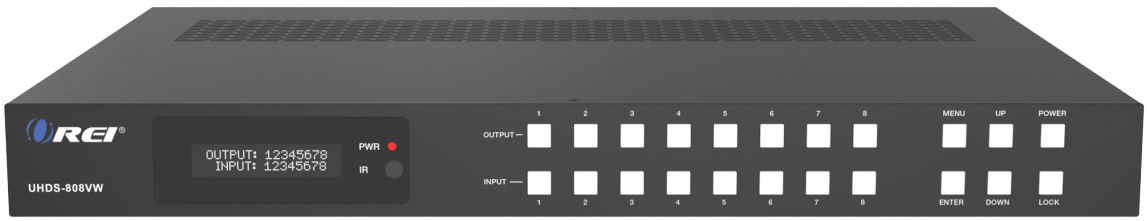

UHDS-808VW

8x8 4K Seamless Matrix with Video Wall

USER MANUAL

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Table of Contents

Thank you for purchasing this product

For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

Surge protection device recommended

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lightning strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the service life of your equipment.

Registration Page

Please Activate your warranty by registering our product through the link below - **www.orei.com/register**

Technical Support

Need Help?

Our experienced Technical Support Team is here for you to answer your questions, give technical advice or help troubleshoot your project to get you installed on time and on budget. Call, email or chat with us now.

OREI Live Technical Support Hours

US team (US/Canada/Mexico): Monday-Friday, 9 a.m. - 5 p.m. Central Time **Support Email** - info@orei.com | **Support Number** - 877-290-5530

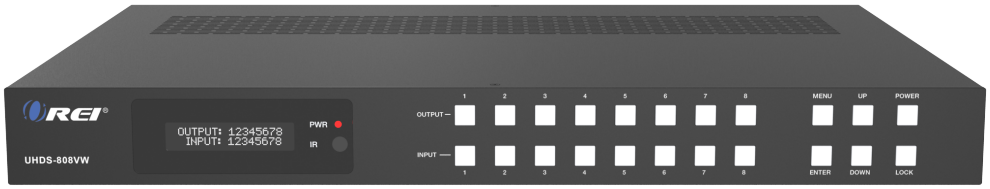
Or

Chat Live on www.orei.com

Send us an instant message now. Our Technical Support Team will respond momentarily. Available during live support hours.

Introduction & Features

The UHDS-808VW is an 8x8 Matrix that allows you to switch between 8 media sources and output them on 8 displays. It features 8 HDMI inputs and outputs, supporting video resolutions up to 4K@60Hz with an 18Gbps video bandwidth and HDCP 2.2 compliance. The device offers seamless switching and features Optical and 5-pin phoenix Analog audio outputs for audio extraction. Additionally, it functions as a video wall controller, enabling various setups like 4x2, 2x2, 8x1, etc. It offers horizontal and vertical mirror options to flip the image 180 degrees for bezel adjustment. The WebGUI provides full control, including CEC control, video wall configuration, and audio matrixing.



Features

1. HDCP 2.2 compliant
2. Video resolutions up to 4K@60Hz
3. Video bandwidth up to 18Gbps
4. Seamless switching
5. Optical and 5-pin phoenix Analog outputs for audio extraction
6. Support for LPCM, Dolby Digital Plus, Dolby TrueHD, DTS High Res, and DTS HD Master Audio through HDMI
7. Bezel adjustment, Audio Matrixing and EDID management
8. Horizontal and Vertical mirror function to rotate the image 180 degrees
9. Power off memory function allows you to recall the previous setup
10. CEC control through WebGUI
11. Compact design for easy installation

Package Contents & Specifications

Package Contents

1.	UHDS-808VW Matrix	1pcs
2.	Power Adapter	1pcs
3.	IR Remote	1pcs
4.	IR Receiver Cable	1pcs
5.	USB to RS-232 Serial Cable (USB A to RS-232 serial DB9 male connector)	1pcs
6.	5pin-3.5mm Phoenix Connector (male)	8pcs
7.	Machine Screw	8pcs
8.	Mounting Ear	2pcs
9.	User Manual	1pcs

Specifications

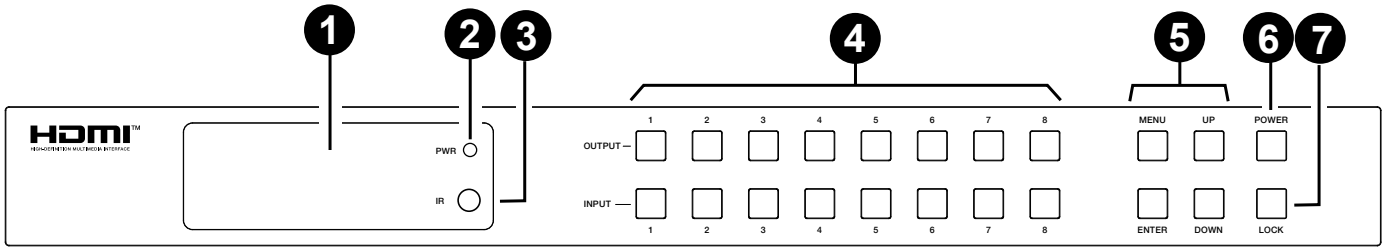
Technical	
HDMI Compliance	HDMI 2.0b
HDCP Compliance	HDCP 2.2
Video Bandwidth	594MHz/18Gbps
Video Resolution	Up to 4K@60Hz 4:4:4
Color Depth	8/10/12bit
Color Space	RGB, YCbCr 4:4:4 / 4:2:2. YUV 4:2:0
Audio Formats	**HDMI:** LPCM, Dolby Digital/Plus/EX, Dolby True HD, Dolby Atmos, DTS, DTS-EX, DTS-96/24, DTS High Res, DTS-HD Master Audio, DSD **Optical**: LPCM 2.0/Dolby/DTS 5.1 **Balanced Analog**: LPCM 2.0
IR Level	5Vp-p
IR Frequency	Wideband 20K-60KHz
ESD Protection	IEC 61000-4-2: ±8kV (Air-gap discharge) & ±4kV (Contact discharge)

Specifications

Connection			
Inputs	8 × HDMI [Type A, 19-pin female]		
Outputs	8 × HDMI [Type A, 19-pin female] 8 × OPTICAL [S/PDIF] 8 × L/R [5-pin Phoenix]		
Control	1 × TCP/IP [RJ45] 1 × RS-232 [D-Sub 9] 1 × IR EXT [3.5mm, Stereo Mini-jack]		
Mechanical			
Housing	Metal Enclosure		
Color	Black		
Dimensions	L: 440mm / 14.32in W: 300mm / 11.81in H: 44.5mm / 1.75in		
Weight	3.95kg / 8.7lbs		
Power Supply	Input: AC 100-240V 50/60Hz, Output: DC 24V/3.75A (US/EU standard, CE/FCC/UL certified)		
Power Consumption	70W (Max)		
Operating Temperature	32 - 104˚F / 0 - 40˚C		
Storage Temperature	-4 - 140˚F / -20 - 60˚C		
Video Resolution	**4K60**	**4K30**	**1080P60**
HDMI Cable Length (HDMI IN / OUT)	5m/16ft	10m/32ft	15m/50ft
The use of “Premium High Speed HDMI” cable is highly recommended.			

Operation Controls and Functions

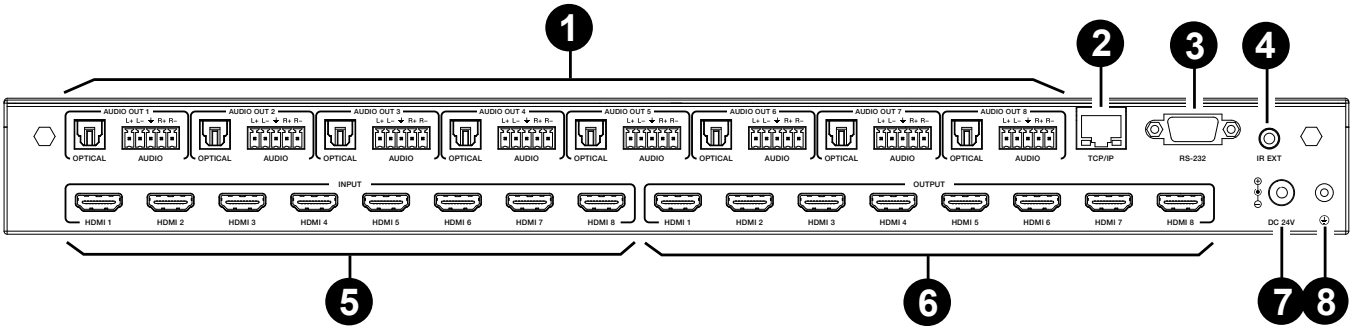
Front Panel



No.	Name	Function Description
1.	OLED screen	Displays the matrix switching status, device information, etc.
2.	PWR LED	The LED will light up Green when the device is powered on. The LED will light up Red when the device is on standby.
3.	IR	IR signal receiver, receives the signal from the included remote.
4.	INPUT / OUTPUT buttons	Press the OUTPUT button (1~8) then press the desired INPUT (1~8) button that you wish to display on that output.
5.	MENU / ENTER / UP / DOWN	Take RESET, for example. ① On the initial OLED display screen, press “MENU” button. There are OUTPUT/ INPUT/EXTAUDIO/SETUP options to select from. ② Press the “UP/DOWN” button to select the “SETUP” option. ③ Press the “ENTER” button to enter into the next level menu. There are LCD ONTIME/BAUD RATE/IP INFO/REBOOT/RESET options to select from. ④ Press the “UP/DOWN” button to select the “RESET” option. ⑤ Press the “ENTER” button to confirm the selection. ⑥ Press the “ENTER” button again, and then it will prompt: SUCCESS! **Note:** · Pressing the “MENU” button will return to the previous menu. · In any level menu, it will return to the initial screen if no input is provided within 10 seconds.
6.	POWER button	Long press the POWER button for 1 second to enter the standby mode, short press to wake up the device.
7.	LOCK button	Short press the LOCK button to lock front panel buttons (Except the power button); Press it again to unlock.

Operation Controls and Functions

Rear Panel



No.	Name	Function Description
1.	AUDIO OUT (1~8)	OPTICAL: Connect to an audio device like soundbar or AVR.
		L/R AUDIO: Analog port, supporting balanced audio output (with a maximum support of 2Vrms) and unbalanced audio output. Balanced connection method: L+, L -, ⏚ , R+, R Unbalanced connection method: L+, ⏚ , R+
2.	TCP/IP	Connect to a PC or router with a CAT cable to control the device.
3.	RS-232 port	Connects to a PC or control system using the included RS-232 cables to send RS-232 commands.
4.	IR EXT	If the IR receiver window of the unit is blocked or the unit is installed in a closed area out of infrared line of sight, the IR receiver cable can be inserted to the “IR EXT” port to receive the IR remote signal.
5.	HDMI INPUT ports (1~8)	Connect a media device such as a DVD Player, set-top box, etc.
6.	HDMI OUTPUT ports (1~8)	Connect a display device such as a TV or Projector.
7.	DC 24V	Connect the included 24V/3.75A power adapter.
8.	GND	Connect the housing to the ground.

Note:

1. You can restore the factory settings via the front panel, WebGUI or RS-232 commands.
2. Power cut memory function is available except when in standby status.
3. The RS-232 and WebGUI will be available in a few minutes when the device is powered on.

LCD Display Navigation

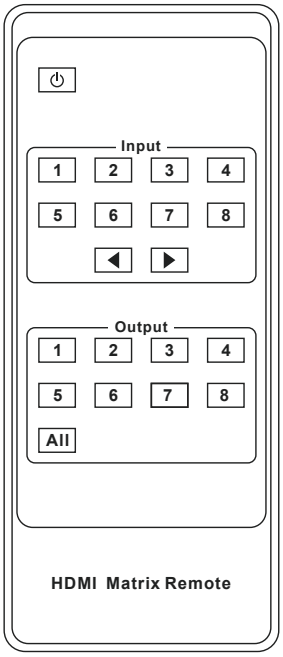
The buttons on the the front panel are used for LCD display navigation, including INPUT(1~8), OUTPUT(1~8), MENU, ENTER, UP, DOWN.
Menu contents are as follows:

Level 1	Level 2	Level 3	Level 4
OUTPUT	RESO	OUT1/OUT2/OUT3/OUT4/ OUT5/OUT6/OUT7/OUT8	4K×2K60W, 4K×2K50W, 4K×2K60, 4K×2K50, 4K×2K30, 1080P60, 1080P50, 1080i60, 1080i50, 1920×1200P60RB, 1360×768P60, 1280×800P60, 720P60, 720P50, XGA60, AUTO
	CSC	OUT1/OUT2/OUT3/OUT4/ OUT5/OUT6/OUT7/OUT8	RGB 444 YUV 444 YUV 422 YUV 420
	STREAM	OUT1/OUT2/OUT3/OUT4/ OUT5/OUT6/OUT7/OUT8	ENABLE DISABLE
	MIRROR	OUT1/OUT2/OUT3/OUT4/ OUT5/OUT6/OUT7/OUT8	OFF H MIRROR V MIRROR HV MIRROR
INPUT	EDID	IN1/IN2/IN3/IN4 /IN5/IN6/IN7/IN8	4K60, 2.0CH 4K60, 5.1CH 4K60, 7.1CH 4K30, 2.0CH 4K30, 5.1CH 4K30, 7.1CH 1080P, 2.0CH 1080P, 5.1CH 1080P, 7.1CH

Operation Controls and Functions

Level 1	Level 2	Level 3	Level 4
INPUT	EDID	IN1/IN2/IN3/IN4 /IN5/IN6/IN7/IN8	(Continued) 1920×1200, 2.0CH 1360×768, 2.0CH 1024×768, 2.0CH USER1 USER2 COPY OUT1 COPY OUT2 COPY OUT3 COPY OUT4 COPY OUT5 COPY OUT6 COPY OUT7 COPY OUT8
EXTAUDIO	OUT	OUT1/OUT2/OUT3/ OUT4/OUT5/OUT6/ OUT7/OUT8	ENABLE DISABLE
	MODE	BIND TO INPUT / BIND TO OUTPUT / AUDIO MATRIX	/
	MATRIX	OUT1/OUT2/OUT3/ OUT4/OUT5/OUT6/ OUT7/OUT8	INPUT1 INPUT2 INPUT3 INPUT4 INPUT5 INPUT6 INPUT7 INPUT8
SETUP	LCD ONTIME	OFF ALWAYS ON 15 SECONDS 30 SECONDS 60 SECONDS	/
	BAUDRATE	4800/9600/19200/ 38400/57600/115200	/
	IP INFO	DHCP: ON/OFF 192.168.0.100	/
	REBOOT	SUCCESS!	/
	RESET	SUCCESS!	/

IR Remote



: Power on the Matrix or set it to standby mode.

Input 1/2/3/4/5/6/7/8:

Press to select the input source.

Output 1/2/3/4/5/6/7/8:

Press to select the output channel.

◄ ►**:** Select the last or next signal input source.

All:

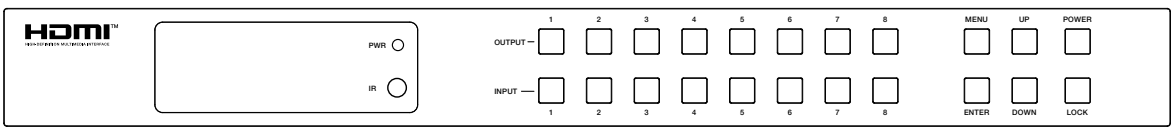
Select all output channel simultaneously. For example, when you press the “All” button and then press input “1” button, the input “1” source will output to all display devices.

Operation instruction:

Press the OUTPUT button (1~8) then press the desired INPUT (1~8) button for the input that you wish to display on that output. Press the ‘All’ button first and the press the INPUT (1~8) button to send a single input to all outputs.

The Matrix can select the input and output signal by using the IR remote. There are two ways to receive the IR remote signal.

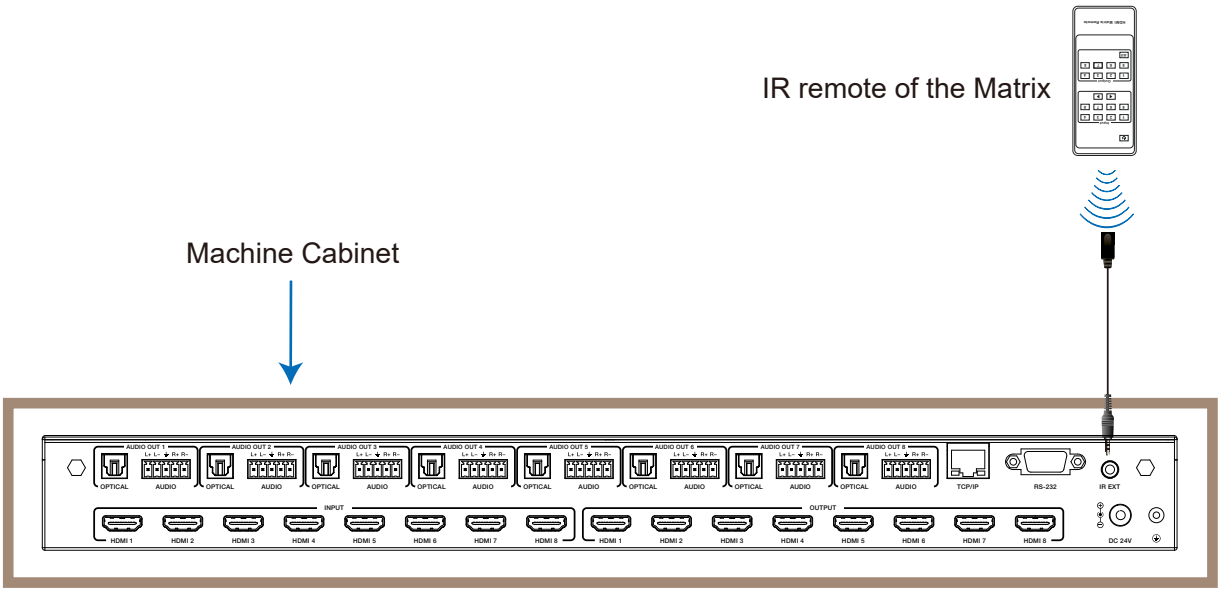
The first way: The IR window accepts the IR remote signal. Using the IR remote, the furthest distance is 8 meters when the IR remote is directly faced to the matrix, and 5 meters when the angle is ± 45°. The diagram is as below:



IR remote of the Matrix

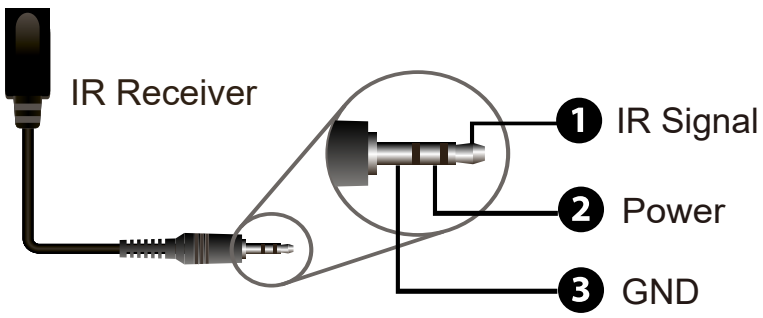
IR Remote &
IR Cable Pin Assignment

The second way: If the IR receiver window of the Matrix is blocked or the Matrix is installed in a closed area out of infra-red line of sight, the IR receiver cable can be inserted to the "IR EXT" port to receive the IR remote signal. The furthest distance of using the IR remote is 5 meters when the IR remote is directly faced to the IR receiver head, and 3 meters when the angle is ± 45°. The diagram is as below.



IR Cable Pin Assignment

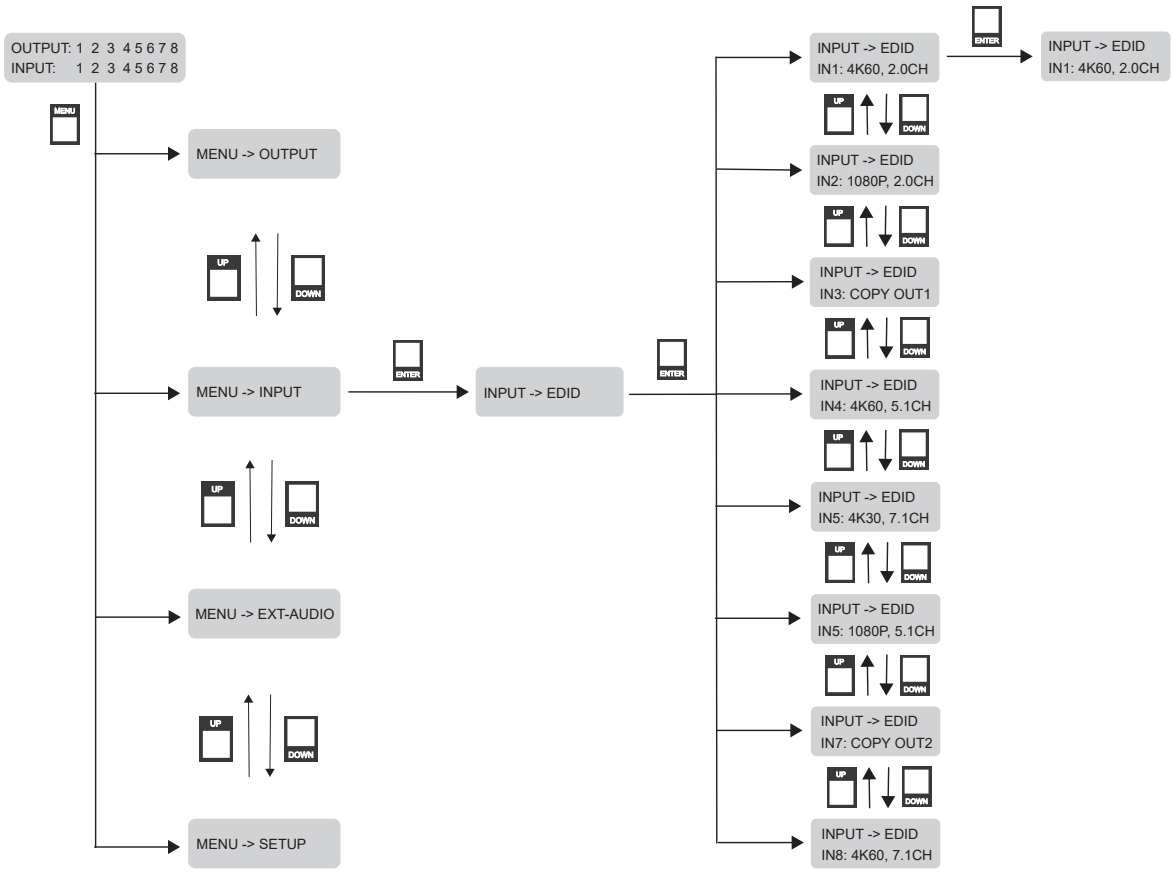
IR RECEIVER



EDID Management

This Matrix has 12 factory defined EDID settings, 2 user-defined EDID modes and 8 copy EDID modes. You can select defined EDID mode or copy EDID mode to input port through front panel buttons, RS-232 control or WebGUI.

On-panel button operation: On the initial OLED display screen, press “MENU” button to enter the first level menu, press “UP/DOWN” button to select “INPUT”, and then press the “ENTER” button. Now the “EDID” option appears. Press the “ENTER” button, and then press “UP/DOWN” button to select the EDID mode you need. Then press “ENTER” button to confirm this operation.

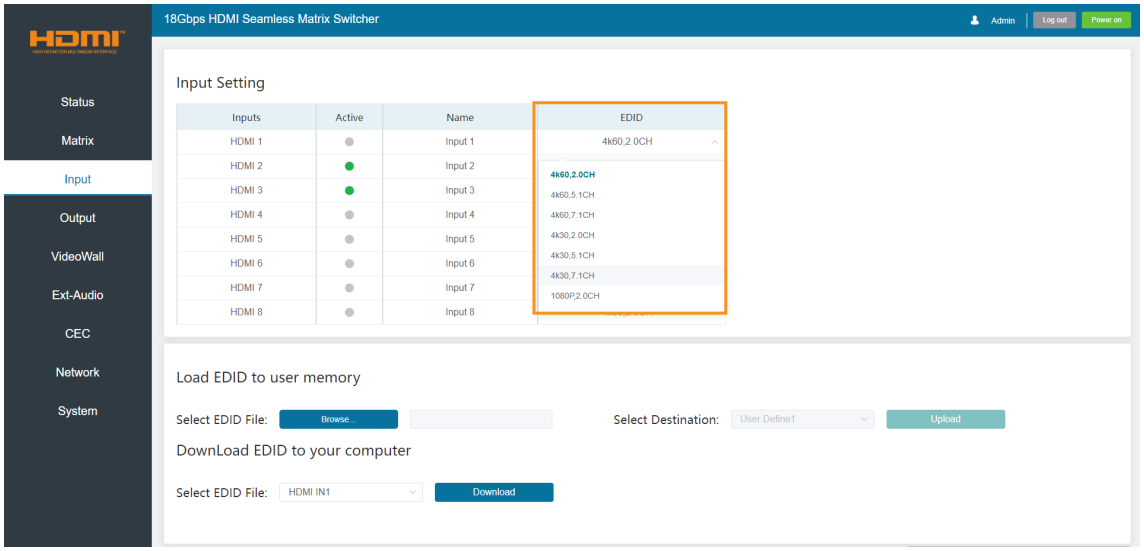


Note: Pressing the “MENU” button will return to the previous menu.

RS-232 control operation: Connect the Matrix to a PC/Laptop with a serial cable, then open a Serial Command tool to send ASCII command “s input x EDID z!” to set EDID. For details, please refer to “EDID Setting” in the RS-232 command list on Page 32.

WebGUI Operation: Please check the EDID management in the “Input page” of “**WebGUI User Guide**” on Page 17.

EDID Management



The defined EDID setting list of the product is shown as below:

No.	EDID Mode	No.	EDID Mode
1	4K60, 2.0CH	12	1024×768, 2.0CH
2	4K60, 5.1CH	13	USER1
3	4K60, 7.1CH	14	USER2
4	4K30, 2.0CH	15	COPY OUT1
5	4K30, 5.1CH	16	COPY OUT2
6	4K30, 7.1CH	17	COPY OUT3
7	1080P, 2.0CH	18	COPY OUT4
8	1080P, 5.1CH	19	COPY OUT5
9	1080P, 7.1CH	20	COPY OUT6
10	1920×1200, 2.0CH	21	COPY OUT7
11	1360×768, 2.0CH	22	COPY OUT8

The Matrix can be controlled by the WebGUI. The operation method is shown as below:

Step 1: Get the current IP Address.

The default IP address is 192.168.0.100. You can get the current Matrix IP address in two ways:

The first way: You can get the IP address via panel buttons. On the initial OLED display screen, press "MENU" to enter the first level menu, press "UP/DOWN" to select "SETUP", and then press "ENTER" to enter the second level menu. Press "UP/DOWN" to select "IP INFO", and press "ENTER" button to check the IP.

The second way: You can get the IP address via RS-232 control. Send the command "r ip addr!" through an ASCII Command tool, and then you'll get the feedback information as shown below:

IP: 192.168.0.100

IP:192.168.0.100 in the above figure is the current Matrix IP address (this IP address is variable, depending on what the specific machine returns).

For the details of ASCII control, please refer to "**RS-232 Command Control**" on Page 29.

Step 2: Connect the TCP/IP port of the Matrix to a PC with a CAT cable, and set the IP address of the PC to be in the same network segment with the Matrix. If 192.168.0.100 is the Matrix IP then set the PC IP to 192.168.0.120.

Step 3: Input the IP address of the Matrix into your browser on the PC to enter WebGUI page. After entering the WebGUI page, there will be a Login page, as shown below:

Select the Username and enter the password. The default credentials are:

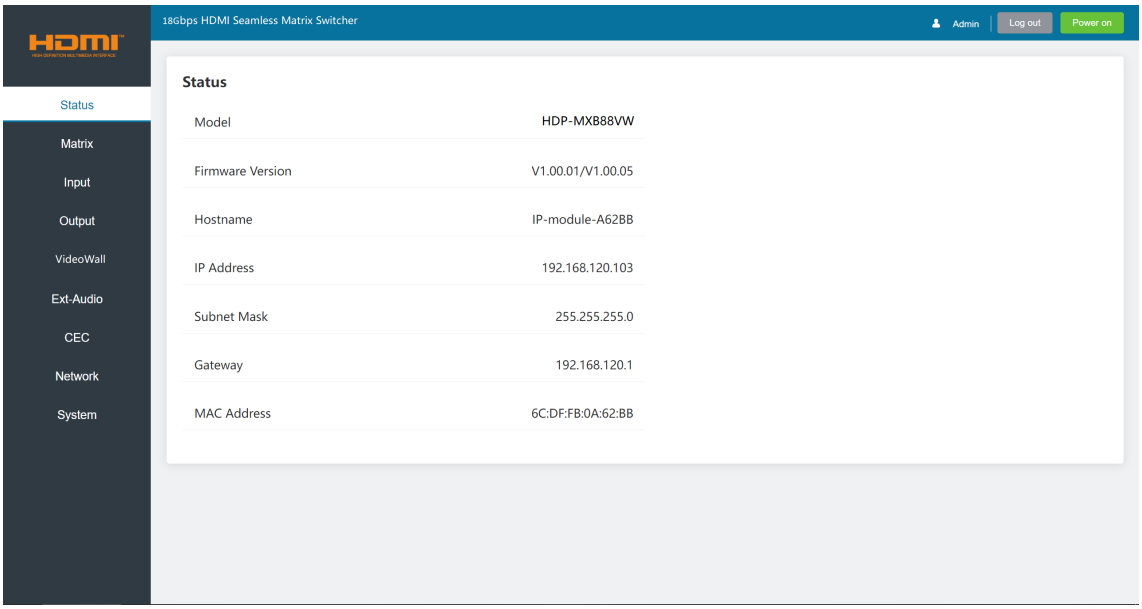
Username **User Admin**

Password **user admin**

Select the username "Admin", enter the password "admin", and select the desired language. Then click the "LOGIN" button and the following Status page will appear.

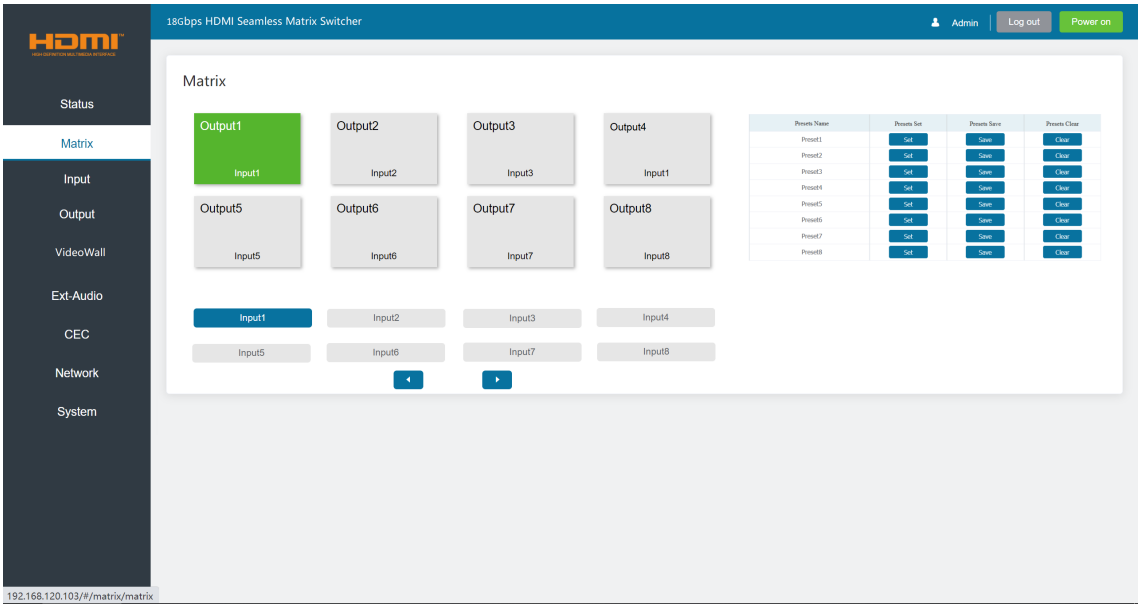
■ Status Page

The Status page provides basic information about the product model, installed firmware version and the network settings of the device.



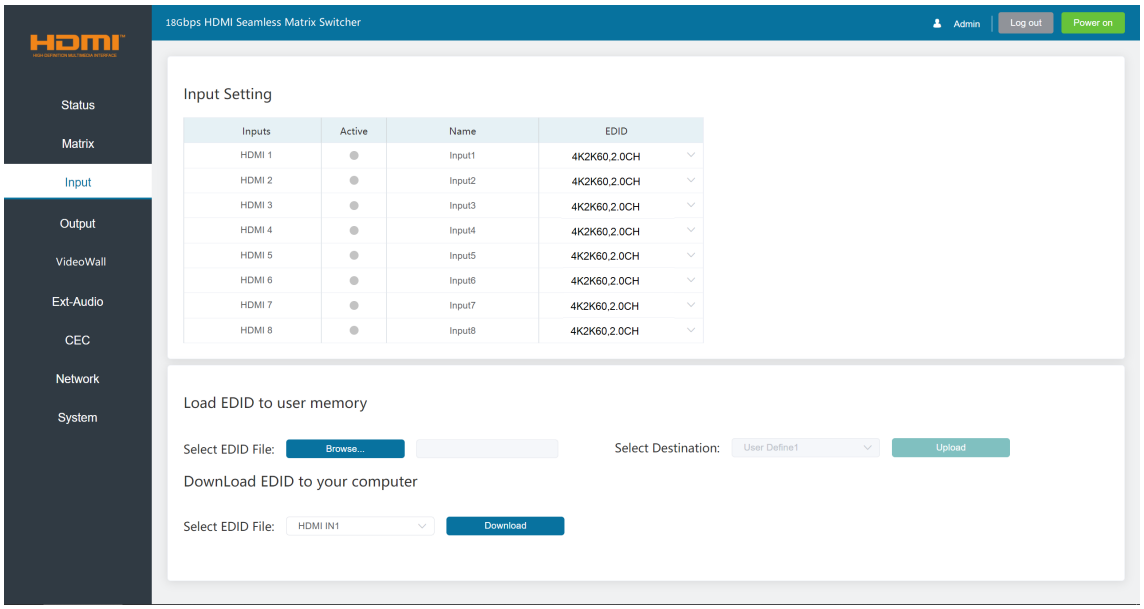
■ Matrix Page

In Matrix page, you can configure the HDMI matrix freely and create a preset if needed.



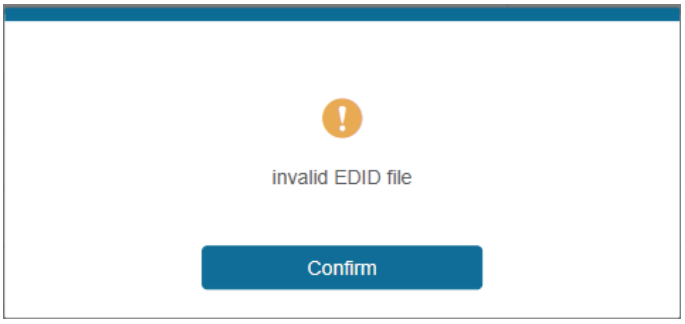
① **Matrix:** You can click and select an output (1~8) first, and then select an input source (1~8) below which will appear in the selected output area.
② **Presets:** You can set, save or clear any route video matrix configuration if needed. For example, if you have a specific configuration where you want a specific input to go to a specific output, you can save that scene and recall it.

■ Input Page

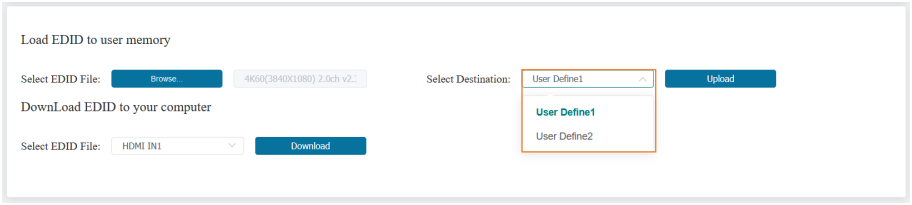


You can do the following operations on the Input page:
① **Inputs:** Input channel of the device.
② **Active:** It indicates whether the channel is connected to a signal source. It will light up Green if the input signal is detected, and Gray if no signal.
③ **Name:** The input channel's name. You can modify it by entering the corresponding name in the input box (max length: 32 characters).
④ **EDID:** It indicates the current EDID of the device. You can click the drop-down menu to select other EDIDs.
⑤ **Load EDID to user memory:** Set EDID for the User.

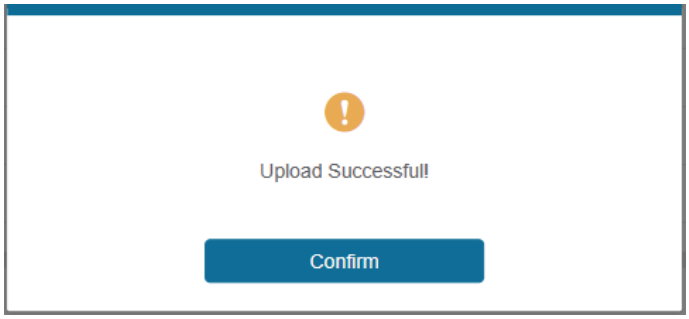
Click the "Browse" button, then select the bin file. If you select the wrong EDID file, there will be a prompt, as shown in the following figure:



Make sure to select the correct file, then you can check the name of the selected file. Then select destination “User Define1/User Define2”, and click “Upload”.

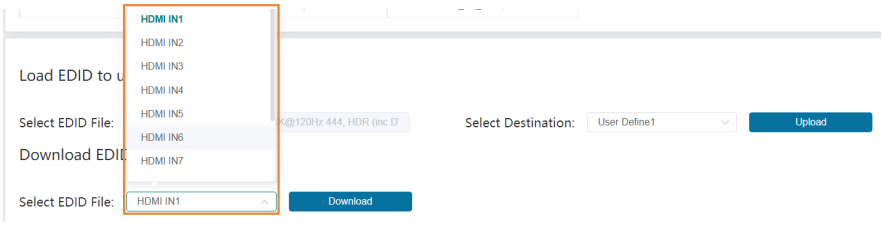


After successful setting, it will prompt as follows:

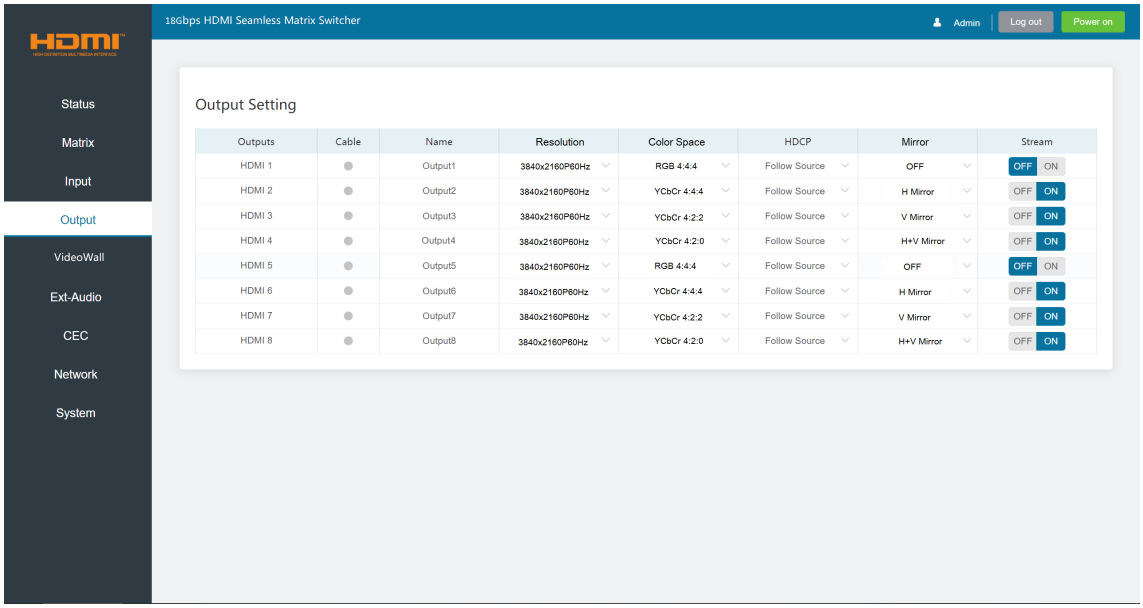


⑥ Download EDID to your computer:

If you want to download the existing EDID, click the drop-down box of “Select EDID File” to select the input channel you want, and then click “Download” to save the corresponding EDID file to your computer.



■ Output Page



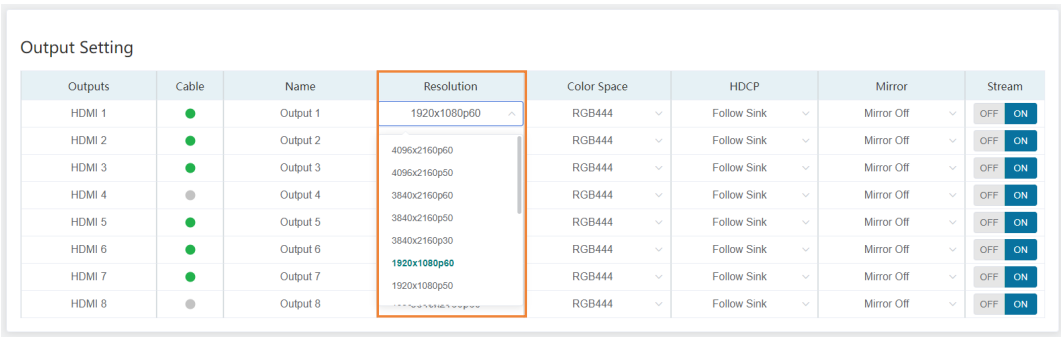
You can do the following operations on the Output page:

① **Outputs:** Output channel of the device.

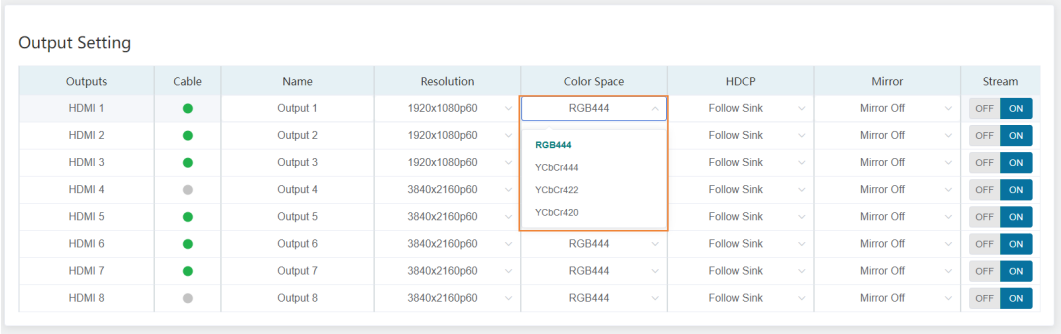
② **Cable:** It indicates the connection status of output ports. When the output port is connected to the display, it lights up Green, otherwise, it lights up Gray.

③ **Name:** The output channel's name. You can modify it by entering the corresponding name in the input box (max length: 32 characters).

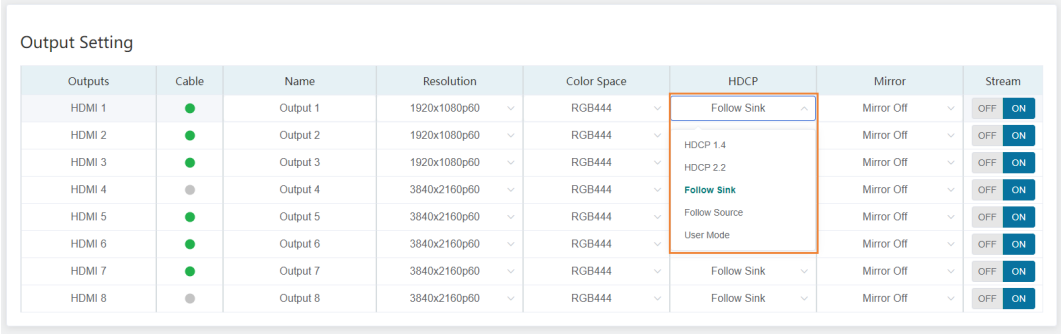
④ **Resolution:** Set the video resolution for current output. Click the drop-down menu and set the resolution you need. There are 16 options to select from. If you select AUTO, it will output the proper video resolution according to the EDID of the display device.



⑤ **Color Space:** Set the color space for current output. Click the drop-down menu and select the option required. There are four options to select from.



⑥ **HDCP:** Set the HDCP version that the current output device supports.

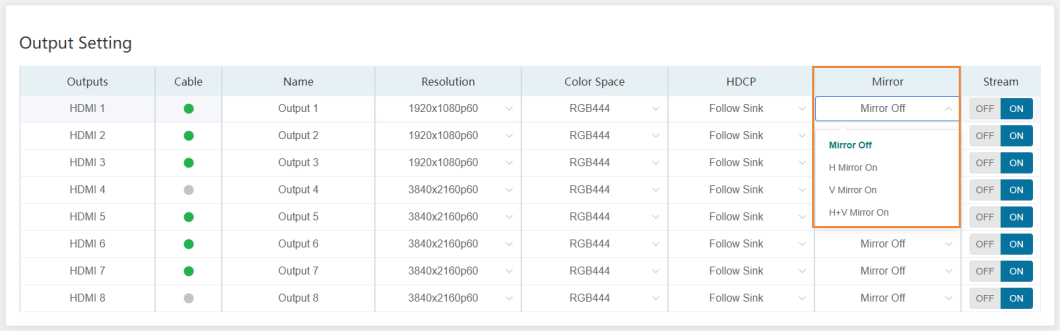


There are five options to select from:

- **HDCP 1.4:** HDCP 1.4 compliant.
- **HDCP 2.2:** HDCP 2.2 compliant.
- **Follow Sink:** HDCP version follows the corresponding display device.
- **Follow Source:** HDCP version follows the assigned input source.
- **User Mode:** User-defined mode.

⑦ **Mirror:** Click the drop-down menu and set the mirror mode for current output.
There are four options to select from:

- **Mirror Off:** Turn off the mirror funciton.
- **H Mirror On:** Set horizontal mirror for the output signal.
- **V Mirror On:** Set vertical mirror for the output signal.
- **H+V Mirror On:** Set horizontal and vertical mirror for the output signal.



⑧ **Stream:** Click ON/OFF button to turn on/off the output stream.

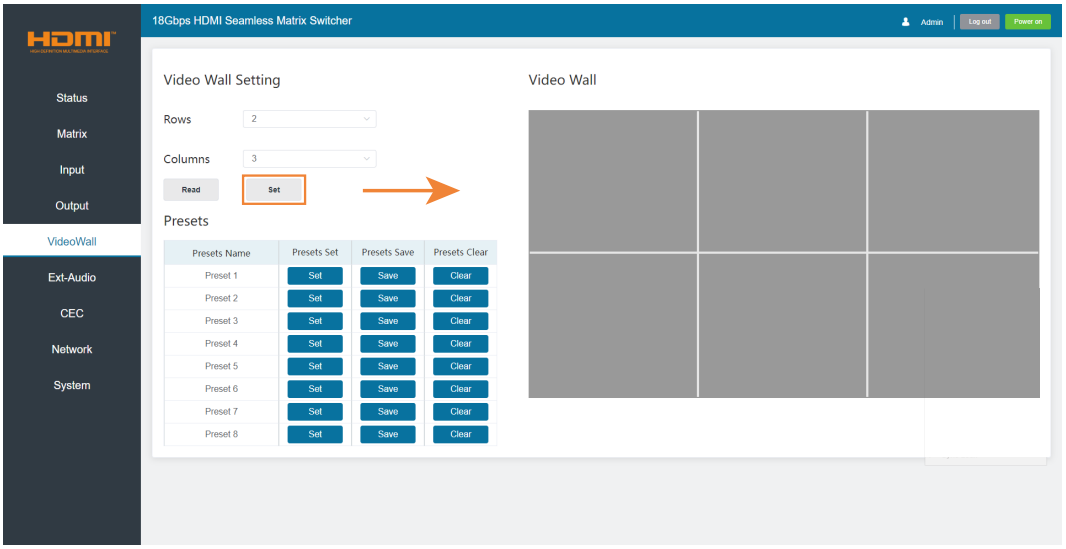
■ Video Wall Page

You can do the following operations on the Video Wall page:

① **Video Wall Setting:** Set the splicing mode, such as 1x8, 2x3. The range of Rows and Columns is 1~8. Click Read button to refresh the system setting. Click Set button to confirm current setting.

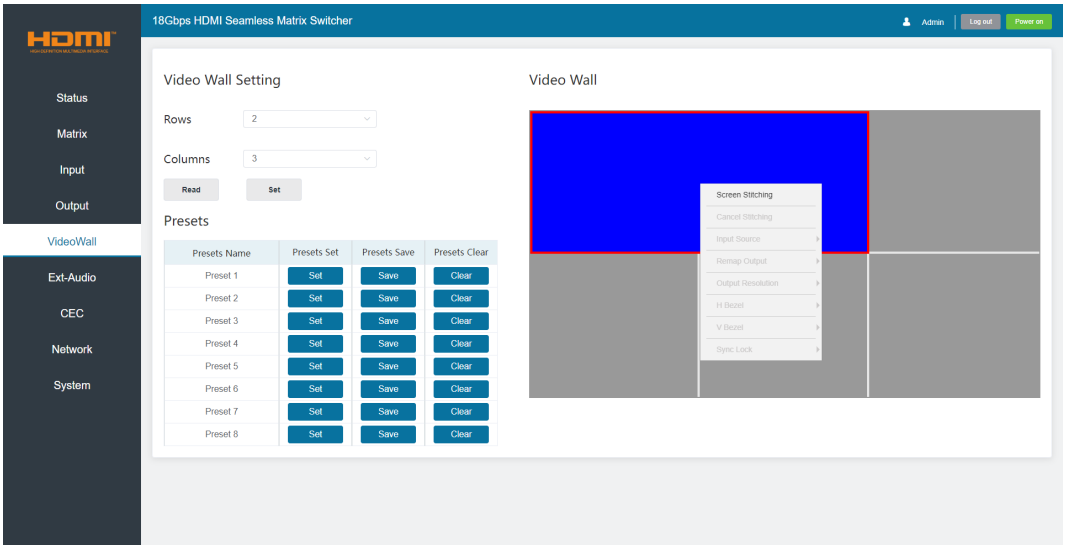
② **Presets:** Set, save or clear the presets. You can rename it if needed, and the max length of a preset name is 32 characters.

③ **Video Wall:** After setting rows and columns, click Set button and it will be displayed in Video Wall area. Aspect ratio of each window is 16:9.



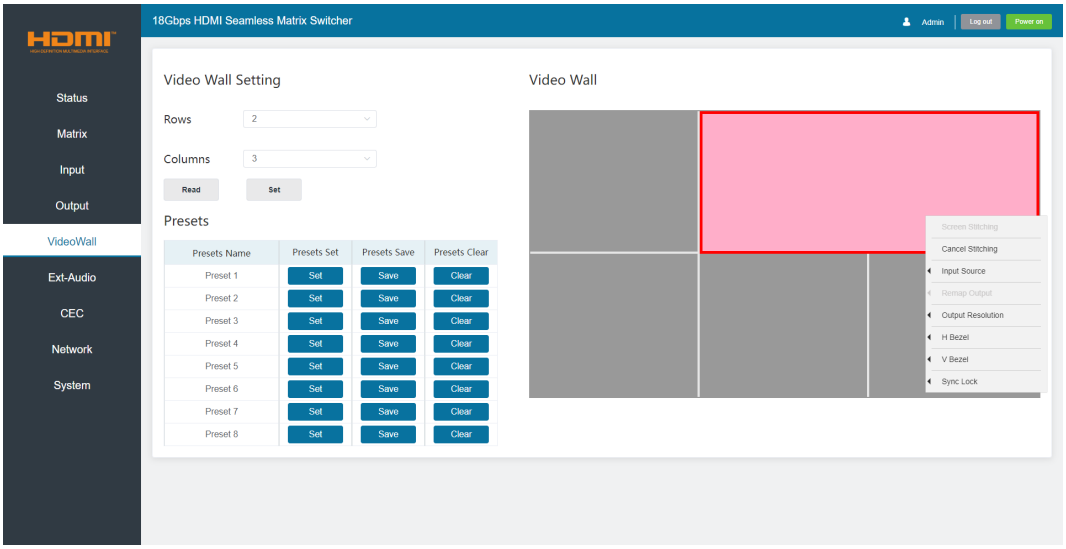
In Video Wall area, you can drag the mouse and choose the adjacent screens to splice. The splicing screen is distinguished by a color automatically.

Note: Before splicing, it is necessary to assign each spliced screen to the output port via right-click menu.



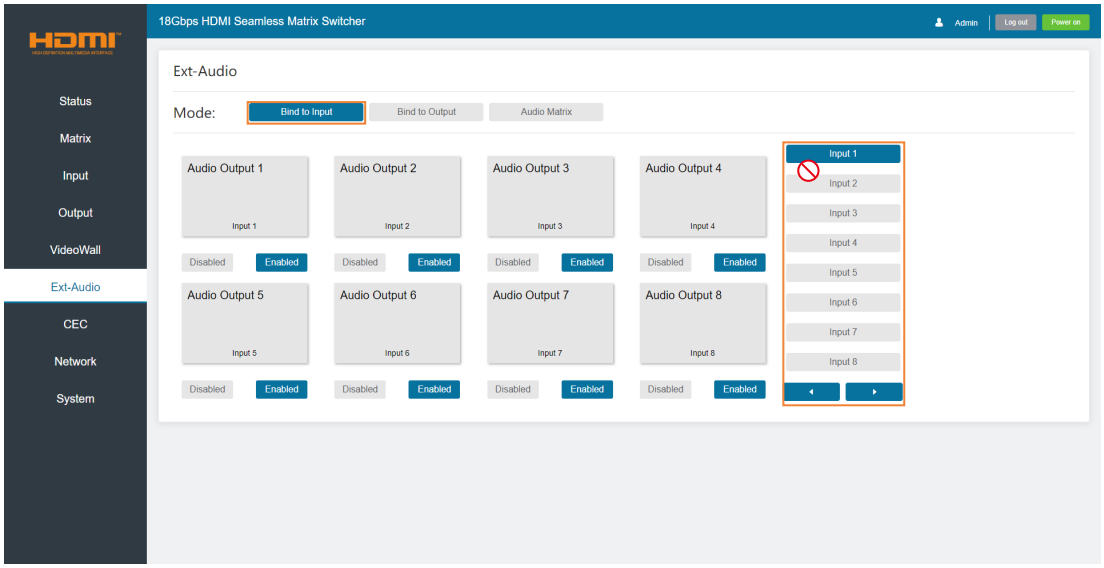
To the splicing screens, you can configure them at the same time using the right-click menu.

- Cancel the screen spicing.
- Select an input source.
- Specify an output resolution.
- Adjust horizontal and vertical bezel.
- Set the screens output synchronization.

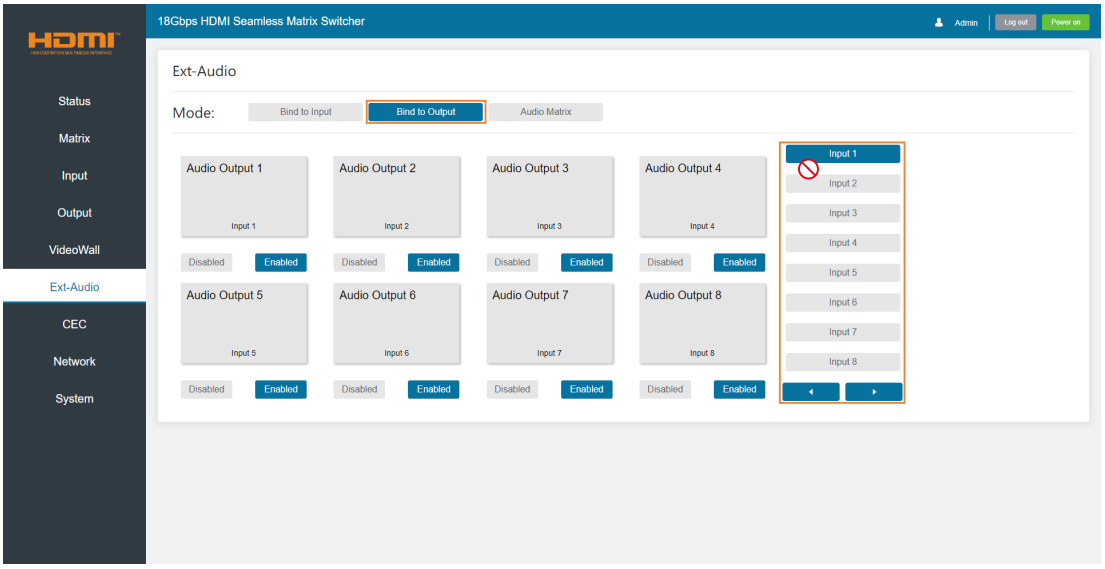


■ Ext-Audio Page

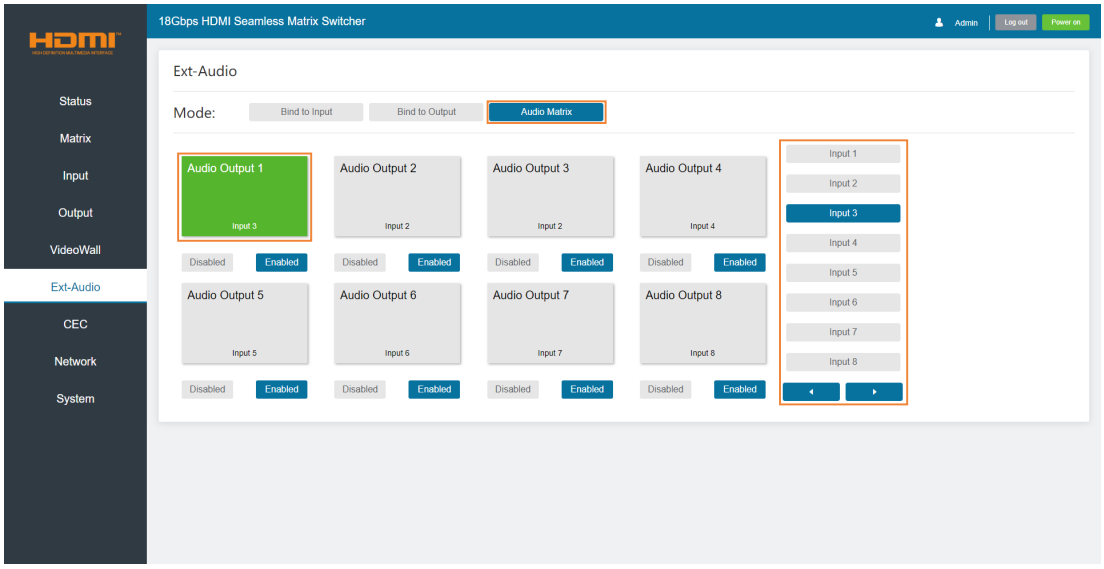
You can set the audio mode on the Ext-Audio page. There are three modes: Bind to Input, Bind to Output and Audio Matrix.



Bind to Input: The Audio Output follows the HDMI Input. And there is a consistent one-to-one match between each HDMI input and audio output.
Click Enable/Disable button to turn on/off the audio channel.
In this mode, the input sources can't be selected.



Bind to Output: The Audio Output follows the HDMI Output. For example, if the HDMI Input 3 is assigned to the HDMI Output 1, the audio of AUDIO Output 1 is from HDMI Input 3.
Click Enable/Disable button to turn on/off the audio channel.
In this mode, the input sources can't be selected.



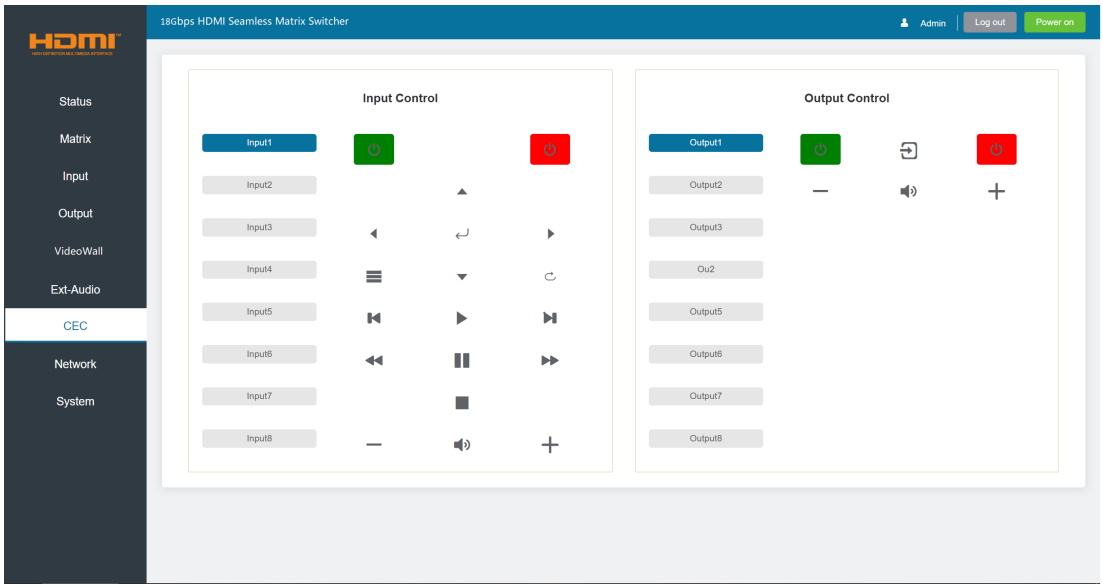
Audio Matrix: This mode allows you to matrix the extracted audio independently. Click on any Audio Out, and then select any input source on the right which will appear below the selected audio out.
Click Enable/Disable button to turn on/off the corresponding audio channel.

■ CEC Page

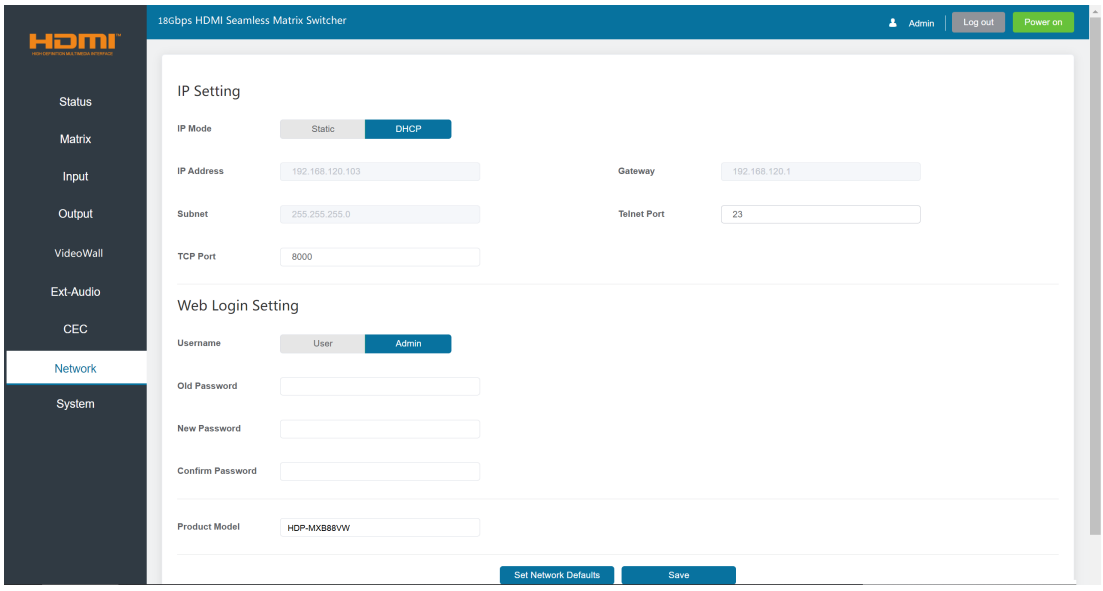
You can perform CEC management on this page. Inputs and Outputs can be controlled by clicking on the corresponding icons.

① **Input Control:** Select the input source on the left, and then click on the icons to power on, power off, return, switch, pause, fast-forward, fast-back, mute, unmute, etc.

② **Output Control:** Select the output on the left, and then click on the icons to control the operation of the display, such as power on/off, volume +/-, etc.



■ Network Page

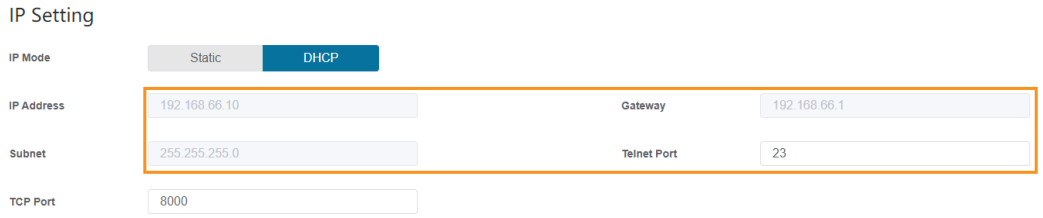


You can do the following operations on the Network page:

① **Modify Network Setting:**

Modify the IP Mode/IP Address/Gateway/Subnet Mask/Telnet Port as required, click “Save” to save the settings, and then it will come into effect.

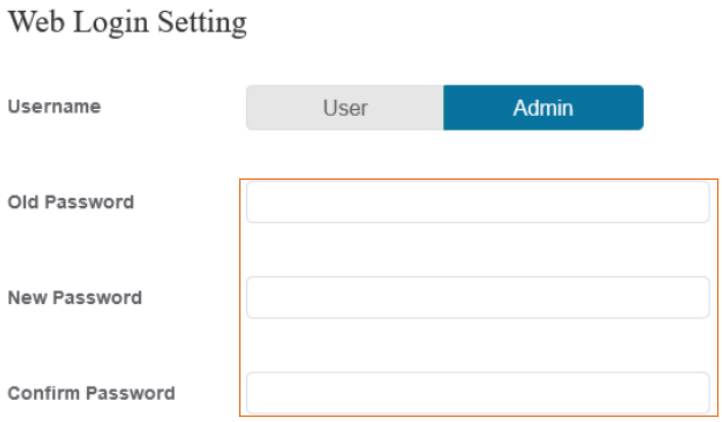
If the Mode is “Static”, you can manually set the IP Address/Gateway/Subnet/Telnet Port as required.

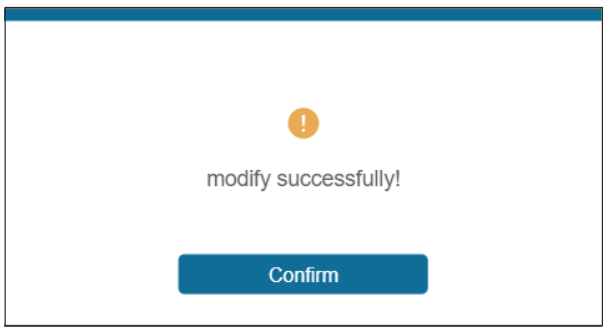


If the Mode is “DHCP”, it will be filled with the IP Address assigned by the router automatically. You can't modify it now.

② **Modify User Password:**

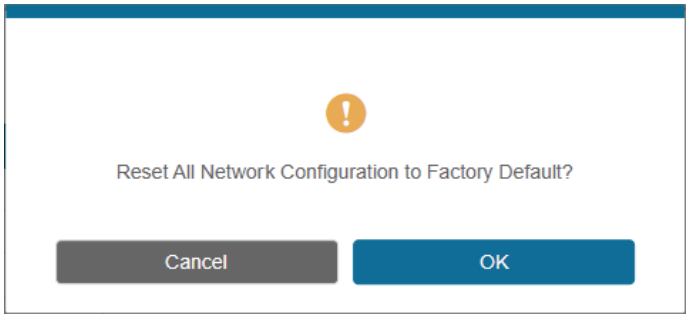
Click the “Admin” button, enter the correct Old Password, New Password, and Confirm Password, and then click “Save”. After successful modification, there will be a prompt, as shown in the following figure:





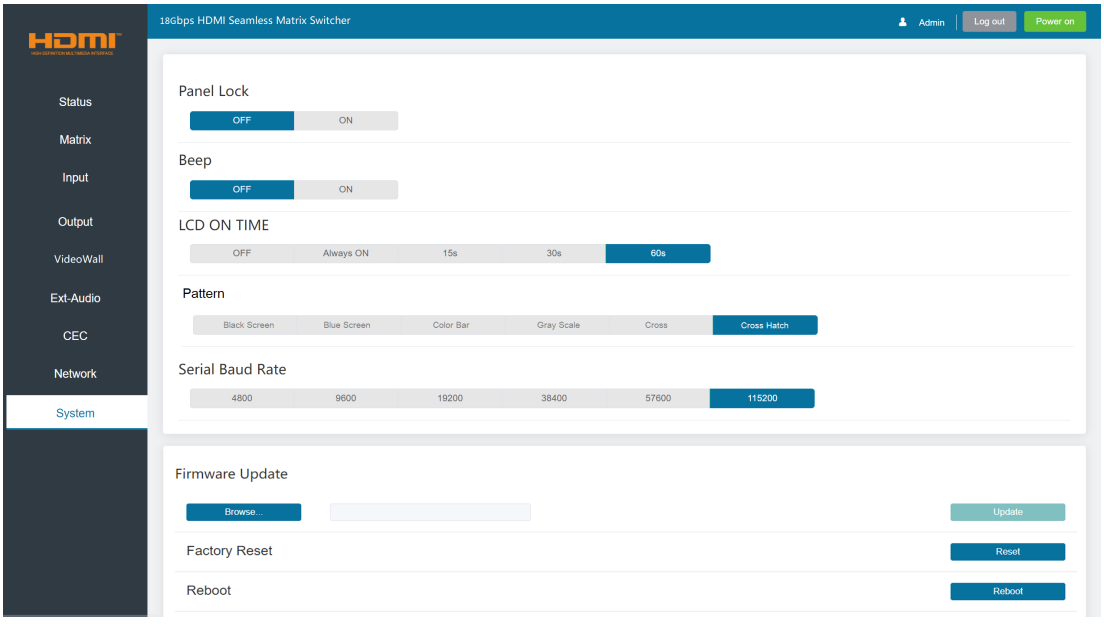
Note: Input rules for changing passwords:
(1) The password can't be empty.
(2) New Password can't be the same as Old Password.
(3) New Password and Confirm Password must be the same.

③ **Set the Default Network:**
Click "Set Network Defaults", there will be a prompt, as shown in the following figure:



Click "OK" to search the IP Address again. After searching is completed, it will switch to the login page, the default network setting is completed.

■ System Page



You can do the following operations on the System page:

① **Panel Lock:** Click “ON/OFF” to lock/unlock panel buttons. “ON” indicates that panel buttons are unavailable; “OFF” indicates panel buttons are available.

② **Beep:** Turn on/off the beep.

③ **LCD On Time:** You can set the display duration time (OFF/Always ON/15s/30s/60s).

④ **Pattern:** Click to select 6 patterns to test the display effect of the display device.

⑤ **Serial Baud Rate:** Click the value to set the Serial Baud Rate.

⑥ **Firmware Update:** Click “Browse” to select the update file, and then click “Update” to complete firmware update.

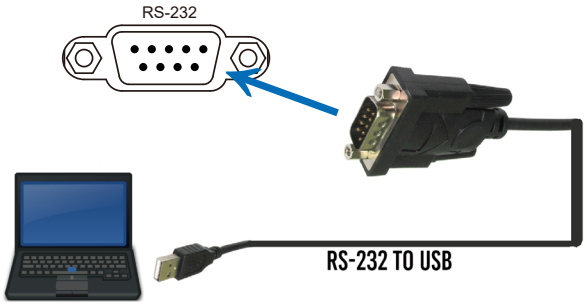
⑦ **Factory Reset:** Reset the unit to factory defaults.

⑧ **Reboot:** Reboot the unit.

Note: After reset/reboot, it will switch to the login page.

RS-232 Command Control

The product also supports RS-232 control. Connect the RS-232 port on Matrix to a PC with the provided USB to RS-232 serial cable. The connection method is as follows:



Then open a Serial Command tool on PC to send RS-232 commands to control the product. The command list of the product is as below.

ASCII Commands				
Serial port protocol. Baud rate: 115200, Data bits: 8, Stop bits:1, Check bit: 0				
x,y,z, XXX are parameters Error Code describe: E00 -> unknown command, E01 -> parameter out of range, E02 -> get the error edid data				
Command Code	**Function Description**	**Example**	**Feedback**	**Default**
System Setting				
help!	List all commands	help!		
r status!	Get device current status	r status!	get the unit all status: power, beep, lock, in/out connection, video/audio crosspoint, edid, scaler, network status	
r type!	Get device model	r type!	HDP-MXB88VW	
r fw version!	Get Firmware version	r fw version!	mcu fw version :1.00.05 WebGUI version :2.00.07 cpld version :1.00.03 audio version :1.00.01 key version :0.00.00	
s power z!	Power on/off the device, z=0~1 (z=0 power off, z=1 power on)	power 1!	power on system initializing... cpld fw: 1.00.03 audio fw: 1.00.01 mcu fw version :1.00.05 WebGUI version :2.00.07 key version :0.00.00 initialization finished! search for ip,please wait ...!	

RS-232 Command Control

Command Code	Function Description	Example	Feedback	Default
r power!	Get current power state	r power!	power on /power off	
s beep z!	Enable/disable buzzer function, z=0~1 (z=0 beep off, z=1 beep on)	s beep 1!	beep on beep of	beep of
r beep!	Get buzzer state	r beep!	beep on / beep of	
s lock z!	Lock/unlock front panel button, z=0~1 (z=0 lock off, z=1 lock on)	s lock 1!	panel button lock on panel button lock of	panel button lock of
r lock!	Get panel button lock state	r lock!	panel button lock on/of	
s lcd on time z!	Set lcd screen remain on time, z=0~4 (0:off 1:always, 2:15s, 3:30s, 4:60s)	s lcd on time 3!	lcd on 30 seconds	lcd on 30 seconds
r lcd mode!	Get the backlight status of lcd screen	r lcd mode!	lcd always on	
s logo1 **********!	Set the logo name displayed on the first line of lcd screen, the max character is 16	s logo1 Matrix Switch!	logo1:Matrix Switch	
s reboot!	Reboot the device	s reboot!	reboot... system initializing... cpld fw: 1.00.03 audio fw: 1.00.01 mcu fw version: 1.00.05 WebGUI version: 2.00.07 key version: 0.00.00 initialization finished! search for ip,please wait ...!	
s baud rate x!	Set RS232 baudrate x=1~6 (1:115200, 2:57600, 3:38400, 4:19200, 5:9600, 6:4800)	s baud rate 1!	s baud rate 115200	115200
s fan x y!	Set fans on/off (x=0~2, y=0~1) x=0, all fans x=1, side fans x=2, top fans y=0, off y=1, on	s fan 2 0!	set top fans of	side fans:off top fans:on
s reset!	Reset to factory defaults	s reset!	reset to factory defaults system initializing... cpld fw: 1.00.03 audio fw: 1.00.01 mcu fw version: 1.00.05 WebGUI version: 2.00.07 key version: 0.00.00 initialization finished! search for ip, please wait ...!	
r device sn!	Get device serial number	r device sn!	serial number:12345634534	

Command Code	Function Description	Example	Feedback	Default
Output Setting				
s output x res y!	Set output x resolution (x=0~8 (0=all output), y=1~16) 1. 4096x2160p60, 2. 4096x2160p50, 3. 3840x2160p60, 4. 3840x2160p50, 5. 3840x2160p30, 6. 1920x1080p60, 7. 1920x1080p50, 8. 1920x1080i60, 9.1920x1080i50, 10. 1920x1200p60rb, 11.1360x768p60, 12.1280x800p60, 13.1280x720p60, 14.1280x720p50, 15.1024x768p60, 16. auto	s output 1 res 3!	output 1 resolution: 3840x2160p60	**3840x2160p60**
r output x res!	Get output x resolution (y=0~8 (0=all output))	r output 1 res!	output 1 resolution: 3840x2160p60	
s output x csc y!	Set output x color space (x=0~8 (0=all output), y=1~4) y=1. rgb444 y=2. ycbcr444 y=3. ycbcr422 y=4. ycbcr420	s output 1 csc 1!	output 1 csc: rgb444	rgb444
r output x csc!	Get output x color space status. (x=0~8 (0=all output))	r output 1 csc!	output 1 csc: rgb444	
s output x hdcp y!	Set output hdcp (x=0~8 (0=all output), y=1~5) y=1. hdcp 1.4 y=2. hdcp 2.2 y=3. follow sink y=4. follow source y=5. user mode	s output 1 hdcp 1!	output 1 hdcp: hdcp 1.4	follow sink
r output x hdcp!	Get output x hdcp status. (x=0~8 (0=all output))	r output 1 hdcp!	output 1 hdcp: hdcp 1.4	
s output x mirror y!	Set output y mirror mode (x=0~8(0=all output),y=0~3) y=0. mirror off y=1. h mirror on y=2. v mirror on y=3. h+v mirror on	s output 1 mirror 0!	output 1 mirror of	output 1 mirror off output 2 mirror off output 3 mirror off output 4 mirror off output 5 mirror off output 6 mirror off output 7 mirror off output 8 mirror of

RS-232 Command Control

Command Code	Function Description	Example	Feedback	Default
Output Setting				
r output x mirror!	Get output x mirror status (x=0~8 (0=all output))	r output 1 mirror!	output 1 h mirror off	
s output x stream y!	Set output x stream enable/disable (x=0~8 (0=all output), y=0~1) y=0. stream disable y=1. stream enable	s output 1 stream 1!	output 1 stream: enable	enable
r output x stream!	Get output x stream status. (x=0~8 (0=all output))	r output 1 stream!	output 1 stream: enable	
s output bg x!	Set output no signal background display mode (x=1~6) x=1. black screen x=2. blue screen x=3. color bar x=4. gray scale x=5. cross x=6. cross hatch	s output bg 1!	output background: black screen	black screen
r output bg!	Get output no signal background display mode	r output bg!	output background: black screen	
EDID Setting				
s input x edid z!	Set hdmi input x edid mode (x=0~8 (0=all input), z=1~22) z=1. 4k60, 2.0ch z=15. copy out1 z=2. 4k60, 5.1ch z=16. copy out2 z=3. 4k60, 7.1ch z=17. copy out3 z=4. 4k30, 2.0ch z=18. copy out4 z=5. 4k30, 5.1ch z=19. copy out5 z=6. 4k30, 7.1ch z=20. copy out6 z=7. 1080p, 2.0ch z=21. copy out7 z=8. 1080p, 5.1ch z=22. copy out8 z=9. 1080p, 7.1ch z=10. wuxga, 2.0ch z=11. 768p, 2.0ch z=12. xga, 2.0ch z=13. user1 z=14. user2	s input 1 edid 1!	input 1 edid: 4k60, 2.0ch	4k60, 2.0ch
r input x edid!	Get input x edid mode (x=0~8 (0=all input))	r input 1 edid!	input 1 edid: 4k60, 2.0ch	

RS-232 Command Control

Command Code	Function Description	Example	Feedback	Default
Video Matrix Setting				
s display mode x!	Set output display mode (x=0~1) x=0 matrix mode x=1 video wall mode	s display mode 0!	display mode: matrix	**matrix**
r display mode!	Get output display mode	r display mode!	display mode: matrix	
s output x in source y!	Route input source to output x (x=0~8, y=1~8) x=0. output all x=1. output 1 x=2. output 2 x=3. output 3 x=4. output 4 x=5. output 5 x=6. output 6 x=7. output 7 x=8. output 8 y=1. input1 y=2. input2 y=3. input3 y=4. input4 y=5. input5 y=6. input6 y=7. input7 y=8. input8	s output 1 in source 1!	output 1->input 1	output 1->input 1 output 2->input 2 output 3->input 3 output 4->input 4 output 5->input 5 output 6->input 6 output 7->input 7 output 8->input 8
r output x in source!	Get output x selected input source (x=0~8 (0=all output))	r output 1 in source!	output 1->input 1	
save mx preset z!	Save matrix state to preset z, z=1~8	save mx preset 1!	save to preset 1	
recall mx preset z!	Recall matrix preset z scenarios, z=1~8	recall mx preset 1!	recall from preset 1	
clear mx preset z!	Clear matrix preset z scenarios, z=1~8	clear mx preset 1!	clear preset 1	
r mx preset z!	Get matrix preset z information, z=1~8	r mx preset 1!	video/audio crosspoint	
Video Wall Setting				
create vw screen row x col y!	Create video wall screen rows and columns layouts (x=1~8, y=1~8)	create vw screen row 2 col 4!	create vw screen 2x4	
s screen x output y!	Set hdmi output y to screen x (x=1~8, y=1~8)	s screen 1 output 1!	hdmi output1->screen 1	hdmi output 1->screen 1 hdmi output 2->screen 2 hdmi output 3->screen 3 hdmi output 4->screen 4 hdmi output 5->screen 5 hdmi output 6->screen 6 hdmi output 7->screen 7 hdmi output 8->screen 8
s vw group z row x col y!	Set video wall group z rows and columns (z<=1~4, x=1~8, y=1~8, x*y<=8)	s vw group 1 row 1 col 2!	vw group 1 row 1 col 2!	

RS-232 Command Control

Command Code	Function Description	Example	Feedback	Default
Video Wall Setting				
s vw group z screen abcd!	Set video wall group z screen number (z<=1~4)	s vw group 2 screen 2367!	vw group 2 screen 2367!	
s vw group z source x!	Set video wall group z select input source (z<=1~4, x<=1~8)	s vw group 1 source 1!	vw group 1 source 1!	
s vw group z hbezel x!	Set video wall group z horizontal bezel (z<=1~4, x=0~10)	s vw group 1 hbezel 0!	video wall group 1 h bezel: 0	video wall group 1 h bezel: 0
s vw group z vbezel y!	Set video wall group z vertical bezel (z<=1~4, x=0~10)	s vw group 1 vbezel 0!	video wall group 1 v bezel: 0	video wall group 1 v bezel: 0
s vw group z out res x!	Set video wall group z output resolution (z=1~4, x=1~15) 1. 4096x2160p60, 2. 4096x2160p50, 3. 3840x2160p60, 4. 3840x2160p50, 5. 3840x2160p30, 6. 1920x1080p60, 7. 1920x1080p50, 8. 1920x1080i60, 9. 1920x1080i50, 10. 1920x1200p60rb, 11. 1360x768p60, 12. 1280x800p60, 13. 1280x720p60, 14. 1280x720p50, 15. 1024x768p60	s vw group 1 out res 6!	video wall group 1 resolution: 1920x1080p60	1920x1080p60
delete vw group z!	Delete video wall group z config (z=1~4)	delete vw group 1!	delete vw group 1!	
r vw info!	Get current video wall scene information	r vw info!	========== ========== ========== video wall info: row: 2 col: 4 output: 1 2 3 4 5 6 7 8 input: 4 4 4 4 4 4 4 4 mosaic number:1 mosaic id:1 mosaic row:2 mosaic col:2 mosaic src:4 mosaic res: 3840x2160p60 mosaic screen: 1 2 5 6 B85	

Command Code	Function Description	Example	Feedback	Default
Video Wall Setting				
save vw preset z!	Save video wall state to preset z, z=1~8	save vw preset 1!	save to preset 1	
recall vw preset z!	Recall video wall preset z scenarios, z=1~8	recall vw preset 1!	recall from preset 1	
clear vw preset z!	Clear video wall preset z scenarios, z=1~8	clear vw preset 1!	clear preset 1	
r vw preset z!	Get video wall preset z information, z=1~8	r vw preset 1!	video/audio crosspoint	
EXT- Audio Setting				
s output x exa y!	Set output x ext-audio enable/disable (x=0~8 (0=all output), y=0~1) y=0. ext-audio disable y=1. ext-audio enable	s output 1 exa 1!	output 1 ext-audio: enable	enable
r output x exa!	Get output x ext-audio enable/disable status. (x=0~8 (0=all output))	r output 1 exa!	output 1 ext-audio: enable	
s output exa mode x!	Set output ext-audio mode (x=0~2) x=0. bind to input mode x=1. bind to output mode x=2. matrix mode	s output exa mode 0!	output ext-audio moe: bind to input	bind to output
r output exa mode!	Get output ext-audio mode	r output exa mode!	output ext-audio moe: bind to input	
s output x exa in source y!	Route input source audio y to output ext-audio x (x=0~8(0=all output), y=0~8) y=1. input1 y=2. input2 y=3. input3 y=4. input4 y=5. input5 y=6. input6 y=7. input7 y=8. input8	s output 1 exa in source 1!	output 1 ext-audio ->input 1	output 1 ext-audio->input 1 output 2 ext-audio->input 2 output 3 ext-audio->input 3 output 4 ext-audio->input 4 output 5 ext-audio->input 5 output 6 ext-audio->input 6 output 7 ext-audio->input 7 output 8 ext-audio->input 8
r output y exa in source!	Get output y ext-audio selected input source (y=0~8 (0=all output))	r output 0 exa in source!	output 1 ext-audio->input 1 output 2 ext-audio->input 2 output 3 ext-audio->input 3 output 4 ext-audio->input 4 output 5 ext-audio->input 5 output 6 ext-audio->input 6 output 7 ext-audio->input 7 output 8 ext-audio->input 8	

RS-232 Command Control

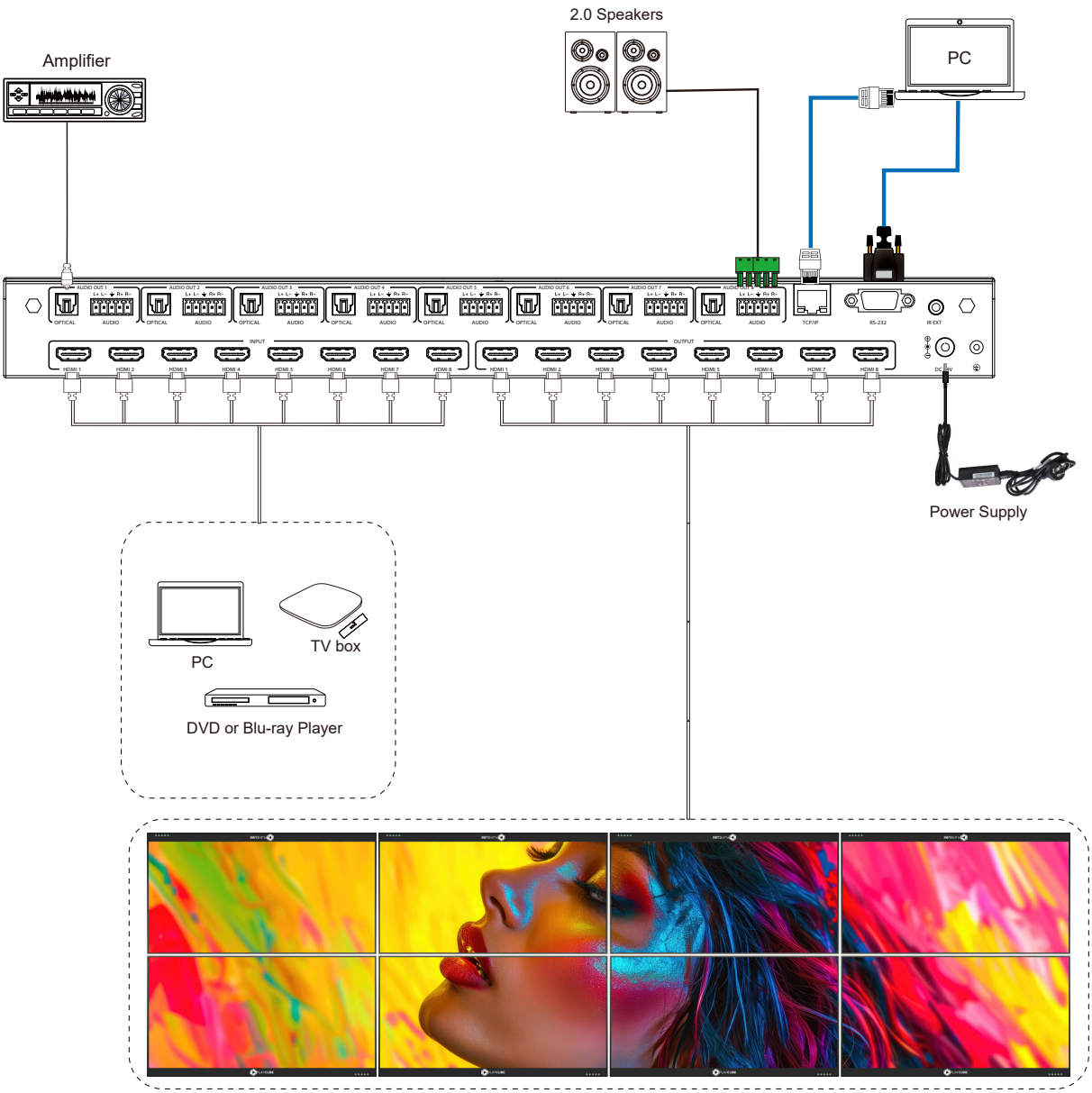
Command Code	Function Description	Example	Feedback	Default
CEC Setting				
s cec in x on!	Set input x power on by cec, x=0~8 (0=all input)	s cec in 1 on!	input 1 power on	
s cec in x off!	Set input x power off by cec, x=0~8 (0=all input)	s cec in 1 off!	input 1 power off	
s cec in x menu!	Set input x open menu by cec, x=0~8 (0=all input)	s cec in 1 menu!	input 1 open menu	
s cec in x back!	Set input x back operation by cec, x=0~8 (0=all input)	s cec in 1 back!	input 1 back operation	
s cec in x up!	Set input x menu up operation by cec, x=0~8 (0=all input)	s cec in 1 up!	input 1 menu up operation	
s cec in x down!	Set input x menu down operation by cec, x=0~8 (0=all input)	s cec in 1 down!	input 1 menu down operation	
s cec in x left!	Set input x menu left operation by cec, x=0~8 (0=all input)	s cec in 1 left!	input 1 menu left operation	
s cec in x right!	Set input x menu right operation by cec, x=0~8 (0=all input)	s cec in 1 right!	input 1 menu right operation	
s cec in x enter!	Set input x menu enter by cec, x=0~8 (0=all input)	s cec in 1 enter!	input 1 menu enter operation	
s cec in x play!	Set input x play by cec, x=0~8 (0=all input)	s cec in 1 play!	input 1 play operation	
s cec in x pause!	Set input x pause by cec, x=0~8 (0=all input)	s cec in 1 pause!	input 1 pause operation	
s cec in x stop!	Set input x stop by cec, x=0~8 (0=all input)	s cec in 1 stop!	input 1 stop operation	
s cec in x rew!	Set input x rewind by cec, x=0~8 (0=all input)	s cec in 1 rew!	input 1 rewind operation	
s cec in x mute!	Set input x volume mute by cec, x=0~8 (0=all input)	s cec in 1 mute!	input 1 volume mute	
s cec in x vol-!	Set input x volume down by cec, x=0~8 (0=all input)	s cec in 1 vol-!	input 1 volume down	
s cec in x vol+!	Set input x volume up by cec, x=0~8 (0=all input)	s cec in 1 vol+!	input 1 volume up	
s cec in x ff!	Set input x fast forward by cec, x=0~8 (0=all input)	s cec in 1 ff!	input 1 fast forward operation	
s cec in x previous!	Set input x previous by cec, x=0~8 (0=all input)	s cec in 1 previous!	input 1 previous operation	
s cec in x next!	Set input x next by cec, x=0~8 (0=all input)	s cec in 1 next!	input 1 next operation	
s cec hdmi out y on!	Set hdmi output y power on by cec, y=0~8 (0=all hdmi output)	s cec hdmi out 1 on!	hdmi output 1 power on	

Command Code	Function Description	Example	Feedback	Default
CEC Setting				
s cec hdmi out y off!	Set hdmi output y power off by cec, y=0~8 (0=all hdmi output)	s cec hdmi out 1 off!	hdmi output 1 power off	
s cec hdmi out y mute!	Set hdmi output y volume mute by cec, y=0~8 (0=all hdmi output)	s cec hdmi out 1 mute!	hdmi output 1 volume mute	
s cec hdmi out y vol-!	Set hdmi output y volume down by cec, y=0~8 (0=all hdmi output)	s cec hdmi out 1 vol-!	hdmi output 1 volume down	
s cec hdmi out y vol+!	Set hdmi output y volume up by cec, y=0~8 (0=all hdmi output)	s cec hdmi out 1 vol+!	hdmi output 1 volume up	
s cec hdmi out y active!	Set hdmi output y active source by cec, y=0~8 (0=all hdmi output)	s cec hdmi out 1 active!	hdmi output 1 active source	
Network Setting				
r ipconfig!	Get the current ip configuration	r ipconfig!	ip mode: static ip: 192.168.0.100 subnet mask: 255.255.255.0 gateway: 192.168.0.1 tcp/ip port=8000 telnet port=23 mac address: 00:1c:91:03:80:01	
r mac addr!	Get network mac address	r mac addr!	mac address: 00:1c:91:03:80:01	
s ip mode z!	Set network ip mode to static ip or dhcp, z=0~1 (z=0 static, z=1 dhcp)	s ip mode 0!	set ip mode:static. (please use "s net reboot!" command or repower device to apply new config!)	
r ip mode!	Get network ip mode	r ip mode!	ip mode: static	
s ip addr xxx.xxx.xxx.xxx!	Set network ip address	s ip addr 192.168.0.100!	set ip address:192.168.0.100 (please use "s net reboot!" command or repower device to apply new config!) dhcp on, device can't config static address, set dhcp off first.	
r ip addr!	Get network ip address	r ip addr!	ip address:192.168.0.100	
s subnet xxx.xxx.xxx.xxx!	Set network subnet mask	s subnet 255.255.255.0!	set subnet mask:255.255.255.0 (please use "s net reboot!" command or repower device to apply new config!) dhcp on, device can't config subnet mask, set dhcp off first.	
r subnet!	Get network subnet mask	r subnet!	subnet mask:255.255.255.0	

RS-232 Command Control

Command Code	Function Description	Example	Feedback	Default
Network Setting				
s gateway xxx.xxx.xxx.xxx!	Set network gateway	s gateway 192.168.0.1!	set gateway:192.168.0.1 (please use “s net reboot!” command or repower device to apply new config!) dhcp on, device can’t config gateway, set dhcp off first.	
r gateway	Get network gateway	r gateway	gateway:192.168.0.1	
s tcp/ip port x!	Set network tcp/ip port (x=1~65535)	s tcp/ip port 8000!	set tcp/ip port:8000	
r tcp/ip port!	Get network tcp/ip port	r tcp/ip port!	tcp/ip port:8000	
s telnet port x!	Set network telnet port (x=1~65535)	s telnet port 23!	set telnet port:23	
r telnet port!	Get network telnet port	r telnet port!	telnet port:23	
s net reboot!	Reboot network modules	s net reboot!	network reboot... ip mode: static ip: 192.168.0.100 subnet mask: 255.255.255.0 gateway: 192.168.0.1 tcp/ip port=8000 telnet port=23 mac address: 00:1c:91:03:80:01	

Application Example



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HIGH-DEFINITION MULTIMEDIA INTERFACE

FAQs & Troubleshooting

1. **I am unable to access the WebGUI. I have the Matrix connected to my PC through a CAT cable.**
To access the WebGUI, your PC IP should be in the same segment as the matrix. 192.168.0.100 is the default Matrix IP. You need to set the PC IP to 192.168.0.120. Once changed, you should be able to access the WebGUI by following the instructions in the manual. Please scan the QR code below for a video.

2. **How can I flip the image on the top TVs to reduce the bezel?**
You can use the H Mirror and V Mirror options in the WebGUI to flip the image. Please refer to Page 19.

Still have some questions?
Please feel free to contact us at: info@orei.com. OR Fill out the form on the 'Contact Us' page on the website.
Our team will be more than happy to help you.

OREI Live Technical Support Hours
US team (US/Canada/Mexico): Monday-Friday, 9 a.m. - 5 p.m. Central Time **Support Email** - info@orei.com |**Support Number** - 877-290-5530

8x8 4K Seamless Matrix with Video Wall

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