User Manual

v1.0.0

Contents

Contents 2
Overview 3
Features 3
Package Contents 3
Specifications 4
Panel Description 5
Installation 7
Wiring Diagram 8
Control of the Matrix 9

Overview

This product is a fixed 2RU 8x12 fast seamless switching matrix featured with multiple videowall capabilities. It supports resolution up to 4K@60Hz 4:4:4 8bit and HDCP 2.3 on all inputs and outputs. There're 12 HDMI outputs, each equipped with an independent 4K60 scaler for optimal displaying effect, which support to create multiple video walls, such as three 2x2 videowalls or one 2x4 videowall plus 4 independent HDMI outputs at same time. On audio side, the matrix supports Dante 4x4 and a built-in 12x8 audio matrix for remote transmission and independent audio switching. In addition, the matrix also provides simple KVM switching, include USB 3.0 switching between 2x USB-B hosts and a 4-port USB 3.0 hub to connect USB 3.0 devices.

The matrix is integrated with flexible control options, include front panel LCD and buttons, LAN control (Telnet & Web UI) and RS232 control. The matrix supports to be managed remotely via Wyrestorm Sygma cloud service, it supports operations such as reboot, log dumping, and firmware upgrading etc.

The matrix is designed for professional markets, such as university lecture halls, large meeting rooms, corporate meeting rooms etc.

Features

- Inputs and outputs support resolutions up to 4K@60Hz 4:4:4 8bit.
- HDCP 2.3 and backward compatible.
- 4K60 scaler built in each HDMI output, and provides fast seamless switching without seeing black screen.
- Supports simple KVM switching, between two USB 3.0 host ports and a 4-port USB 3.0 hub.
- Multiple videowall capabilities
  - Support M x N regular videowall setup.
  - Support output label OSD.
  - Support creating multiple windows in a videowall, and each window can select different video inputs independently.
  - Support videowall layout switching.
- Dante 4x4 built-in.
- Supports independent audio switching among all HDMI input de-embedded audio, Dante audio and analog audio outputs.
- Supports CEC display control.
- Rich control options, including front panel LCD and buttons, RS232 and LAN (Web UI &Telnet).
- Sygma Cloud service built-in.

Package Contents

- 1 x MX-0812-SCL 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 Phoenix Male Connector (3.5mm, 3 Pins)

- 4 x Phoenix Male Connector (3.5mm, 5 Pins)
- 2 x Mounting Brackets (2U, with Screws)
- 1 x Quick Start Guide

Specifications

Technical

Input/Output Ports	8 x HDMI IN, 12 x HDMI OUT, 4 x LINE OUT, 2 x USB HOST, 4 x USB DEVICE, 2 x ETHERNET, 1 x RS-232, 1 x Dante (RJ45 port), 1 x AC 100~240V 50/60Hz, 1 x RESET
Input/Output Video Type	4K@60Hz 4:4:4 8bit, HDCP 2.3
Input Resolution 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] 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 Resolution 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] 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	HDMI IN/OUT/LINE OUT: PCM 2.0
Maximum Data Rate	HDMI: 18Gbps
Control Method	Front panel buttons, RS232, 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)	TBD
Dimensions (W x H x D)	440mm x 88mm x 362mm/17.32" x 3.46" x 14.25" (Without mounting brackets)

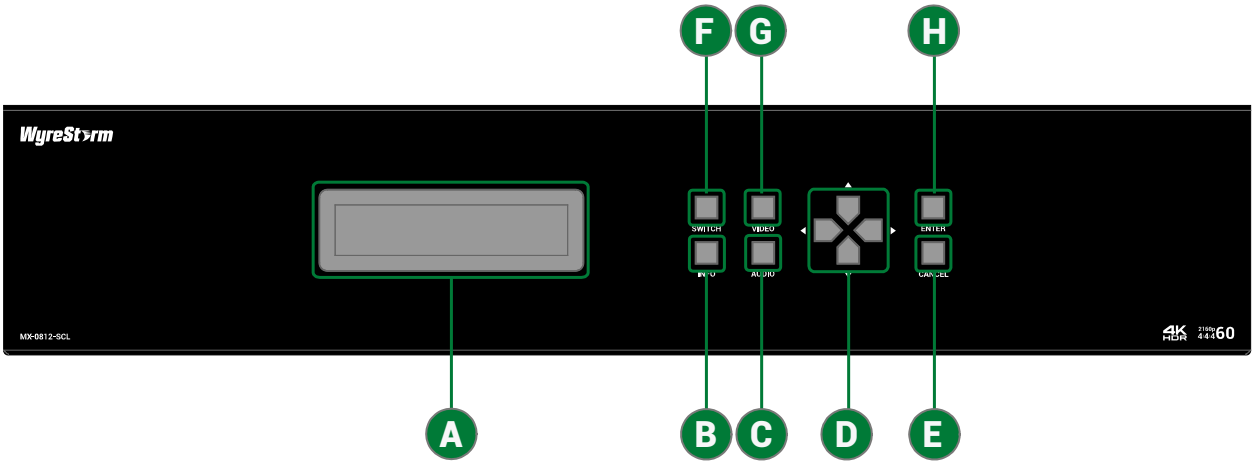
Weight	6.63kg/14.62lbs
Rack Space Required	2U

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

Panel Description

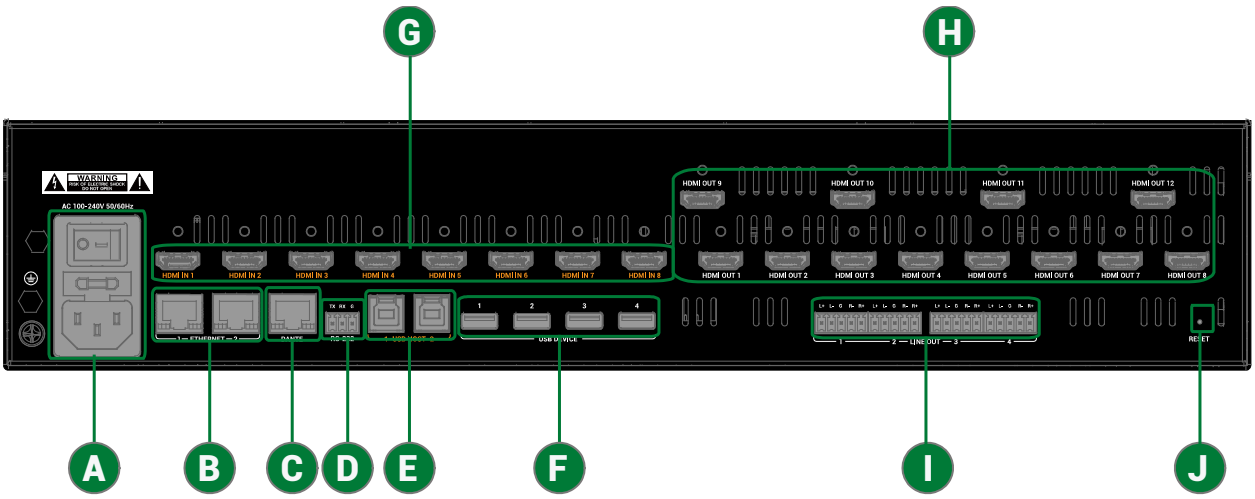
Front Panel



A	**LCD Indicator**	Display the information of the button operation.
B	**INFO Button**	Press the button, the LCD indicator window will display the device's information, including IP address, Fan speed, Mac address, firmware version and temperature.
C	**AUDIO Button**	Press the button, enter the volume adjustment mode.
D	**Selection Buttons**	• INFO: Press the four selection buttons to flip the page to display the information. • AUDIO: Press the left/right button to switch audio output channels. Press the up/down button to increase volume / decrease volume. • SWITCH: Press the left/right button to switch output. Press the up/down button to select input for the selected output. • VIDEO: Press the left/right button to switch input port. Press the up/down button to flip the page to display the video information.

E	**CANCEL Button**	Press the button to cancel the operation or exit the current mode.
F	**SWITCH Button**	Press the button to enter input channel switch mode.
G	**VIDEO Button**	Press the button, the LCD indicator window will display the video information of selected input port, including resolution, color space, and HDCP.
H	**ENTER Button**	Press the button to perform the switching operation.

Rear Panel



A	**AC 100~240V 50/60Hz Port and Power Button**	• AC 100~240V 50/60Hz Port: Connect to the power source via the provided AC power cable. • Power Button: Press the button to power on/off the device.
B	**ETHERNET 1&2**	RJ45 port. Connect to the network, for web UI control, or telnet control.
C	**Dante**	RJ 45 port. Connect to the network for Dante audio connection.
D	**RS-232**	Connect to a RS232 enabled control device for API control.
E	**USB Host (1&2)**	USB 3.0 Type-B port. Connect to USB host devices.
F	**USB DEVICE 1~4**	USB 3.0 Type-A port. Connect to USB devices.
G	**HDMI IN (1~8)**	Connect to HDMI sources.

H	**HDMI OUT (1~12)**	Connect to HDMI displays.
I	**LINE OUT (1~4)**	Connect to audio receivers.
J	**RESET**	Use a needle to press the hole: • Less than 5s: Nothing will happen. • More than 5s but less than 15s: Reset the IP mode of the device to DHCP, and reset the login password of telnet and web UI to defaults. The default login password of telnet is "wyrestorm", and the default login password of web UI is "admin". • More than 15s: Reset the device to factory defaults.

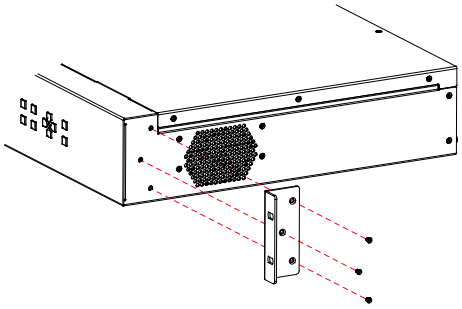
Installation

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

The matrix occupies 2U space and can be placed on a solid and stable surface or installed on a standard equipment rack.

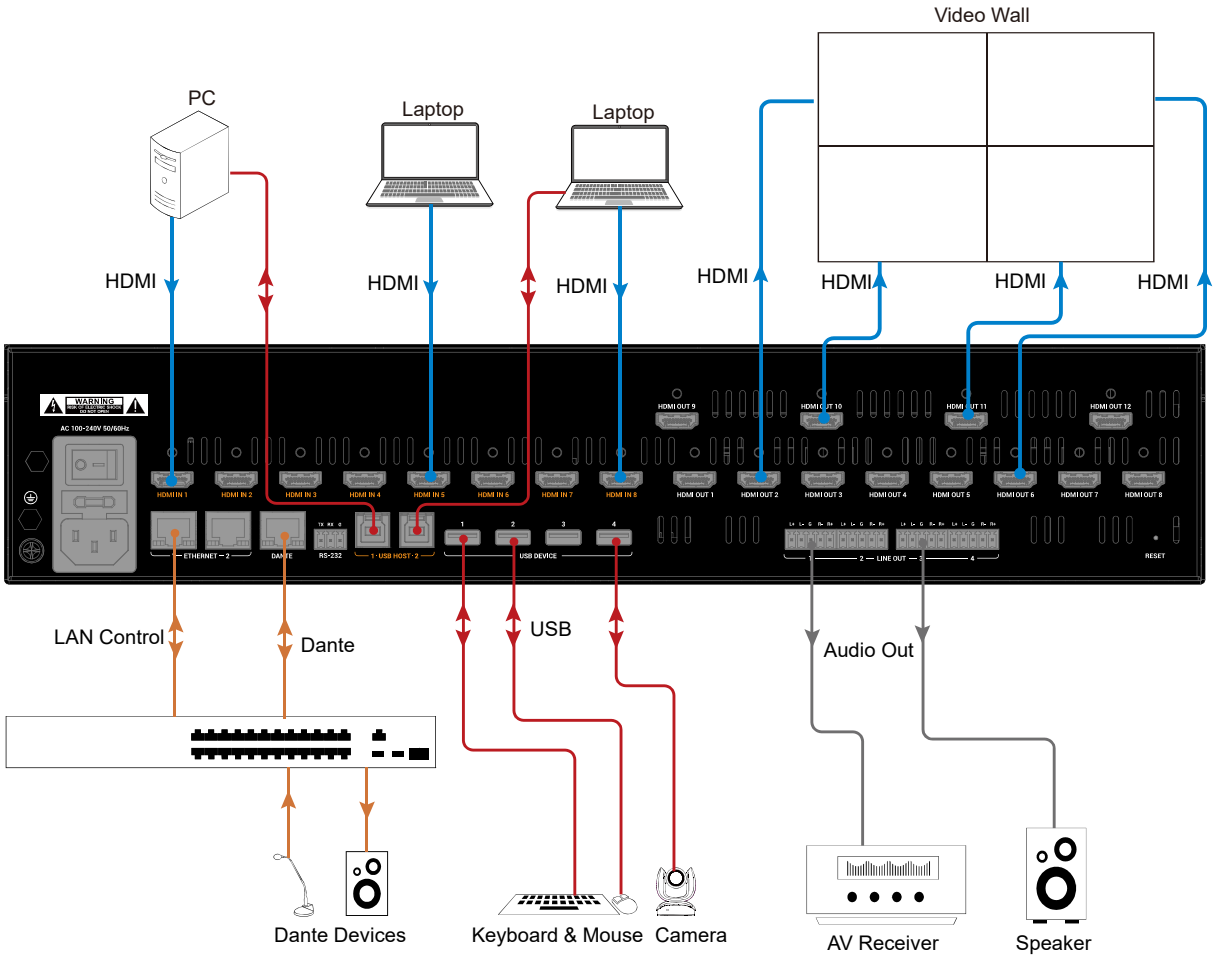
To install the matrix on an equipment rack:

1. Position and install the mounting brackets provided to the front panel.



2. Install the matrix in the mounting rack by using the mounting screws to affix the matrix to the rack.

Wiring Diagram



Note: Please configure video wall through web UI before connecting video wall, refer to "Web UI Control" section to get detail information.

Instruction of Dante:

The matrix supports 4x4 Dante audio transmission. Before using Dante function, please enable all devices are connected to the same wired network, as the Dante Controller is only available on wired connections.

Connect the "Dante" port to a local area network, and launch the "Dante Controller" software on the laptop connected in the same network (Refer to https://www.audinate.com/products/software/dante-controller to download the latest Dante Controller). Pair the transmitters and receivers (both the transmitters and receivers are connected with the same network) as required on the Dante Controller with the matrix. The paired transmitters can generate Dante audio and transmit it to the Dante in of the matrix through the network, and the paired receiver can receive Dante audio from Dante out of the matrix through the network. Users can set audio sources and audio outputs through API commands or web UI. Refer to the separate document "*API Command Set_MX-0812-SCL*" or "Web UI Control" section to get detail information.

Control of the Matrix

The matrix can be controlled through Front Panel, RS-232, and LAN (Web UI or Telnet).

Front Panel Control

Basic switch of input sources to output displays, audio volume adjustment, and information obtain can be achieved by using front panel controls.

Power on the matrix, the LCD indicator window will display "Starting", and wait until the window display the matrix's model and IP address, which indicates the matrix is ready to operate.

1. Switch input sources for the output
    1) Press "SWITCH" button to enter switch mode.
    2) Press the Left (◀) or Right (▶) button to select output channel. The ">" icon will move to the output port number users select currently.
    3) Press the Up (▲) or Down (▼) button to select input channel.
    4) Press "ENTER" button to confirm the selection or press "CANCEL" to exit the mode and return to the main page.

2. Adjust volume of audio outputs
    1) Press "AUDIO" to enter volume adjustment mode.
    2) Press the Left (◀) or Right (▶) button to select audio output channel.
    3) Press the Up (▲) or Down (▼) button to adjust volume of the selected channel.
    4) Press "CANCEL" to exit the mode and return the main page.

3. Get device's information or video information
    1) Press "INFO" button to enter device's information display mode or press "VIDEO" button to enter video information display mode.
    2) Press the Left (◀) or Right (▶) button to flip the page to display the video information in video information display mode or flip to display the device's information in device's information display mode.
    3) Press the Up (▲) or Down (▼) button to select input port to get its video information in video information display mode, or flip the page to display the device's information in device's information display mode.
    4) Press "CANCEL" to exit the current mode and return the main page.

RS232 Control

Users can control the matrix through RS232 port by sending API commands. Connect a control PC to the RS-232 port of the device. Before sending API commands to control the device, ensure the serial ports between this device and PC are configured correctly. A professional RS-232 serial interface software (e.g., Serial Assist) may be needed as well. API commands can be obtained from the separate document "*API Command Set_MX-0812-SCL*".

Baud Rate	9600 bps
Data bits	8 bits

Parity	None
Stop bits	1 bit
Flow control	None

LAN Control

Obtain IP Address

Users can obtain IP address through the following methods:

1. Check LCD window on front panel

   When the matrix is powered on successfully, the LCD window will show the IP address. Or users can press "INFO" button to check information including IP address on LCD window.

2. Sending API Commands

   1) Connect a control PC to the RS-232 port of the device.

   2) Configure RS232 parameters for the PC's serial port correctly through a RS232 serial port tool, such as Serial Assist.

   3) Input the command GET IPADDR<CR><LF> and send. You will get a response with IP address, see following:

      Input:

      GET IPADDR<CR><LF>

      Response:

      IPADDR 192.168.11.243<CR><LF>

Telnet

Connect a control PC to the LAN port of the device. Before you intend to control the device through telnet API, you shall establish connection between this device and your computer.

The form of the command for telnet connection is below:

telnet ip (port)

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

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

telnet 192.168.11.143

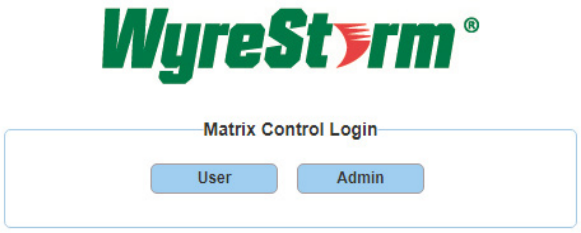
Web UI Control

The Web UI designed for the matrix allows basic controls and advanced settings of the matrix and can be accessed through a browser with latest version, e.g., Chrome, Safari, Firefox, Opera, IE10+, etc.

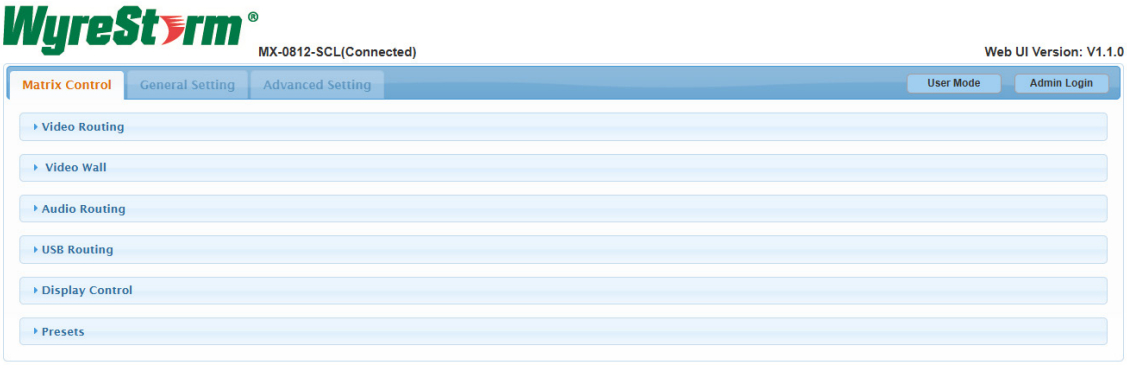
The default IP mode of the matrix is DHCP. If the device is not connected to DHCP server, it will generate a local 169.254.xxx.xxx IP address. Default login password for Web UI is "admin".

To get access to Web UI

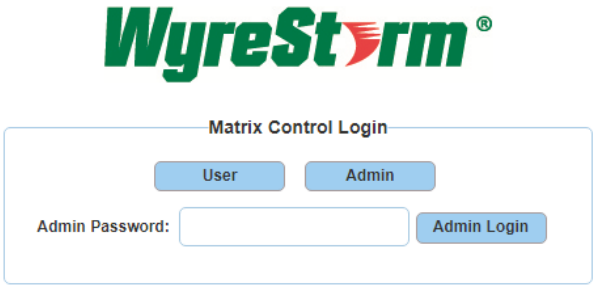
1. Connect the any of the two ETHERNET ports of the matrix to the ethernet switch with DHCP server, and connect the PC to the same ethernet switch. If connect one ETHERNET port to the PC directly, please set the PC to the same segment with the device.
2. Get the IP address through LCD window or sending API commands (see "Obtain IP Address" section to get detail information).
3. Input the IP address obtained in the last step in your browser and press "Enter" key on keyboard. The following page can be access in:



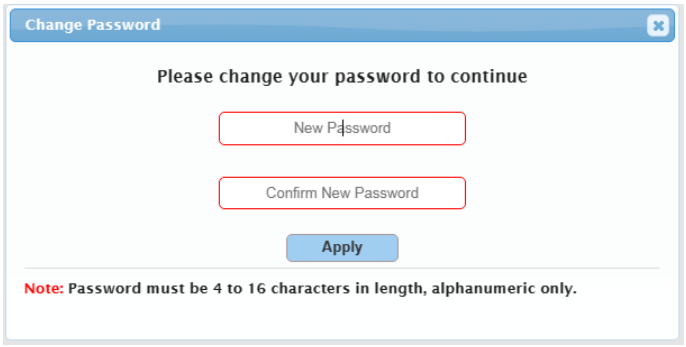
- To implement basic video and audio control of the matrix, click "User" to login as User. When login as User, no password is required. In this mode, only the submenus in Matrix Control tab can be set.



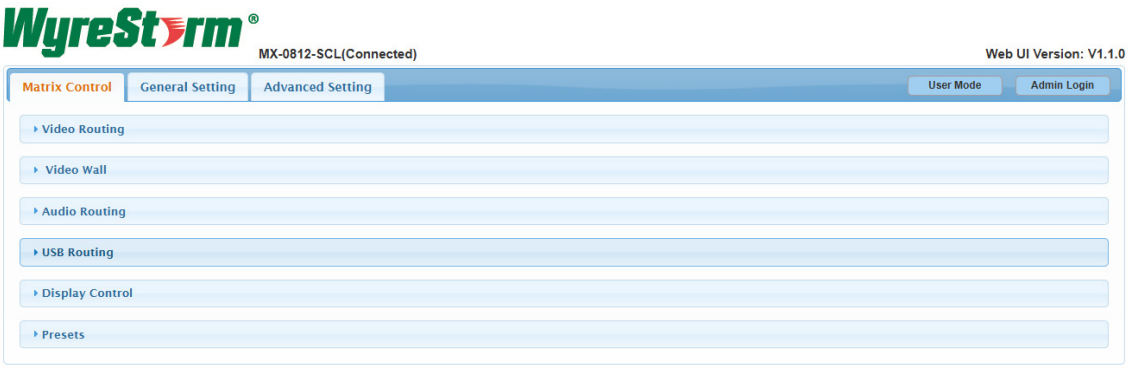
- If advanced setting is required, click "Admin", and enter the password to login as Admin.



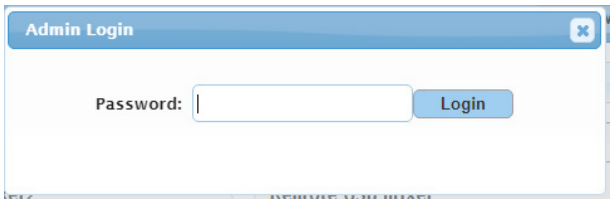
The default password is "admin". When login web UI first time, after clicking "Admin Login", users will enter the following window to change login password. Input new password and click "Apply" to enter the main page.



Note: The new password must be 4 to 16 characters in length, alphanumeric only.



- In User mode, users can also click "Admin Login" on the upper right corner, then input the password enter Matrix Control, General Setting and Advanced Setting pages. The default password is "admin". When login the admin mode first time, users also need to change login password firstly. The operations are same with logging through the home page.



The main page includes three tabs: Matrix Control, General Setting and Advanced Setting.

Reset password and IP mode

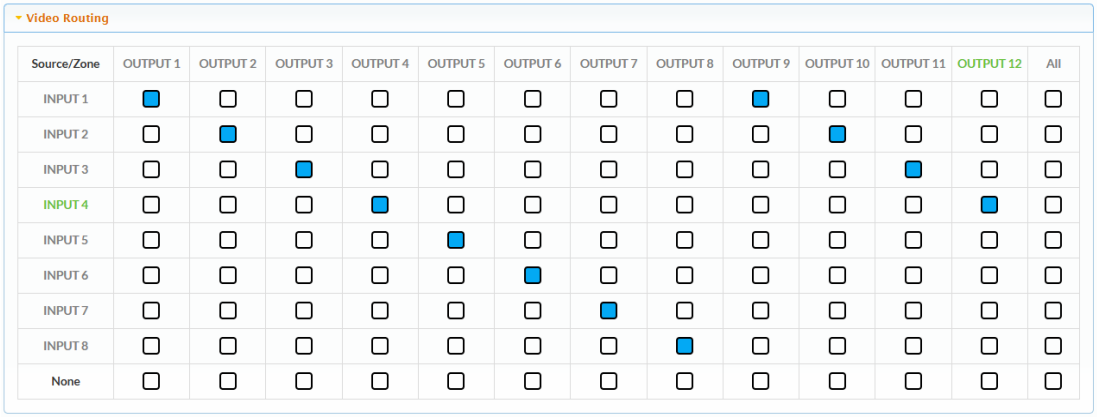
If users forget the login password, the following ways can be used to restore the default password:

- Hold the "RESET" hole on the front panel for more than 5s but less than 15s to reset the IP mode to DHCP and login password to "admin".
- Hold the "RESET" hole on the front panel for about 15s to reset the device to factory defaults, which includes resetting the password.
- Send the API command "RESET<CR><LF>" to reset the device to factory defaults, which includes resetting the password.

Web UI Introduction

1. Matrix Control

1) Video Routing



This section manages distribution of input video sources to output displays and shows the connection status of the inputs and outputs.

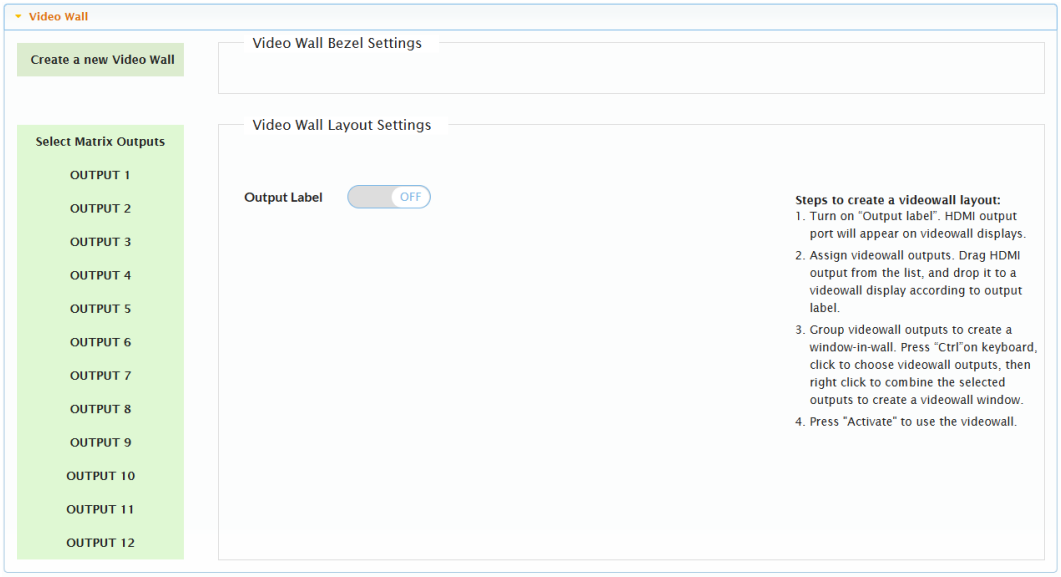
The green names of inputs and outputs indicate that the corresponding input and output ports are connected to active sources and active displays. The grey names of inputs and outputs indicate that the corresponding input and output ports aren't connected with active sources and active displays.

Click the button in the table to select the input for the output display (button turns from white to blue once selection is done).

- All: Click to route one input to all outputs.
- None: None input is routed to the output (or the output is turned off).

By default, Video Input 1 routes to Output 1…Video Input 8 routes to Output 8, Video Input 1 routes to Output 9… Video Input 4 routes to Output 12.

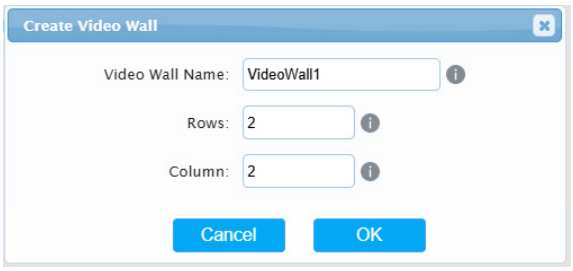
2) Video Wall



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

Steps to create a video wall:

a) Click "Create a new Video Wall" button, enter the following window:

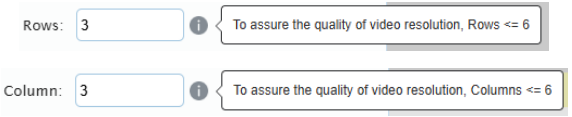


- Video Wall Name: Input a name for the created video wall. For example VideoWall1.

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

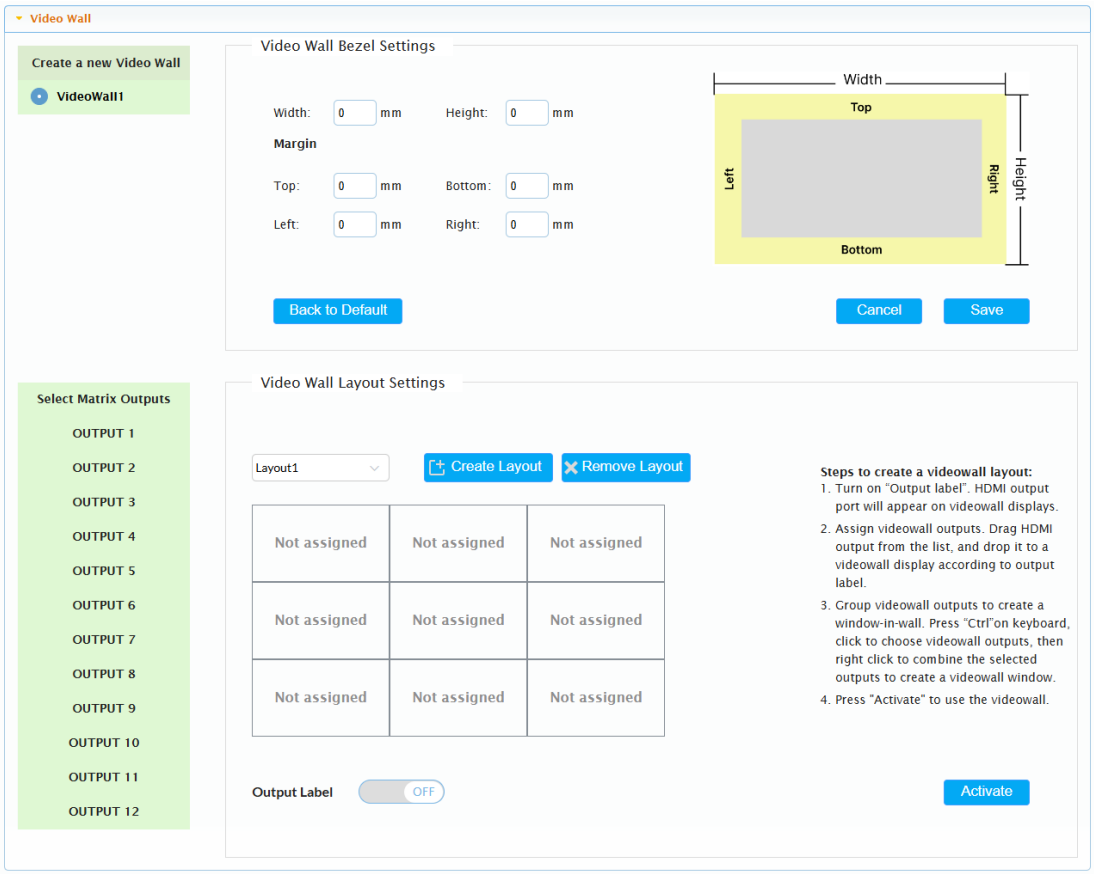
- Rows / Column: Input video wall row and column numbers, such as row 3, and column 3.

  Note: The number of Rows/column must be in the range of 1~6, and row x column should not exceed 12. Move the mouse to the "ⓘ" icon displays the warning information.



- OK / Cancel: Click "OK" to save the configuration or click "Cancel" to cancel the operation.

b) Input 3 in "Rows" box and "Column" box, and click "OK" to create a 3x3 video wall.



- Video Bezel Settings:

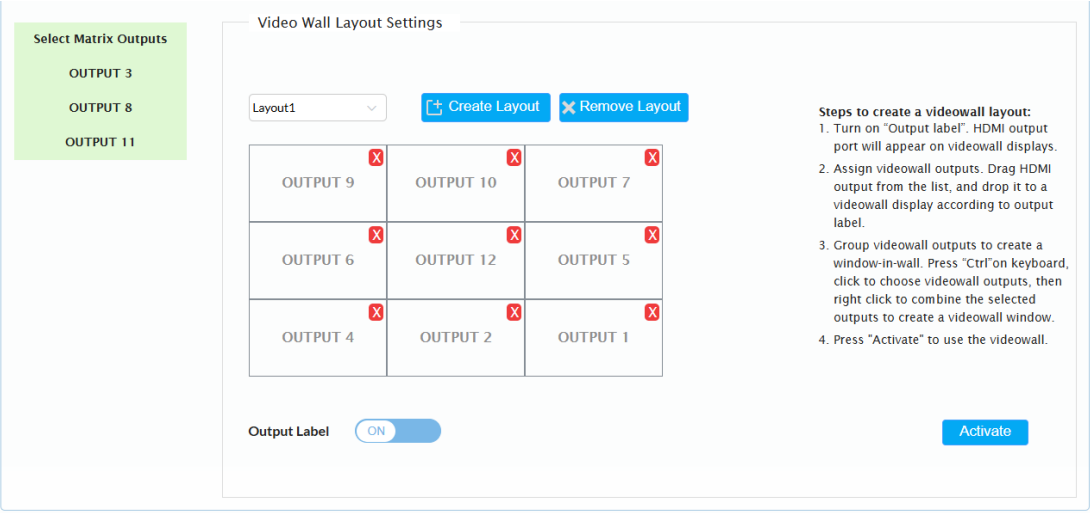
  Default settings: 0; Range: 0-10000

  - 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.

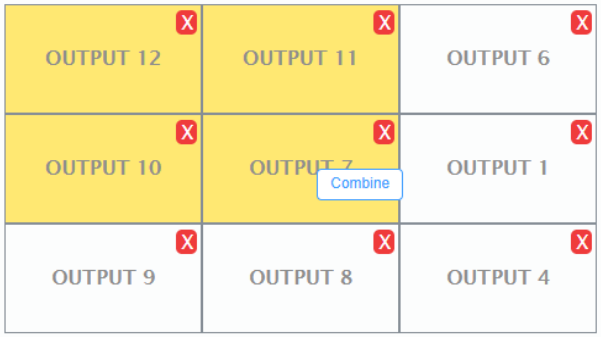
  Margin:

  - 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.

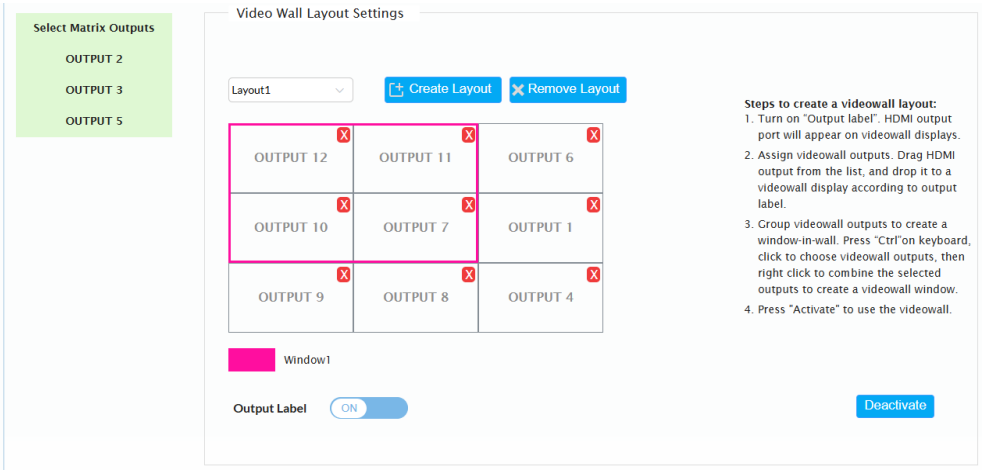
c) Set "Output Label" to ON to enable OSD function, the output port of each display connected will be shown in the lower right corner of its screen. Drag the output name on "Select Matrix Output" field to the corresponding screen in "Video Wall Layout Settings" field according to the output port displayed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

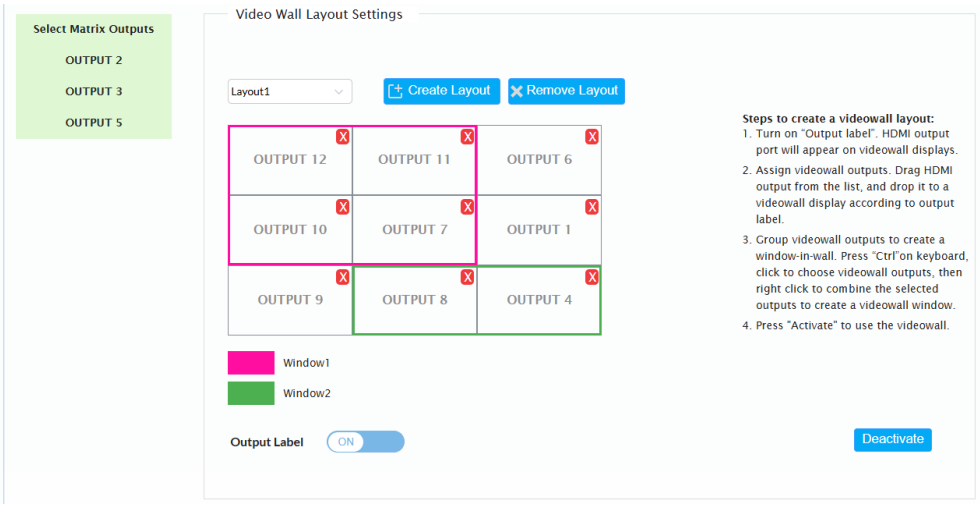


d) Press "Ctrl" key of the keyboard and use the left button of the mouse to click the adjacent outputs in the diagram to combine them (the selected output will turn orange), then right click the mouse and click "Combine" button to create a "window-in-wall".



e) The created "window-in-wall" will has 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.

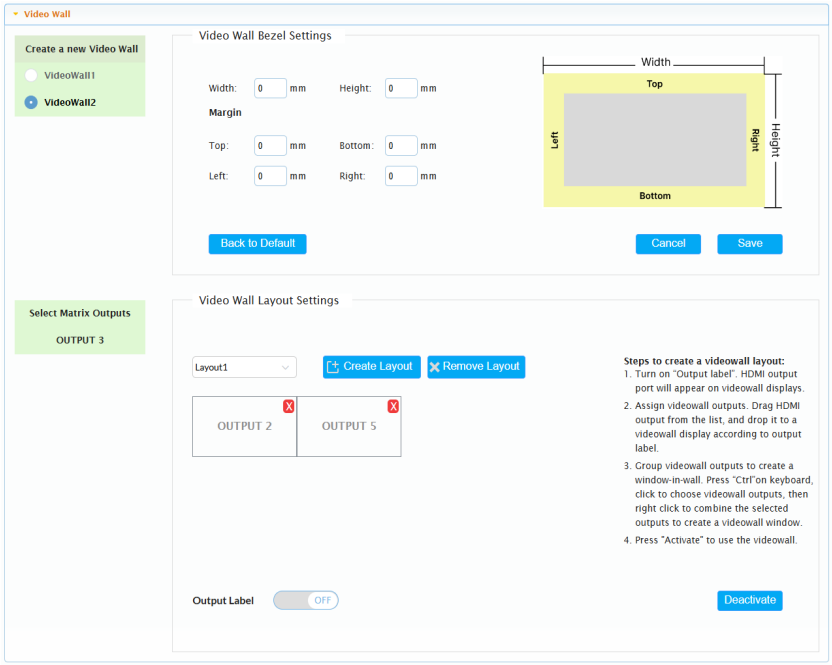




- Create Layout: Click to save current layout.
- Remove Layout: Click to remove current saved layout.
- Output Label: Click to enable/disable OSD. Default setting: OFF.

  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 12.

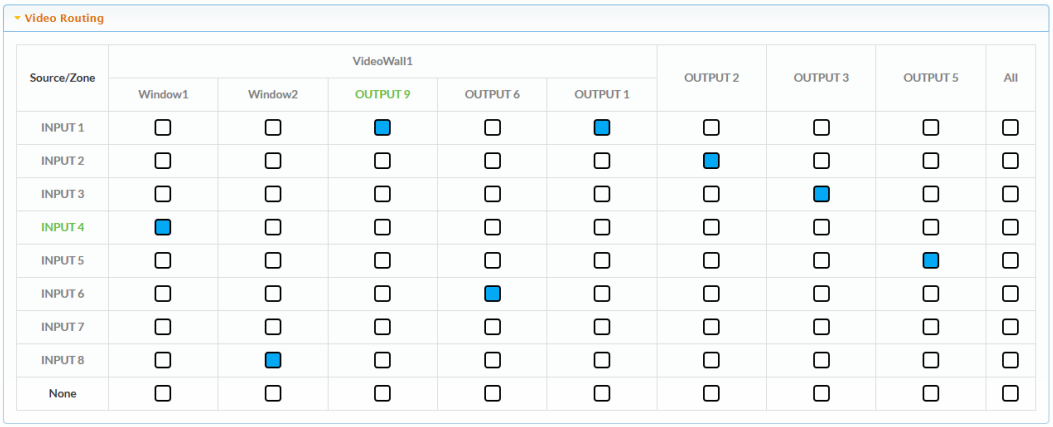


Check the box before the video wall name to enter its corresponding configuration page.

Move the mouse to the video wall name, when the mouse become the shape of a hand, click " " to edit the name

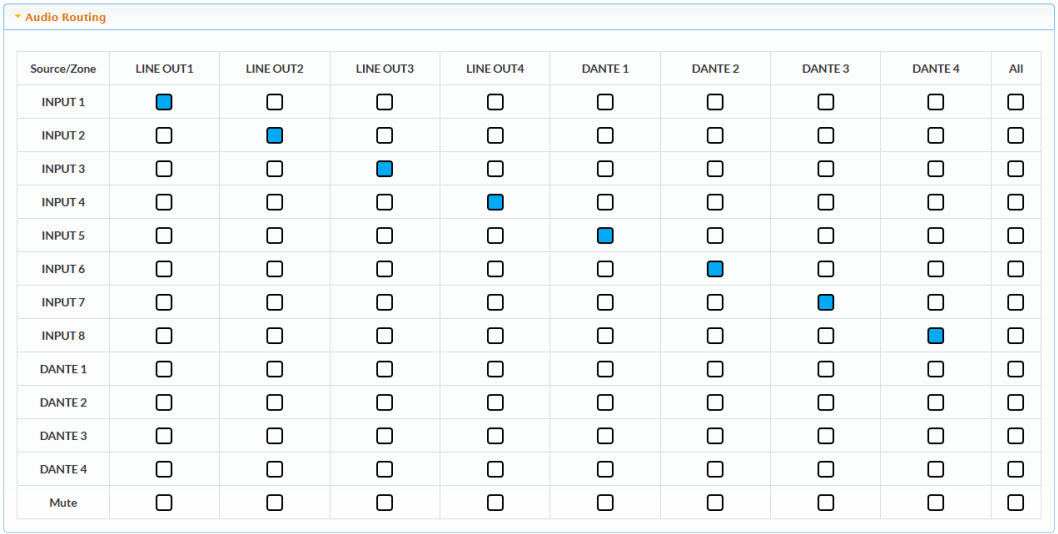
of this video wall, and click "X" to delete the video wall.

g) After clicking "Activate" to successfully create the video wall, users can select input for the window in video wall in "Video Routing" field.



Note: 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.

3) Audio Routing



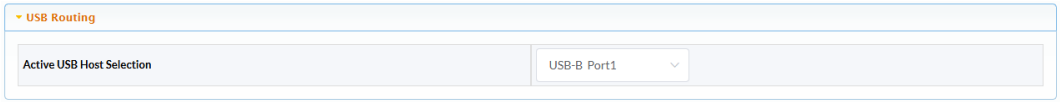
This section allows users to set audio routing and audio mute.

Click the button in the table to select the audio input for the audio output (button turns from white to blue once selection is done). Default setting: De-embedded audio from HDMI IN 1 routes to LINE OUT 1… De-embedded audio from HDMI IN 4 routes LINE OUT 4, De-embedded audio from HDMI IN 5 routes to DANTE 1… De-embedded audio from HDMI IN 8 routes DANTE 4.

- All: Click to route one audio input to all audio outputs.
- Mute: Click to mute the corresponding audio output. Default: Unmute (white). Button turns from white to blue once the corresponding output is set to mute.

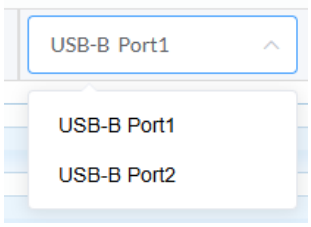
- All in Mute line: Click to mute all audio outputs.

4) USB Routing



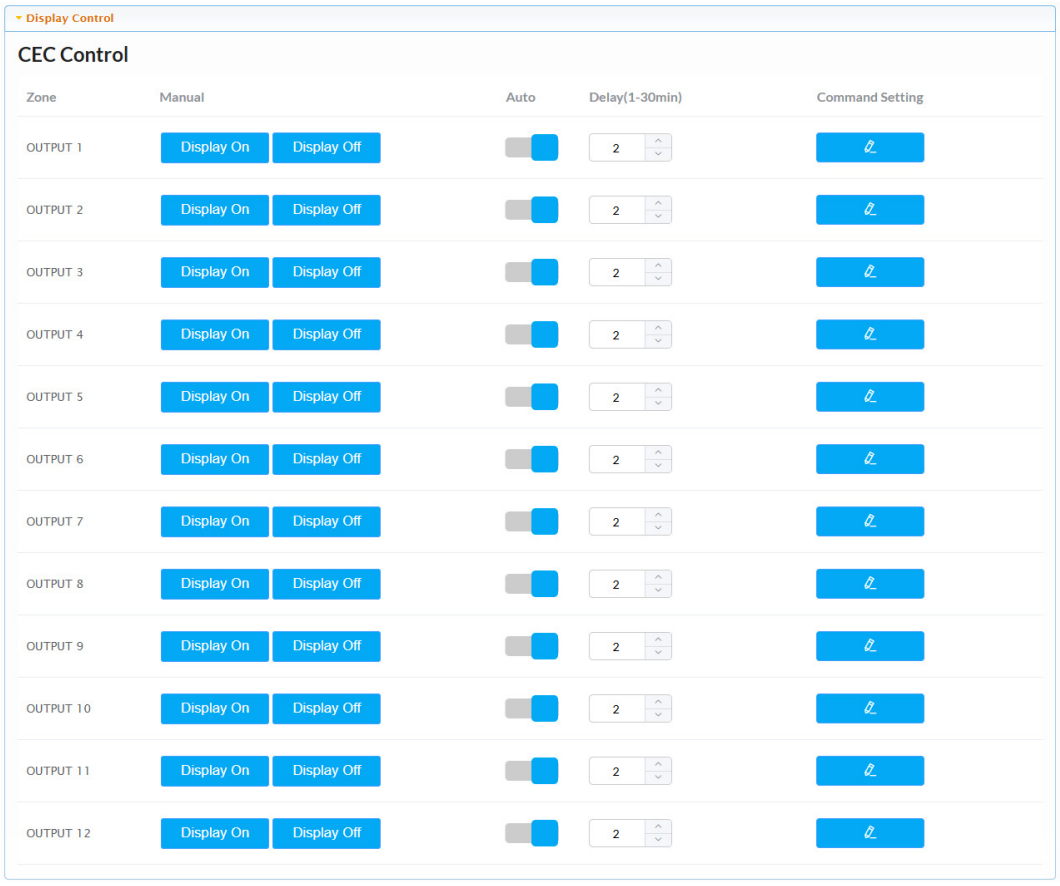
This section allows users to select USB host all the USB devices connected.

Active USB Host Selection: Select the USB Host from the drop-menu. The default setting is USB-B Port1.



For example, when select USB-B Port1, all USB devices the matrix connected are connected to USB-B Port 1.

5) Display Control



- Display On: Click to send the saved Display On command to the connected CEC-enabled display to power on it immediately.
- Display Off: Click to send the saved Display Off command to the connected CEC-enabled display to power off it immediately.
- Auto On/Off: Click to enable or disable the CEC Auto Control. By default, the auto CEC control is On.
- Delay Time (1~30min): click the up/down arrow to set the time for the display to power off automatically when no signal is present. For example, if Auto control is set as on and the time is set to 2 minutes, the output display will power off automatically when there's no signal at the display for 2 minutes.
- Command Setting: Click "  " to enter the following window to do command testing, set and save commands of Display On/Off.

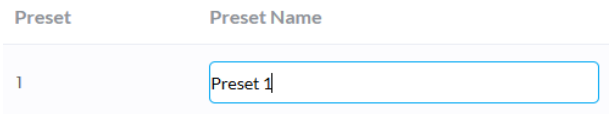
  - Command Testing: Input a Display on/off command, and then click "Send" to send it to the selected output to test if it takes effects.
  - Display On/Off: Input the corresponding CEC command, then click "Save" to save it.

    Note: If users want to change CEC commands, please refer to the CEC specification document.

6) Presets

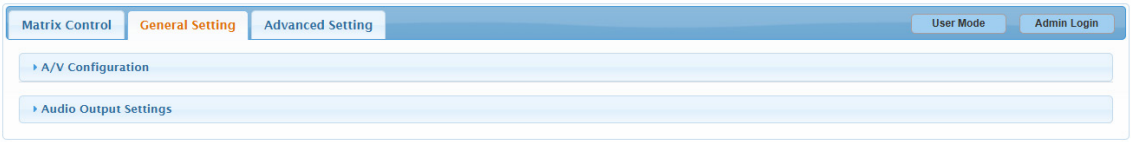
This section saves/loads the matrix control settings to or from the Matrix.

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. The input name must include letters, and not exceed 31 characters.

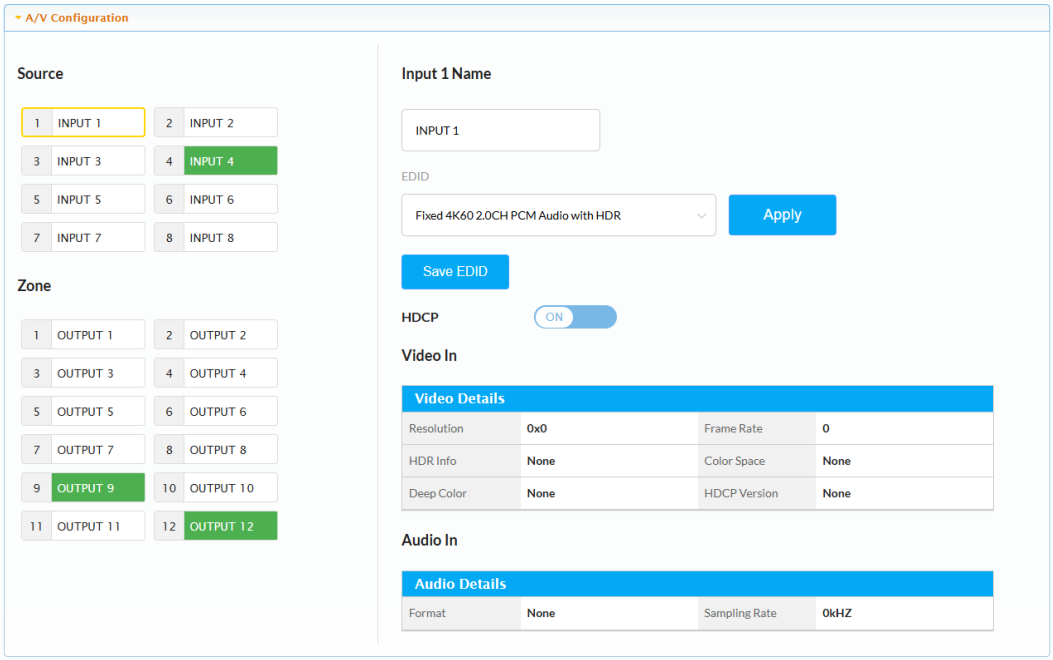


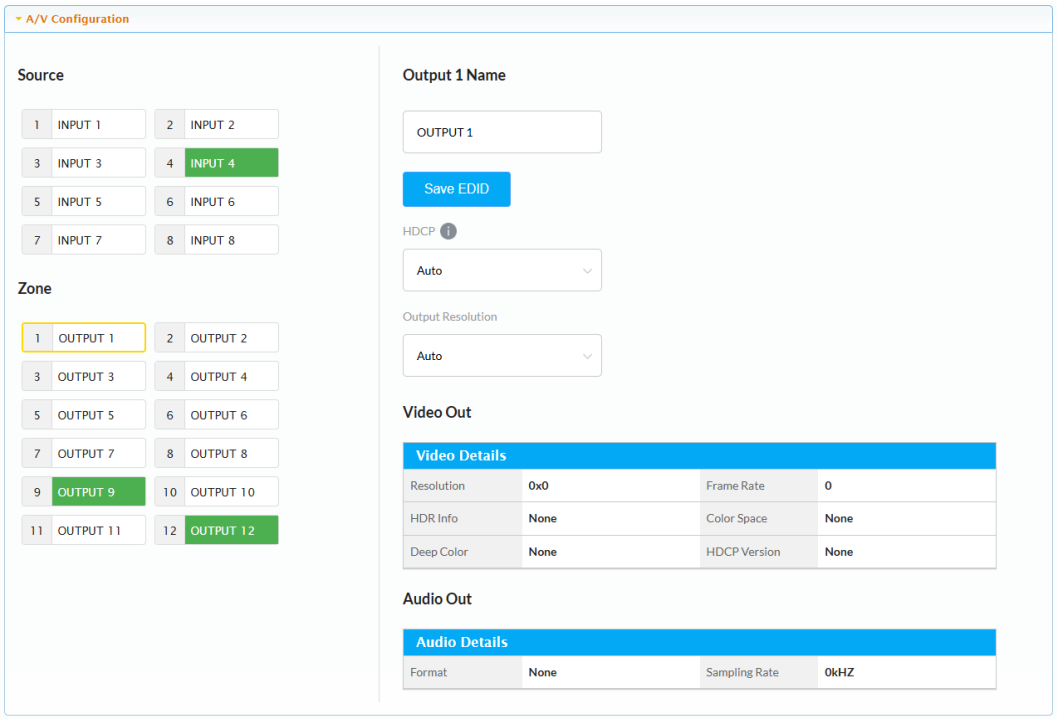
- Save: Save the current settings on the web UI to the matrix.
- Load: Load the saved preset file from the matrix.

2. General Setting



1) A/V Configuration





This section allows users to set name, EDID, HDCP and get video and audio information of each input source, and set name, save EDID, select HDCP, output resolution, and get output video and audio information.

- Source/Zone: Select an input/output to set (the button will have an orange frame when select the input/output to set).
  - ➢ Green button: Indicates the corresponding input/output port is connected to active source/display.
  - ➢ White button: Indicates the corresponding input/output port isn't connected with active source/display.
- Input (1~8) / Output (1~10) Name: Input a new name for the selected input/output.
- EDID (for input 1-8): Select EDID for the corresponding input port, and click "Apply" to take effect. The default EDID is Fixed 4K60 2.0CH PCM Audio with HDR.

  EDID Selection includes:

  Copy form HDMI Output 1;

  Copy form HDMI Output 2;

  Copy form HDMI Output 3;

  Copy form HDMI Output 4;

  Copy form HDMI Output 5;

  Copy form HDMI Output 6;

  Copy form HDMI Output 7;

  Copy form HDMI Output 8;

  Copy form HDMI Output 9;

  Copy form HDMI Output 10;

  Copy form HDMI Output 11;

Copy form HDMI Output 12;

Fixed 4K60 2.0CH PCM Audio with HDR;

Fixed 4K60 2.0CH PCM Audio with SDR;

Fixed 4K30 2.0CH PCM Audio with HDR;

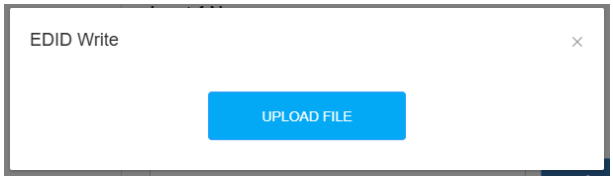
Fixed 4K30 2.0CH PCM Audio with SDR;

Fixed 1080p@60Hz 2.0CH PCM Audio with HDR;

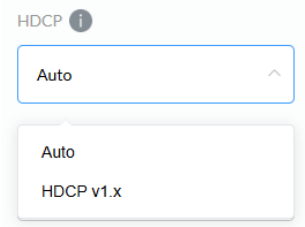
Fixed 1080p@60Hz 2.0CH PCM Audio with SDR;

EDID Write.

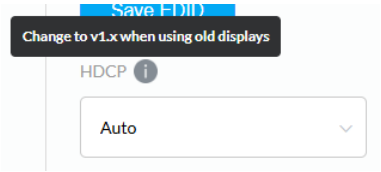
When select EDID Write, users can click "UPLOAD FILE" in the popped window to select an EDID file from the local PC to write to the corresponding port.



- Save EDID: Click to save the EDID information of the select input/output as a bin file to local PC.
- HDCP (ON/OFF) (for input 1~8): Click to enable/disable HDCP encryption of each input port, the default setting is "ON".
- HDCP (for output 1~12): Select HDCP support for the selected output port from the drop-down menu (Auto, HDCP v1.x). By default, Output HDCP Support is "Auto", follow the input HDCP. For example, input HDCP is HDCP 2.2, output HDCP is also HDCP 2.2. When set it to HDCP v1.x, it means the HDCP of the output is set to HDCP 1.4.

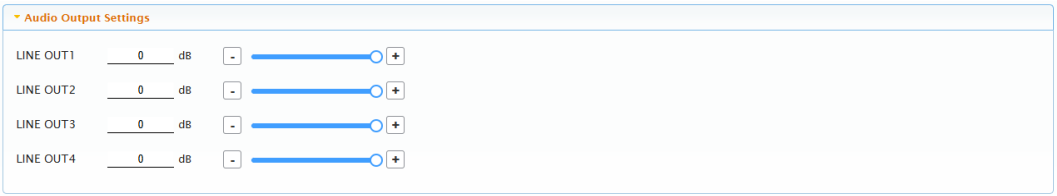


Move the mouse to the "ⓘ" icon, it shows the instruction of HDCP v 1.x.



- Output Resolution: Select output resolution for the selected output port. The default setting is "AUTO".
- Video In/Audio In (for input 1~8): Shows the video and audio information of the selected input.
- Video Out/Audio Out (for output 1~12): Shows the video and audio information of the selected output.

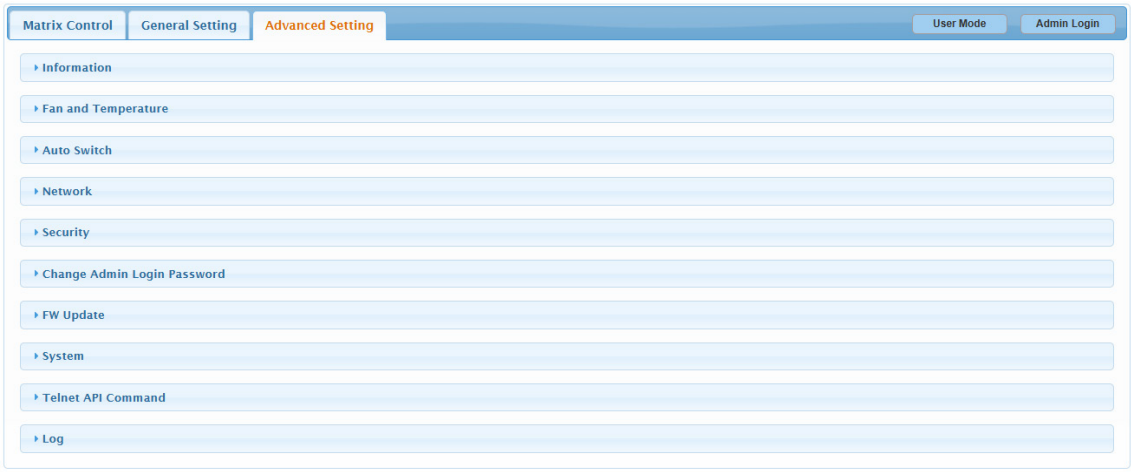
2) Audio Output Settings



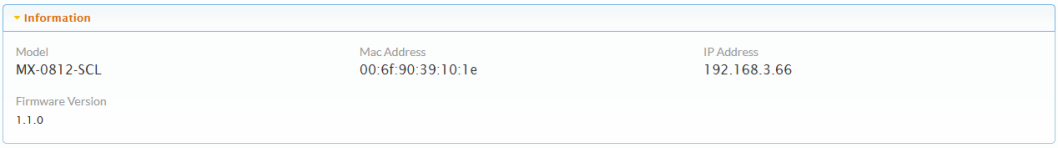
This section allows users to set output volume of LINE OUT.

Input or use the slider to set the volume of LINE OUT 1 to 4. Default setting: 0dB. Range: -100dB~0dB.

3. Advanced Setting

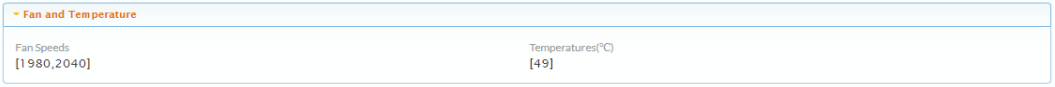


1) Information



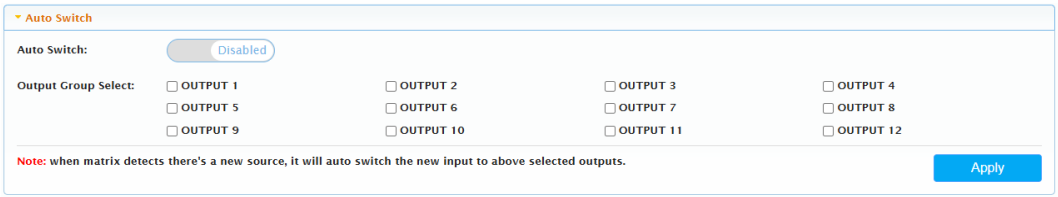
This section shows the device's information, including Model, Mac address, IP address and firmware version.

2) Fan and Temperature



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

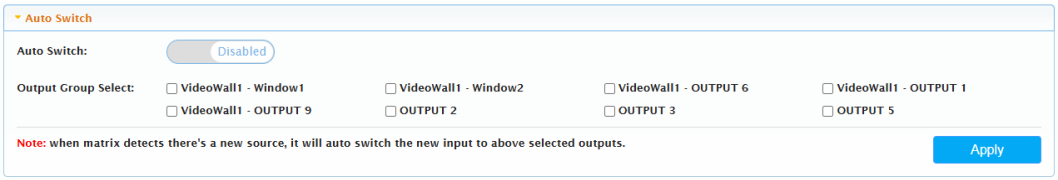
3) Auto Switch



This section allows users to set output group, and set auto switch function to enable/disable of the selected output group.

- Auto Switch: Click to set the auto switch function of the selected output group to enable/disable. Default setting: Disabled.
- Output Group Select: Check the box before the corresponding output to set them as a group. Default setting: Unchecked (all outputs are not grouped).

  If users create video wall, the outputs will be grouped according the video wall, such as the following figure:



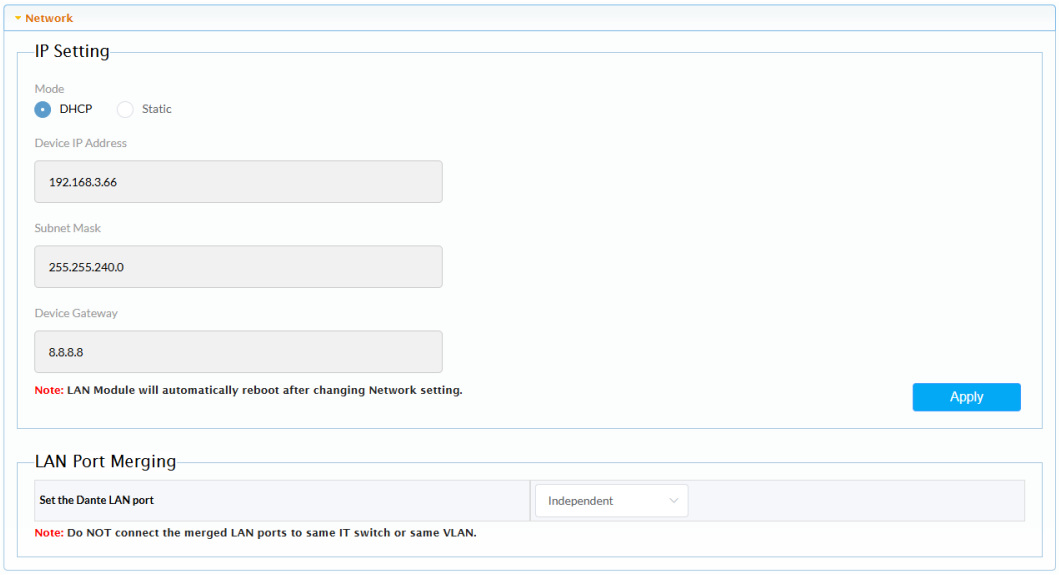
- Apply: Click to perform the grouping.

For example:

Check the VideoWall1 - Window1 and OUTPUT 2 as a group, and set the Auto Switch function to Enabled, when a new source is inserted, VideoWall1 - Window1 and OUTPUT 2 will automatically switch to the source.

Note: Other outputs not grouped are not affected by this function, and switched in original way.

4) Network



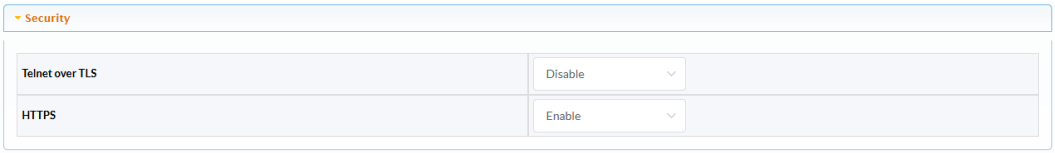
Network is used to set between the static and dynamic IP address.

- DHCP (default): When enabled, the IP address of the Matrix is assigned automatically by the DHCP server connected.
- Static: When enabled, set up the IP address manually.
- Apply: Click to enable the network setting.

Note:

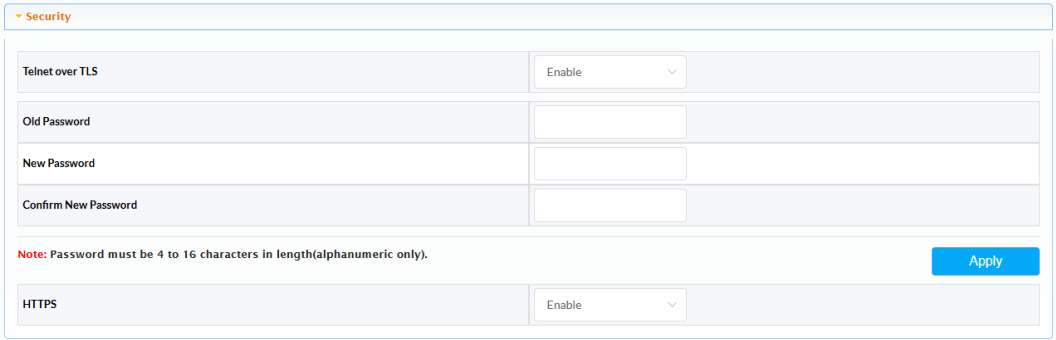
- When "Static" is selected, please ensure your PC is in the same network segment as the Matrix, i.e., the IP address of your PC should be set as 192.168.xxx.xxx.
- Please wait for 2-3 minutes for the Matrix's LAN module to reboot and reconnect after the network setting is changed.

5) Security



- Telnet over TLS (Disable/Enable): Set TLS (Transport Layer Security) to enable or disable, when it is set to enable, users can change the TelnetS login password. The default setting is “Disable”. The default user name and password for logging in the Telnet is “admin” and “wyrestorm”.

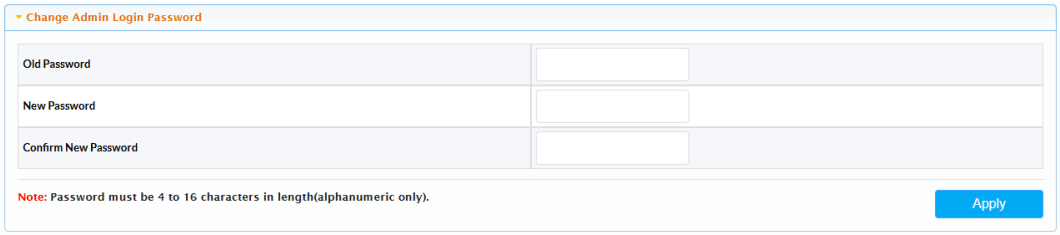
Note: The password must be 4 to 16 characters in length, and alphanumeric only.



- HTTPS (Enable/Disable): Set HTTPS to “Enable” or “Disable”. The default setting is “Enable”. HTTPS (Enable): Https is mandatory supported. HTTPS is a secure version of the HTTP protocol that builds an SSL encryption layer over HTTP and encrypts the transmitted data.

  HTTP network protocol is the most widely used hypertext transfer protocol, this method allows a third-party to listen in and eavesdrop on the transferred information. To ensure the secure data transmission, the HTTP can be disabled, and the all the information can be transferred via HTTPS. HTTPS protocol encrypts the clear text, so it becomes incomprehensible for a third-party and keeps the data secure.

6) Change Admin Login Password

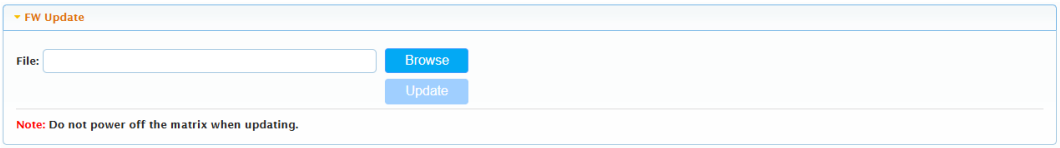


This section allows users to change admin password. The default password is "admin".

- Apply: Click to perform the change.

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

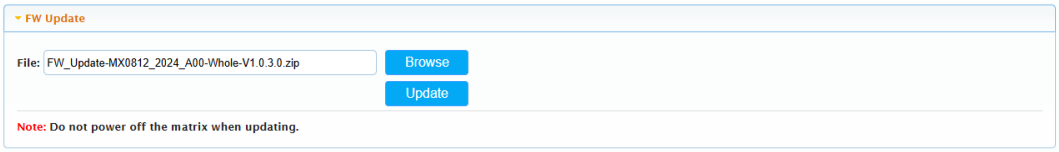
7) FW Update



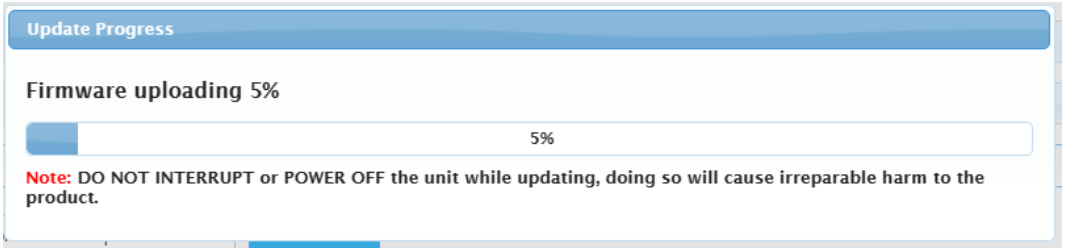
This section allows users to update firmware.

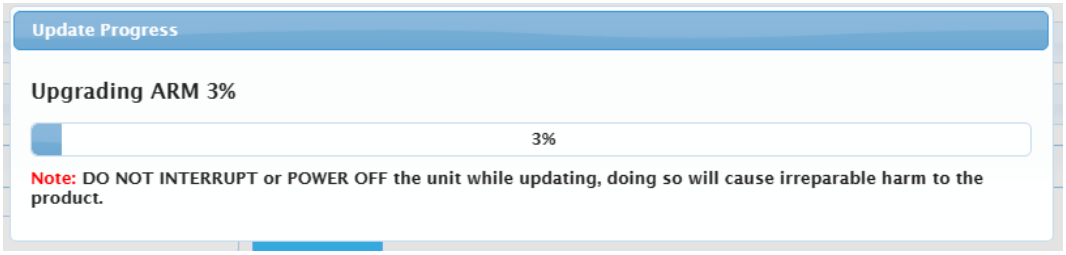
To update Firmware:

1. Click "Browse" for the update file.

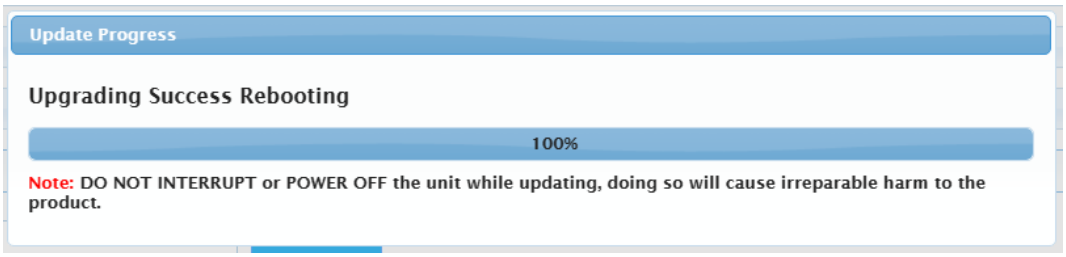


2. Click "Update" to proceed.



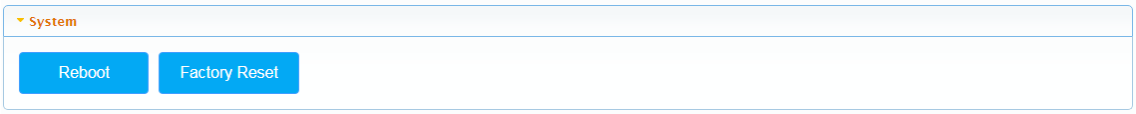


3. The matrix will reboot automatically after upgrading is completed.



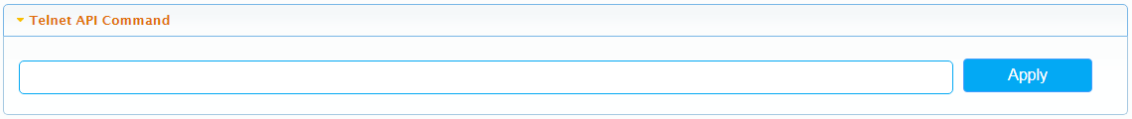
Note: Do not interrupt or power off the matrix during the upgrading.

8) System



- Reboot: Click to reboot the device, and wait 2 minutes to re-access Web UI by refreshing the browser.
- Factory Reset: Click to reset the device to factory defaults, and wait 2 minutes to re-access Web UI by refreshing the browser.

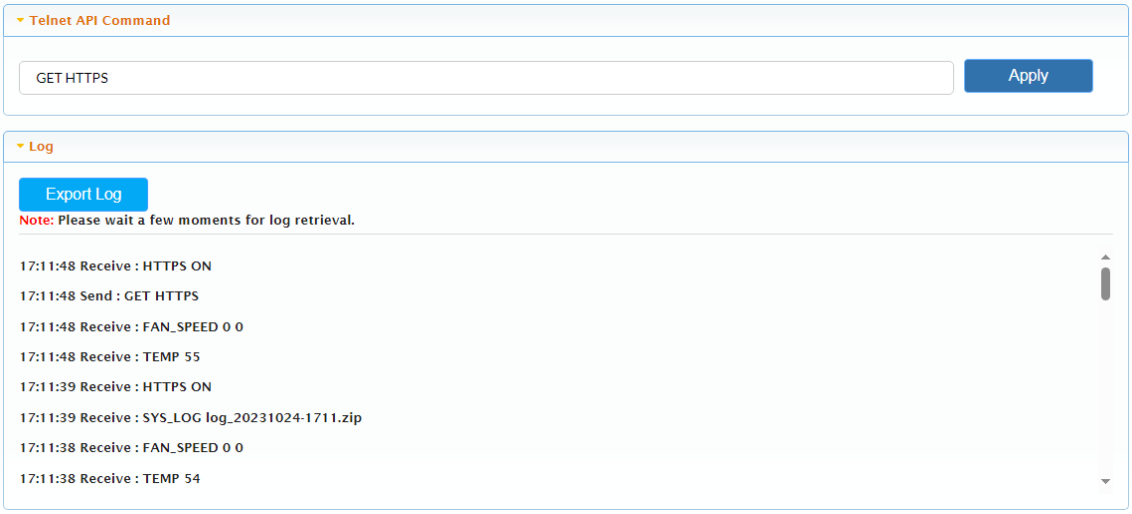
9) Telnet API



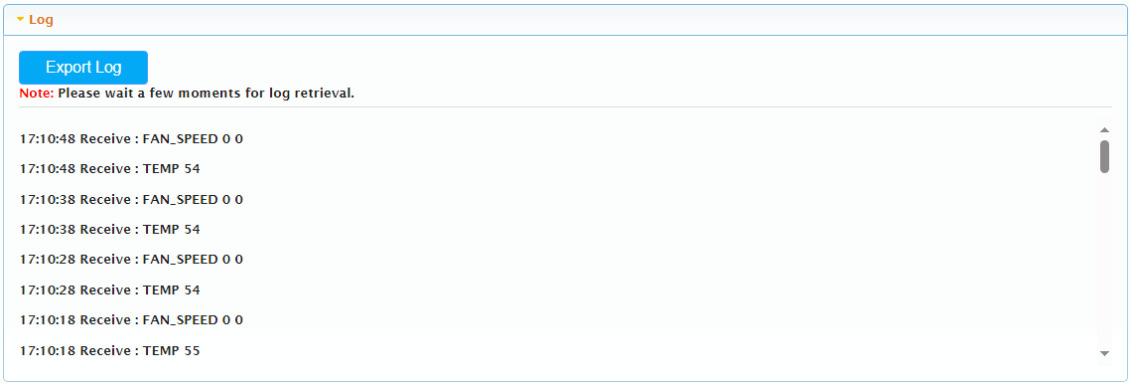
This section allows users to input and send API commands to the matrix. The return value will be display in "Log" part.

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

For example:



10) Log



This section shows the operation log and commands return.

Export Log: Click to export the log file to local PC.