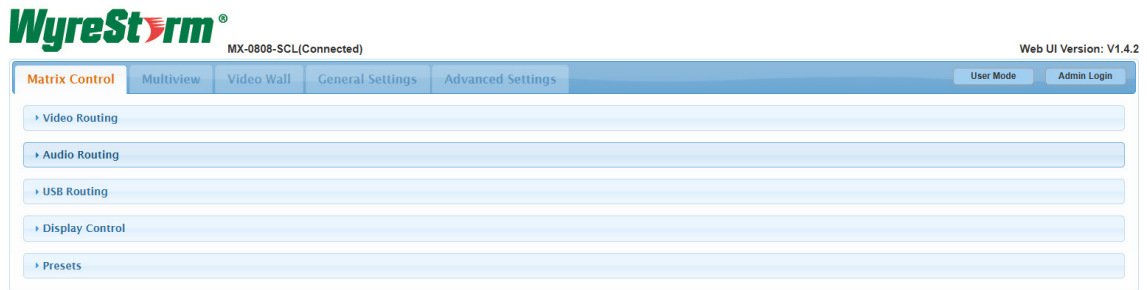
By default, the device's IP addressing mode is DHCP.

To access the Web UI:

1. Connect either the LAN 1 or LAN 2 port of the device to local area network. Ensure there's a DHCP server in the network so that the device can obtain a valid IP address. The allocated IP address can be checked through the LCD screen menu.
2. Tip: Another simple way to obtain the IP address is to send command "`GET IPADDR<CR><LF>`" to the device through RS232 port.
3. Connect a PC to the same network as the device.
4. Input the device's IP address in the browser and press Enter, the following page appears.

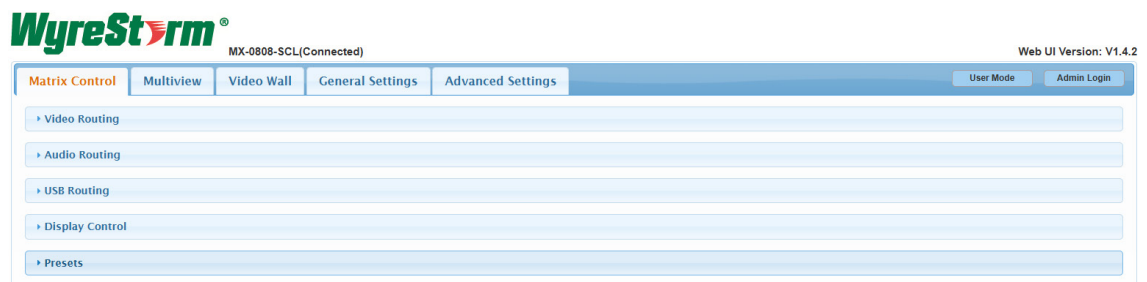


- User: To log on as a user, you are able to access the Matrix Control tab only for basic video and audio settings. Click User you will enter the web UI directly and no login password is required.



- Admin: To log on as an administrator, you are granted with full privileges to configure the matrix system. Select "Admin", type the password (default password is admin) in the Admin Password field and press Enter.

Input a new password in the following pop-up window and click Apply to enter the main page. The password must be alphanumeric with 4 to 16 characters in length.



Matrix Control

Video Routing

Video Routing									
Source/Zone	OUTPUT1	OUTPUT2	OUTPUT3	OUTPUT4	OUTPUT5	OUTPUT6	OUTPUT7	OUTPUT8	All
INPUT1	☒	☐	☐	☐	☐	☐	☐	☐	☐
INPUT2	☐	☒	☐	☐	☐	☐	☐	☐	☐
INPUT3	☐	☐	☒	☐	☐	☐	☐	☐	☐
INPUT4	☐	☐	☐	☒	☐	☐	☐	☐	☐
INPUT5	☐	☐	☐	☐	☒	☐	☐	☐	☐
INPUT6	☐	☐	☐	☐	☐	☒	☐	☐	☐
INPUT7	☐	☐	☐	☐	☐	☐	☒	☐	☐
INPUT8	☐	☐	☐	☐	☐	☐	☐	☒	☐
AV MUTE	☐	☐	☐	☐	☐	☐	☐	☐	☐

This section manages association relationships between the input video sources and output displays, and enable / disable AV MUTE. Click the button in the table to select an input for a certain output display (button turns from white to blue once selection is done).

The green names of inputs and outputs indicate that the corresponding ports are currently receiving or transmitting signals.

The grey names indicate that the corresponding ports have no signal input or output.

- All: Click to route a certain input to all outputs.
- None: Click to deselect the input for a certain output.
- AV Mute: Click to disable the 5V output and TMDS signal of the corresponding output. The button changes from white to orange when AV Mute is enabled.
- In the example below, AV Mute is enabled for Output 1, as indicated by the orange square. Outputs 2 and 3 are not muted. Clicking the orange square will turn it white, which means AV Mute has been turned off for that output.

Video Routing		
Source/Zone	OUTPUT1	OUTPUT2
INPUT1	☒	☐
INPUT2	☐	☒
INPUT3	☐	☐
INPUT4	☐	☐
INPUT5	☐	☐
INPUT6	☐	☐
INPUT7	☐	☐
INPUT8	☐	☐
AV MUTE	☒	☐

By default, Video Input 1 routes to Output 1... Video Input (n) routes to Output (n), Video Input 8 routes to Output 8. All outputs are not set to AV Mute.

Audio Routing

Audio Routing

Follow Video

Independent Switching

This section manages audio routing mode and association relationships between the input audio sources and LINE OUT ports.

- Follow Video: In this mode, LINE OUT 1-4 follow the input channel selection of video outputs 1-4.
- For example, if HDMI IN 1 routes to HDMI OUT 1... HDMI IN 4 routes to HDMI OUT 4, when Follow Video is selected, audio of HDMI IN 1 routes to LINE OUT 1... audio of HDMI IN 4 routes to LINE OUT 4.
- Independent Switching: In this mode, you are able select a desired audio input for a certain LINE OUT port manually, which will be independent of the settings in "Video Routing" section.

Audio Routing

Follow Video

Independent Switching

Source/Zone	LINE OUT1	LINE OUT2	LINE OUT3	LINE OUT4	All
INPUT 1	☒	☐	☐	☐	☐
INPUT 2	☐	☒	☐	☐	☐
INPUT 3	☐	☐	☒	☐	☐
INPUT 4	☐	☐	☐	☒	☐
INPUT 5	☐	☐	☐	☐	☐
INPUT 6	☐	☐	☐	☐	☐
INPUT 7	☐	☐	☐	☐	☐
INPUT 8	☐	☐	☐	☐	☐

In Independent Switching mode, click the button in the table to select an audio input for a certain output (button turns from white to blue once selection is done).

- All: Click to route a certain audio input to all LINE OUT ports.

Default setting: Follow Video.

USB Routing

USB Routing

Active USB Host Selection

USB-B Port1

Active USB Host Selection: For USB host selection among USB-C IN 1, USB-B Port 1 and USB Port 2 ports. Once selection is done, the selected port will be associated with the four USB 3.0 type-A ports immediately.

Default setting: USB-B Port 1

Display Control

The screenshot shows a 'Display Control' window with a 'CEC Control' section. It contains a table with 8 rows, each representing an output zone (OUTPUT 1 to OUTPUT 8). Each row has four columns: 'Manual', 'Auto', 'Delay(1-30min)', and 'Command Setting'. The 'Manual' column has 'Display On' and 'Display Off' buttons. The 'Auto' column has a toggle switch (currently on). The 'Delay' column has a numeric input (set to 2) and up/down arrows. The 'Command Setting' column has a button with a pencil icon.

Zone	Manual	Auto	Delay(1-30min)	Command Setting
OUTPUT 1	Display On Display Off	☒	2	
OUTPUT 2	Display On Display Off	☒	2	
OUTPUT 3	Display On Display Off	☒	2	
OUTPUT 4	Display On Display Off	☒	2	
OUTPUT 5	Display On Display Off	☒	2	
OUTPUT 6	Display On Display Off	☒	2	
OUTPUT 7	Display On Display Off	☒	2	
OUTPUT 8	Display On Display Off	☒	2	

This section provides configuration of CEC control on output displays.

Manual:

- **Display On:** Click to send the Display On command (predefined in the Command Setting dialog box) to the certain output display immediately.
- **Display Off:** Click to send the Display Off command (predefined in the Command Setting dialog box) to the certain output display immediately.
- **Auto:** Toggle to turn on/off the automatic CEC control function. If Auto is turned on, the corresponding output port sends Display Off command to the connected display automatically when it detects no valid signal input within the predefined Delay time.

Default setting: On

- **Delay (1-30min):** Define the delay time for the output port to automatically send Display Off command to the connected display when no signal is present. For example, if the Delay is set to 2 minutes, the output display will automatically power off when there's no signal at the display in 2 minutes.

Default setting: 2

Command Setting

Click the icon to open the Command Setting dialog box:

The screenshot shows a 'Command Setting' dialog box with three sections. The first section is 'Command Testing' with a text input field and a 'Test' button. The second section is 'Display On' with a text input field containing '40 04' and a 'Save' button. The third section is 'Display Off' with a text input field containing '40 36' and a 'Save' button.

- **Command Testing:** Input a command and click Test to test if it sends out the command to the connected display successfully.
- **Display On/Off:** Type the defined CEC command for controlling display on/off, and click Save.

Default setting for Display On command is "40 04", for Display Off command is "40 36".

Note: To change CEC commands, please refer to the CEC specification document.

Presets

Presets		
Preset	Preset Name	
1	Preset 1	<button>Load</button> <button>Save</button>
2	Preset 2	<button>Load</button> <button>Save</button>
3	Preset 3	<button>Load</button> <button>Save</button>
4	Preset 4	<button>Load</button> <button>Save</button>
5	Preset 5	<button>Load</button> <button>Save</button>
6	Preset 6	<button>Load</button> <button>Save</button>
7	Preset 7	<button>Load</button> <button>Save</button>

This section saves or loads settings to or from the Matrix. The device supports up to 24 presets.

- **Preset Name:** Name the preset. Move the mouse to the current preset name and click it to enter name edit mode, users can input a new preset name for the corresponding preset, and click other blank area to take effect.

Preset	Preset Name
1	Preset 1

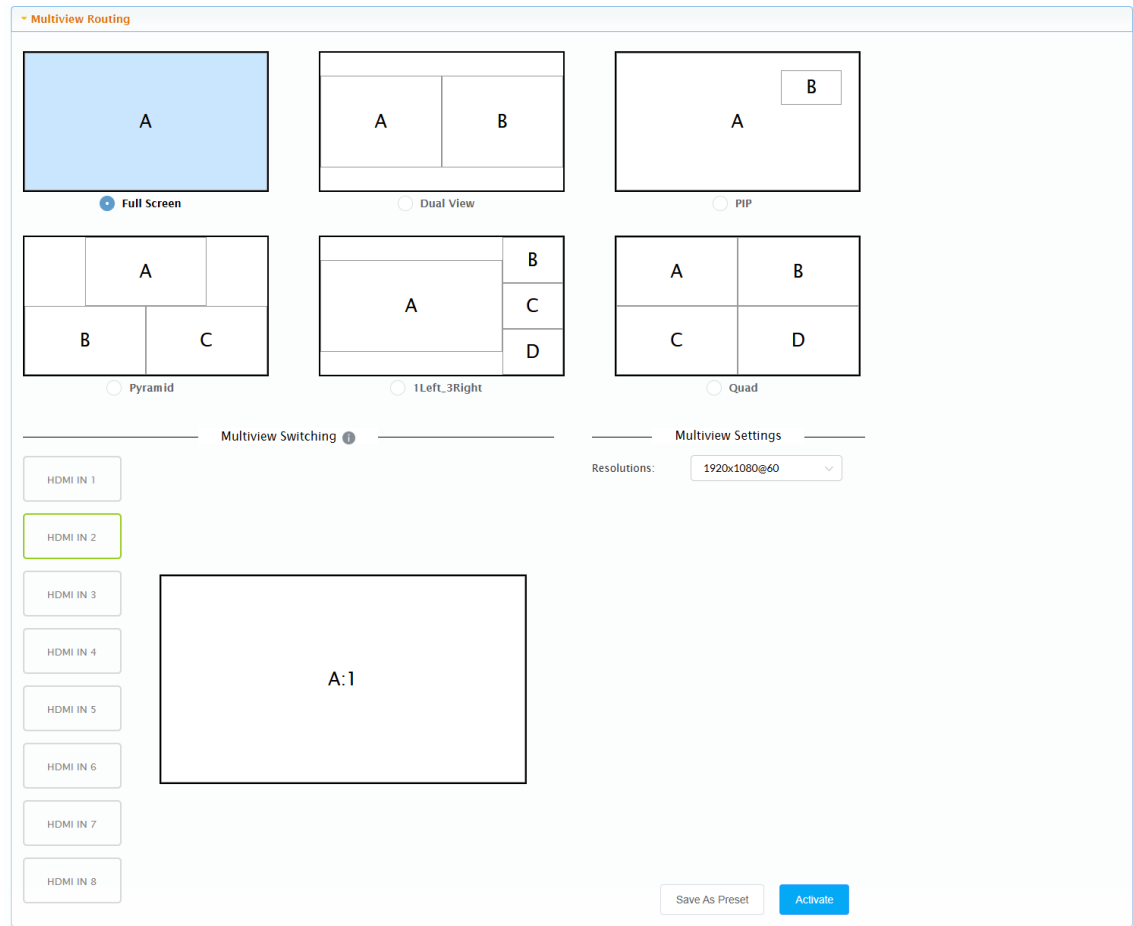
The input name can use numbers, letters, space and "_", "-" special character. The length of the input name should be less than 32 characters.

- **SAVE:** Save the Settings in Matrix Control and General Setting tabs as a certain preset to the matrix.
- **LOAD:** Load the preset from the matrix.

Note: Saving configurations to a preset that is already in use will overwrite the previously saved settings.

Multiview

Multiview Routing



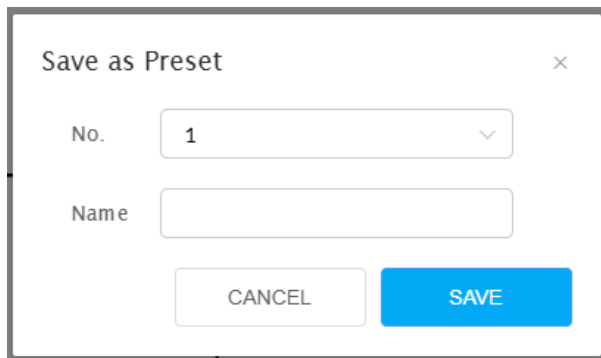
Click the circle (turns to blue) below the corresponding multiple view diagram to select the multiple view mode. When set the video mode to multiple view, the Output 1, 2, 3 and 4 support multiple layout modes (Multiview output is mirrored displayed in HDMI output 1, HDMI output 2, HDMI output 3 and HDMI output 4). This section allows users to set layout mode among “Full Screen”, “Dual View”, “PIP”, “Pyramid”, “1Left_3Right” and “Quad”, select input source for each layout window and other configurations in different layout modes.

Drag and drop the HDMI input button onto the corresponding window in the multi-view diagram to select it as the input source for that window.

Full Screen Mode	Resolutions: Select the output resolution from the drop-down menu. Default setting: 1920x1080@60.
Dual View Mode	- Audio Select: Select audio source from window A or window B for the output 1/2/3/4. Default Setting: window A, the audio is from the source window A selected.   : When activate the multiview mode and settings, click the button to mute/unmute the selected audio. Default setting: unmute. - Resolutions: Select the output resolution from the drop-down menu. Default setting: 1920x1080@60.

PIP Mode	- Audio Select: Same as Dual View mode.  / : Same as Dual View mode. - Resolutions: Same as Dual View mode. PIP Settings: - PIP Position: Select the position of the window B (small window) from the drop-down menu (Top Left, Bottom Left, Top Right, and Bottom Right). Default setting: Top Left. - PIP Size: Select the ratio of the window B (small window) to window A (big window) from the dropdown menu (1/4, 1 / 9, and 1 / 16). Default setting: 1/4.
Pyramid Mode	- Audio Select: Select audio source from window A, window B or window C for the output 1/2/3/4. Default Setting: window A, the audio is from the source window A selected.  / : Same as Dual View Mode. - Resolutions: Same as Dual View Mode.
1Left_3Right Mode	- Audio Select: Select audio source from window A, window B, window C or window D for the output 1/2/3/4. Default Setting: window A, the audio is from the source window A selected.  / : Same as Dual View Mode. - Resolutions: Same as Dual View Mode.
Quad Mode	

- Save As Preset: Click to enter preset page to save the switching settings, video wall settings and multiple settings to the matrix.



The dialog box titled "Save as Preset" has a close button (X) in the top right corner. It contains two input fields: "No." with a dropdown menu showing "1" and a downward arrow, and "Name" with a text input field. At the bottom, there are two buttons: "CANCEL" and "SAVE".

- No: Select preset number to save. If the currently selected preset number already has another preset saved, saving to this preset number again will overwrite the previous preset.
- Name: Input a preset name. The input name must include letters, and not exceed 31 characters.
- SAVE/CANCEL: Click to save the preset or cancel the preset.

The saved preset will be shown on the "Preset" part on "Matrix Control" page.

- Activate: Click to activate the multiview mode setting and to set output 1/2/3/4 to multiview mode.
- Deactivate: Click to exit multiview mode and back to normal matrix mode (output 1/2/3/4 select input source independently).

Video Routing

Video Routing									
Source/Zone	OUTPUT 1 Multiview Mode	OUTPUT 2 Multiview Mode	OUTPUT 3 Multiview Mode	OUTPUT 4 Multiview Mode	OUTPUT 5	OUTPUT 6	OUTPUT 7	OUTPUT 8	All
INPUT 1	☐	☐	☐	☐	☐	☐	☐	☐	☐
INPUT 2	☐	☐	☐	☐	☐	☐	☐	☐	☐
INPUT 3	☐	☐	☐	☐	☐	☐	☐	☐	☐
INPUT 4	☐	☐	☐	☐	☐	☐	☐	☐	☐
INPUT 5	☐	☐	☐	☐	☒	☐	☐	☐	☐
INPUT 6	☐	☐	☐	☐	☐	☒	☐	☐	☐
INPUT 7	☐	☐	☐	☐	☐	☐	☒	☐	☐
INPUT 8	☐	☐	☐	☐	☐	☐	☐	☒	☐
AV MUTE	☐	☐	☐	☐	☐	☐	☐	☐	☐

OUTPUT 1–4 are displayed in multiview mode and cannot be configured in this section. The remaining outputs can be selected and switched as usual. The "Video Routing" section in "Matrix Control" page are same with this part.

Video Wall

Create Video Wall

+

Video Wall Bezel Settings

Width: mm

Height: mm

Margin

Top: mm

Bottom: mm

Left: mm

Right: mm

Width

Top

Left

Right

Height

Bottom

This section allows users to create video wall and configure the created video wall(s).

Steps to create a video wall:

- Click "+" button after "Create Video Wall" in left zone, enter the following window:

Create Video Wall

Video Wall Name:

Rows:

Column:

Cancel

OK

- Video Wall Name: Input a name for the created video wall. For example VideoWall1.

Note: The video wall name supports special characters expect spaces. Move the mouse to the "i" icon displays the message.

Video Wall Name:

i

Support special characters except the " " space.

- Rows / Column: Input video wall row and column numbers, such as row 2, and column 2.

Note: The number of Rows/column must be in the range of 1~6, and row x column should not exceed 8. Move the mouse to the "i" icon displays the message.

Rows:

i

To assure the quality of video resolution, Rows <= 6

Column: To assure the quality of video resolution, Columns <= 6

- OK / Cancel: Click "OK" to save the configuration or click "Cancel" to cancel the operation.
- b) Input 3 in "Rows" box and input 2 in "Column" box, and click "OK" to create a 3x2 video wall.

The screenshot displays the 'Video Wall' configuration window. On the left, there's a 'Create Video Wall' section with a list containing 'VideoWall1'. Below it is the 'Select Matrix Outputs' section with buttons for OUTPUT 1 through OUTPUT 8. The main area is divided into two panels. The top panel, 'Video Wall Bezel Settings', includes input fields for Width (0 mm), Height (0 mm), and Margin (Top, Bottom, Left, Right, all 0 mm). It also features a diagram of a video wall with labels for Width, Height, Top, Bottom, Left, and Right margins. The bottom panel, 'Video Wall Layout Settings', shows a 'Layout1' dropdown, 'Create Layout' and 'Remove Layout' buttons, a 3x2 grid of 'Not assigned' cells, and an 'Output Label' toggle set to 'OFF'. A 'Save As Preset' button and an 'Activate' button are at the bottom right.

Video Wall Bezel Settings:

Default settings: 0; Range: 0-10000

Width (mm): This is the outside horizontal length (width) of each video wall display.

Height (mm): This is the outside vertical length (height) of each video wall display.

Margin:

Top: This is the top border width of each video wall display.

Left: This is the left border width of each video wall display.

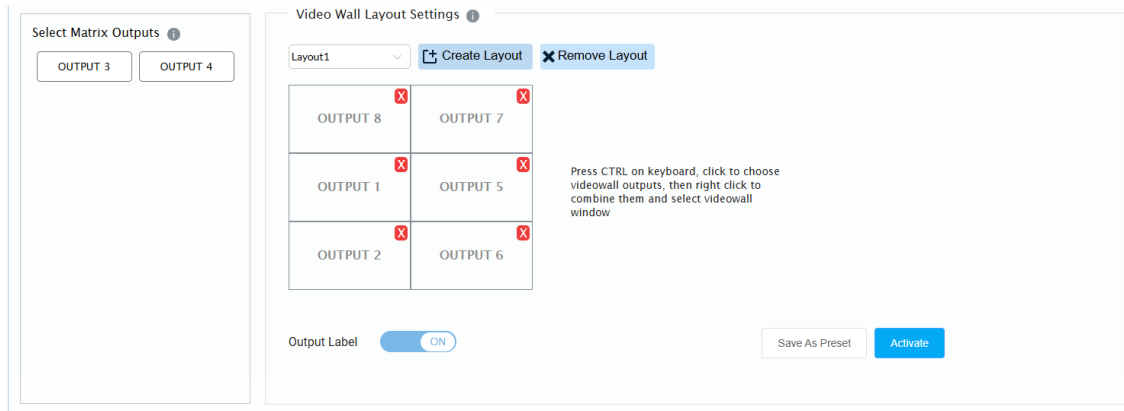
Bottom: This is the bottom border width of each video wall display.

Right: This is the right border width of each video wall display.

Save / Cancel: Click to perform / cancel the settings.

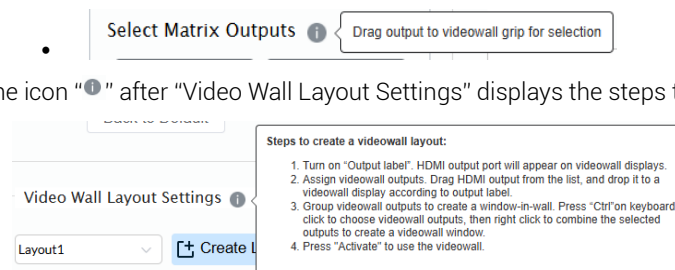
Back to Default: Click to set the values in Video Bezel Settings to defaults.

- c) Set "Output Label" to ON to enable OSD function, the output port of each display connected will be shown in the lower right corner of its screen. Drag the output name on "Select Matrix Outputs" field to the corresponding screen in "Video Wall Layout Settings" field according to the output port displayed on each screen.

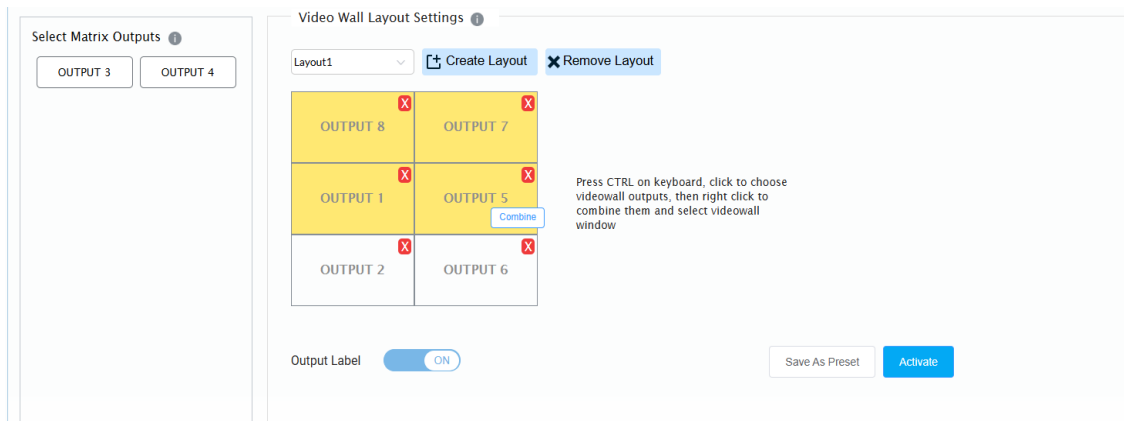


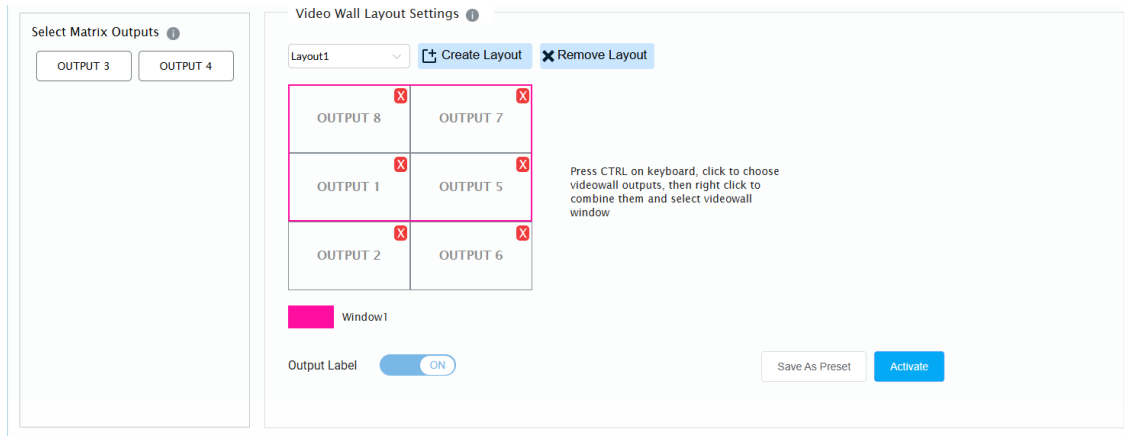
Note:

- Move the mouse to the icon "i" after "Select Matrix Outputs" displays the operation information.
- Move the mouse to the icon "i" after "Video Wall Layout Settings" displays the steps to set video wall.



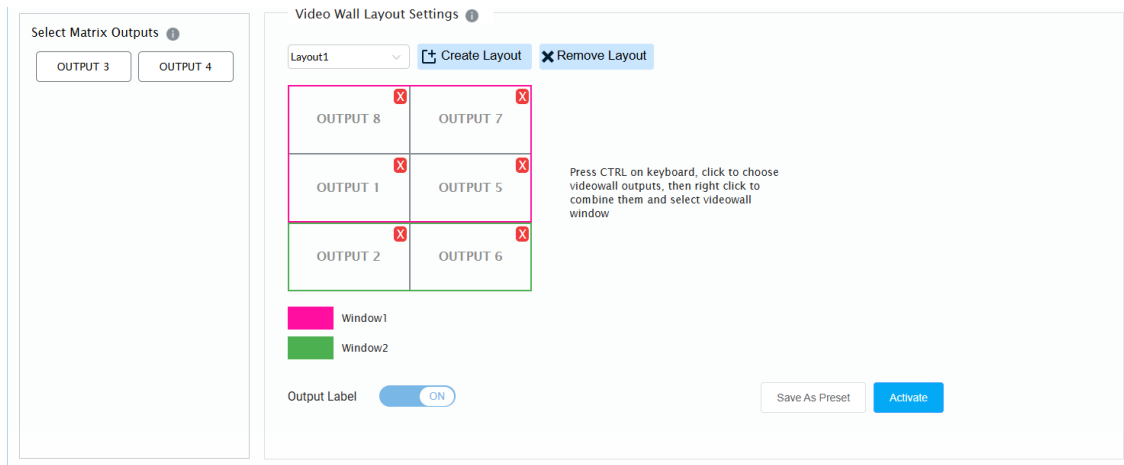
- d) Press "Ctrl" key of the keyboard and use the left button of the mouse to click the adjacent outputs in the diagram to combine them (the selected output will turn orange), then right click the mouse and click "Combine" button to create a "window-in-wall".





Note: Right-click on an existing Window-In-Wall area and select "Dismiss" to remove it.

- e) The created "window-in-wall" will have a magenta frame in the diagram. Users can create multiple windows in a video wall, and different windows have different frames in the diagram to distinguish.



- Create Layout: Click to save current layout.
- Remove Layout: Click to remove current saved layout.
- Output Label: Click to enable/disable OSD. Default setting: OFF.
- When set it to ON, the IP address and the output of this display connected will be shown in the lower right corner of its screen.
- Activate / Deactivate: Click to activate / deactivate the video wall setting.
- : Click to remove the current selected output of the display. Before remove, click "Deactivate" first.

- f) Users can create multiple videos, but the total rows x total columns can't exceed 8.

Click the video wall name to enter its corresponding configuration page.

Click "... " button after video wall name to open the following window:

- Edit: Click to enter the following window to change the name of the video wall.

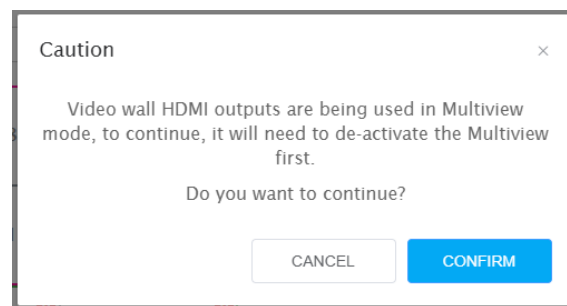
- Delete: Click to delete the video wall.

After clicking "Activate" to successfully create the video wall, users can select input for the windows and outputs in video wall in "Video Routing" field. The outputs in window(s) form a video wall and select one input source, and other outputs aren't be created as window in the video wall can select different sources as other outputs.

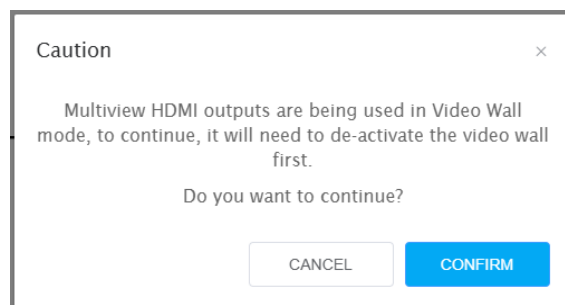
Video Routing					
Source/Zone	VideoWall1		VideoWall2		All
	Window1	Window2	OUTPUT 3	OUTPUT 4	
INPUT 1	☐	☐	☐	☐	☐
INPUT 2	☐	☒	☐	☐	☐
INPUT 3	☐	☐	☒	☐	☐
INPUT 4	☐	☐	☐	☒	☐
INPUT 5	☐	☐	☐	☐	☐
INPUT 6	☐	☐	☐	☐	☐
INPUT 7	☐	☐	☐	☐	☐
INPUT 8	☒	☐	☐	☐	☐
AV MUTE	☐	☐	☐	☐	☐

Note:

- All outputs support video wall mode configuration. HDMI Outputs 1–4 additionally support mirrored multiview mode. When Outputs 1–4 are configured in Multiview mode, attempting to assign any of these outputs to the Video Wall will trigger a confirmation prompt. Selecting “CONFIRM” will switch the corresponding output(s) from Multiview mode to Video Wall mode.



- Conversely, if one or more of Outputs 1–4 are currently set to Video Wall mode and you attempt to switch them to Multiview mode, the confirmation prompt will appear. Upon confirmation, the selected output(s) will exit Video Wall mode and be set to Multiview mode.



- When the Video Wall does not include any of Outputs 1–4, it is possible to use both the Video Wall and Multiview mode at the same time. In this case, Outputs 1–4 can remain in Multiview mode, while the Video Wall uses other available outputs. The Video Routing interface in this scenario appears as shown below:

Video Routing									
Source/Zone	OUTPUT 1 Multiview Mode	OUTPUT 2 Multiview Mode	OUTPUT 3 Multiview Mode	OUTPUT 4 Multiview Mode	VideoWall1				All
					OUTPUT 5	OUTPUT 6	OUTPUT 7	OUTPUT 8	
INPUT 1	☐	☐	☐	☐	☐	☐	☐	☐	☐
INPUT 2	☐	☐	☐	☐	☐	☐	☐	☐	☐
INPUT 3	☐	☐	☐	☐	☐	☐	☐	☐	☐
INPUT 4	☐	☐	☐	☐	☐	☐	☐	☐	☐
INPUT 5	☐	☐	☐	☐	☒	☐	☐	☐	☐
INPUT 6	☐	☐	☐	☐	☐	☒	☐	☐	☐
INPUT 7	☐	☐	☐	☐	☐	☐	☒	☐	☐
INPUT 8	☐	☐	☐	☐	☐	☐	☐	☒	☐
AV MUTE	☐	☐	☐	☐	☐	☐	☐	☐	☐

General Setting

General Setting tab includes two submenus: A/V Configuration and Audio Output Settings.

A/V Configuration

A/V Configuration

Source

1 INPUT 1

2 INPUT 2

3 INPUT 3

4 INPUT 4

5 INPUT 5

6 INPUT 6

7 INPUT 7

8 INPUT 8

Zone

1 OUTPUT 1

2 OUTPUT 2

3 OUTPUT 3

4 OUTPUT 4

5 OUTPUT 5

6 OUTPUT 6

7 OUTPUT 7

8 OUTPUT 8

Input 1 Name ⓘ

INPUT 1

Apply

EDID

Fixed 3840x2160@30 PCM Audio with SDR

Export EDID

USB Data

ON

USB-C Ethernet

ON

Video Details

Resolution	0x0	Frame Rate	0
HDR Info	None	Color Space	None
Deep Color	None	HDCP Version	None

Audio Details

Format	None	Sampling Rate	0kHz
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A/V Configuration

Source

1 INPUT 1

2 INPUT 2

3 INPUT 3

4 INPUT 4

5 INPUT 5

6 INPUT 6

7 INPUT 7

8 INPUT 8

Zone

1 OUTPUT 1

2 OUTPUT 2

3 OUTPUT 3

4 OUTPUT 4

5 OUTPUT 5

6 OUTPUT 6

7 OUTPUT 7

8 OUTPUT 8

Input 2 Name ⓘ

INPUT 2

Apply

EDID

Fixed 3840x2160@60 PCM Audio with HDR

Export EDID

HDCP

ON

Video Details

Resolution	3840x2160	Frame Rate	60
HDR Info	NO HDR	Color Space	RGB
Deep Color	8 bit	HDCP Version	NO HDCP

Audio Details

Format	PCM	Sampling Rate	48kHz
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A/V Configuration

Source

1	INPUT 1	2	INPUT 2
3	INPUT 3	4	INPUT 4
5	INPUT 5	6	INPUT 6
7	INPUT 7	8	INPUT 8

Zone

1	OUTPUT 1	2	OUTPUT 2
3	OUTPUT 3	4	OUTPUT 4
5	OUTPUT 5	6	OUTPUT 6
7	OUTPUT 7	8	OUTPUT 8

Output 1 Name ⓘ

OUTPUT 1 Apply

Export EDID

HDCP ⓘ

Auto

Output Resolution

Auto

Video Details

Resolution	0x0	Frame Rate	0
HDR Info	None	Color Space	None
Deep Color	None	HDCP Version	None

Audio Details

Format	None	Sampling Rate	0kHz
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This section manages alias name, input EDID, output HDCP support and displays video and audio detailed information for the input/output ports.

For input ports 1-8:

- **Source:** To select an input port.
- **Input Name (1~8):** Input a new alias name for the selected input.
- **EDID (Input 1-8):** Select EDID for the corresponding input port, and click Apply.

Note: Default EDID for Input 1 is 3840x2160@30 PCM Audio with SDR and for Input 2-8 is Fixed 3840x2160@60 PCM Audio with HDR.

EDID Options include the following:

Fixed 5K Ultrawide PCM Audio with HDR;

Fixed 5K Superwide PCM Audio with HDR;

Fixed 3840x2160@60 CH PCM Audio with HDR;

Fixed 3840x2160@60 CH PCM Audio with SDR;

Fixed 3840x2160@30 PCM Audio with HDR;

Fixed 3840x2160@30 PCM Audio with SDR;

Fixed 1920x1080@60 PCM Audio with HDR;

Fixed 1920x1080@60 PCM Audio with SDR;

Special EDID:

Fixed 8Kx1K, 5Kx1K@60Hz PCM Audio;

Fixed 3840x1080@60Hz PCM Audio;

Fixed 3440x1440@60 PCM Audio;

Fixed 2560x1600@60 PCM Audio;

Fixed 2560x1536@60 PCM Audio;

Fixed 2560x1440@60 PCM Audio;

Fixed 2560x1080@60 PCM Audio;

Fixed 1920x2160@60 PCM Audio;

Fixed 1680x1050@60 PCM Audio;

Fixed 1600x1200@60 PCM Audio;

Copy from Output:

Copy from HDMI Output 1

Copy from HDMI Output 2

Copy from HDMI Output 3

Copy from HDMI Output 4

Copy from HDMI Output 5

Copy from HDMI Output 6

Copy from HDMI Output 7

Copy from HDMI Output 8

EDID Write

For EDID Write, click Apply > UPLOAD FILE to select an EDID file from your computer to have it imported to the matrix.



- Export EDID: To download the EDID information of the select input port as a bin file to local PC.
- USB Data (for INPUT 1 only): Enable / disable USB data transmission of USB-C port. Default setting: Enable.
- USB Ethernet (for INPUT 1 only): Enable or disable the USB-C port's access to the connected Ethernet. Default setting: Enable.
- Video Details: Displays the input port's video information.
- Audio Details: Displays the input port's audio information.

For output ports 1-8:

- Zone: To select an output port.
- Output Name (1~8): Input a new alias name for the selected output.
- Save EDID: To download the EDID information of the select output port as a bin file to the PC.
- HDCP: To configure the HDCP support function.
 - Auto: To allow the selected output port to perform HDCP setting automatically.
 - HDCP v1.x: To set the output port to HDCP 1.4 encryption.

Default setting: Auto

- Output Resolution: Click the button "... " to select output resolution for the selected output port in the following window. The default setting is "Auto". Check the box in front of the resolution, check the box in front of Output Rate, and click "Apply" to take effect or click "Cancel" to cancel the operation.

Output Resolution

Output Resolution

☒ Auto ☐ 3840x2160 ☐ 1920x1200

☐ 1920x1080 ☐ 1680x1050 ☐ 1600x1200

☐ 1600x900 ☐ 1440x900 ☐ 1366x768

☐ 1360x768 ☐ 1280x1024 ☐ 1280x960

☐ 1280x800 ☐ 1280x768 ☐ 1280x720

☐ 1024x768 ☐ 800x600

Customized Resolution

☐ Customized - 1 ☐ Customized - 2 ☐ Customized - 3

Cancel Apply

Customized Resolution: To define the output resolution by entering the values of horizontal and vertical pixels in the following fields. Three customized resolutions are supported.

Output Resolution

Output Resolution

☐ Auto ☐ 3840x2160 ☐ 1920x1200

☐ 1920x1080 ☐ 1680x1050 ☐ 1600x1200

☐ 1600x900 ☐ 1440x900 ☐ 1366x768

☐ 1360x768 ☐ 1280x1024 ☐ 1280x960

☐ 1280x800 ☐ 1280x768 ☐ 1280x720

☐ 1024x768 ☐ 800x600

Customized Resolution

☒ Customized - 1 ☐ Customized - 2 ☐ Customized - 3

Horizontal pixels (640 - 7680)

Vertical pixels (480 - 7680)

Cancel Save

Cancel Apply

Horizontal pixels range from 640 to 7680, and vertical ones range from 480 to 7680.

Customized Resolution

☒ Customized - 1 ☐ Customized - 2 ☐ Customized - 3

Horizontal pixels (640 - 7680) Horizontal pixels values must be between 640-7680

Vertical pixels (480 - 7680) Vertical pixels values must be between 480-7680

Cancel Save

- Video Details: Displays the output port's video information.
- Audio Details: Displays the output port's audio information.

Audio Output Settings

Audio Output Settings

LINE OUT1	0	dB	-		+	Unmuted
LINE OUT2	0	dB	-		+	Unmuted
LINE OUT3	0	dB	-		+	Unmuted
LINE OUT4	0	dB	-		+	Unmuted

This section manages the audio properties of the LINE OUT ports (1-4), including the output audio volume, and toggle switch between mute and unmute.

- The output volume of LINE OUT 1-4 ranges from -100dB to 0dB, and can be turned up and down by **+** and **-** buttons.

Default output audio volume is 0 dB.

- The toggle switch is provided for switching between mute and unmute of the audio output.

Default audio output status is unmuted.

Advanced Setting

The Advanced Setting includes the following submenus.

Matrix Control

Multiview

Video Wall

General Settings

Advanced Settings

User Mode

Admin Login

Information

Fan and Temperature

Network

Security

Change Admin Login Password

FW Update

System

Syigma Cloud Management

Telnet API Command

Log

Information

Information

MODEL	MACADDRESS	IP ADDRESS
MX-0808-SCL	00:6f:90:46:f9:ec	192.168.8.196
FIRMWARE VERSION		
1.4.2		

This section displays the device information, including Model number, physical address, IP address and firmware version.

Fan and Temperature

Fan and Temperature

Fan Speeds	Temperatures(°C)
[4050,4050]	[45]

This section shows the device's fan speed and temperature.

Network

▼ Network

Mode
☒ DHCP ☐ Static

Device IP Address
192.168.8.196

Subnet Mask
255.255.240.0

Device Gateway
192.168.2.1

Note: LAN Module will automatically reboot after changing Network setting.

Apply

This section manages network settings.

- IP Addressing mode:
 - DHCP: When enabled, the IP address of the Matrix is assigned automatically by the DHCP server in the system.
 - Static: When enabled, the IP address can be set manually.
 - ⇒ Subnet Mask: Set subnet mask manually when Static is selected.
 - ⇒ Device Gateway: Set gateway address manually to communicate with another network when Static is selected.

Default setting: DHCP

- Apply: Click to perform the network setting.

Tips:

- When "Static" is selected, ensure your PC is in the same network segment as the Matrix.
- Please wait for 2-3 minutes for the Matrix to reboot after the network settings are changed.

Security

▼ Security

Telnet over TLS	Disable
HTTPS	Enable

This section manages the protocol settings of communication to the API channel on the matrix.

- Telnet over TLS:
 - Disable: When Telnet over TLS is disabled, telnet will be used for establishing an open and insecure connection to the matrix on port 23, which allows access to send and receive API commands from the computer.
 - Enable: When Telnet over TLS is enabled, it will be used for establishing an encrypted and secure connection to the matrix on port 24. Default username and password for TLS login are listed in the following table, you can optionally set a new password for logging on to the matrix through TLS.

Security

Telnet over TLS

Enable

Old Password

New Password

Confirm New Password

	Telnet (Default)	Telnet over TLS
Port	23	24
Credentials	<none>	User: admin Default password: wyrestorm

Note: The password to log on to the matrix through TLS must be alphanumeric with 4 to 16 characters in length.

Default setting: Disable

- HTTPS: HTTPS provides an encrypted and secure access to the matrix, and can be enabled or disabled as needed to meet application security requirements.
 - Enable: HTTPS will be used for providing an encrypted and secure access to the web server of the matrix.
 - Disable: HTTP will be used for providing an open and unencrypted access to the web server of the matrix.
- Default setting: Enable

Change Admin Login Password

Change Admin Login Password

Old Password

New Password

Confirm New Password

Note: Password must be 4 to 16 characters in length(alphanumeric only).

Apply

This section is for changing admin login password. The default password is "admin".

Apply: Click to perform the setting.

Note: The password must be 4 to 16 characters in length (alphanumeric only).

FW Update

FW Update

File:

Browse

Update

Note: Do not power off the matrix when updating.

This section is for firmware update.

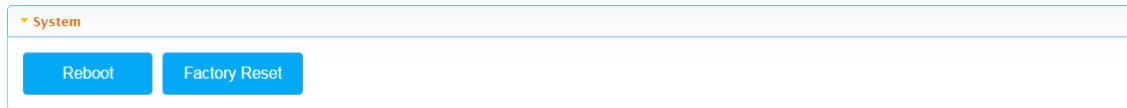
Steps for firmware update:

- Contact your product supplier for the latest upgrade file.

2. Click "Browse" to select the upgrade file on your computer.
3. Click "Update" to proceed. The matrix reboots automatically after upgrading is completed.

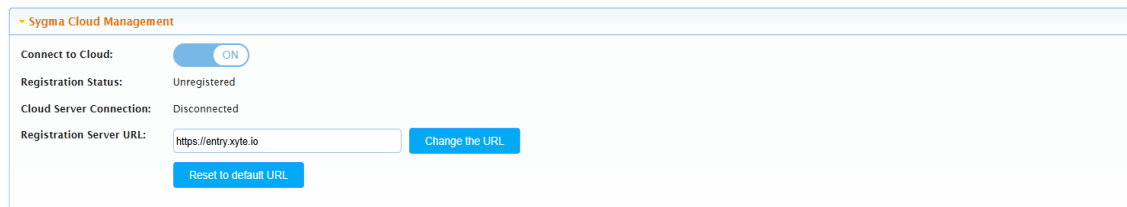
Note: Do not power off the matrix during the upgrading.

System

A screenshot of the 'System' configuration panel. It has a title bar with a dropdown arrow and the text 'System'. Below the title bar, there are two blue buttons: 'Reboot' and 'Factory Reset'.

- Reboot: Click to reboot the device, and wait for 2 minutes to log back in by refreshing the browser.
- Factory Reset: Click to reset the device to factory defaults, and wait for 2 minutes to log back in by refreshing the browser.

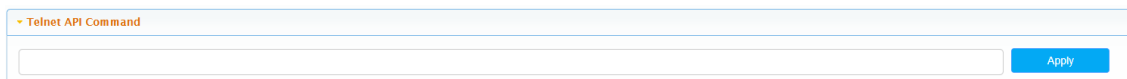
Sigma Cloud Management

A screenshot of the 'Sigma Cloud Management' panel. It has a title bar with a dropdown arrow and the text 'Sigma Cloud Management'. Below the title bar, there are several settings: 'Connect to Cloud:' with a toggle switch set to 'ON'; 'Registration Status:' showing 'Unregistered'; 'Cloud Server Connection:' showing 'Disconnected'; and 'Registration Server URL:' with a text input field containing 'https://entry.xyte.io'. There are two buttons: 'Change the URL' and 'Reset to default URL'.

This section allows users to manage sigma cloud.

- Connect to Cloud: Click to enable/disable sigma cloud connection. Default setting: ON.
Note: If users want to add the device to sigma cloud, please set "Connect to Cloud" to ON.
- Registration Status: Show if the matrix is registered to the sigma cloud or not.
- Cloud Server Connection: Show the sigma cloud server connection status.
- Registration Server URL: Input the server URL.
- Change the URL: Click to save the changed URL.
- Reset to default URL: Click to reset the URL to default setting. Default URL: https://entry.xyte.io.

Telnet API

A screenshot of the 'Telnet API Command' panel. It has a title bar with a dropdown arrow and the text 'Telnet API Command'. Below the title bar, there is a text input field and a blue 'Apply' button.

This section allows users to send telnet API commands to the matrix. The command response can be obtained in "Log" section.

- Apply: Click to send the input command to the matrix.

For example:

Telnet API Command

Log

Export Log

Note: Please wait a few moments for log retrieval.

14:17:52 Receive : HTTPS ON
14:17:51 Send : GET HTTPS

Log

Log

Export Log

Note: Please wait a few moments for log retrieval.

09:57:23 Receive : FAN_SPEED 4080 4050
09:57:23 Receive : TEMP 45
09:57:13 Receive : FAN_SPEED 4080 4080
09:57:13 Receive : TEMP 45
09:57:03 Receive : FAN_SPEED 4080 4050
09:57:03 Receive : TEMP 45
09:56:53 Receive : FAN_SPEED 4080 4080
09:56:53 Receive : TEMP 45

This section displays the system log and command response.

Export Log: Click to export the log to the computer.

Note: Please wait for a few moment for log retrieval.