WST-PMX006

8x8 HDMI 4K60Hz Seamless Matrix with Audio Extraction PRO



4K60 | 18Gbps | HDR | HDCP2.3

HDMI

Safety Instructions

1. Keep Dry | 防水防潮

Do not expose this apparatus to rain, moisture, dripping or splashing. Do not place objects filled with liquids, such as vases, on the apparatus.

請勿將本設備暴露於雨水、濕氣、滴水或濺水之下，亦不得在設備上放置盛有液體的物品，例如花瓶。

2. Ventilation | 保持通風

Do not install or place this unit in a bookcase, built-in cabinet or other confined space. Ensure the unit is well ventilated.

請勿將本設備安裝或放置於書櫃、內置櫃或其他密閉空間。請確保設備通風良好。

3. Ventilation Openings | 勿遮擋散熱孔

To prevent electric shock or fire due to overheating, do not obstruct ventilation openings with newspapers, tablecloths, curtains or similar items.

為避免過熱造成觸電或火災，請勿以報紙、桌布、窗簾或類似物品遮擋設備的通風孔。

4. Heat Sources | 遠離熱源

Do not install near heat sources such as radiators, heat registers, stoves or other apparatus, including amplifiers, that produce heat.

請勿安裝於暖氣設備、暖氣出風口、火爐或其他會產生熱量的設備（包括擴大機）附近。

5. Open Flames | 遠離明火

Do not place sources of naked flames, such as lighted candles, on the unit.

請勿在設備上放置明火，例如點燃的蠟燭。

6. Cleaning | 清潔方式

Clean this apparatus only with a dry cloth.

僅可使用乾布清潔本設備。

7. Disconnect Power | 拔除電源

Unplug this apparatus during lightning storms or when unused for long periods of time.

雷雨期間或長時間不使用時，請拔除本設備的電源插頭。

8. Power Cord | 保護電源線

Protect the power cord from being walked on or pinched, particularly at plugs.

請避免電源線遭到踩踏或夾壓，尤其是插頭處。

9. Accessories | 指定配件

Only use attachments and accessories specified by the manufacturer.

僅可使用製造商指定的附件及配件。

10. Servicing | 專業維修

Refer all servicing to qualified service personnel.

所有維修作業均應交由合格的專業人員進行。

Introduction

WST-PMX006 is a professional 4K 8 x 8 HDMI seamless matrix switcher featuring instant, glitch-free switching and free scaling up to 4K@60Hz, with SDR / HDR support on all outputs. It allows eight HDMI sources to be routed to eight HDMI displays seamlessly, delivering smooth transitions for live presentations and AV distribution.

In addition to advanced video processing, the WST-PMX006 provides 4 x LINE OUT analog audio outputs with independent routing, allowing audio from any of the eight HDMI inputs to be assigned to any of the four analog outputs. This enables flexible audio breakout to external amplifiers, speakers, or recording / streaming systems.

For easy integration and operation, the unit supports multiple control methods, including front-panel buttons, API commands, and a Web GUI. Designed for both 1U rackmount and standalone installations, the WST-PMX006 delivers high-performance 4K A/V switching and distribution—ideal for corporate training rooms, hotel conference rooms, university classrooms, and other professional AV environments.

Key Features

- Seamless 8 x 8 HDMI switching with no black screen
- Supports 18Gbps bandwidth and up to 4K@60Hz 4：4：4
- HDCP 2.3 / 2.2 / 1.4 compliant
- Supports Dolby Vision and HDR10
- Independent downscaling on each HDMI output for mixed-resolution displays
- 4 x balanced analog audio outputs with independent switching
- Supports AV Mute and de-embedded audio control per output zone
- Advanced EDID management
- CEC display power control with automatic, manual, scheduled, and signal-loss trigger options
- Multiple control methods: front-panel buttons, Web GUI, RS-232, Telnet, and API commands
- 24 preset routing configurations, compatible with WST-ECR001
- Supports third-party control system integration and low-power standby via API
- TAA compliant; Made in Taiwan

Package Contents

8 x 8 Matrix x 1 | UK / EU / AUS / US AC power cord cables x 4 | Phoenix Male Connector（3-Pin）x 1 | Phoenix Male Connector（5-Pin）x 4 | Rackmount Ears Set x 1

Panel Overview

FRONT



NAME	DESCRIPTION
LCD SCREEN	Displays the information of the button operation.
INFO	Press to display the device's information on the LCD screen, including IP address, fan speed, physical address, firmware version and temperature.
SWITCH	Press the button to enter input channel selection mode.
VIDEO	Press to display the video information of the selected input port on LCD screen, including resolution, color space and HDCP encrypted status.
AUDIO	Press to enter the volume adjustment mode.
Selection	• 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.
ENTER	Press to perform the button operation.
CANCEL	Press to cancel the button operation or exit current mode.

REAR

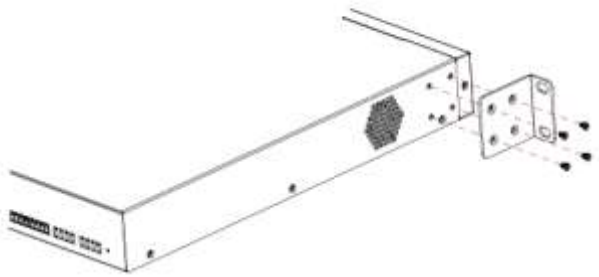


NAME	DESCRIPTION
AC POWER	Connect to the power source using the AC power cord provided.
LAN	Connect to an Ethernet device for LAN control (Web UI / Telnet)
RS-232	Connect to an RS-232 device for bi-directional serial communication.
HDMI IN 1-8	Connect to HDMI sources.
HDMI OUT 1-8	Connect to HDMI displays.
AUDIO OUT 1-4	Connect to Audio devices
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 passwords for telnet-TLS session and web UI are “admin”. • More than 15 seconds: Reset the device to factory defaults.

Installation

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

   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).

⚠ NOTE:

- Before starting the installation, please ensure that all devices are powered off.
- Recommended maximum installation height for the device is 2 meters.

Control of the Matrix

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

Front Panel Button 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.

- To select an input source for an output display
  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.
- 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.
- 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.
- 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 display information.

     For example,

     Device info

     192.168.5.120

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

     Temp: 45

     Fan speed: 3990

     Version: v1.0.2
  3) Press “CANCEL” to exit the current mode and return the main page.

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 with latest version is recommended.

1. Accessing the Web UI

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

To access the Web UI:

1) Connect the LAN 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.

   Tip: Another simple way to obtain the IP address is to send command "GET IPADDR<CR><LF>" to the device through RS232 port.

2) Connect a PC to the same network as the device.

3) 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.

2. Web UI Introduction

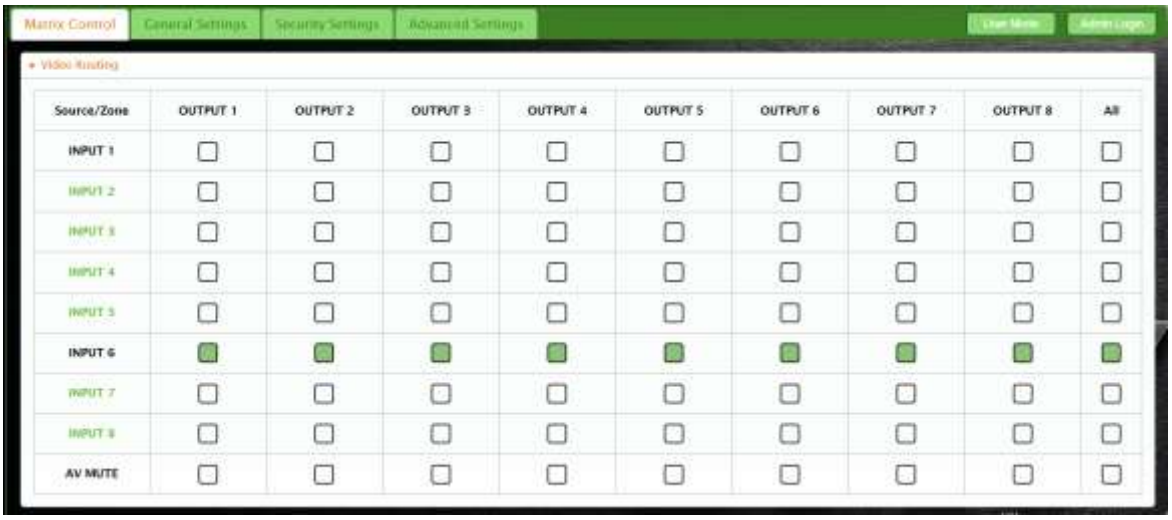
The web UI main page is split into Matrix Control, General Setting and Advanced Setting tabs.

Matrix Control

Matrix Control provides settings of video and audio routing, display control and preset management



▼ **Video Routing**



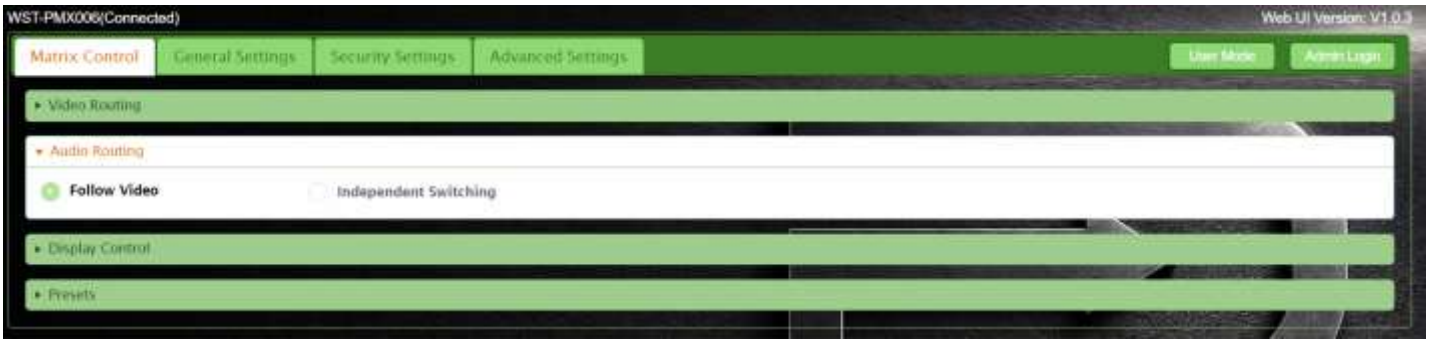
This section manages association relationships between the input video sources and output displays. Click the button in the table to select an input for a certain output display (button turns from white to green once selection is done).

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.



▼ **Audio Routing**

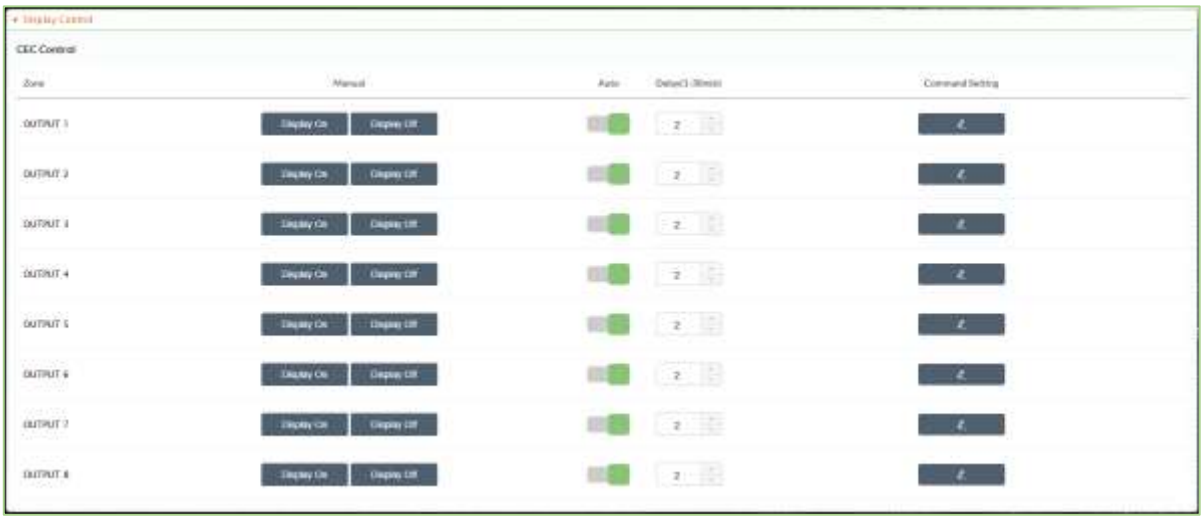


This section manages audio routing mode and association relationships between the input audio sources and LINE OUT ports.

- **Follow Video**: In this mode, LINE OUT 1-4 follow the input channel selection of video outputs 1-4. Default setting: Follow Video.
- **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. In Independent Switching mode, click the button in the table to select an audio input for a certain output (button turns from white to green once selection is done).
- **All**: Click to route a certain audio input to all LINE OUT ports.



▼ **Display Control**



This section provides configuration of CEC control on output displays.

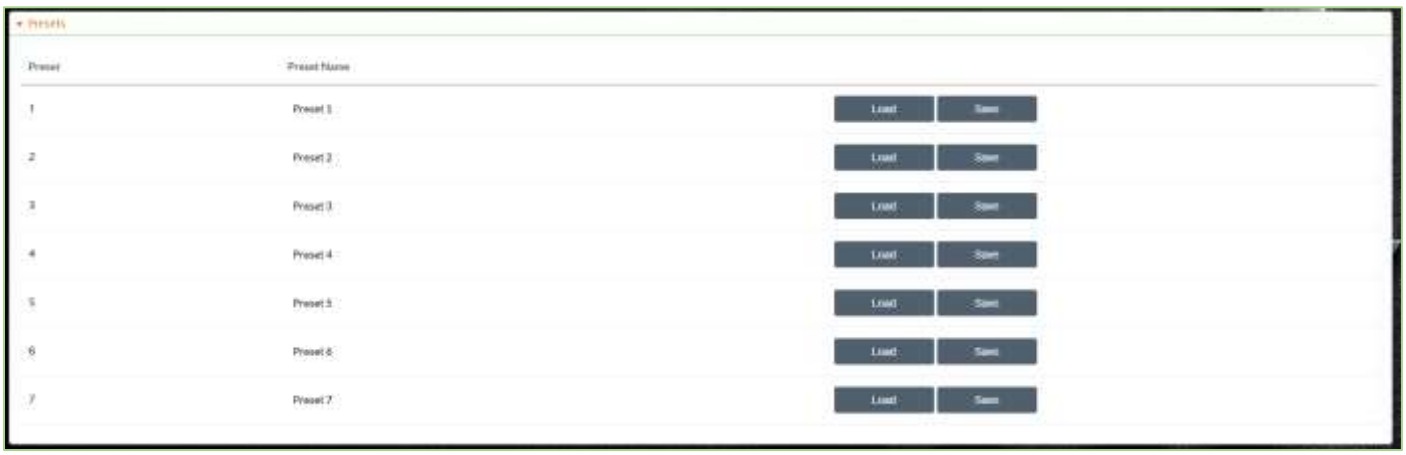
- **Display On:** Click to send the Display On command (predefined in the Command Setting dialog box) to the certain output display immediately.
- **Display Off**: Click to send the Display Off command (predefined in the Command Setting dialog box) to the certain output display immediately.
- **Auto**: 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:



- **Command Testing**: Input a command and click **Send** 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**



This section saves/loads the matrix control settings to or from the Matrix. It supports up to 24 presets to operate.

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

General Settings

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

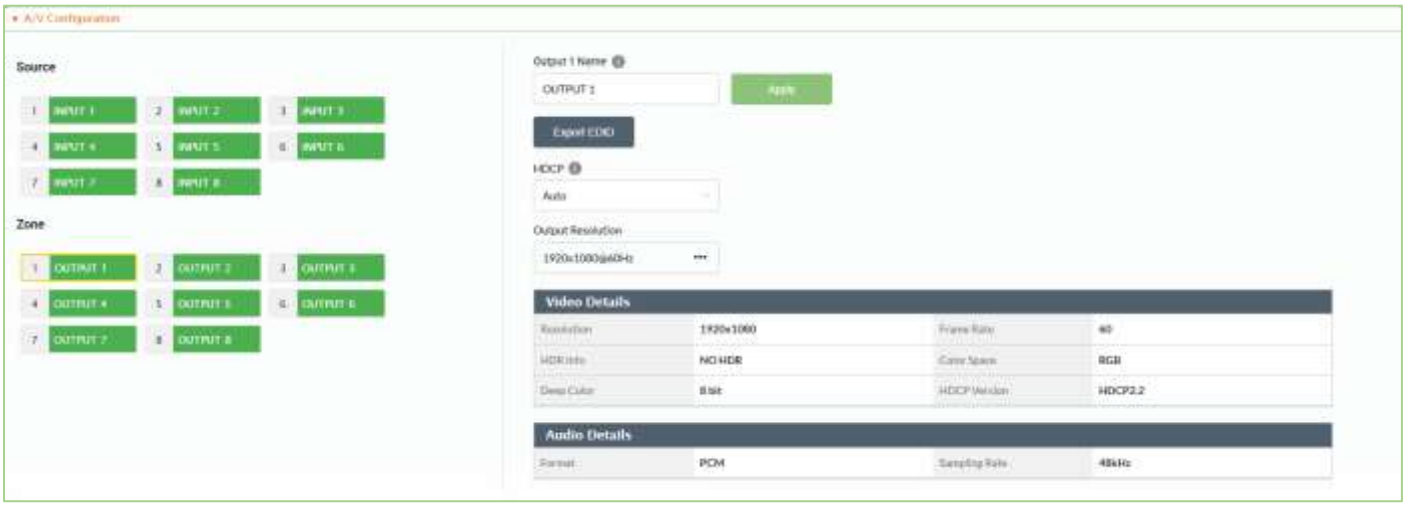


▼ **A/V Configuration**

INPUT



OUTPUT



This section manages alias name, input EDID, output HDCP support and displays video and audio detailed information for the input/output ports.

- **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 (1~8) Name**: Input a new name for the selected input/output. The length of the name can't exceed 12 characters. Move the mouse to the " " icon, it will shows the limitation:



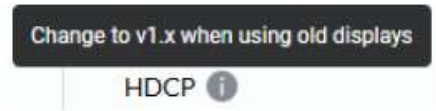
- **EDID (for INPUT 1-8)**: Select EDID for the corresponding input port from the drop-down menu.Default EDID: Fixed 4K60 2.0CH PCM Audio with HDR.

Fixed EDID	Special EDID	Copy from Output	EDID Write
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	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 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	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. 

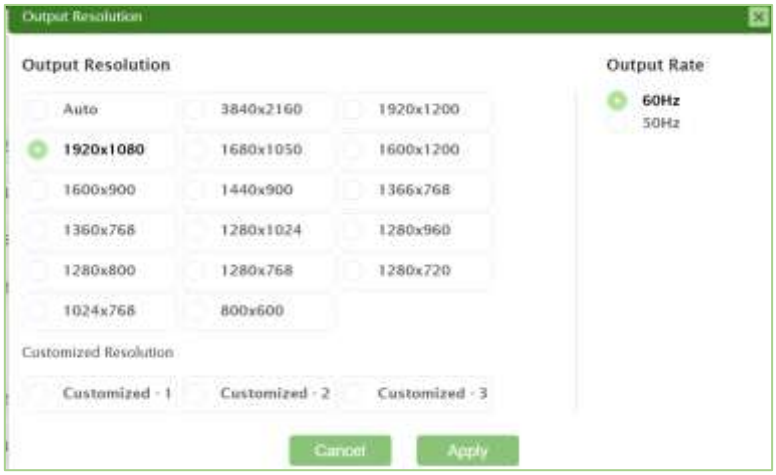
- **Export EDID**: Click to export the EDID information of the select input/output as a bin file to local PC.
- **HDCP (ON/OFF) (for INPUT 1~8)**: Click to enable/disable HDCP encryption of each input port, the default setting is "ON".
- **HDCP (for OUTPUT 1~8):** Select HDCP support for the selected 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:** 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.



- **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.



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

- **Video Details**: Displays the input/output port’s video information.
- **Audio Details**: Displays the input/output port’s audio information.

▼ **Audio Output Settings**



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.

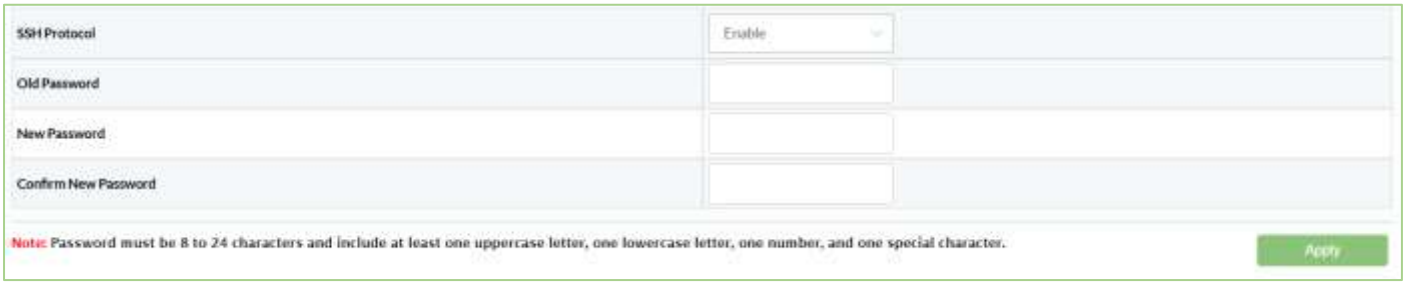
Security Settings

▼ **Network Protocols (Telnet and SSH)**



- **Telnet Protocol**: Enable or disable telnet protocol. Default setting: Enable.
- **SSH Protocol**: Enable or disable SSH protocol. Default setting: Disable.

  When enable SSH protocol, you can set password of the SSH authentication. No default password for SSH. The new set password must be 8 to 24 characters and include at least one uppercase letter, one lowercase letter, one number, and one special character.



⚠ NOTE: Telnet protocol and SSH protocol settings take effect immediately.

▼ **HTTPS**



- **HTTPS Status**: Enable/disable HTTPS. Default setting: Enable.

  When enable HTTPS, all Web UI communications are encrypted using SSL/TLS.
- **HTTPS Certificate**: Selects the certificate used for HTTPS connections.

This option is available only when HTTPS is enabled.

  - **Internal Certificate** (default): Uses the device's built-in self-signed certificate.
  - **Server Certificate**: Uses a user-uploaded certificate issued by a trusted certificate authority (CA). Recommended for production deployments.

▼ **802.1X**



802.1x is a port-based network access control protocol that authenticates the device with a RADIUS server before allowing access to the network. Only authenticated devices are permitted to connect.

Enable: Enable or disable 802.1x authentication service for the device.Default setting: Disable

When 802.1x feature is enabled:

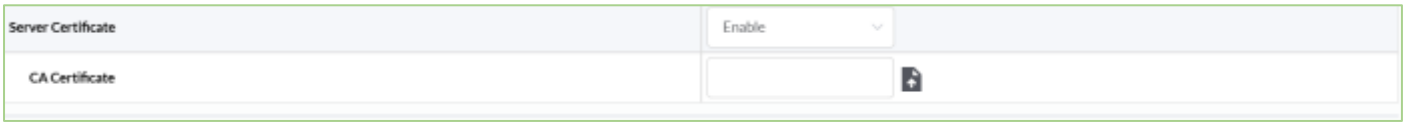


- **Authentication Method:** Select one of the following authentication methods:
  - EAP-MSCHAP V2: Authenticates the device using a username and password. This method is widely supported and suitable for general network environments.
  - EAP-TLS: Authenticates the device using a client certificate and private key. The private key password is optional but recommended.

This method provides higher security through certificate-based authentication and is recommended for environments with strict security requirements.

⚠ NOTE:

- The username can include letters, numbers, hyphens (“-”), underscores (“_”), “@” and “.”, and must be 1 to 24 characters long. Hyphens and underscores must not appear at the beginning or end.
- The password must consist of 1–24 printable ASCII characters.



- **Server Certificate**: Enable or disable verification of the RADIUS server certificate. Default setting: Disabled

When enabled,

Click to upload a CA certificate. The device verifies the identity of the RADIUS server using the CA certificate during authentication. Network access is granted only after successful verification.

This option is recommended for high-security environments.

Advanced Settings

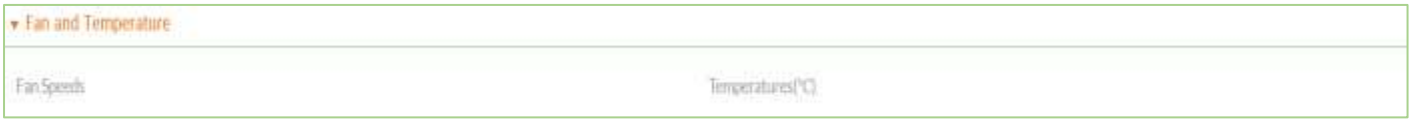


▼ **Information**



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

▼ **Fan and Temperature**



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

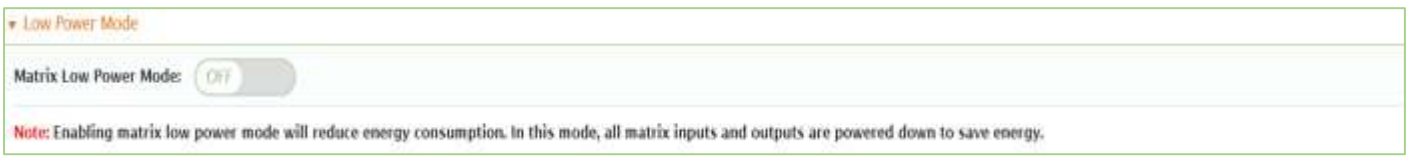
▼ **Front Panel Lock**



Set front panel lock to on / off. Default setting: OFF.

⚠NOTE: When set front panel lock to on, the front panel controls can be locked to prevent unauthorized manual changes.

▼ **Low Power Mode**



Set matrix low power mode to on / off. Default setting: OFF.

⚠NOTE: Enabling matrix low power mode will reduce energy consumption. In this mode, all inputs and outputs are powered down to save

energy

▼ **Network**



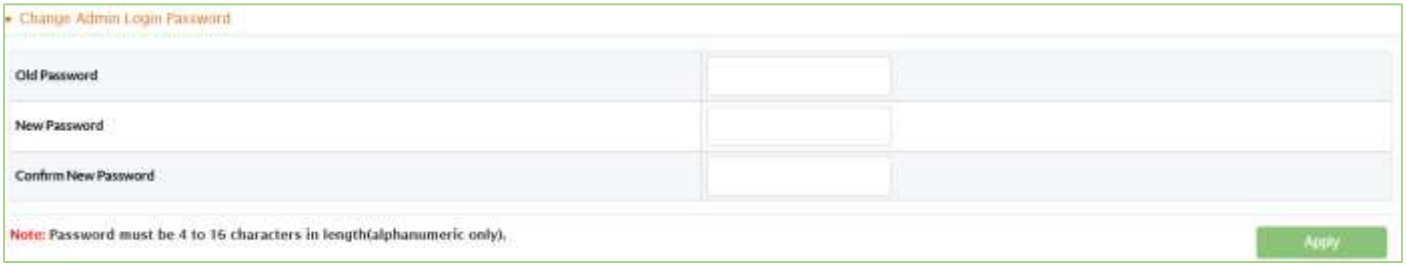
This section manages network settings.

- **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.
- **Device IP Address:** Set subnet mask manually when Static is selected.
- **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.

⚠ NOTE:

- 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.

▼ **Change Admin Login Password**

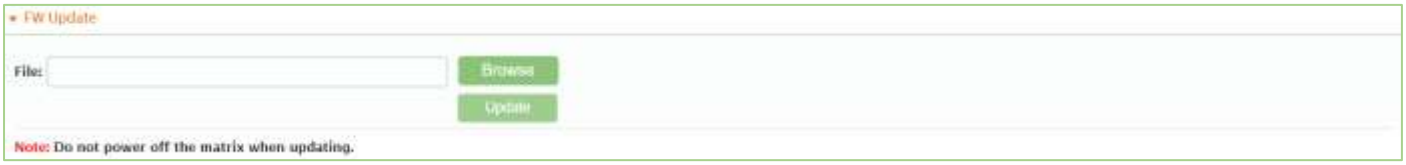


This section is for changing admin login password. The default password is “admin”.

- **Apply**: Click to perform the setting.

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

▼ **FW Update**



This section is for firmware update.

Steps for firmware update:

1) 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:

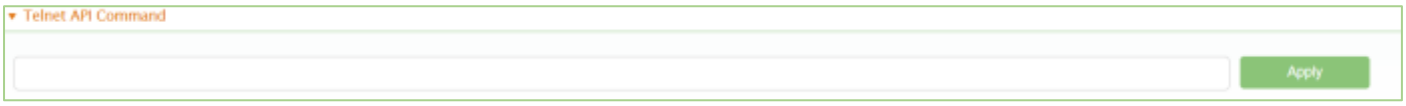
Do not power off the matrix during the upgrading.

▼ **System**



- **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.

▼ **Telent API Command**



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, enter the telnet API GET MP out1<CR><LF> and click **Apply**, a response of MP IN1 OUT1 will be displayed in the Log section as the following:

▼ **Log**



This section displays the system log and command response.

- •**Export Log**: Click to export the log to the computer.

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_ WST-PMX006*".

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

1. RS232

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 RS232 serial interface software (e.g., Serial Assist) may be needed as well.

Parameters	Default Valeue
Baud Rates	9600
Data bits	8 bits
Parity	None
Stop bits	1 bit
Flow Control	None

2. Telnet

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:

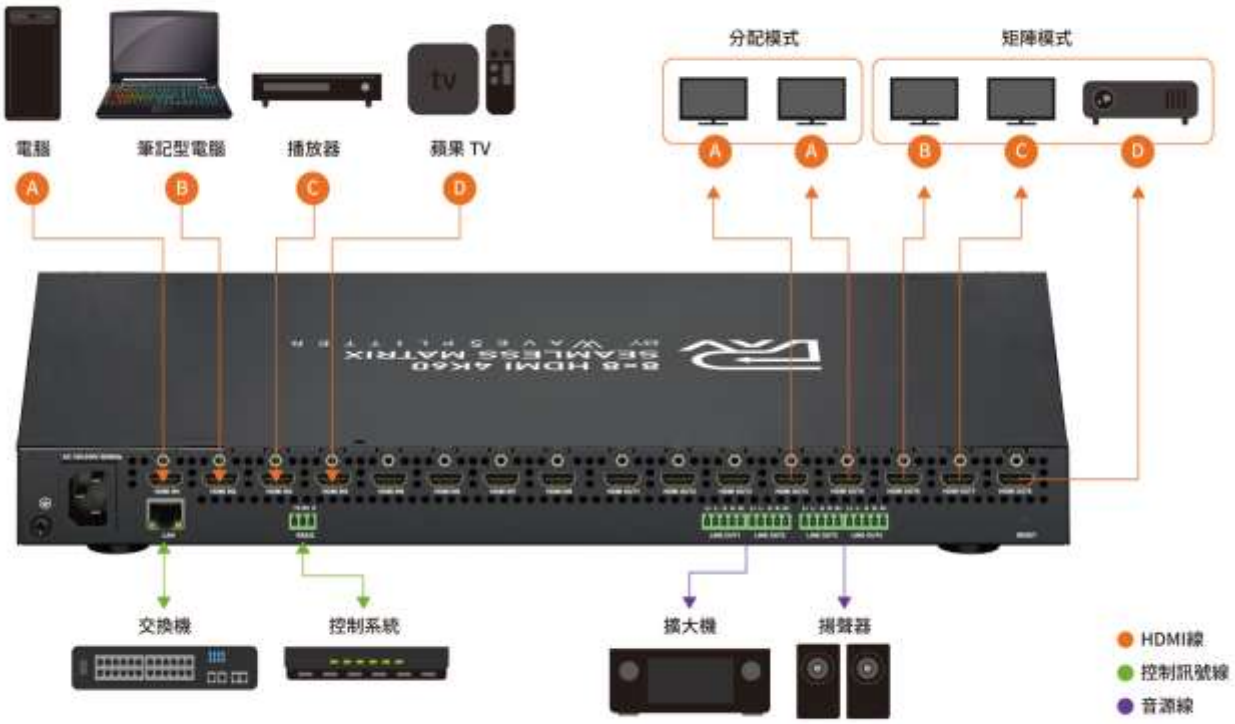
telnet ip (port)

- *ip*: The device's IP address.
- *port*: The protocol port number, this is non-required for some telnet client tools. Telnet port number is 23 and telnet-TLS port number is 24.

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

Connection Diagram



Specifications

Interface	
Video Input	HDMI Type-A（Female）x 8
Video Output	HDMI Type-A（Female）x 8
Audio	Balanced Analog Audio Line In（5-Pin Phoenix Terminal Block）x 4
Control I/O	RS-232（3-pin Phoenix Terminal Block）x 1 Control Port（RJ-45）x 1
Transmission	
HDMI Compliant	HDMI2.0b
HDCP Compliant	2.3 / 2.2 / 1.4
Output Resolution	4096x2160@60Hz / 3840x2160@60Hz / 2560x1600@60Hz / 1920x1200@60Hz / 1920x1080@60Hz
Audio Format	HDMI Audio Pass-Through Balance Audio output：PCM 2.0
Power	
Power Supply	AC 100~240V 50/60Hz
Power Consumption	68W
Environment	
Operating Temperature	0˚C ~ 45˚C
Storage Temperature	-20˚C ~ 70˚C
Product Structure	
Main Material	Iron
Size W x D x H	440 x 43.5 x 330mm
Weight	4680g
Country of Origin	Taiwan
Certification	
Safety & Emission	CE / FCC / RoHS / REACH