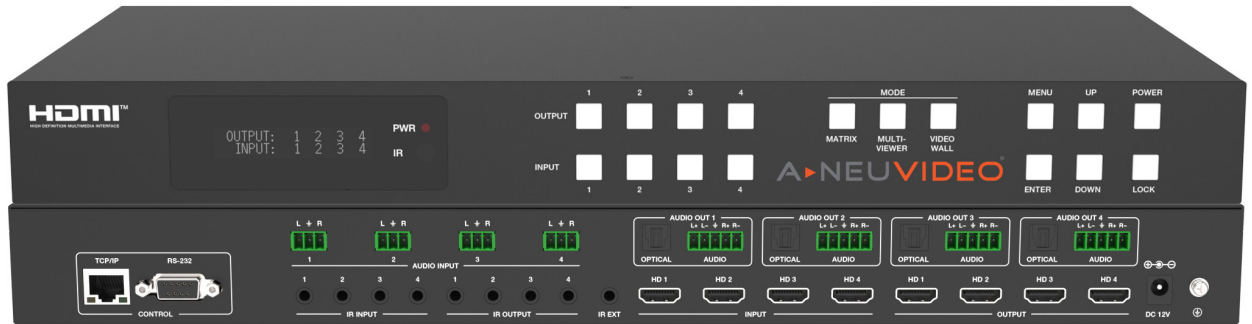# ANI-PIP-44UHD

4x4 4K60 UHD HDR Quad/PiP/PoP Multiviewer Seamless Video Switcher

PACKAGE CONTENTS

Before attempting to use this unit, please check the packaging and make sure the following items are contained in the box:

- 4K60 4x4 Seamless Matrix
- 12V/2.5A Locking Power Adapter
- (5) 12V IR Wideband Receiver Cable (1.5M)
- (4) IR Blaster Cable (1.5M)
- RS-232 Serial Cable (1.5M, male to female head)
- (4) 5pin-3.81mm Phoenix Connector
- (4) 3pin-3.81mm Phoenix Connector
- (8) Machine Screw (KM3*6)
- (2) Mounting Ear

A-NeuVideo.com
Frisco, Texas 75036

4K @60Hz UHD

A▸NEUVIDEO®

SAFETY INFORMATION

1. To ensure the best results from this product, please read this manual and all other documentation before operating your equipment. Retain all documentation for future reference.

2. Follow all instructions printed on unit chassis for proper operation.

3. To reduce the risk of fire, do not spill water or other liquids into or on the unit, or operate the unit while standing in liquid.

4. Make sure power outlets conform to the power requirements listed on the back of the unit. Keep unit protected from rain, water and excessive moisture.

5. Do not attempt to clean the unit with chemical solvents or aerosol cleaners, as this may damage the unit. Dust with a clean dry cloth.

6. Do not use the unit if the electrical power cord is frayed or broken. The power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords and plugs, convenience receptacles, and the point where they exit from the appliance.

7. Do not force switched or external connections in any way. They should all connect easily, without needing to be forced.

8. Always operate the unit with the AC ground wire connected to the electrical system ground. Precautions should be taken so that the means of grounding of a piece of equipment is not defeated.

9. AC voltage must be correct and the same as that printed on the rear of the unit. Damage caused by connection to improper AC voltage is not covered by any warranty.

10. Turn power off and disconnect unit from AC current before making connections.

11. Never hold a power switch in the "ON" position.

12. This unit should be installed in a cool dry place, away from sources of excessive heat, vibration, dust, moisture and cold. Do not use the unit near stoves, heat registers, radiators, or other heat producing devices.

13. Do not block fan intake or exhaust ports. Do not operate equipment on a surface or in an environment which may impede the normal flow of air around the unit, such as a bed, rug, carpet, or completely enclosed rack. If the unit is used in an extremely dusty or smoky environment, the unit should be periodically "blown free" of foreign dust and matter.

14. To reduce the risk of electric shock, do not remove the cover. There are no user serviceable parts inside. Refer all servicing to qualified service personnel. There are no user serviceable parts inside.

15. When moving the unit, disconnect Input ports first, then remove the power cable; finally, disconnect the interconnecting cables to other devices.

16. Do not drive the Inputs with a signal level greater than that required to drive equipment to full Output.

17. The equipment power cord should be unplugged from the outlet when left unused for a long period of time.

18. Save the carton and packing material even if the equipment has arrived in good condition. Should you ever need to ship the unit, use only the original factory packing.

19. Service Information Equipment should be serviced by qualified service personnel when:

    A. The power supply cord or the plug has been damaged.
    B. Objects have fallen, or liquid has been spilled into the equipment.
    C. The equipment has been exposed to rain.
    D. The equipment does not appear to operate normally, or exhibits a marked change in performance.
    E. The equipment has been dropped, or the enclosure damaged.

THIS SAFETY INFORMATION IS OF A GENERAL NATURE AND MAY BE SUPERSEDED BY INSTRUCTIONS CONTAINED WITHIN THIS MANUAL.

▶ CONTENTS

INTRODUCTION

The 4K60 4x4 Seamless Matrix is a perfect solution for video transmission from (4) HDMI sources to (4) HDTV displays. It has video wall and multi-viewer functions with multiple display modes. 4x4 IR matrix, audio embedded and de-embedded are also supported. Video resolution is up to 4K@60Hz 4:4:4. Each of the sources can be individually scaled. And seamless switching ensures a smooth picture transition without frame loss. This matrix can be controlled via front panel buttons, LCD screen, IR remote, RS-232, and Web GUI. This product has a 3 year warranty.

CAUTION

The product requires the use of UTP connectors. Please connect in direct interconnection method and do not cross connect.
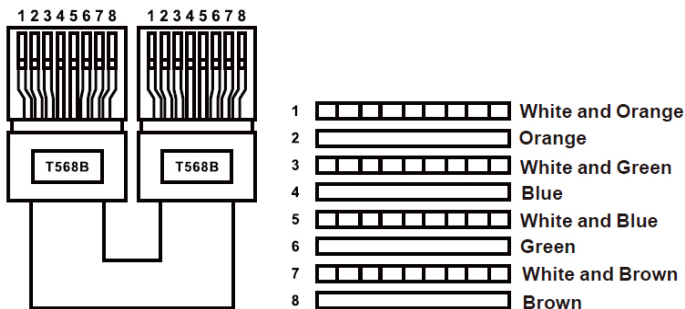
Direct Interconnection Method

SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply. Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any w(8) to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

DISCLAIMERS

The information in this manual has been carefully checked and is believed to be accurate. We assume no responsibility for any infringements of patents or other rights of third parties which may result from its use.

We assume no responsibility for any inaccuracies that may be contained in this document. We make no commitment to update or to keep current the information contained in this document.

We reserve the right to make improvements to this document and/or product at any time and without notice.

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FEATURES

- HDMI 2.0 and HDCP 2.2 compliant
- Supports HDR
- Video resolution is up to 4K@60Hz 4:4:4
- Supports 18Gbps lossless compressed video bandwidth
- Supports 12 display categories in multi-viewer mode, and 9 splicing modes in video wall mode
- HDMI audio format: LPCM, Dolby Digital/Plus/EX, Dolby True HD, DTS, DTSEX, DTS-96/24, DTS High Res, DTS-HD Master Audio
- Supports CEC control, and multiple video resolution output
- Advanced EDID management
- Control via front panel buttons, LCD screen, IR remote, RS-232, and Web GUI

SPECIFICATIONS

- **Input Ports:**
  - (4) HDMI INPUT [Type A, 19-pin female]
  - (4) L/R AUDIO INPUT [3.81mm, 3pin Phoenix Connector]
- **Output Ports:**
  - (4) HDMI OUTPUT [Type A, 19-pin female]
  - (4) OPTICAL AUDIO OUT [S/PDIF]
  - (4) L/R AUDIO OUT [3.81mm, 5pin Phoenix Connector]
- **Control Ports:**
  - TCP/IP [RJ45]
  - RS-232 [D-Sub 9]
  - IR EXT [3.5mm, Stereo Mini-jack]
  - (4) IR INPUT [3.5mm, Stereo Mini-jack]
  - (4) IR OUTPUT [3.5mm, Stereo Mini-jack]
- **HDMI Compliance:** HDMI 2.0
- **HDCP Compliance:** HDCP 2.2
- **Video Bandwidth:** 594MHz/18Gbps
- **Video Resolution:** 480i ~1080P@50/60Hz, 4K2K@24/30Hz, 4K2K@60Hz
- **Color Space:** RGB, YCbCr 4:4:4, YCbCr 4:2:2, YCbCr 4:2:0
- **Color Depth:** 8 bpc (24 bit total)
- **Audio Formats:** LPCM, Dolby Digital/Plus/EX, Dolby True HD, DTS, DTS-EX, DTS-96/24, DTS High Res, DTS-HD Master Audio
- **ESD Protection:** Human body model — ±8kV (Air-gap discharge) & ±4kV (Contact discharge)
- **Dimensions (WxHxD):** 17.2 x 1.9 x 10.6 in (440x203x44.5mm)
- **Housing:** Metal Enclosure
- **Color:** Black
- **Weight:** 5.6 lbs / 2.55kg
- **Power Supply Input:** AC 100-240V 50/60Hz, Output: DC 12V/2.5A (US/EU standard, CE/FCC/UL certified)
- **Power Consumption:** 25W (Max)
- **Operating Temperature:** 32 - 104°F / 0 - 40°C
- **Storage Temperature:** -4 - 140°F / -20 - 60°C
- **Relative Humidity:** 20 - 90% RH (no-condensing)
- **Video Resolution HDMI Cable Length (HDMI IN / OUT):** *The use of "Premium High Speed HDMI" cable is highly recommended.*
  - 4K60: 5M/16ft
  - 4K30: 10M/32ft
  - 1080P60: 15M/50ft

As product improvements are continuous, specifications are subject to change without notice.

FRONT PANEL
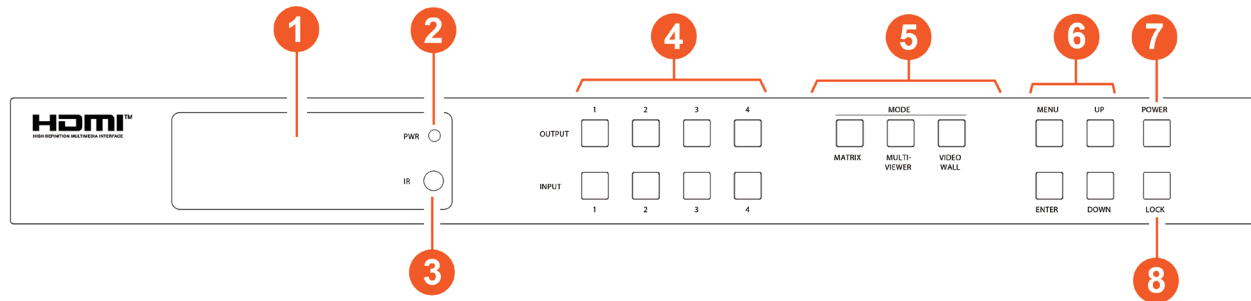
❶ **LCD SCREEN:** Display matrix switching status, input / output port, EDID, Baud rate, IP Address, etc.

❷ **PWR INDICATOR:** The LED is on green when the device is working. The LED is on red when the device is on standby.

❸ **IR:** IR signal receiver. Receiving the signal from the IR remote.

❹ **INPUT / OUTPUT BUTTONS:** Press an output button (1~4), then press an input button (1~4) to select the corresponding input source for the output port.

❺ **MODE (MATRIX / MULTIVIEWER / VIDEO WALL):** Press the buttons to select the video mode as required.

MATRIX: In matrix mode, you can press an output button (1~4) firstly and then press an input button (1~4) to select the corresponding input source for the output port.

MULTIVIEWER: In multiviewer mode, the Output buttons are used as Windows. You can press a window button (1~4) firstly and then press an input button (1~4) to select the corresponding input source for the window.

VIDEO WALL: In video wall mode, the Output buttons are used as Groups. you can press a group button (1~4) firstly and then press an input button (1~4) to select the corresponding input source for the group.

❻ **MENU / ENTER / UP /DOWN:** Take RESET, for example.

1. On the initial LCD display screen, press **"MENU"** button. There are OUTPUT/MV/VM/INPUT/EXTAUDIO/SET items to be selected.

2. Press the **"UP/DOWN"** button to select **"SET"** item.

3. Press the **"ENTER"** button to enter into the next level menu. There are LCD ONTIME/BAUD RATE/IP INFO/BG PATTERN/REBOOT/ RESET items to be selected.

4. Press the **"UP/DOWN"** button to select **"RESET"** item.

5. Press the **"ENTER"** button to confirm the selection.

6. Press the **"ENTER"** button, and then it will prompt: SUCCESS!

Note:

• Pressing the "MENU" button will return to the previous menu.

• In any level menu, it will reture to the initial display screen if no operation goes on within 10 seconds.

❼ **POWER BUTTON:** Press the button for 1 second to enter the standby mode, then quickly press it to wake up the device.

❽ **LOCK BUTTON:** Short press the button to lock front panel buttons (Except the power button); press it again to unlock.

REAR PANEL
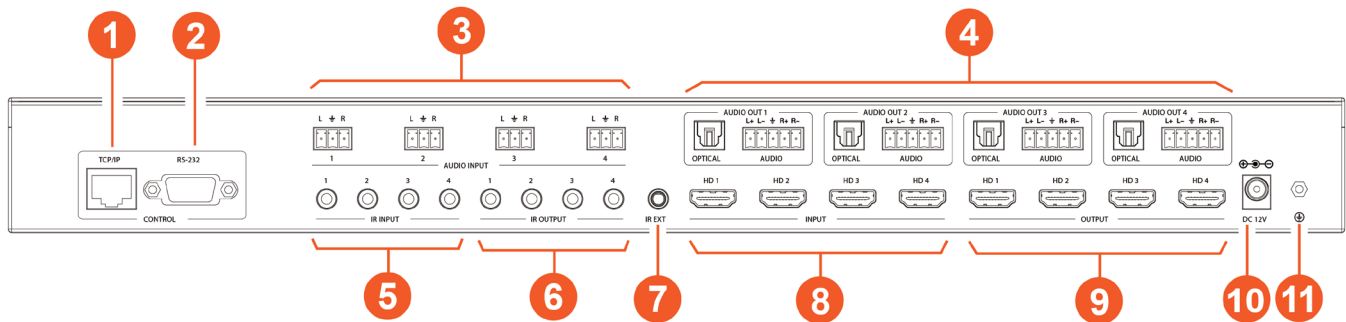
❶ **TCP/IP:** TCP/IP control port, connected to PC or router with a CAT cable.

❷ **RS-232 PORT:** Connect to a PC or control system by D-Sub 9-pin cable to transmit RS-232 command.

❸ **AUDIO INPUT (1~4):** L/R analog audio input port, connected to an analog audio input source such as DVD or Blu-ray Player. It follows HDMI input (1~4), and the embeded audio can not be extracted to audio out channel to output.

❹ **AUDIO OUT (1~4):**
OPTICAL: Optical audio output port, connected to an audio output device such as audio amplifier.
L/R AUDIO: Analog audio output port, supporting balanced/unbalanced audio output, with a maximum support of 2Vrms.
Balanced connection method: L+, L -,　, R+, R
Unbalanced connection method: L+,　, R+

❺ **IR INPUT (1~4):** Connect to IR receiver cable.

❻ **IR OUTPUT (1~4):** Connect to IR blaster cable.

❼ **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 connected to the **"IR EXT"** port to receive the IR remote signal.

❽ **HDMI INPUT PORTS (1~4):** HDMI input ports, connected to HDMI source devices such as computer, DVD or set-top box with an HDMI cable.

❾ **HDMI OUTPUT PORTS (1~4):** HDMI output ports, connected to HDMI display devices such as TV or monitor with an HDMI cable.

❿ **LOCK:** Press to lock all button functions on the front panel. Press and hold for 3 seconds to release the lock function. The LCD will display **"LOCK"** when the function is active.

⓫ **DC 12V:** Connect to 24V/2.5A power adapter.

⓬ **GND:** Connect the housing to the ground.

Note:

1. You can restore the factory settings via the front panel, web GUI or RS-232 command.

2. Power cut memory function is available except for standby status and panel lock.

3. The RS-232 and Web will be available in a few minutes when the device is powered on.

REMOTE CONTROL

❶ **POWER ON OR STANDBY:** Power on the Matrix or set it to standby mode.

❷ **INFO:** Press to check the serial baud rate and IP address. It will be displayed in the top right corner of the screen, and disappear in five seconds or press the button again.

❸ **INPUT 1/2/3/4:** Press these buttons to select input sources.

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

❺ **OUTPUT 1/2/3/4:** Select the output display device.

❻ **ALL:** Select all output simultaneously. *For example,* when you press the **"All"** button and then press input **"1"** button, at this time the input **"1"** source will be output to all display devices.

❼ **VIDEO MODE:** There are three video output modes: MATRIX, VIDEOWALL and MULTIVIEWER. It will memorize the correspondence between the inputs and outputs and the configuration which are set in each mode on Web page last time when you switch the modes.

OPERATION INSTRUCTION: You need to press the output button firstly and then press input button to select the corresponding input source.
For example, press Output-X (X means output button from 1 to 4 , including **"All"** button), then press Input-Y (Y means input button from 1 to 4) The Matrix can be selected input and output source 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, thefurthest distance is 8 meters when the IR remote is directly faced to the matrix, and 5 meters when the using angle is ± 45°. The diagram is shown as below:
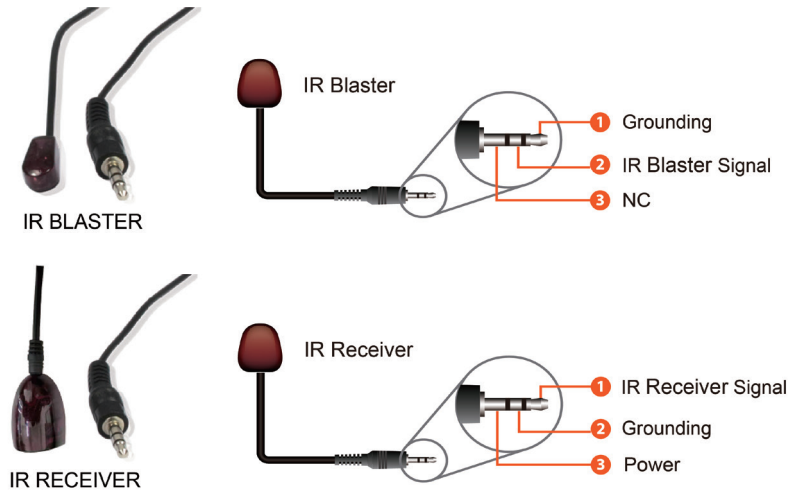

IR remote of the Matrix
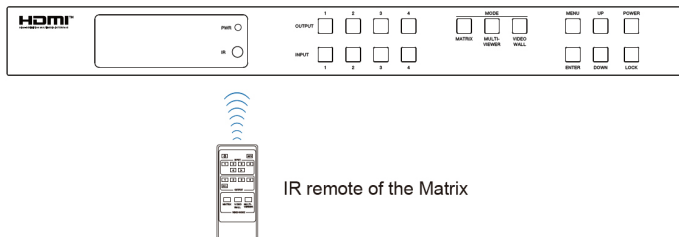
The second way: If the IR receiver window of the Matrix is blocked or the Matrix is installed in a closed area out of infrared line of sight, the IR receiver cable can be inserted to the **"IR EXT"** port to receive the IR remote signal. The furthest distance of using the IR remote is 5 meters when the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

IR remote of the Matrix

Machine Cabinet
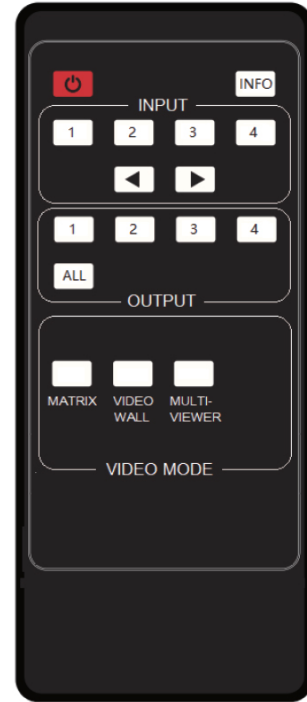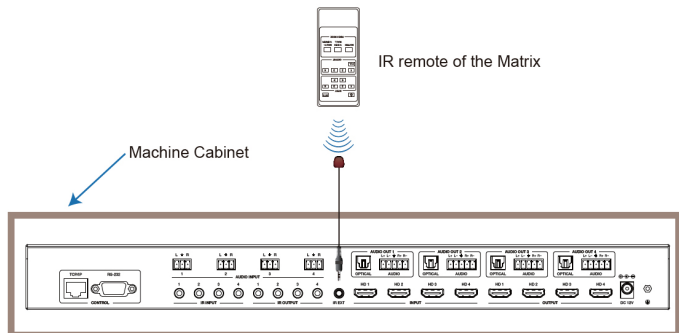
HEX CODES

BUTTON FUNCTION	HOUSE CODE	BUTTON CODE
POWER TOGGLE	08F7	4D
INFO	08F7	0B
INPUT 1	08F7	09
INPUT 2	08F7	54
INPUT 3	08F7	47
INPUT 4	08F7	42
PREVIOUS SOURCE	08F7	48
NEXT SOURCE	08F7	4B
OUTPUT 1	08F7	0C
OUTPUT 2	08F7	19
OUTPUT 3	08F7	0F
OUTPUT 4	08F7	03
OUTPUT ALL	08F7	55
MATRIX	08F7	40
VIDEO WALL	08F7	10
MULTI-VIEWER	08F7	11

IR CABLE PIN ASSIGNMENT

IR BLASTER

IR Blaster

1 Grounding
2 IR Blaster Signal
3 NC

IR RECEIVER

IR Receiver

1 IR Receiver Signal
2 Grounding
3 Power

IR CONTROL SYSTEM

This product supports one-way IR control. When the matrix is connected to IR receiver cable and IR blaster cable, you can control the corresponding input source devices through IR signal transmission remotely at the side of display devices. Four IR blaster cables connected to the IR outputs must be placed near the four HDMI input sources. Four IR receiver cables connected to the IR inputs must be placed near the display devices connected to the four HDMI outputs. IR matrix follows the HDMI matrix. For example, if HDMI INPUT3 is selected for HDMI OUT1 to outout, the signal of IR OUT3 near the HDMI INPUT3 is emitted to IR IN1 near the HDMI OUT1. Now you can use the IR remote of the DVD connected to HDMI INPUT3 to control it at the side of the TV connected to HDMI OUT1. Similarly, if HDMI INPUT1 is selected for all HDMI OUT1/2/3/4 to outout, the signal of IR OUT1 near the HDMI INPUT1 is emitted to IR IN1/2/3/4 near the four HDMI OUT.
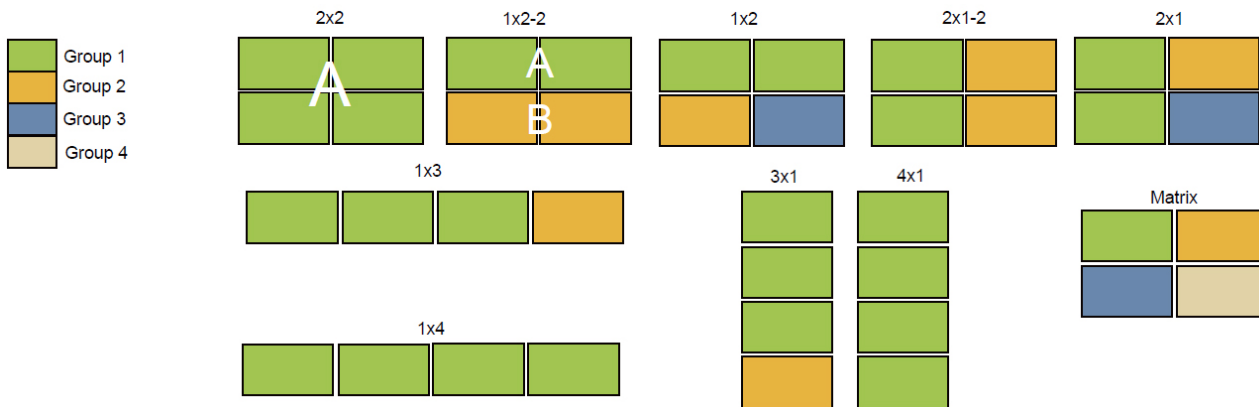
LCD DISPLAY NAVIGATION

The buttons on the the front panel are used for LCD display navigation, including INPUT(1~4), OUTPUT(1~4), MATRIX, MULTIVIEWER, VIDEOWALL, MENU, ENTER, UP, DOWN, POWER, LOCK. Menu items are as follows:

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
OUTPUT	RESO	OUT1 / OUT2 / OUT3 / OUT4	4Kx2K60W, 4Kx2K50W, 4Kx2K60, 4Kx2K50, 4Kx2K30, 1080P60, 1080P50, 1080i60, 1080i50,WUXGA60_RB, 1360x768@60, 1280x800@60, 720P60, 720P50, XGA60, AUTO
	CSC	OUT1 / OUT2 / OUT3 / OUT4	RGB 444 YUV 444 YUV 422 YUV 420
	STREAM	OUT1 / OUT2 / OUT3 / OUT4	ENABLE DISABLE
	H MIRROR	OUT1 / OUT2 / OUT3 / OUT4	ENABLE DISABLE
	V MIRROR	OUT1 / OUT2 / OUT3 / OUT4	ENABLE DISABLE
MV	MODE	SINGLE / PIP / DUAL / TRIPLE-1 / TRIPLE-2 / TRIPLE-3 / QUAD-1 / QUAD-2 / QUAD-3 / USER-1 / USER-2 / USER-3	
	ASPECT	FULL / 16:9	
	PIP POSITION	UPPER LEFT LOWER LEFT UPPER RIGHT LOWER RIGHT	
	PIP SIZE	SMALL / MIDDLE /LARGE	
VW	MODE	2x2 / 2x1 / 2x2-2 / 1x2 / 1x2-2 / 3x1 / 4x1 / 1x3 / 1x4	
	RESO	4K2K60W / 4K2K50W / 4K2K60 / 4K2K50 / 4K2K30 / 1080P60 / 1080P50 / 1080i60 / 1080i50 / WUXGA60_RB / 1360x768@60 / 1280x800@60 / 720P60 / 720P50 / XGA60	
	H BEZEL	0-10	
	V BEZEL	0-10	
INPUT	EDID	IN1 / IN2 / IN3 / IN4	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 WUXGA, 2.0CH 768P, 2.0CH XGA, 2.0CH

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
INPUT	EDID	IN1 / IN2 / IN3 / IN4	USER1 USER2 COPY OUT1 COPY OUT2 COPY OUT3 COPY OUT4
	AUDIOSEL	IN1 / IN2 / IN3 / IN	ORIGINAL EMBED
EXTAUDIO	OUT	OUT1 / OUT2 / OUT3 / OUT4	ENABLE DISABLE
	MODE	BIND TO INPUT / BIND TO OUTPUT / AUDIO MATRIX	
	MATRIX	OUT1 / OUT2 / OUT3 / OUT4	INPUT1 INPUT2 INPUT3 INPUT4
SET	LCD ONTIME	OFF / ALWAYS ON / 15 SECONDS / 30 SECONDS / 60 SECONDS	
	BAUD RATE	4800 / 9600 / 19200 / 38400 / 57600 / 115200	
	IP INFO	DHCP:ON / OFF	
	BG PATTERN	BLACK SCREEN / BLUE SCREEN / COLOR BAR / GRAY SCALE / CROSS / CROSS HATCH	
	REBOOT	Y / N	
	RESET	Y / N	

VIDEO WALL

The matrix supports 10 categories of display modes as below:

Group 1
Group 2
Group 3
Group 4

2x2   1x2-2   1x2   2x1-2   2x1

A   A
B

1x3   3x1   4x1   Matrix

1x4

MULTI-VIEWER

The matrix supports 16 categories of multiview display modes: SINGLE, PIP, Dual, Triple 1, Triple 2, Triple 3, Quad 1, Quad 2, Quad 3, User 1, User 2, User 3.

Users can select different operations for different multiview modes as following:

SINGLE: Inputs selection

PIP, Dual: Inputs selection, Sub window size and position selection Triple 1, Triple 2, Triple 3, Quad 1, Quad 2, Quad 3: Inputs selection, Display mode selection, Display aspect selection

PIP-UPPER LEFT   PIP-UPPER RIGHT   PIP-LOWER LEFT   PIP-LOWER RIGHT

=Window 1
=Window 2
=Window 3
=Window 4

DUAL-FULL   DUAL-16:9   TRIPLE-FULL   TRIPLE-16:9

TRIPLE2-2PIP LEFT   TRIPLE3-2PIP RIGHT   QUAD1-FULL   QUAD1-16:9

QUAD2-FULL   QUAD2-16:9   QUAD3   USER

Note:
• In multiview display mode, all the four HDMI outputs display the same image from the HDMI IN you selected.
• You can drag and drop any input source to the corresponding window easily and quickly.
• You can select the user-defined mode to meet with needs of flexible customization of the windows.

EDID MANAGEMENT

This Matrix has 12 factory defined EDID settings, 2 user-defined EDID modes and 4 copy EDID modes. You can select defined EDID mode or copy EDID mode to input port through front panel buttons, RS-232 control or Web GUI.

On-panel button operation: On the initial LCD 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 item 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.
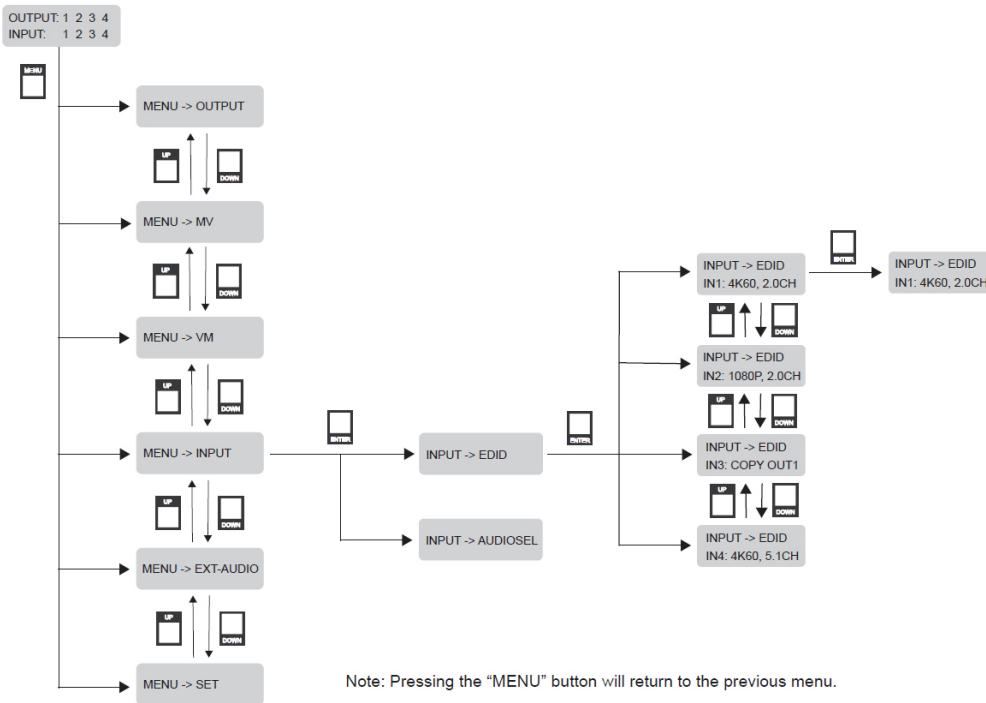
RS-232 control operation: Connect the Matrix to PC with a serial cable, then open a Serial Command tool on PC to send ASCII command **"s input x EDID z!"** to set EDID. For details, please refer to **"EDID Setting"** in the ASCII command list of **"RS-232 Control Command"**.

Web GUI Operation: Please check the EDID management in the **"Input page"** of **"Web GUI User Guide"**.
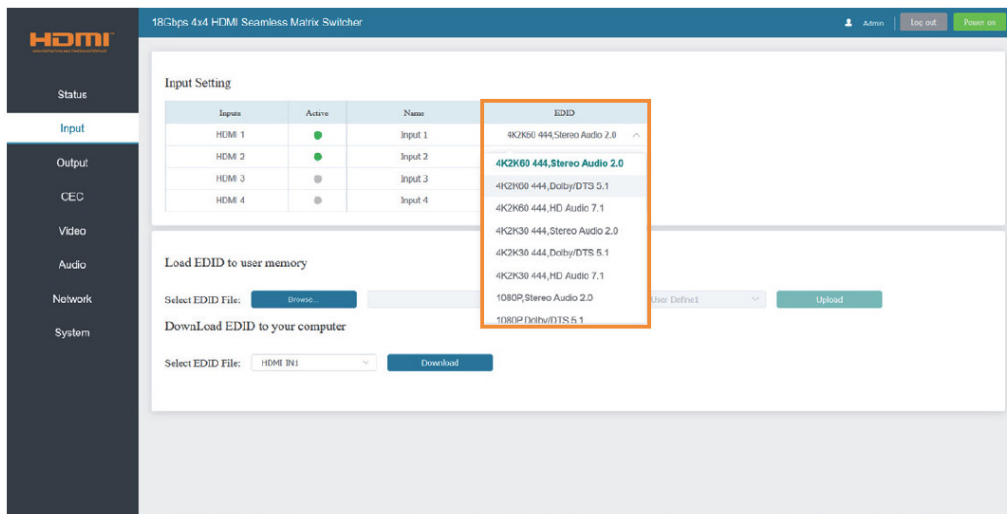
The defined EDID setting list of the product is shown as below:

EDID MODE	EDID DESCRIPTION
1	4K60, 2.0CH
2	4K60, 5.1CH
3	4K60, 7.1CH
4	4K30, 2.0CH
5	4K30, 5.1CH
6	4K30, 7.1CH
7	1080P, 2.0CH
8	1080P, 5.1CH
9	1080P, 7.1CH
10	WUXGA, 2.0CH
11	768P, 2.0CH
12	XGA, 2.0CH
13	USER1
14	USER2
15	COPY OUT1
16	COPY OUT2
17	COPY OUT3
18	COPY OUT4

WEB GUI USER GUIDE

The Matrix can be controlled by Web GUI. 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 IR remote. Pressing the INFO button on remote, the IP address and serial baud will be displayed in the top right corner of the screen.

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: **IP: 192.168.0.100**

IP:192.168.0.100 in the above figure is the IP Address of the Matrix (the IP address is variable, depending on what the specific machine returns). For the details of ASCII control, please refer to **"RS-232 Control Command"**. After entering the Web GUI page, there will be a Login page, as shown below:

Step 2: Connect the TCP/IP port of the Matrix to a PC with an UTP cable, and set the IP address of the PC to be in the same network segment with the Matrix.

Step 3: Input the IP address of the Matrix into your browser on the PC to enter Web GUI page.

After entering the Web GUI page, there will be a Login page, as shown below:

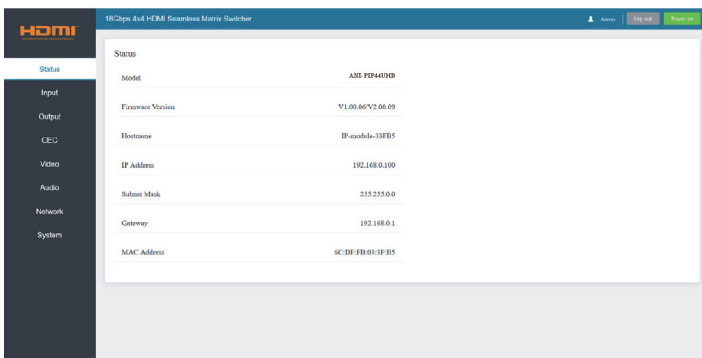Select the Username and enter the password. The default password is:

> Username **User / Admin**
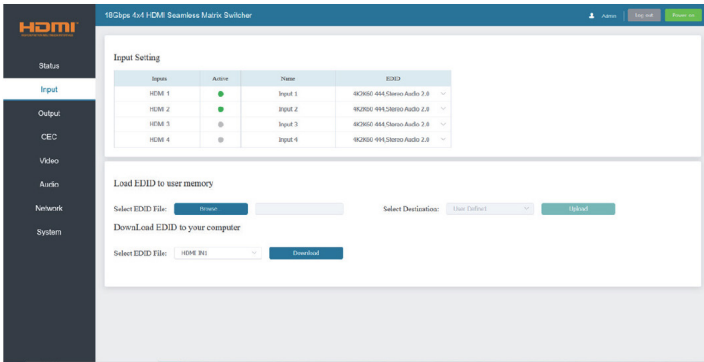> Password **user / admin**

Then click the **"LOGIN"** button and the following Status page will appear.

STATUS PAGE

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

INPUT PAGE

You can do the following operations on the Input page:

1. Input: Input channel of the device.

2. Active: It indicates whether the channel is connected to a signal source. It is green if connected, and gray if not connected.

3. Name: The input channel's name. You can modify it by entering the corresponding name (max length: 31 characters) in the input box.

4. EDID: It indicates the current EDID of the device. You can click the drop-down menu to select other EDIDs.
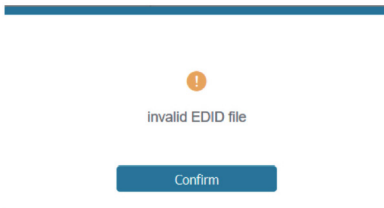

5. Load EDID to user memory: Set EDID for the User. Click the **"Browse"** button, then select the bin file. If you select the wrong EDID file, there will be a prompt, as shown in the following figure.
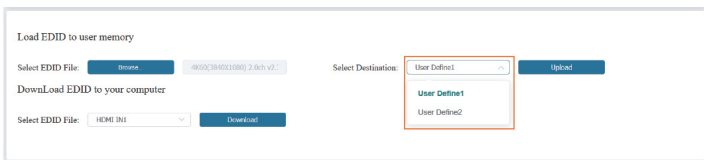

Make sure to select the correct file, then you can check the name of the selected file. Then select destination **"User Define1/User Define2"**, and click **"Upload"**.
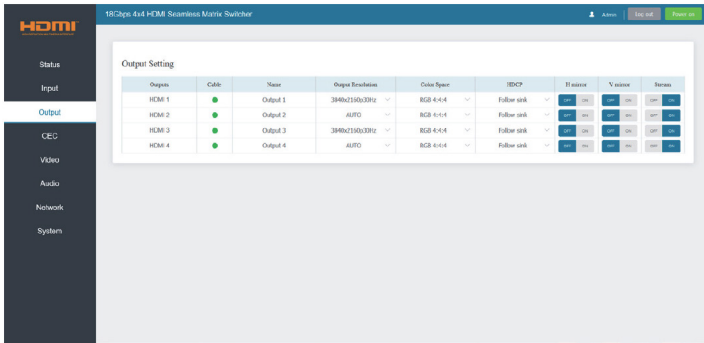
After successful setting, it will prompt as follows:
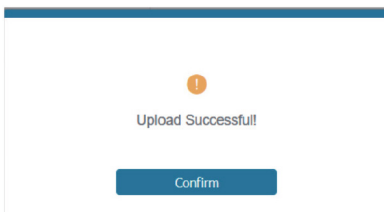
6. Download EDID to your computer: If you want to download the existing EDID, click the drop-down box of **"Select EDID File"** to select the input channel you want, and then click **"Download"** to save the corresponding EDID file to your computer.
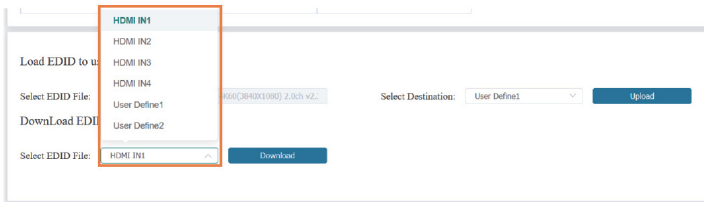
OUTPUT PAGE


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 shows green. Otherwise, it shows gray.

3. Name: The output channel's name. You can modify it by entering the corresponding name (max length: 31 characters) in the input box.

4. Output Resolution: Set the video resolution for current output. Click the dropdown menu and set the resolution you need. There are 16 options to be selected. If you select AUTO, it will output the proper video resolution according to the EDID of the display device.
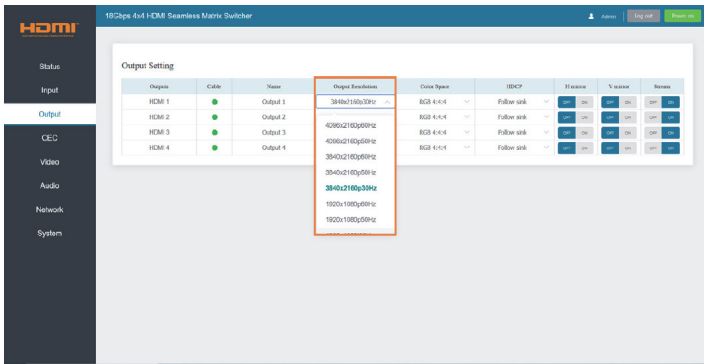
Note: Output resolution is not available in video wall and multi-viewer mode.
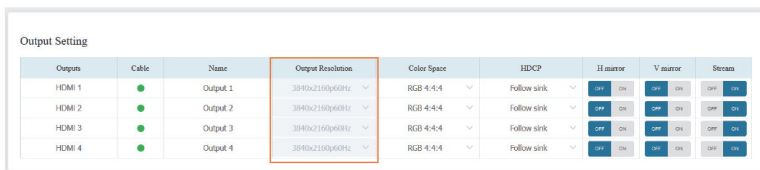
5. Color Space: Set the color space for current output. Click the drop-down menu and select the item as required. There are four options to be selected.
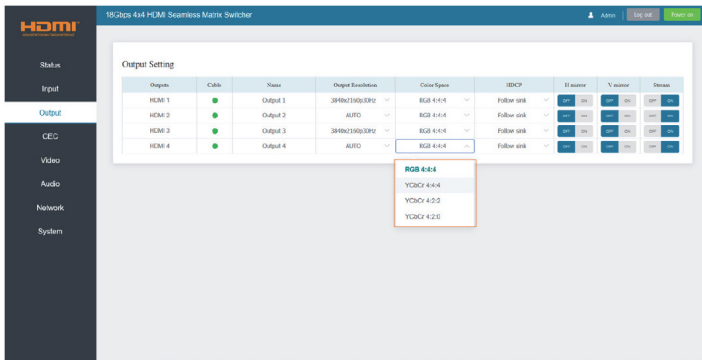
6. HDCP: Click the drop-down menu and set the HDCP version for current output.
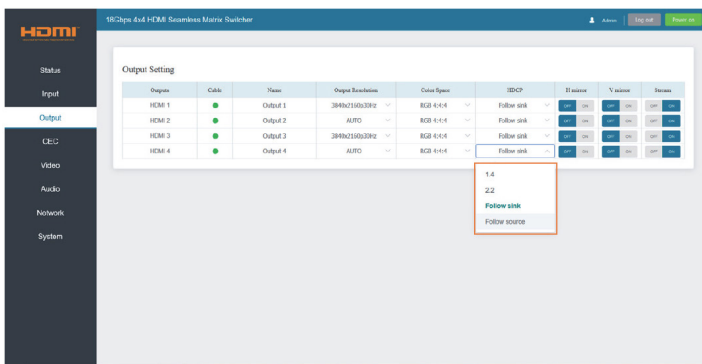
There are four options to be selected:
- 1.4: HDCP 1.4 compliant.
- 2.2: HDCP 2.2 compliant.
- Follow Sink: HDCP version follows the corresponding display device.
- Follow Source: HDCP version follows the assigned input source.

7. H mirror: Turn on/off the horizontal mirroring of the output signal.

8. V mirror: Turn on/off the vertical mirroring of the output signal.

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

CEC PAGE

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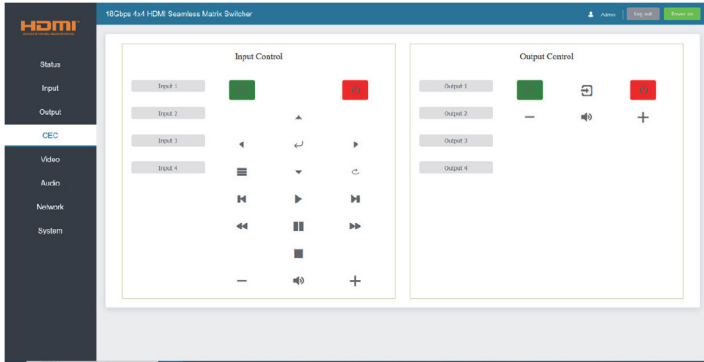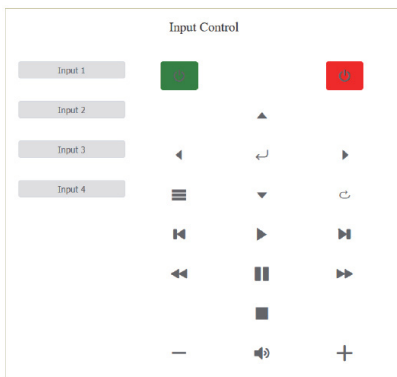

1. Input Control: Select the input source on the left, and then click on the icons to power on, power off, return, switch, pause, fast-forward, fast-back, mute, unmute, etc.
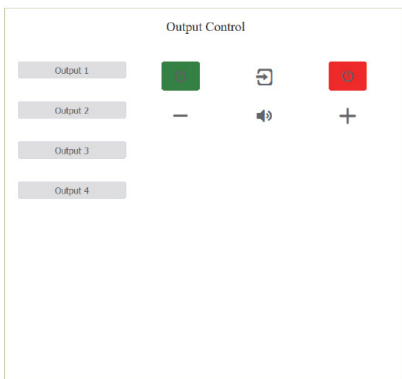
2. Output Control: Select the output on the left, and then click on the icons to control the operation of the display, such as power on/off, volume +/-, etc.

VIDEO PAGE

You can set the video mode on this page. There are three modes: Matrix, Video Wall and Multi-Viewer.

1. Matrix: Click to select Matrix mode.

In matrix mode, you can select an output (1~4) firstly, and then select an input source (1~4) which will appear on the selected output area. One route of video output configuration is completed.

Note: You can drag and drop any input source on the right to the corresponding output easily and quickly.

2. Video Wall: Click the buttons to select a splicing screen mode. There are 9 modes to be selected.
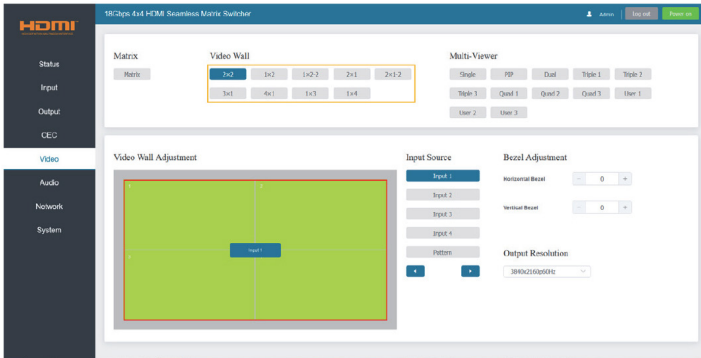
In video wall mode, you can select a window (1~4) firstly, and then select an input source (1~4) which will appear on the selected output area. Click +/- to adjust the corresponding Horizontal/Vertical Bezel (0-10). Set the output resolution for current output by clicking the drop-down list.
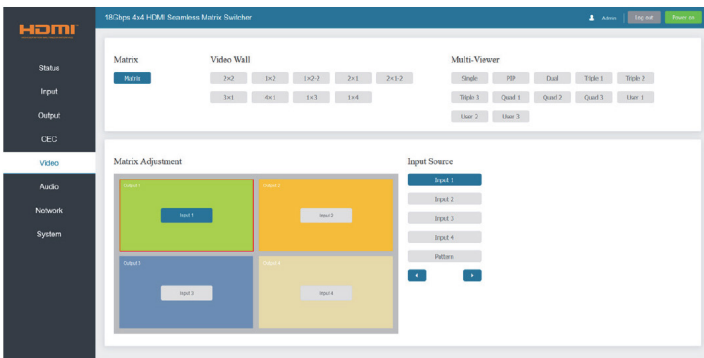
Note: You can drag and drop any input source on the right to the corresponding window easily and quickly.

3. Multi-Viewer: Click the buttons to select the multi-viewer display mode. There are 12 modes to be selected.
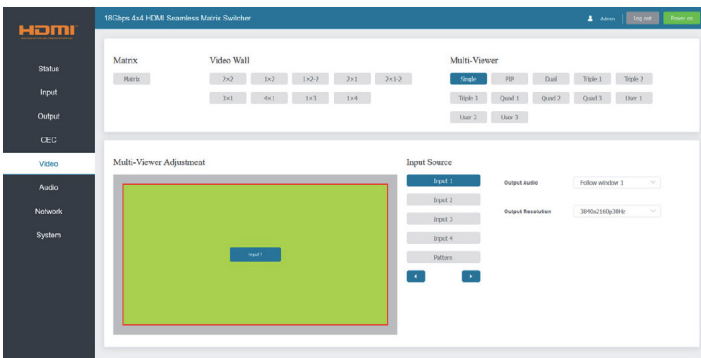
In multi-viewer mode, all the four HDMI outputs display the same image from the HDMI IN you selected. You can select the input source which will appear on the corresponding window area. Then set the output resolution for current output by clicking the dropdown list. Output Audio can be selected to follow any input source or the corresponding window as required.
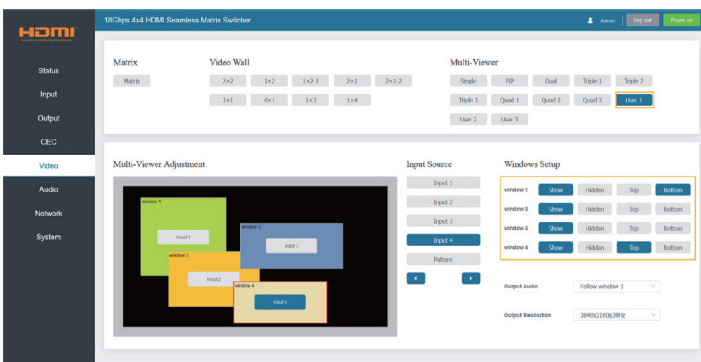
If a user-defined mode is selected, you can do the following operations on this page:
- The four windows are all displayed by default.
- Each window can be dragged and zoomed at will.
- Drag and drop the input source to any window.
- Click Windows Setup buttons to set the display of the corresponding window.
- The window will be maximized and placed on the top with double-clicking. It will restore the previous status with double-clicking again.

AUDIO PAGE

In Audio page, you can select the input audio in Input Audio Select area, and set the ext-audio mode in Ext Audio Select area.

You can select any input audio source from an HDMI input internal audio or an embeded audio. *For example,* if **"HDMI 1 Original"** is selected, the audio source is from the internal audio of HDMI Input 1; if **"Embed 1"** is selected, the audio source is from the Embed 1 audio. (The embed audio follows HDMI INPUT, and it will be embeded in HDMI INPUT to output.)

The ext-audio has three modes: Bind to Input, Bind to Output and Audio Matrix.
Note: The embeded audio can not be extracted to audio out channel to output.

Bind to Input: The AUDIO OUT (1~4) follows the HDMI INPUT (1~4). *For example,* the audio of AUDIO OUT 1 is from HDMI INPUT 1. The audio of AUDIO OUT 2 is from HDMI INPUT 2. The audio of AUDIO OUT 3 is from HDMI INPUT 3. The audio of AUDIO OUT 4 is from HDMI INPUT 4.

Bind to Output: The AUDIO OUT (1~4) follows the HDMI OUTPUT (1~4). *For example,* if HDMI INPUT 2 is connected to HDMI OUTPUT 1, the audio of AUDIO OUT 1 is from HDMI INPUT 2; if HDMI INPUT 3 is connected to HDMI OUTPUT 1, the audio of AUDIO OUT 1 is from HDMI INPUT 3.

Audio Matrix: you can select the audio of any HDMI input source for the corresponding ext-audio out.

NETWORK PAGE
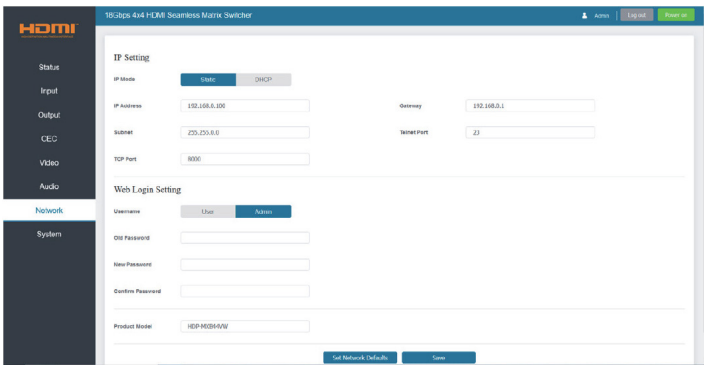
You can do the following operations on the Network page:

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 set manually the IP Address/Gateway/Subnet/Telnet Port as required.

IP Setting

IP Mode	Static	DHCP		
IP Address	192.168.0.100		Gateway	192.168.0.1
Subnet	255.255.0.0		Telnet Port	23
TCP Port	8000			

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

2. Modify User Password: Click the **"User"** 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:

Web Login Setting

Username	User	Admin
Old Password		
New Password		
Confirm Password		
Product Model	HDP-MXB44VW	

Set Network Defaults   Save

⚠
modify successfully!
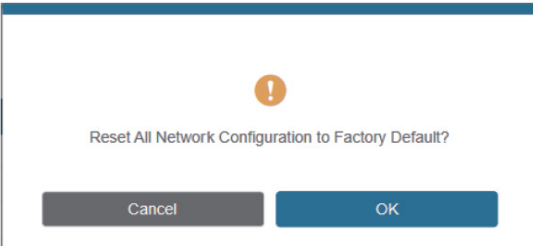
Confirm

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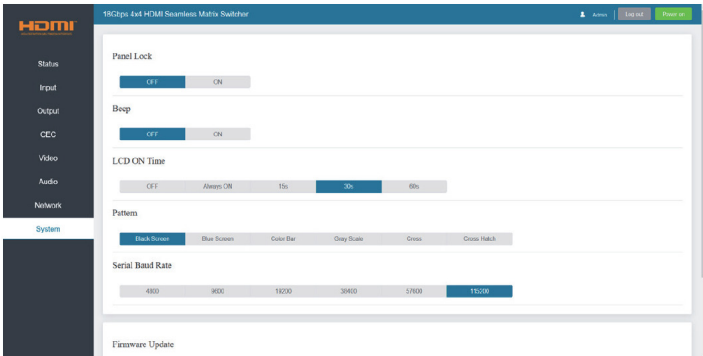
3. Set the Default Network: Click **"Set Network Defaults"**, there will be a prompt, as shown in the following figure:

⚠
Reset All Network Configuration to Factory Default?

Cancel   OK

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 for the LCD screen.

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 by clicking **"Reset"**.

8. Reboot: Reboot the unit by clicking **"Reboot"**.

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

RS-232 CONTROL COMMAND

The product also supports RS-232 control. You need a serial cable with RS-232 male head and DB9 transfer USB male head. The RS-232 head of the serial cable is connected to the RS-232 control port with DB 9 at the rear of the Matrix, and the USB head of the serial cable is connected to a PC. The connection method is as follows:
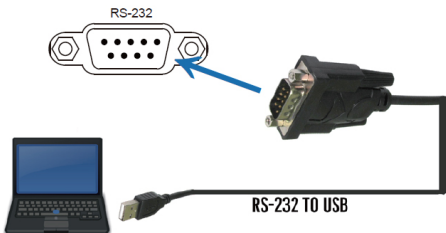
Then, open a Serial Command tool on PC to send ASCII command to control the Matrix. The ASCII command list about the product is shown as below.

ASCII COMMAND				
SERIAL PORT PROTOCOL. BAUD RATE: 115200, DATA BITS: 8BIT, STOP BITS:1, CHECK BIT: 0				
X - PARAMETER 1, Y - PARAMETER 2, ! - DELIMITER				
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 mode	r type!	4x4 hdmi seamless matrix	
r fw version!	get firmware version	r fw version!	mcu fw version: x.xx.xx web gui: x.xx.xx	
s power z!	power on/off the device, z=0~1 (z=0 power off, z=1 power on)	s power 1!	power on system initializing... initialization finished! mcu fw version x.xx.xx	
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 off	beep off
r beep!	get buzzer state	r beep!	beep on / beep off	
s lock z!	lock/unlock front panel button, z=0~1 (z=0 lock off,z=1 lock on)	s lock z!	panel button lock on panel button lock off	panel button lock off
r lock!	get panel button lock state	r lock!	panel button lock on/off	
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 Swtich!	logo1:Matrix Switch	

COMMAND CODE	FUNCTION	DESCRIPTION	EXAMPLE	FEEDBACK	DEFAULT
s reboot!	reboot the device	s reboot!	reboot… 4x4 hdmi seamless matrix system initializing... initialization finished! mcu fw version: x.xx.xx web gui: x.xx.xx		
s reset!	reset to factory defaults	s reset!	reset to factory defaults 4x4 hdmi seamless matrix system initializing... initialization finished! mcu fw version: x.xx.xx web gui: x.xx.xx		
OUTPUT SETTING					
s display mode x!	set output display mode (x=0~2) x=0 matrix mode x=1 video wall mode x=2 multi-viewer mode	s display mode 0!	display mode: martrix	matrix	
r display mode!	get output display mode	r display mode!	display mode: martrix		
r output y res!	get output y resolution (y=0~4) y=0. output all y=1. output 1 y=2. output 2 y=3. output 3 y=4. output 4	r output 1 res!	output 1 resolution: 3840x2160p60		
s output y res x!	set output y resolution (y=0~4, x=1~16) y=0. output all y=1. output 1 y=2. output 2 y=3. output 3 y=4. output 4 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	
s output y csc x!	set output y color space (y=0~4, x=1~4) y=0. output all y=1. output 1 y=2. output 2 y=3. output 3 y=4. output 4 x=1. rgb444 x=2. ycbcr444	s output 1 csc 1!	output 1 csc: rgb444	rgb444	

COMMAND CODE	FUNCTION	DESCRIPTION	EXAMPLE	FEEDBACK DEFAULT
s output y csc x!	x=3. ycbcr422 x=4. ycbcr420	s output 1 csc 1!	output 1 csc: rgb444	rgb444
r output y csc!	get output y color space status.(y=0~4) y=0. output all y=1. output 1 y=2. output 2 y=3. output 3 y=4. output 4	r output 1 csc!	output 1 csc: rgb444	
s output y hdcp x!	set output hdcp (y=0~4, x=1~4) y=0. output all y=1. output 1 y=2. output 2 y=3. output 3 y=4. output 4 x=1. hdcp 1.4 x=2. hdcp 2.2 x=3. follow sink x=4. follow source	s output 1 hdcp 1!	output 1 hdcp: hdcp 1.4	matrix
r output y hdcp!	get output y hdcp status (y=0~4) y=0. output all y=1. output 1 y=2. output 2 y=3. output 3 y=4. output 4	r output 1 hdcp!	output 1 hdcp: hdcp 1.4	
s output y hmirror x!	set output y h mirror (y=0~4, x=0,1) y=0. output all y=1. output 1 y=2. output 2 y=3. output 3 y=4. output 4 x=0. h mirror off x=1. h mirror on	s output 1 hmirror 1!	output1 h mirror on	output 1 h mirror off output 2 h mirror off output 3 h mirror off output 4 h mirror off
s output y vmirror x!	set output y v mirror (y=0~4, x=0,1) y=0. output all y=1. output 1 y=2. output 2 y=3. output 3 y=4. output 4 x=0. v mirror off x=1. v mirror on	s output 1 vmirror 0!	output1 v mirror off	output 1 v mirror off output 2 v mirror off output 3 v mirror off output 4 v mirror off
r output y mirror!	get output y mirror status (y=0~4) y=0. output all y=1. output 1 y=2. output 2 y=3. output 3 y=4. output 4	r output 0 mirror!	output 1 h mirror on, v mirror off output 2 h mirror on, v mirror off output 3 h mirror on, v mirror off output 4 h mirror on, v mirror off	
s output y stream x!	set output y stream enable/disable (y=0~4, x=0~1) y=0. output all y=1. output 1 y=2. output 2	s output 1 stream 1!	output 1 stream: enable	enable

COMMAND CODE	FUNCTION	DESCRIPTION	EXAMPLE	FEEDBACK DEFAULT
s output y stream x!	y=3. output 3 y=4. output 4 x=0. stream disable x=1. stream enable	s output 1 stream 1!	output 1 stream: enable	enable
r output y stream!	get output y stream status (y=0~4) y=0. output all y=1. output 1 y=2. output 2 y=3. output 3 y=4. output 4	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=0~4, z=1~18) x=0. all input x=1. input1 x=2. input2 x=3. input3 x=4. input4 z=1. 4k60,2.0ch z=2. 4k60,5.1ch z=3. 4k60,7.1ch z=4. 4k30,2.0ch z=5. 4k30,5.1ch z=6. 4k30,7.1ch z=7. 1080p,2.0ch z=8. 1080p,5.1ch 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 z=15. copy out1 z=16. copy out2 z=17. copy out3 z=18. copy out4	s input 1 edid 1!	input 1 edid: 4k60,2.0ch	4k60, 2.0ch
r input x edid!	get input x edid mode (x=0~4) x=0. all input x=1. input1 x=2. input2 x=3. input3 x=4. input4	r input 1 edid!	input 1 edid:4k60,2.0ch	

COMMAND CODE	FUNCTION	DESCRIPTION	EXAMPLE	FEEDBACK DEFAULT
VIDEO MATRIX SETTING				
s output y in source x!	route input source to output y (y=0~4, x=1~4) y=0. output all y=1. output 1 y=2. output 2 y=3. output 3 y=4. output 4 x=1. input 1 x=2. input 2 x=3. input 3 x=4. input 4	s output 1 in source 1!	output1->input1	output1->input1 output2->input2 output3->input3 output4->input4
r output y in source!	get output y selected input source (y=0~4) y=0. output all y=1. output 1 y=2. output 2 y=3. output 3 y=4. output 4	r output 1 in source!	output1->input1	
VIDEO WALL SETTING				
s tw mode x!	set tv wall display mode (x=1~9) x=1. 2x2 mode x=2. 2x1 mode x=3. 2x1-2 mode x=4. 1x2 mode x=5. 1x2-2 mode x=6. 3x1 mode x=7. 4x1 mode x=8. 1x3 mode x=9. 1x4 mode	s tw mode 1!	tv wall mode: 2x2	tv wall mode: 2x2
r tw mode!	get tv wall display mode	r tw mode!	tv wall mode: 2x2	
s tw h bezel x!	set tv wall horizontal bezel (x=0~10,+,-)	s tw h bezel 0!	tv wall horizontal bezel: 0	tv wall horizontal bezel: 0
r tw h bezel!	get tv wall row bezel	r tw h bezel!	tv wall horizontal bezel: 0	
s tw v bezel x!	set tv wall vertical bezel (x=0~10,+,-)	s tw v bezel 0!	tv wall vertical bezel: 0	tv wall vertical bezel: 0
r tw v bezel!	get tv wall vertical bezel	r tw v bezel!	tv wall vertical bezel: 0	
s tw group y input x!	set tv wall group y display which source input (y=0~4, x=1~4) y=0. tv wall group all y=1. tv wall group 1 y=2. tv wall group 2 y=3. tv wall group 3 y=4. tv wall group 4 x=1. hdmi input 1 x=2. hdmi input 2 x=3. hdmi input 3 x=4. hdmi input 4	s tw group 1 input 1!	tv wall group 1 input: hdmi input 1	tv wall group 1 input: hdmi input 1
r tw group y source!	get tv wall group y display which source input (y=0~4) y=0. tv wall group all	r tw group 0 source!	tv wall group 1 input: hdmi input 1 tv wall group 2 input: hdmi input 2	

COMMAND CODE	FUNCTION	DESCRIPTION	EXAMPLE	FEEDBACK DEFAULT
r tw group y source!	y=1. tv wall group 1 y=2. tv wall group 2 y=3. tv wall group 3 y=4. tv wall group 4	r tw group 0 source!	tv wall group 3 input: hdmi input 3 tv wall group 4 input: hdmi input 4	
s tw res x!	set tv wall resolution (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 tw res 3!	tv wall resolution: 3840x2160p60	3840x2160p60
r tw res!	get tv wall resolution	r tw res!	tv wall resolution: 3840x2160p60	3840x2160p60
MULTI-VIEWER SETTING				
s multiview x!	set multi-viewer display mode(x=1~6) x=1. single x=2. pip x=3. dual x=4. triple x=5. quad x=6. user	s multiview 1!	single screen	single screen
r multiview!	get multi-viewer display mode	r multiview!	single screen	
s window y in x!	select one input for one window for the current multiview mode (x=1~4, y=0~4) y=0. window all y=1. window 1 y=2. window 2 y=3. window 3 y=4. window 4 x=1. hdmi 1 x=2. hdmi 2 x=3. hdmi 3 x=4. hdmi 4	s window 1 in 1!	window 1 select hdmi 1	
r window y in!	get windows y selected input source (y=0~4) y=0. window all y=1. window 1 y=2. window 2 y=3. window 3 y=4. window 4	r window in!	window 1 select hdmi 1	

COMMAND CODE	FUNCTION	DESCRIPTION	EXAMPLE	FEEDBACK DEFAULT
s pip position x!	set pip window position (x=1~4) 1. upper left 2. lower left 3. upper right 4. lower right	s pip position 3!	pip on upper right	pip on upper right
r pip position!	get pip window positon	r pip position!	pip on upper right	
s pip size x!	set pip window size (x=1~3) 1. small 2. middle 3. large	s pip size 3!	pip size: large	pip size: large
r pip size!	get pip window size	r pip size!	pip size: large	
s dual x mode!	set dual windows display mode (x=1) 1. dual 1 mode	s dual 1 mode!	dual 1 mode	dual 1 mode
r dual mode!	get dual windows display mode	r dual mode!	dual 1 mode	
s triple x mode!	set dual windows display mode (x=1~3) 1. triple 1 mode 2. triple 2 mode (2pip-left) 3. triple 3 mode (2pip-right)	s triple 1 mode!	triple 1 mode	triple 1 mode
r triple mode!	get dual windows display mode	r triple mode!	triple 1 mode	
s quad x mode!	set quad windows display mode (x=1~3) 1. quad 1 mode 2. quad 2 mode 3. quad 3 mode	s quad 1 mode!	quad 1 mode	quad 1 mode
r quad mode!	get quad windows display mode	r quad mode!	quad 1 mode	
s aspect x!	set windows display aspect ratio (x=1~2) 1. full screen 2. 16:9	s aspect 1!	aspect: quad 2 full screen	aspect: full screen
r aspect!	get windows display aspect ratio	r aspect!	aspect: quad 2 full screen	
s user x mode!	set user define windows display mode (x=1~3) 1. user 1 mode 2. user 2 mode 3. user 3 mode	s user 1 mode!	user 1 mode	user 1 mode
r user mode!	get user define windows display mode	r user mode!	user1 mode	
s mv output audio x!	set output audio source (x=0~4) 0. follow window 1 selected source 1. input 1 audio 2. input 2 audio 3. input 3 audio 4. input 4 audio	s mv output audio 0! s mv output audio 1!	output audio: follow window 1 selected source output audio: select input 1 audio	output audio: follow window 1 selected source

COMMAND CODE	FUNCTION	DESCRIPTION	EXAMPLE	FEEDBACK DEFAULT
r mv output audio!	get output audio source	r mv output audio!	output audio: follow window 1 selected source	
s mv res x!	set multi-viewer resolution (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 mv res 3!	multi-viewer resolution: 3840x2160p60	3840x2160p60
r mv res!	get multi-viewer resolution	r mv res!	multi-viewer resolution: 3840x2160p60	3840x2160p60
EMBEDED AUDIO SETTING				
s input x as z!	set input x audio seleced source hdmi or embed analog audio (x=0~4, z=0~1) x=0. all input x=1. input 1 x=2. input 2 x=3. input 3 x=4. input 4 z=0. hdmi orginal audio z=1. embed analog audio	s input 1 as 1!	input 1 select hdmi orginal audio	hdmi orginal audio
r input x as!	get input x audio seleced source hdmi or embed analog audio (x=0~4, z=0~1) x=0. all input x=1. input 1 x=2. input 2 x=3. input 3 x=4. input 4	r input 0 as!	input 1 select hdmi orginal audio input 2 select hdmi orginal audio input 3 select embed analog audio input 4 select embed analog audio	
EXT-AUDIO SETTING				
s output y exa x!	set output y ext-audio enable/disable (y=0~4, x=0~1) y=0. output all y=1. output 1 y=2. output 2 y=3. output 3 y=4. output 4 x=0. ext-audio disable x=1. ext-audio enable	s output 1 exa 1!	output 1 ext-audio: enable	enable
r output y exa!	get output y ext-audio enable/disable status. (y=0~4)	r output 1 exa!	output 1 ext-audio: enable	

| COMMAND CODE	FUNCTION	DESCRIPTION	EXAMPLE	FEEDBACK DEFAULT
r output y exa!	y=0. output all y=1. output 1 y=2. output 2 y=3. output 3 y=4. output 4	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 y exa in source x!	route input source audio x to output ext-audio y (y=0~4, x=1~4) y=0. output all y=1. output 1 y=2. output 2 y=3. output 3 y=4. output 4 x=1. input 1 x=2. input 2 x=3. input 3 x=4. input 4	s output 1 exa in source 1!	output 1 ext-audio->input 1	output 1 extaudio->input 1 output 2 extaudio->input 2 output 3 extaudio->input 3 output 4 extaudio->input 4
r output y exa in source!	get output y ext-audio secected input source (y=0~4) y=0. output all y=1. output 1 y=2. output 2 y=3. output 3 y=4. output 4	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	
CEC SETTING				
s cec in x on!	set input x power on by cec, x=0~4(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=0~4(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=0~4(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=0~4(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=0~4 (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=0~4 (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=0~4 (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=0~4 (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=0~4(0=all input)	s cec in 1 enter!	input 1 menu enter operation	

COMMAND CODE	FUNCTION	DESCRIPTION	EXAMPLE	FEEDBACK DEFAULT
s cec in x play!	set input x play by cec, x=0~4 (0=all input)	s cec in 1 play!	input 1 play operation	
s cec in x pause!	set input x pause by cec, x=0~4(0=all input)	s cec in 1 pause!	input 1 pause operation	
s cec in x stop!	set input x stop by cec, x=0~4(0=all input)	s cec in 1 stop!	input 1 stop operation	
s cec in x rew!	set input x rewind by cec, x=0~4(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=0~4(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=0~4 (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=0~4(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=0~4(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=0~4 (0=all input)	s cec in 1 previous!	input 1 previous operation	
s cec in x next!	set input x next by cec, x=0~4 (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=0~4 (0=all hdmi output)	s cec hdmi out 1 on!	hdmi output 1 power on	
s cec hdmi out y off!	set hdmi output y power off by cec, y=0~4 (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=0~4 (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=0~4 (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=0~4 (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=0~4 (0=all hdmi output)	s cec hdmi out 1 active!	hdmi output 1 active source	
NETWORK SETTING				
r ipconfig!	get the current ip configauration	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. (use "s net reboot!" command or repower device to apply new config!)	

COMMAND CODE	FUNCTION	DESCRIPTION	EXAMPLE	FEEDBACK DEFAULT
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 (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 (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	
s gateway xxx.xxx.xxx.xxx!	set network gateway	s gateway 192.168.0.1!	set gateway:192.168.0.1 (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	
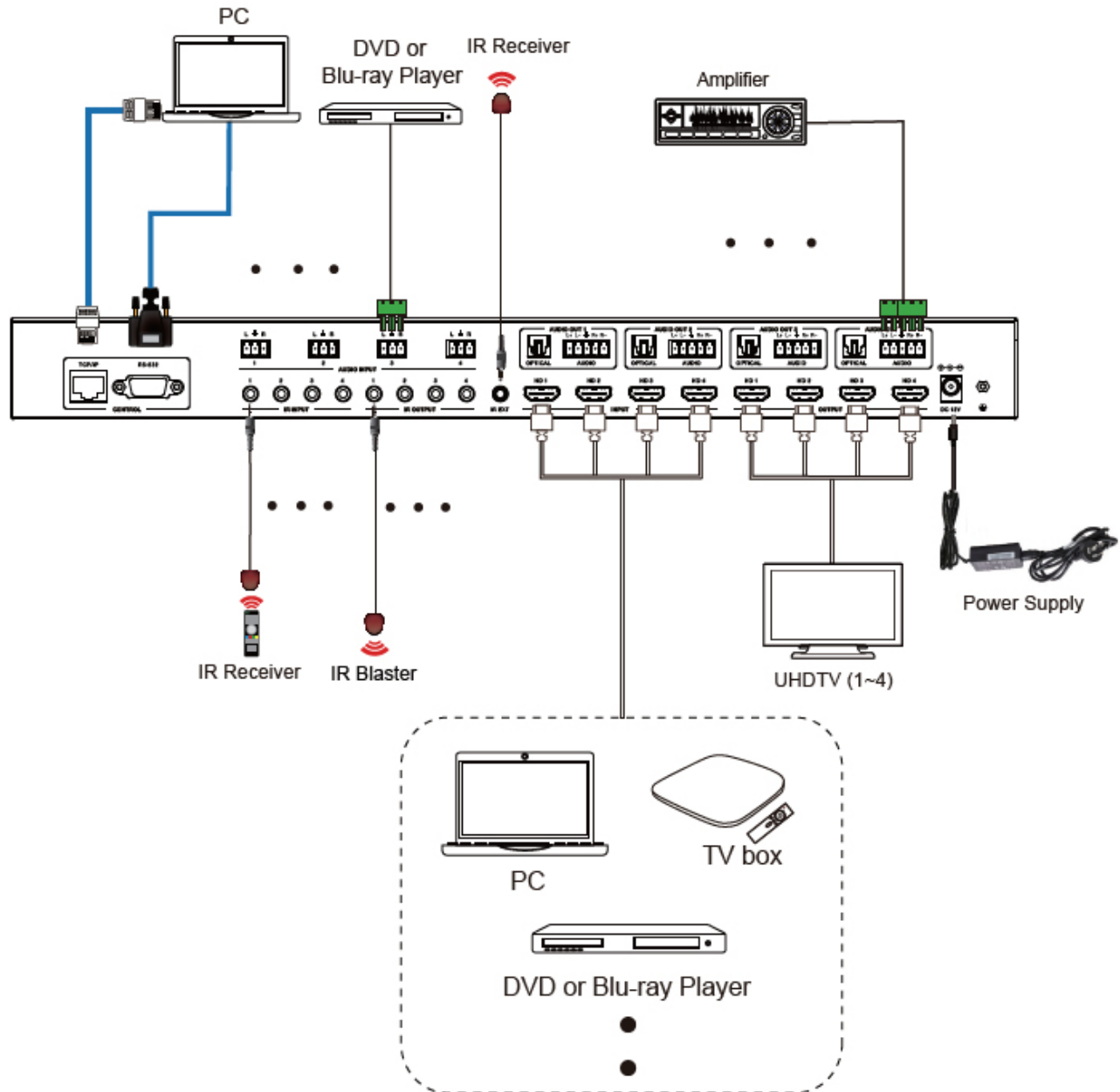
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