4K UHD

H8

8 x 8 HD Matrix

Operations Guide

Safety Instructions

Symbols used in user manuals and equipment indicate the possible harm to users or others and the risk of property damage. In order for you to use the equipment safely and correctly, the signs and their meanings are as follows. Please make sure to correctly understand these signs before reading the user manual.

The product contains some metal components, please pay attention to environmental protection.

This product is Class A, which may cause radio interference in living environment. In this case, users may need to take practical measures against interference.

Remind the user that the uninsulated dangerous voltage in the equipment may cause electric shock.

Warning: To avoid electric shock, please don't open the cover and put the useless parts in the case. Please contact qualified service personnel.

Lists the contents that may lead to unsuccessful operation or setup and some related information that needs attention.

Warning

To ensure the reliable use of the equipment and personal safety, please observe the following items during installation, use and maintenance:

Precautions during installation

- Do not use this product in the following places: places with dust, lampblack, conductive dust, corrosive gas and combustible gas; Exposed to high temperature, condensation, wind and rain; There are occasions of vibration and impact. Electric shock, fire and misoperation can also lead to product damage and deterioration;
- During screw hole processing and wiring, do not make metal scraps and wire ends fall into the vent hole of the controller, which may cause fire, failure and misoperation;
- At the end of the product installation, it is necessary to ensure that there are no foreign objects on the ventilation surface, including dust-proof paper and other packaging items, otherwise it may lead to poor heat dissipation during operation, resulting in fire, failure and misoperation;
- Avoid wiring, plugging and unplugging cable plugs in the live state, otherwise it will easily lead to electric shock or circuit damage;
- And the installation and wiring must be firm and reliable, and poor contact may lead to misoperation;
- For applications with serious interference, shielded cables should be used for input or output cables of high-frequency signals to improve the anti-interference performance of the system.

Matters needing attention when wiring

- All external power supply must be cut off before installation, wiring and other operations can be carried out, otherwise electric shock or equipment damage may be caused;
- This product is grounded through the grounding wire of the power cord. To avoid electric shock, the grounding wire must be connected to the earth. Before connecting the input or output of this product, please be sure to properly ground this product.
- After the installation and wiring, remove the foreign matter immediately. Please cover the terminal cover plate of the product before electrifying to avoid electric shock.

Matters needing attention in maintenance

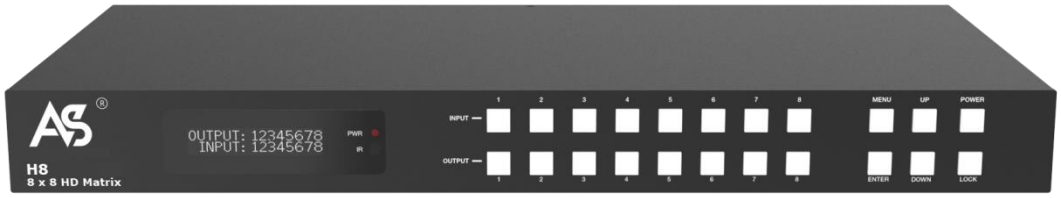
- Do not touch the terminal when it is energized, otherwise it may cause electric shock and misoperation;
- Please clean and tighten the terminals after turning off the power supply, which may cause electric shock when powered on;
- Please connect or remove the communication signal cable, cable connection or removal of expansion module or control unit after turning off the power supply, otherwise it may cause equipment damage and misoperation;
- Do not disassemble the equipment to avoid damaging the internal electrical components;
- Be sure to read this manual carefully and fully confirm the safety before changing, commissioning, starting and stopping the program.

Matters needing attention when scrapping products

- Electrolytic capacitors on circuit boards may explode when burned;
- Please collect and treat them separately, and do not put them into domestic garbage.
- Please treat it as industrial waste or according to local environmental protection regulations.

Contents:

1. Technical parameter



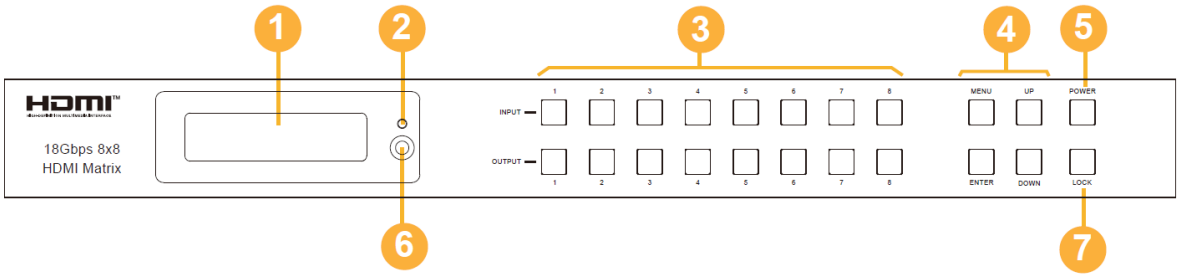
Specifications for the H8 are listed in the following table.

Parameter specification			
HDMI version	HDMI 2.0b		
HDCP version	HDCP 2.2, HDCP 1.4		
Video bandwidth	18Gbps		
Video resolution	Up to 4Kx2K@50/60Hz 4:4:4		
Color space	RGB, YCbCr 4:4:4/4:2:2/4:2:0		
Color depth	8-bit, 10-bit, 12-bit		
HDR	Support HDR10, HDR10+, Dolby Vision, HLG		
HDMI audio format	LPCM 2/5.1/7.1, Dolby Digital, DTS 5.1, Dolby Digital+, Dolby True HD, DTS-HD Master Audio, Dolby Atmos, DTS:X		
Coaxial audio format	PCM2.0CH, Dolby Digital / Plus, DTS 2.0/5.1		
L/R audio format	PCM 2.0CH		
Electrostatic protection	Mannequin: ±8kV (air discharge), ±4kV (contact discharge)		
Shell	Metal shell		
Color	Black		
Size	440mm[L]×200mm[W]×44.5mm[H]		
Weight	2.8kg		
Power supply	Input: AC 100~240V 50/60Hz Output: DCDC 12V/5A (US/EU standard, CE/FCC/UL certified)		
Power consumption	43W		
Operating temperature	-10° C ~ 45° C / 14° F ~ 113° F		
Storage temperature	-20° C ~ 60° C / -4° F ~ 104° F		
Relative humidity	20~90% RH (No condensation)		
Input	8 x HDMI in Type A [19-pin female] 1 x IR EXT [3.5mm Stereo Mini-jack]		
Output	8 x HDMI out Type A [19-pin female] 8 x L/R audio out [3.5mm Stereo Mini-jack] 8 x COAX audio out [RCA]		
Control port	1 x TCP/IP [RJ45] 1 x RS-232 [D-Sub 9]		
Resolution / Distance	**4K@60Hz - M**	**4K@30Hz - M**	**1080P@60Hz - M**
HDMI IN/OUT	5M	10M	15M
Advanced high-speed HDMI cable is recommended.			

2. Physical Description

2.1 Panel introduction

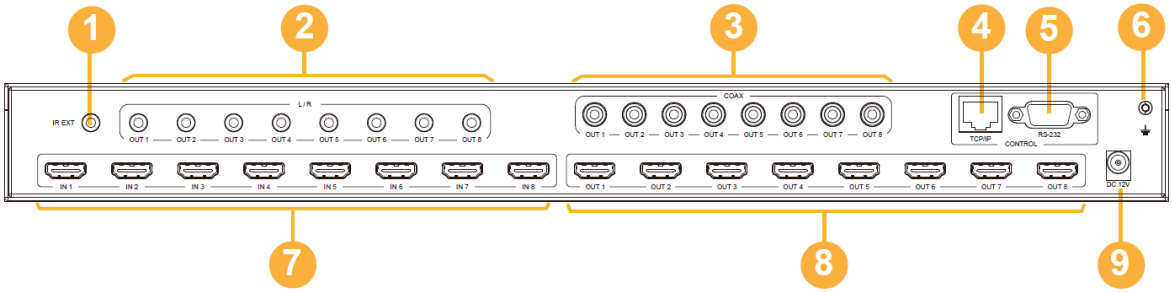
◆ Front View



Connectors, Controls & Indicators

No.	Name	Functional description
1	OLED display	Displays the switching status, input/output interface, EDID, baud rate and IP address of the matrix.
2	Power indicator	Green means power on. Red means standby.
3	Input/Output buttons	Press the output button (1-8) first, then press the input button (1-8) to select the corresponding input source for the output interface.
4	MENU / ENTER / UP /DOWN Buttons	①EDID query: first press "MENU" to activate the initial OLED display (display matrix switching status), then press "UP/DOWN" to view the EDID information of each HDMI input port. ②EDID setting: In the initial OLED display state, press "MENU" once to enter the "Select EDID" interface, then press "UP/DOWN" to select the EDID type, and then press "ENTER" to enter the "Copy To Input:" interface , and then use "UP/DOWN" to select the input port, and finally press "ENTER" to confirm. ③Baud rate setting: In the initial OLED display state, press "MENU" twice to enter the "SELECT BAUD" interface, then press "UP/DOWN" to select the baud rate, and finally press "ENTER" to complete the setting. ④IP address query: In the initial OLED display state, press "MENU" three times to enter the IP information interface, and you can view the current IP address. Press "UP/DOWN" to switch DHCP ON/OFF. Press "MENU" again to Return to the initial OLED display state.
5	Power button	Press and hold the power button for 3 seconds to enter standby mode, and short press the button again to wake up the device.
6	IR receiving window	Receive IR remote control signals.
7	LOCK button	Short press the LOCK button to lock the front panel buttons (except the power button); press the button again to unlock the buttons.

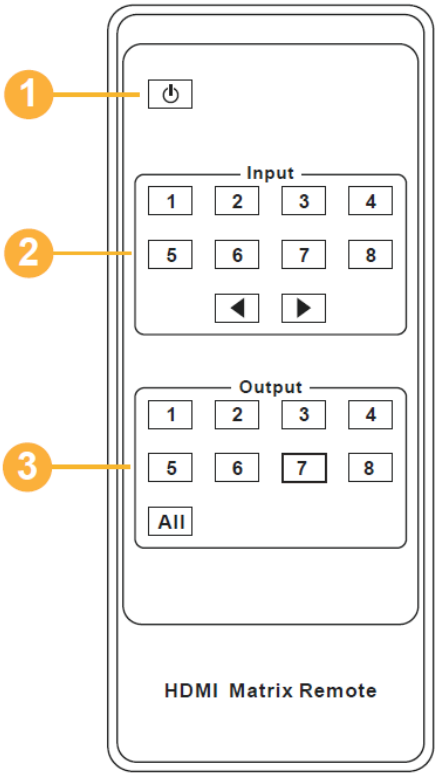
◆ Rear View



Connectors, Controls & Indicators

No.	Name	Functional description
1	IR EXT	If the IR receiving window on the front panel of the device is blocked or the device is installed in an enclosed area where infrared signals cannot be received. Then you can receive the signal from the IR remote control by inserting the IR receiving cable into the IR EXT interface.
2	L/R Audio Output OUT 1 - 4	Analog audio output port, connect power amplifier or speaker through 3.5mm audio cable.
3	Coaxial Audio Output OUT 1 - 4	Coaxial audio output port, connect audio output devices such as power amplifier through coaxial cables.
4	TCP/IP	TCP/IP control interface, connect computer or router through RJ45 cable.
5	RS-232	Use D-Sub 9-pin cable to connect a computer or control system to transmit RS-232 commands
6	Ground	Connect the case to ground.
7	IN 1 – 8	HDMI input port, connect HDMI signal source device through HDMI cable.
8	OUT 1 – 8	HDMI output port, connect HDMI display device through HDMI cable.
9	DC 12V In	12V DC power supply interface.

2.2 Infrared remote controller

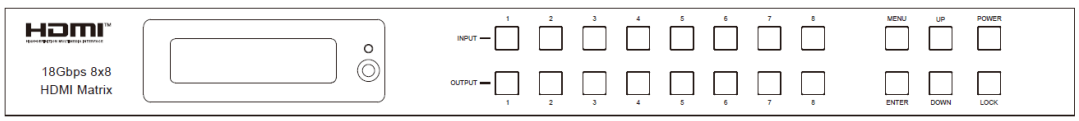


1	⏻	On/Standby button.
2	Input 1 - 8	Select the input source.
	◀ ▶	Select the previous or next input source.
3	Output 1 - 8	Select the output source.
	All	Select all output sources at the same time. For example, press "All" first, and then press "Input 1" , the signal from source "1" will be output to all display devices.

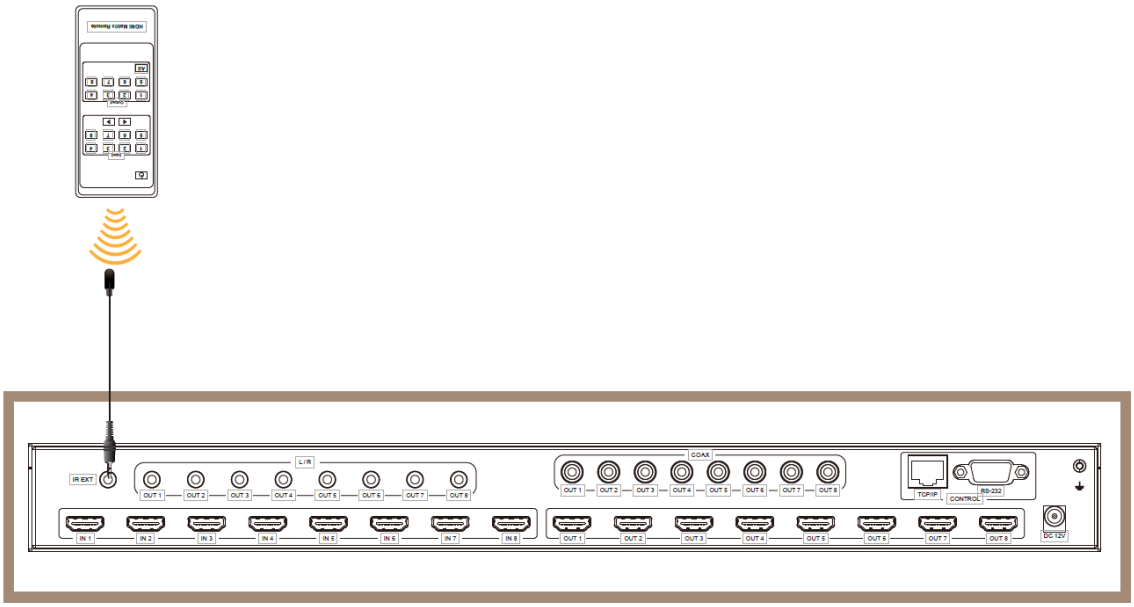
Operation method: Press the output button first, then press the input button to select the corresponding input signal source. e.g.:
Press Output-X first
(X represents the output buttons from 1 to 8, including the "All" button)
Then press Input-Y
(Y represents the input buttons from 1 to 8)

The matrix can select the input source and output source by using the infrared remote control. There are two ways to receive IR remote control signals.

The first one: Receive IR remote control signal through IR receiving window. When using the IR remote control, the maximum distance is 7 meters and the angle is ± 45, as shown in the picture:

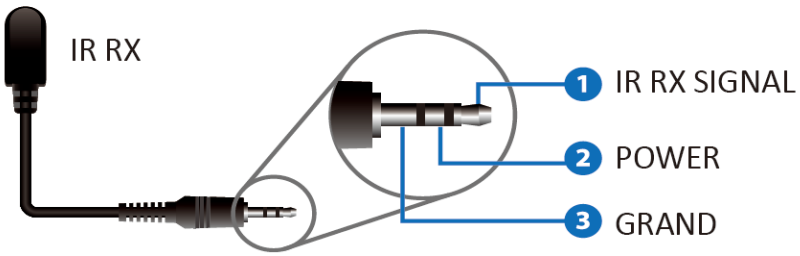


The second one: If the IR receiving window on the front panel of the device is blocked, or the device is installed in an enclosed area where infrared signals cannot be received. Then you can receive the signal from the IR remote control by inserting the IR receiving cable into the “IR EXT” interface, the maximum distance is 7 meters, and the remote control needs to be directly aimed at the IR receiving head. as shown in the picture:



2.3 Infrared receiving line

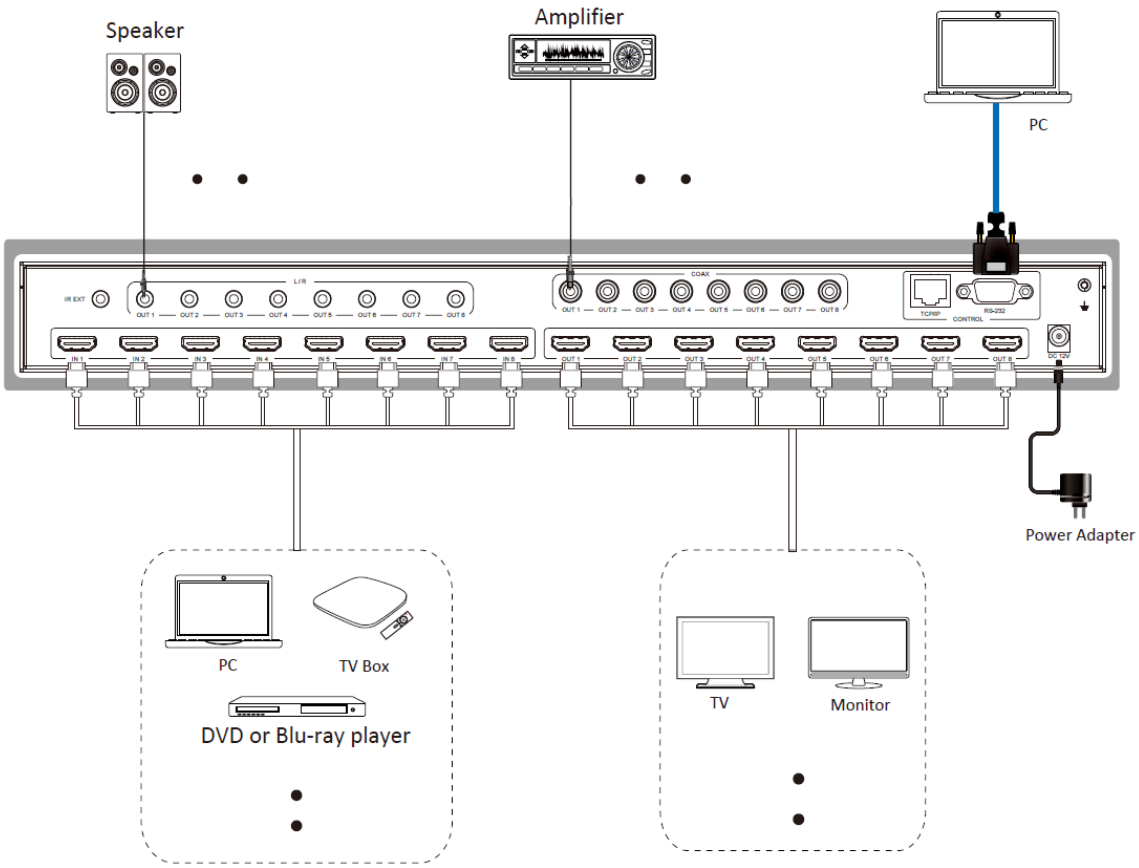
IR RX



3. Functional performance

- Comply with HDMI 2.0b, HDCP2.2 / HDCP1.4
- Support 18Gbps video bandwidth
- Support high video resolution up to 4K2K@ 60Hz(4:4:4)
- Support Dolby Vision, HDR10+ and HLG
- All ports support 4K->1080P video scaling function
- Supported HDMI audio formats up to 7.1 HD Audio Channels (LPCM, Dolby TrueHD and DTS-HD Master Audio)
- Support audio stripping from HDMI source to coaxial audio port and analog audio port
- Support ARC function, can return the audio of HDMI display device to coaxial audio port
- Support CEC control display and intelligent EDID management
- 1U rack mount design with front panel OLED display
- Controlled by front panel keys, IR remote, RS-232, LAN and Web GUI

4. Schematic diagram



5. Matrix Instructions

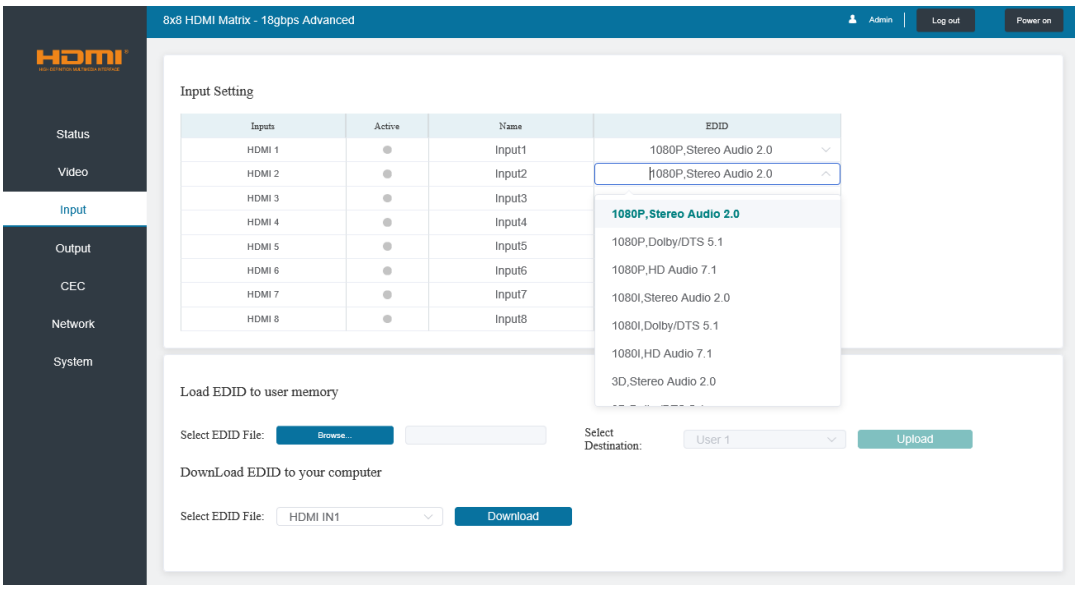
5.1 EDID management

This matrix has 21 factory-defined EDID settings, 2 user-defined EDID modes and 8 copy EDID modes. Users can choose to define the EDID mode or copy the EDID mode through the front panel buttons, RS-232 control or Web GUI.

Front panel button operation: In the initial OLED display state, press "MENU" once to enter the "Select EDID" interface, then press "UP/DOWN" to select the EDID type, and then press "ENTER" to enter the "Copy To Input: ” interface, and then use “UP/DOWN” to select the input port, and finally press the “ENTER” key to confirm.

RS-232 control operation: Use serial cable to connect the matrix and computer, then open the serial command tool on the computer and send the ASCII command "s edid in x from z!" to set the EDID. For details, please refer to "EDID setting" of the ASCII command table in the chapter “5.3 RS-232 Control Commands".

Web GUI operation: Please refer to the EDID management of "Input page" in “5.2 Web GUI Operation Guide" chapter.



The list of defined EDID settings for a product looks like this:

EDID mode	EDID description
1	1080p, Stereo Audio 2.0
2	1080p, Dolby/DTS 5.1
3	1080p, HD Audio 7.1
4	1080i, Stereo Audio 2.0
5	1080i, Dolby/DTS 5.1
6	1080i, HD Audio 7.1
7	3D, Stereo Audio 2.0
8	3D, Dolby/DTS 5.1
9	3D, HD Audio 7.1
10	4K2K30_444, Stereo Audio 2.0
11	4K2K30_444, Dolby/DTS 5.1
12	4K2K30_444, HD Audio 7.1
13	4K2K60_420, Stereo Audio 2.0
14	4K2K60_420, Dolby/DTS 5.1
15	4K2K60_420, HD Audio 7.1
16	4K2K60_444, Stereo Audio 2.0
17	4K2K60_444, Dolby/DTS 5.1
18	4K2K60_444, HD Audio 7.1
19	4K2K60_444, Stereo Audio 2.0 HDR
20	4K2K60_444, Dolby/DTS 5.1 HDR
21	4K2K60_444, HD Audio 7.1HDR
22	USER1
23	USER2
24	Copy from hdmi output 1
25	Copy from hdmi output 2
26	Copy from hdmi output 3
27	Copy from hdmi output 4
28	Copy from hdmi output 5
29	Copy from hdmi output 6
30	Copy from hdmi output 7
31	Copy from hdmi output 8

5.2 Web GUI operation guide

This matrix supports Web GUI control. The specific operation method is as follows:

Step 1: Get the current IP address.

The default IP address of the matrix is 192.168.1.100. Users can get the current IP address of the matrix in two ways:

Method 1: Get it by pressing the panel buttons. Press "MENU" on the panel to enter the IP page, and then press "UP/DOWN" to view the current IP address.

Method 2: Get it by RS-232 control. Use the ASCII command tool to send the command "r ipconfig!", the following feedback will appear:

```
IP Mode: DHCP
IP:192.168.62.109
Subnet Mask:255.255.255.0
Gateway:192.168.62.1
TCP/IP port:8000
Telnet port:23
Mac address:6c-df-fb-0c-b3-8e
```

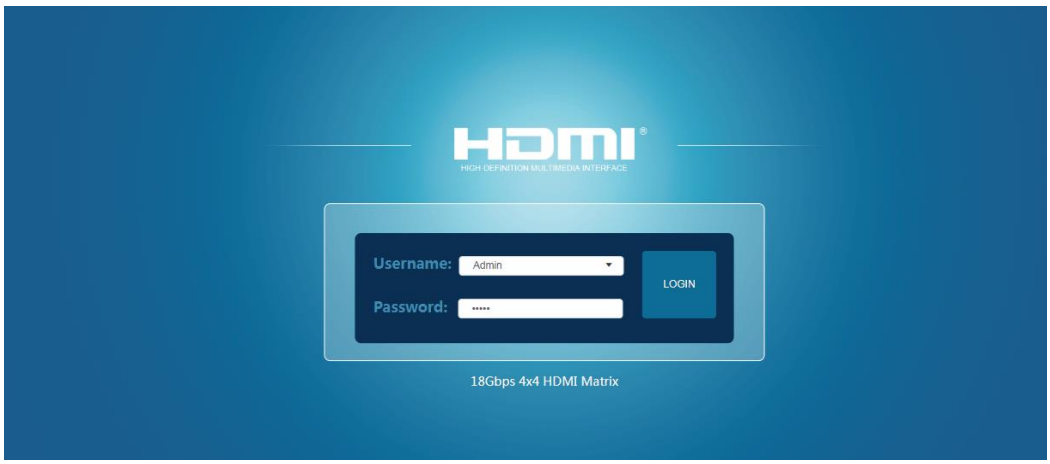
The IP: 192.168.62.109 is the current IP address of the matrix (the IP address is variable, depending on what the machine returns).

For details on ASCII control, refer to "5.3 RS-232 Control Commands".

Step 2: Use the UTP cable to connect the TCP/IP interface of the matrix to the computer, and set the IP address of the computer and the matrix to be in the same network segment.

Step 3: Enter the IP address of the matrix on the computer's browser to enter the Web GUI page.

Before entering the main page of the Web GUI, the login page will appear, as shown in the following figure:



Select the username in the drop-down box and enter the password. The default passwords are as follows:

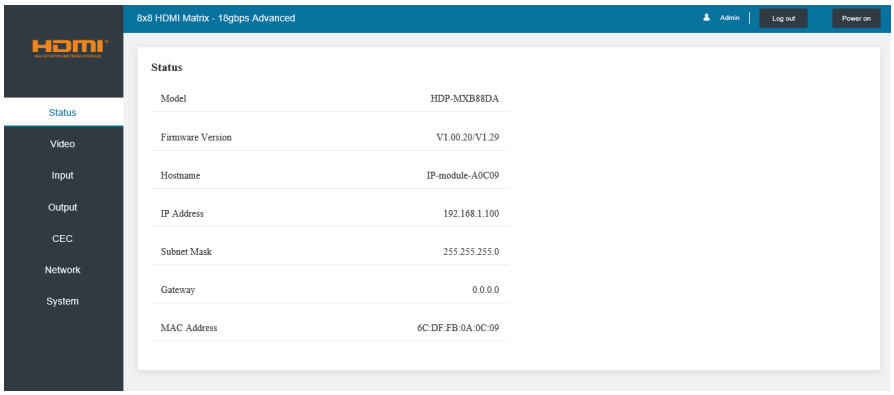
Select the username in the drop-down box and enter the password. The default passwords are as follows:

Username	**User**	**Admin**
Password	**user**	**admin**

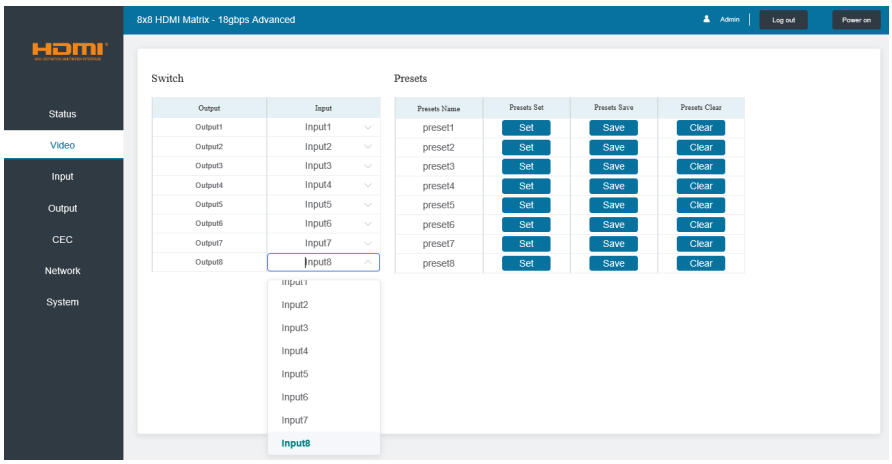
After entering the password, click "LOGIN" to log in, and the Status page will appear.

◆ Status Page

This page provides basic information about the device, such as product model, installed firmware version, and network settings.



◆ Video Page



Users can perform the following operations on the video page:

① Output: The output port of the current device, you can select the signal source for it.

② Input: You can click the drop-down menu to select the signal source for the corresponding output port.

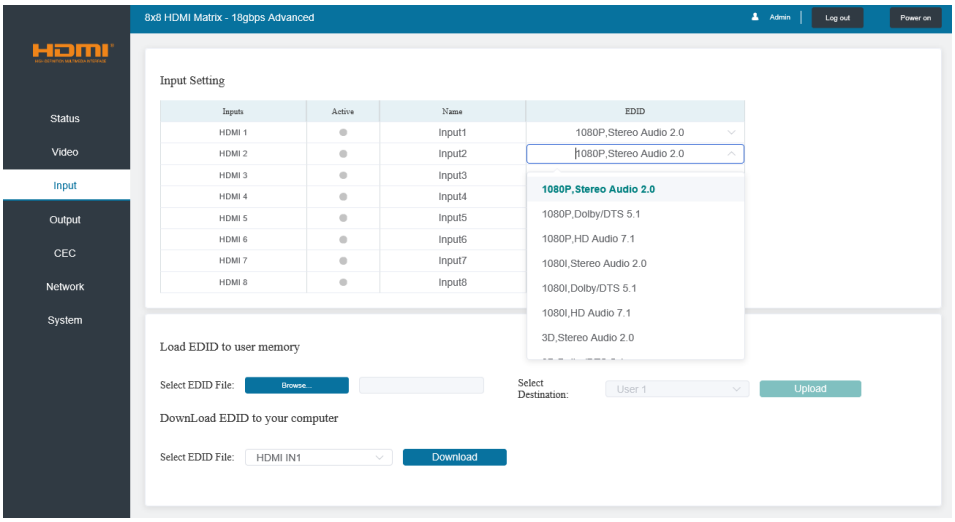
③ Presets Name: The name of the current scene, the maximum length of the name is 12 characters, and the name cannot be Chinese.

④ Presets Set: Restore the settings of the last saved audio and video matrix switching relationship.

⑤ Presets Save: Save the audio and video matrix switching relationship.

⑥ Presets Clear: Clear the saved audio and video matrix switching relationship.

◆ Input Page



Users can perform the following operations on the input page:

① Inputs: The input channel of the device.

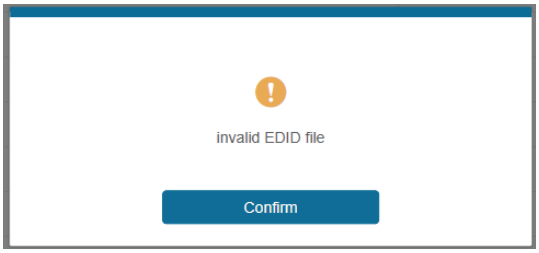
② Active: Indicates whether the channel is connected to a signal source.

③ Name: Enter the name of the channel. If you want to modify it, you can directly enter the corresponding name in the input box. The maximum length of the name is 12 characters, and the name cannot be Chinese.

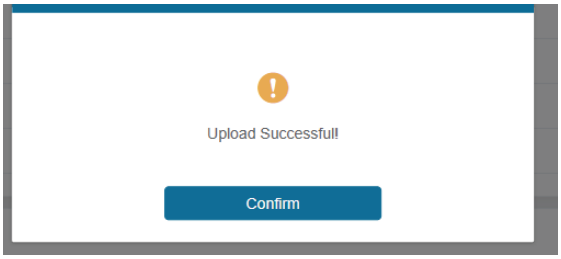
④ EDID: The EDID of the current channel can be set. The specific operations are as follows:

Set EDID for user

Click "Browse" and select the bin file. If the wrong EDID file is selected, the following prompt will appear:



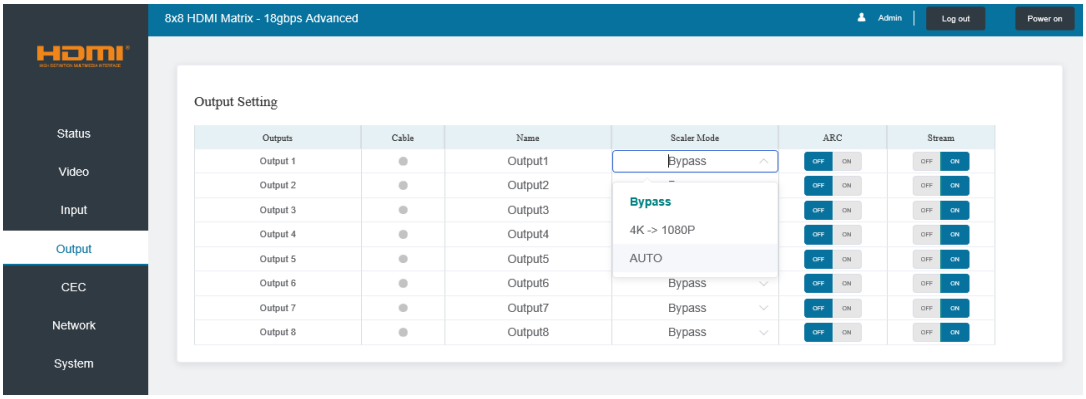
After selecting the correct file name, you can view the file name of the selected file. After selecting User 1 or User 2, click "Upload", after the setting is successful, the prompt is as follows:



Download the EDID file for the corresponding input channel

Click the drop-down box to the right of "Select EDID File" to select the corresponding input channel, and then click "Download" to download the corresponding EDID file.

◆ Output Page



Users can perform the following operations on the output page:

① Outputs: The output channel of the device.

② Name: The name of the output channel. If you want to modify it, you can directly enter the corresponding name in the input box. The maximum length of the name is 12 characters, and the name cannot be Chinese.

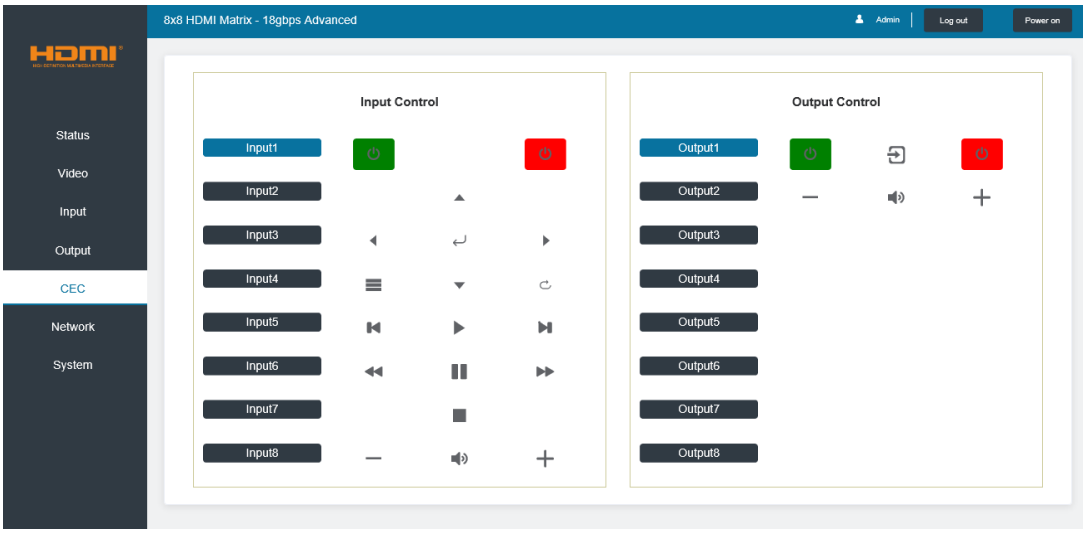
③ Cable: Indicates whether the current output channel has an HDMI receiver. When the output port is connected to a monitor, the indicator light is green, otherwise it is gray.

④ Scalar Mode: Set the current output resolution mode.

⑤ ARC: Enable/disable ARC function.

⑥ Stream: Open/close the output stream.

◆ CEC Page

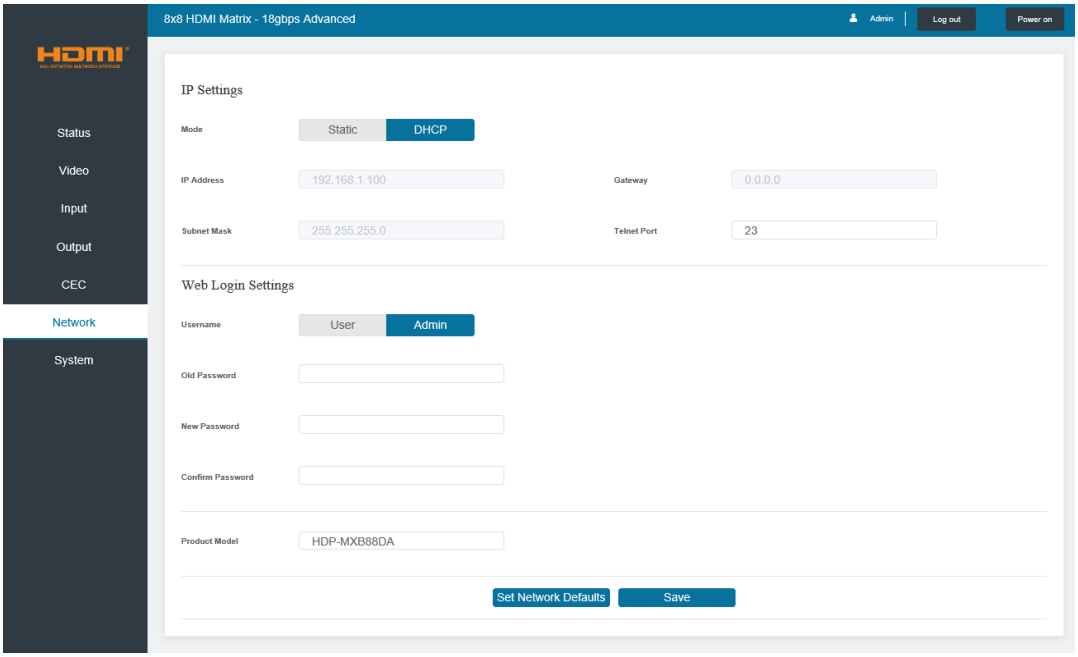


Users can perform CEC management on this page:

① Input Control: You can control the operation of each input source by clicking the icons on the page.

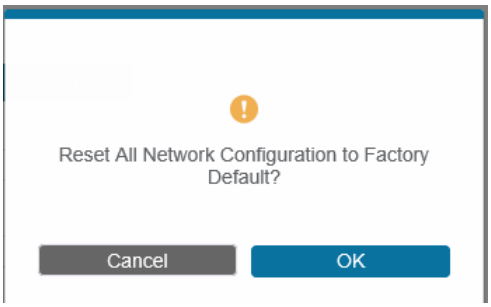
② Output Control: You can control the operation of each output port by clicking the icons on the page, such as on/off, volume adjustment and signal source switching.

◆ Network Page

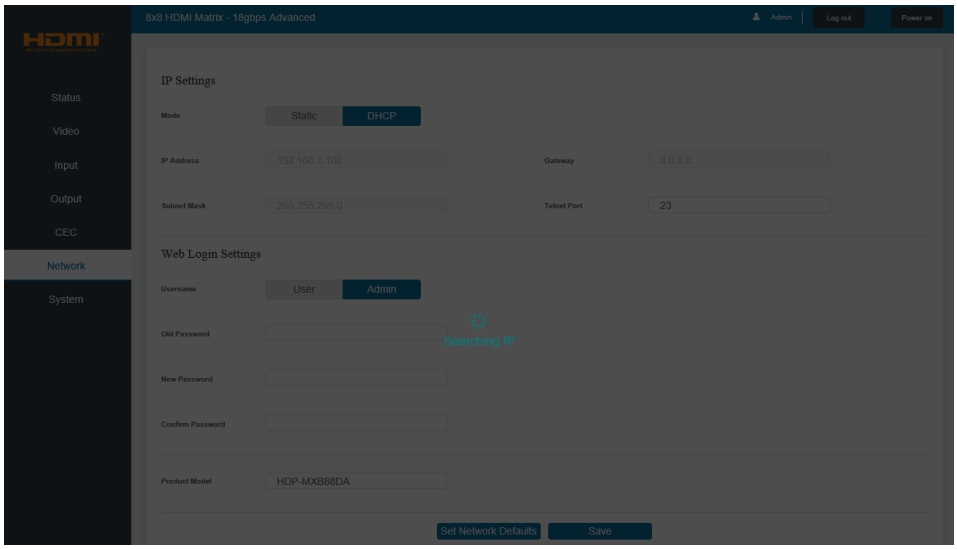


set default network

Click "Set Network Defaults", the following prompt will appear:



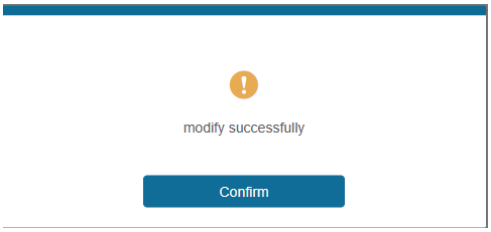
Click "OK" to search for the IP address again, as shown below:



When you jump to the login page after the search is complete, you are done setting the default network settings.

Modify user password

After clicking "User", enter the correct old and new passwords and confirm the password, then click "Save". After the modification is successful, the following prompt will appear:



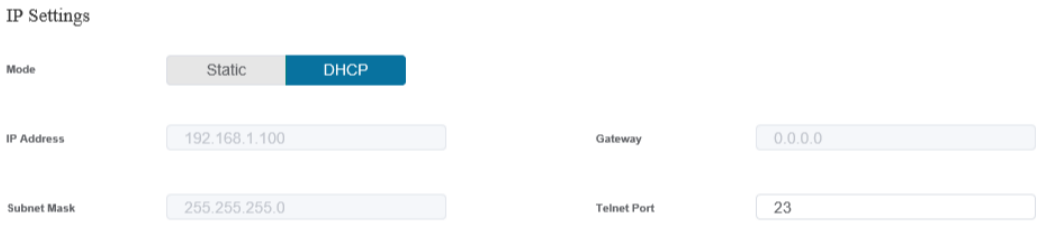
Note: Input rules when changing the password:

1) The password cannot be empty
2) New Password and Old Password cannot be the same
3) New Password and Confirm Password must be the same

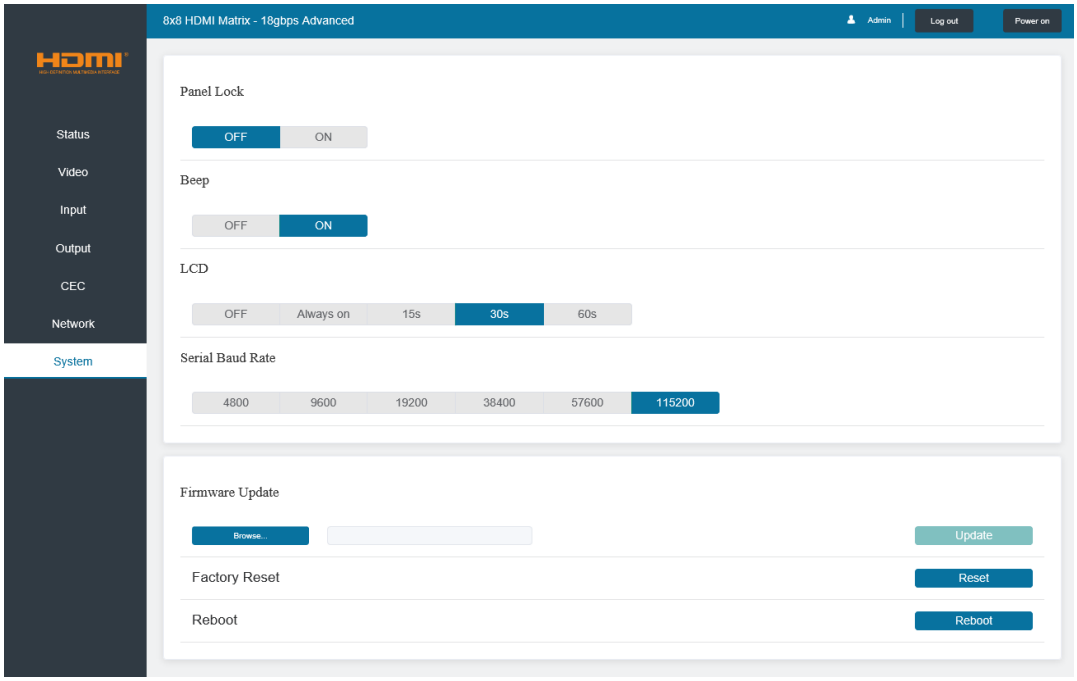
Modify network settings

You can modify the Mode/IP Address/Gateway/Subnet Mask/Telnet Port as required, and then click “Save” to save, the settings will take effect.

If the modified Mode is "Static", it will jump to the corresponding IP address; if it is "DHCP", it will automatically search for the IP address assigned by the router and then jump to the IP address.



◆ System Page



Users can perform the following operations on the System page:

① Panel Lock: Lock/unlock the panel keys. If "On" is selected, the panel keys cannot be used; if "Off" is selected, the panel keys can be used.

② Beep: Turn on/off the buzzer.

③ LCD: Turn on/off the LCD, you can set the turn-on time of the LED (15s/30s/60s).

④ Serial Baud Rate: Click the corresponding value to set the device baud rate to the corresponding value.

⑤ Firmware Update: Click “Browse” to select the upgrade file, and then click “Update” to start the firmware upgrade.

⑥ Factory Reset: Click "Reset" to restore the device to the factory default settings.

⑦ Reboot: Click “Reboot” to restart the device.

Note: After resetting/restarting the device, you will be redirected to the login page.

5.3 RS-232 control commands

This matrix supports RS-232 serial port control. Users need a serial cable with RS-232 male connector (connected to the RS-232 interface of the matrix) and DB9 to USB male connector (connected to the USB interface of the computer) to connect the matrix to the computer. After the connection is successful, open the serial command tool on the computer and send ASCII commands to control the matrix. The list of ASCII commands for this product is shown below.

ASCII commands				
Serial port protocol: Baud rate： 115200 (default), Data bits: 8bit, Stop bits:1, Check bit: None TCP/IP protocol port: 8000 x - Parameter 1 y - Parameter 2 ! - Delimiter				
ASCII commands	**Function description**	**Example**	**Feedback**	**Default setting**
Power				
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! power off	power on
r power!	Get current power state	r power!	power on/power off	
s reboot!	Reboot the device	s reboot!	Reboot... System Initializing... Initialization Finished! FW version x.xx.xx	
System Settings				
help!	List all commands	help!		
r type!	Get device model	r type!	HDP-MXB88DA	

ASCII commands	Function description	Example	Feedback	Default setting
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 fw version!	Get Firmware version	r fw version!	MCU BOOT: Vx.xx.xx MCU APP: Vx.xx.xx WEB GUI: Vx.xx	
r link in x!	Get the connection status of the x input port，x=0~8(0=all)	r link in 1!	hdmi input 1: connect	
r link out y!	Get the connection status of the y output port，y=0~8(0=all)	r link out 1!	hdmi output 1: connect	
s reset!	Reset to factory defaults	s reset!	Reset to factory defaults System Initializing... Initialization Finished! FW version x.xx.xx	
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 on
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 1!	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 on, 2:15s, 3:30s, 4:60s)	s lcd on time 1!	lcd on 15 seconds	lcd on 30 seconds
r lcd mode!	Get the backlight status of lcd screen	r lcd mode!	lcd always on	
s save preset z!	Save switch state between all output port and the input port to preset z, z=1~8	s save preset 1!	save to preset 1	
s recall preset z!	Call saved preset z scenarios, z=1~8	s recall preset 1!	recall from preset 1	
s clear preset z!	Clear stored preset z scenarios, z=1~8	s clear preset 1!	clear preset 1	
r preset z!	Get preset z information, z=1~8	r preset 1!	video/audio crosspoint	
s logo1 **********!	Set the logo name displayed on the first line of LCD screen,the max character is 16	s logo1 Initializing...!	logo1:Initializing...	
s logo2 **********!	Set the logo name displayed on the second line of LCD screen,the max character is 16	s logo2 HDP-MXB88DA!	logo2 HDP-MXB88DA!	
s baud rate xxx!	Set the serial port baud rate of RS02 module, z=(115200,57600, 38400,19200,9600,4800)	s baud rate 115200!	Baudrate:115200	115200
r baud rate!	Get the serial port baud rate of RS02 module	r baud rate!	Baudrate:115200	
s id z!	Set the control ID of the product, z=000~999	s id 888!	id 888!	0
Output Settings				
s in x av out y!	Set input x to output y， x=1~8 ，y=0~8(0=all)	s in 1 av out 2!	input 1 -> output 2	PTP
r av out y!	Get output y signal status y=0~8(0=all)	r av out 0!	input 1 -> output 1 ..... input 8 -> output 8	

ASCII commands	Function description	Example	Feedback	Default setting
s hdmi y stream z!	Set output y stream on/off, y=0~8 (0=all) z=0~1(0:disable,1:enable)	s hdmi 1 stream 1! s hdmi 0 stream 1!	Enable hdmi output 1 stream Disable hdmi output 1 stream Enable hdmi all outputs stream Disable hdmi all outputs stream	enable
r hdmi y stream!	Get output y stream status, y=0~8(0=all)	r hdmi 1 stream!	Enable hdmi output 1 stream	
s hdmi y scaler z!	Set hdmi output y port output scaler mode，y=0~8(0=all), z=1~3(1=bypass,2=4k->1080p, 3=Auto)	s hdmi 1 scaler 1! s hdmi 0 scaler 1!	hdmi output 1 set to bypass mode hdmi all outputs set to bypass mode	hdmi all outputs set to bypass mode
r hdmi y scaler!	Get hdmi output y port output mode y=0~8(0=all)	r hdmi 1 scaler !	hdmi output 1 set to bypass mode	
EDID Settings				
s edid in x from z!	Set input x EDID from default EDID z, x=0~8(0=all),z=1~31 1, 1080p,Stereo Audio 2.0 2, 1080p,Dolby/DTS 5.1 3, 1080p,HD Audio 7.1 4, 1080i,Stereo Audio 2.0 5, 1080i,Dolby/DTS 5.1 6, 1080i,HD Audio 7.1 7, 3D,Stereo Audio 2.0 8, 3D,Dolby/DTS 5.1 9, 3D,HD Audio 7.1 10, 4K2K30_444,Stereo Audio 2.0 11, 4K2K30_444,Dolby/DTS 5.1 12, 4K2K30_444,HD Audio 7.1 13, 4K2K60_420,Stereo Audio 2.0 14, 4K2K60_420,Dolby/DTS 5.1 15, 4K2K60_420,HD Audio 7.1 16, 4K2K60_444,Stereo Audio 2.0 17, 4K2K60_444,Dolby/DTS 5.1 18, 4K2K60_444,HD Audio 7.1 19, 4K2K60_444,Stereo Audio 2.0 HDR 20, 4K2K60_444,Dolby/DTS 5.1 HDR 21, 4K2K60_444,HD Audio 7.1 HDR 22, User1 23, User2 24~31, copy from hdmi output 1~8	s edid in 1 from 1! s edid in 0 from 1!	input 1 EDID:1080p, Stereo Audio 2.0 all inputs EDID:1080p, Stereo Audio 2.0	1080p,Stereo Audio 2.0
r edid in x!	Get EDID status of the input x，x=0~8(0=all input)	r edid in 0!	input 1 EDID: 4K2K60 _444,Stereo Audio 2.0 …… input 8 EDID: 4K2K60 _444,Stereo Audio 2.0	
r edid data hdmi y!	Get the EDID data of the hdmi output y port，y=1~8	r edid data hdmi 1!	EDID: 00 FF FF FF FF FF FF 00 ……	
Audio Settings				
s hdmi y arc z!	Turn on/off ARC of HDMI output y, y=0~8(0=all) z=0~1(z=0,off,z=1 on)	s hdmi 1 arc 1! s hdmi 0 arc 1!	hdmi output 1 arc on hdmi output 1 arc off hdmi all outputs arc on hdmi all outputs arc off	off
r hdmi y arc!	Get the ARC state of HDMI output y，y=0~8(0=all)	r hdmi 1 arc!	hdmi output 1 arc on	

ASCII commands	Function description	Example	Feedback	Default setting
CEC Settings				
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!	iInput 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!	iInput 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 output y power on by CEC, y=0~8(0=all output)	s cec hdmi out 1 on!	hdmi output 1 power on	
s cec hdmi out y off	set output y power off by CEC, y=0~8(0=all output)	s cec hdmi out 1 on!	hdmi output 1 power off	
s cec hdmi out y mute!	set output y volume mute by CEC, y=0~8(0=all output)	s cec hdmi out 1 mute!	hdmi output 1 volume mute	
s cec hdmi out y vol-!	set output y volume down by CEC, y=0~8(0=all output)	s cec hdmi out 1 vol-!	hdmi output 1 volume down	
s cec hdmi out y vol+!	set output y volume up by CEC, y=0~8(0=all output)	s cec hdmi out 1 vol+!	hdmi output 1 volume up	
s cec hdmi out y active!	set output y active source by CEC, y=0~8(0=all output)	s cec hdmi out 1 active!	hdmi output 1 active source	

ASCII commands	Function description	Example	Feedback	Default setting
Network Settings				
r ipconfig!	Get the Current IP Configuration	r ipconfig!	IP Mode: Static IP: 192.168.1.72 Subnet Mask: 255.255.255.0 Gateway: 192.168.1.1 TCP/IP port=8000 Telnet port=10 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 192.168.1.100!	Set IP address: 192.168.1.100 (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: 192.168.1.100	
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	
s gateway xxx.xxx.xxx.xxx!	Set network gateway	s gateway 192.168.1.1!	Set gateway: 192.168.1.1 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:192.168.1.1	
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 network reboot!	Network reboot... IP Mode: Static IP: 192.168.1.72 Subnet Mask: 255.255.255.0 Gateway: 192.168.1.1 TCP/IP port=8000 Telnet port=10 Mac address: 00:1C:91:03:80:01	

安全指示

用户手册和设备上所使用的符号，指出可能对用户或他人造成的伤害以及财产受损的风险，为了您能够安全、正确使用设备，标识及其含义如下，请确保在阅读用户手册之前正确理解这些标识。

产品中含有一些金属元器件，请注意环保。

此为A 级产品，在生活环境中，该产品可能会造成无线电干扰。在这种情况下，可能需要用户对干扰采取切实 可行的措施。

提醒使用者设备内出现的未绝缘的危险电压可能会导致人遭受电击

警告：为了避免电击，请不要打开机盖，也不要将无用的部分放在机箱内。请与有资格的服务人员联系。

一般信息指示

列示了可能导致操作或设置不成功的内容及一些需要注意的相关信息。

警告

为确保设备可靠使用及人员人身安全，请在安装、使用和维护时，请遵守以下事项：

安装时的注意事项：

- 请勿在下列场所使用本产品：有灰尘、油烟、导电性尘埃、腐蚀性气体、可燃性气体的场所；
- 暴露于高温、结露、风雨的场合；有振动、冲击的场合。电击、火灾、误操作也会导致产品损坏和恶化；
- 在进行螺丝孔加工和接线时，不要使金属屑和电线头掉入控制器的通风孔内，这有可能引起火灾、故障、误操作；
- 产品在安装工作结束，需要保证通风面上没有异物，包括防尘纸等包装物品，否则可能导致运行时散热不畅，引起火灾、故障、误操作；
- 避免带电状态进行接线、插拔电缆插头，否则容易导致电击，或导致电路损坏；
- 安装和接线必须牢固可靠，接触不良可能导致误操作；
- 对于在干扰严重的应用场合，高频信号的输入或输出电缆应选用屏蔽电缆，以提高系统的抗干扰性能。

布线时的注意事项：

- 必须将外部电源全部切断后，才能进行安装、接线等操作，否则可能引起触电或设备损坏；
- 本产品通过电源线的接地导线接地，为避免电击，必须将接地导线与大地相连，在对本产品的输入端或输出端进行连接之前，请务必将本产品正确接地；
- 在安装布线完毕，立即清除异物，通电前请盖好产品的端子盖板，避免引起触电。

保养时的注意事项：

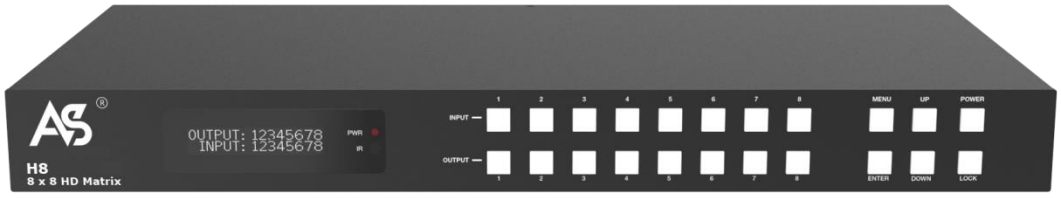
- 请勿在通电时触摸端子，否则可能引起电击、误操作；
- 请在关闭电源后进行清扫和端子的旋紧工作，通电时这些操作可能引起触电；
- 请在关闭电源后进行通讯信号电缆的连接或拆除、扩展模块或控制单元的电缆连接或拆除等操作，否则可能引起设备损坏、误操作；
- 请勿拆卸设备，避免损坏内部电气元件；
- 务必熟读本手册，充分确认安全后，再进行程序的变更、试运行、启动和停止操作。

产品报废时的注意事项：

- 电路板上的电解电容器焚烧时可能发生爆炸；
- 请分类收集和处理，不能投入生活垃圾中；
- 请按工业废弃物进行处理，或者按当地的环境保护规定处理。

目录：

1. 技术参数



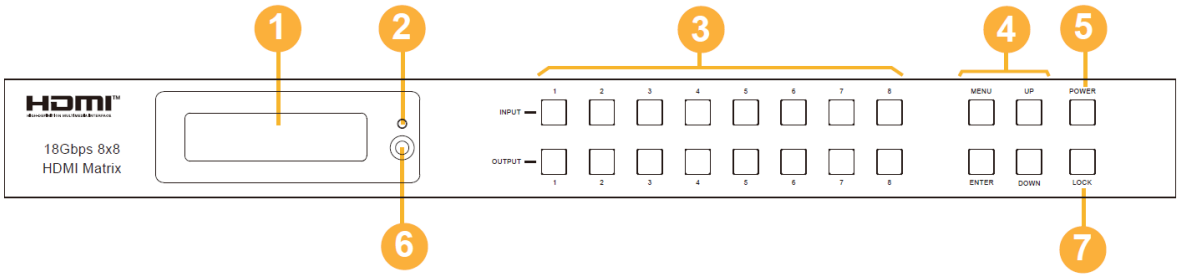
下表列出了H8的规格：

参数规格			
HDMI标准	HDMI 2.0b		
HDCP标准	HDCP 2.2， HDCP 1.4		
视频带宽	18Gbps		
分辨率	高达4Kx2K@50/60Hz 4:4:4		
颜色空间	RGB，YCbCr 4:4:4/4:2:2/4:2:0		
颜色深度	8-bit，10-bit，12-bit		
HDR	支持HDR10， HDR10+，Dolby Vision，HLG		
HDMI音频格式	LPCM 2/5.1/7.1，Dolby Digital，DTS 5.1，Dolby Digital+， Dolby True HD，DTS-HD Master Audio，Dolby Atmos，DTS:X		
同轴音频格式	PCM2.0CH，Dolby Digital / Plus， DTS 2.0/5.1		
L/R 音频格式	PCM2.0CH		
静电保护	±8kV (空气放电) , ±4kV (接触放电)		
外壳	金属外壳		
颜色	黑色		
尺寸	440mm[长]×200mm[宽]×44.5mm[高]		
重量	2.8kg		
供电电源	输入：AC 100~240V 50/60Hz 输出：DC 12V/5A (US/EU标准, CE/FCC/UL认证)		
电源功耗	43W		
工作温度	-10° C ~ 45° C / 14° F ~ 113° F		
储存温度	-20° C ~ 60° C / -4° F ~ 104° F		
相对湿度	20~90% RH (无凝结)		
输入端口	8 x HDMI in Type A [19-pin母座] 1 x IR EXT [3.5mm Stereo Mini-jack]		
输出端口	8 x HDMI out Type A [19-pin母座] 8 x L/R audio out [3.5mm Stereo Mini-jack] 8 x COAX audio out [RCA]		
控制端口	1 x TCP/IP [RJ45] 1 x RS-232 [D-Sub 9]		
分辨率 / 线长	**4K@60Hz - 米**	**4K@30Hz - 米**	**1080P@60Hz - 米**
HDMI IN/OUT	5米	10米	15米
推荐使用高级高速HDMI线。			

2. 物理描述

2.1 面板介绍

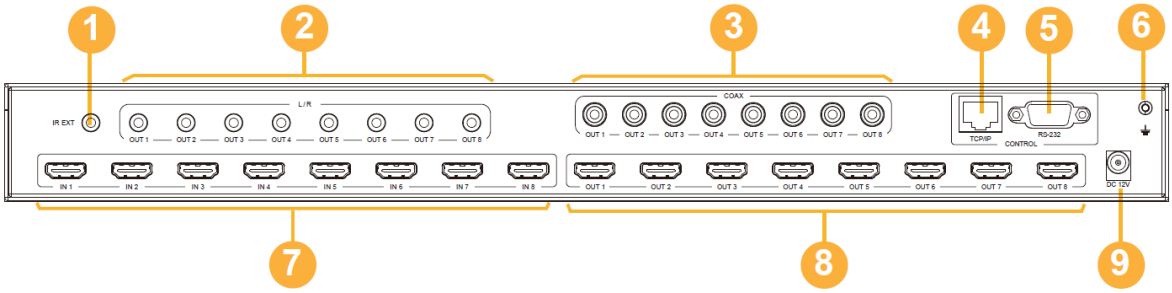
◆ 前面板端口



连接器、控制器和指示器

标号	名称	功能描述
1	OLED显示屏	显示矩阵的切换状态、输入/输出接口、EDID、波特率和IP地址。
2	电源指示灯	本设备上电时，指示灯亮绿色；设备待机时，指示灯亮红色。
3	输入/输出按键	先按输出键（1-8），再按输入键（1-8），给输出接口选择相应的输入源。
4	MENU / ENTER / UP /DOWN按键	①EDID查询：先按“MENU”键激活初始OLED显示屏（显示矩阵切换状态），再按“UP/DOWN”键可以查看每一个HDMI输入口的当前EDID信息。 ②EDID设置：在初始OLED显示屏状态下，按一次“MENU”键进入“Select EDID”界面，再按“UP/DOWN”键选择 EDID类型，然后按“ENTER”键进入“Copy To Input:”界 面，再使用“UP/DOWN”键选择要设置的输入口，最后按 “ENTER”键确认。 ③波特率设置: 在初始OLED显示屏状态下，按两次“MENU”键进入“SELECT BAUD”界面，再按“UP/DOWN”键选择波特率，最后按“ENTER”键完成波特率设置。 ④IP地址查询：在初始OLED显示屏状态下，按三次“MENU 键进入IP信息界面，可查看当前的IP地址。按“UP/DOWN ”键可以切换DHCP ON/OFF。再次按“MENU”键将返回到初始OLED显示屏状态。
5	电源按键	长按电源按键3秒进入待机模式，再次短按此键可唤醒设备。
6	IR接收窗	红外信号接收窗，仅接收本设备的红外遥控信号。
7	LOCK按键	短按LOCK按键锁定前面板按键（电源按键除外）；再次按此键可解锁按键。

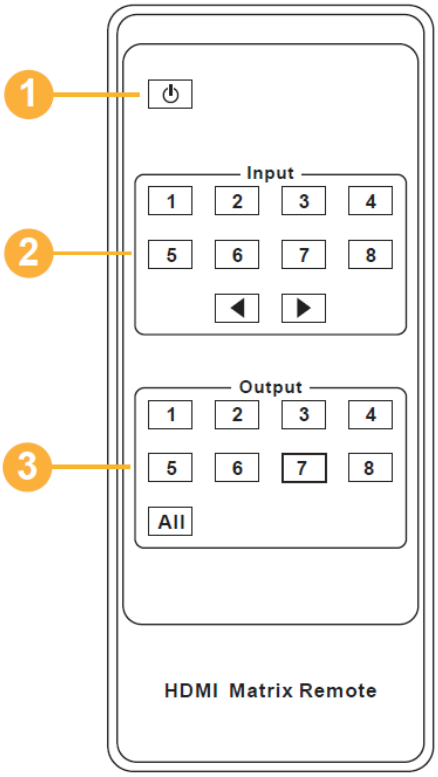
◆后面板端口



连接器、控制器和指示器

标号	名称	功能描述
1	IR EXT	若设备前面板上的IR接收窗被挡或者设备安装在一个红外信号无法接收的封闭区域。则可以通过在IR EXT接口插入IR 接收线来接收IR遥控器的信号。
2	L/R音频输出口 OUT 1 - 4	模拟音频输出口，通过3.5mm音频线连接功放或音响。
3	同轴音频输出口 OUT 1 - 4	同轴音频输出口，通过同轴线连接功放等音频输出设备。
4	TCP/IP	TCP/IP控制接口，通过RJ45网线连接电脑或路由器。
5	RS-232	使用D-Sub 9-pin线连接电脑或控制系统传输RS-232指令
6	接地口	连接外壳接地。
7	IN 1 - 8端口	HDMI信号输入口。通过HDMI线连接HDMI源设备，如DVD播放器或机顶盒。
8	OUT 1 - 8端口	HDMI信号输出口。通过HDMI线连接HDMI显示设备，如TV或监视器。
9	DC 12V 电源	DC 12V电源输入口。

2.2 红外遥控器

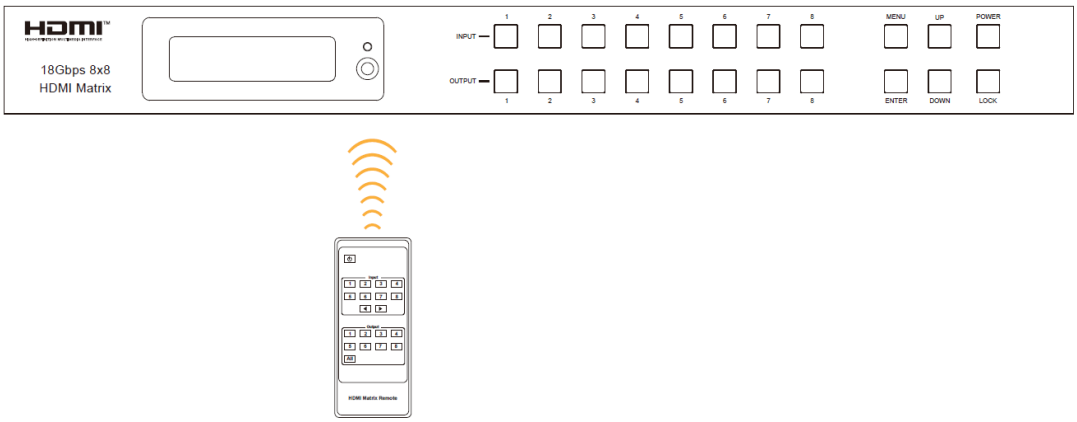


1	⏻	开机/待机按键。
2	Input 1 - 8	选择输入源。
	◀ ▶	选择上一个或下一个输入源。
3	Output 1 - 8	选择输出源。
	All	同时选择所有的输出源。例如，先按“All”键，再按“Input 1”键，此时输入源“1”的信号将输出到 所有显示设备。

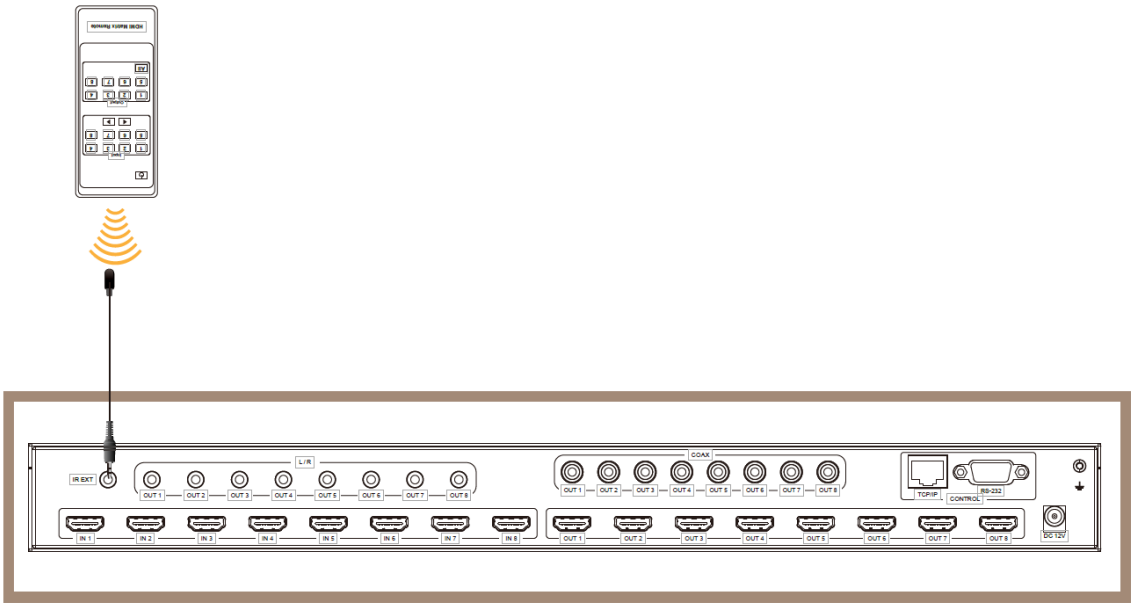
操作方法：先按输出键，再按输入键，选择相应的输入信号源。例如：
先按Output-X键
(X代表从1到8的输出键，包括“All”键)
再按 Input-Y键
(Y代表从1到8的输入键)

矩阵可以通过使用红外遥控器选择输入源和输出源。接收IR遥控信号的方式有以下两种。

第一种：通过IR接收窗接收IR遥控信号。使用IR遥控器时，最远距离为7米，角度为± 45，如图所示：

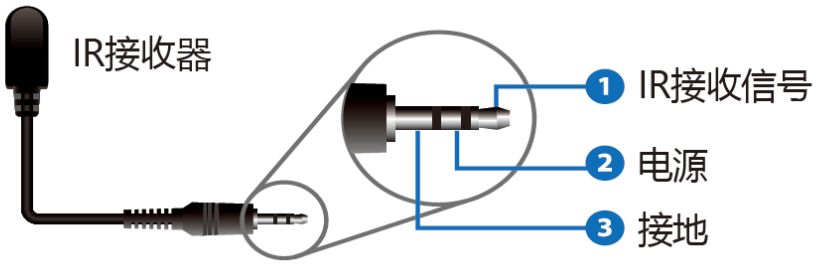


第二种：如果矩阵的IR接收窗被阻挡，或者矩阵安装在红外发射范围之外的封闭区域，可以将IR接收线插入“IR EXT”接口来接收IR遥控信号。使用IR遥控器时，最远距离为7米，遥控器需要直接对准IR接收头。如图所示：



2.3 红外接收线

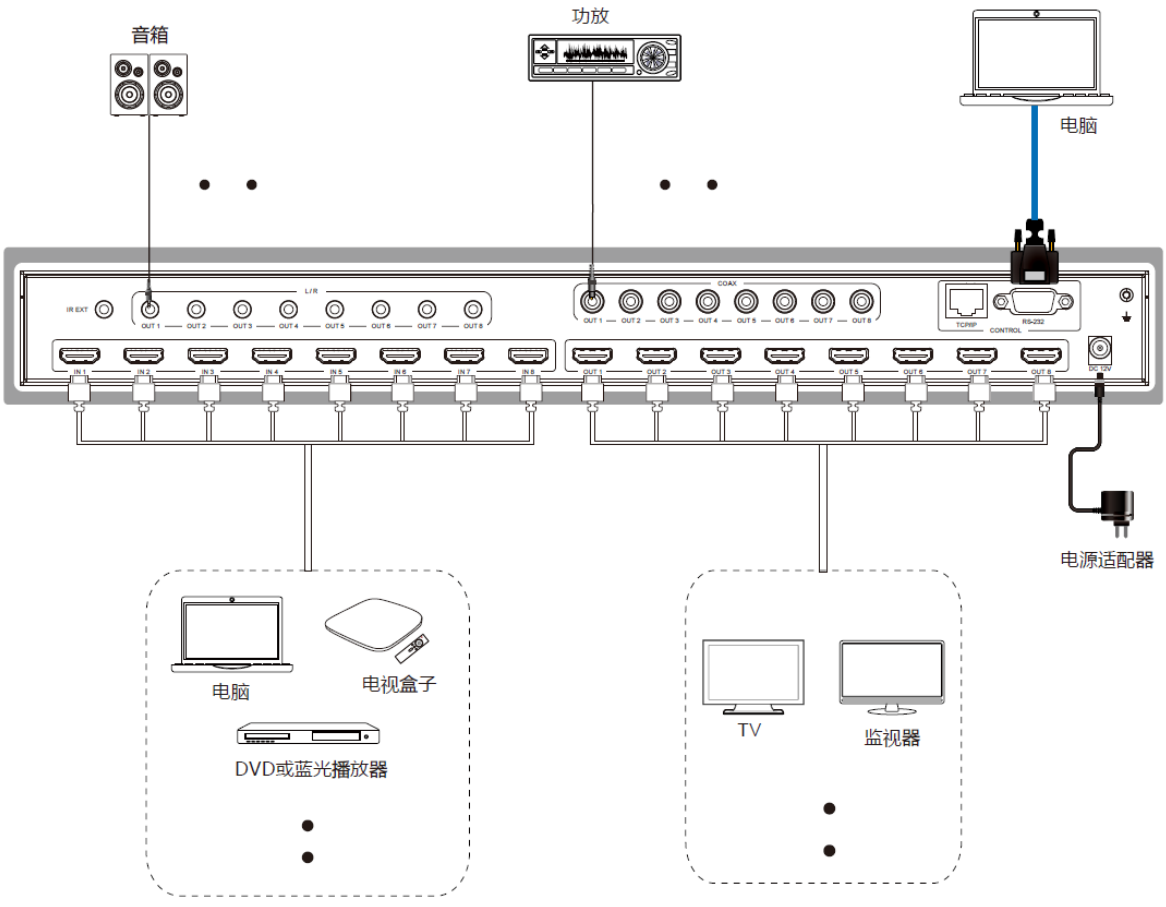
IR接收器



3. 功能特性

- 符合HDMI 2.0b，HDCP 2.2 / HDCP 1.4
- 支持18 Gbps视频带宽
- 视频分辨率最高支持4K2K@60Hz (4:4:4)
- 支持Dolby Vision，HDR10+和HLG
- 所有端口都支持4K->1080P 视频缩放功能
- 支持的HDMI音频格式高达7.1高清音频通道(LPCM，Dolby TrueHD和DTS-HD Master Audio)
- 支持剥离HDMI源的音频给同轴音频口和模拟音频口输出
- 支持ARC功能，可以将HDMI显示设备的音频回传到同轴音频口输出
- 支持CEC控制显示，以及智能EDID管理
- 1U机架安装设计，带有前面板OLED显示屏
- 通过前面板按键，红外遥控器，RS-232，LAN和Web GUI控制

4. 系统连接图



5. 矩阵使用说明

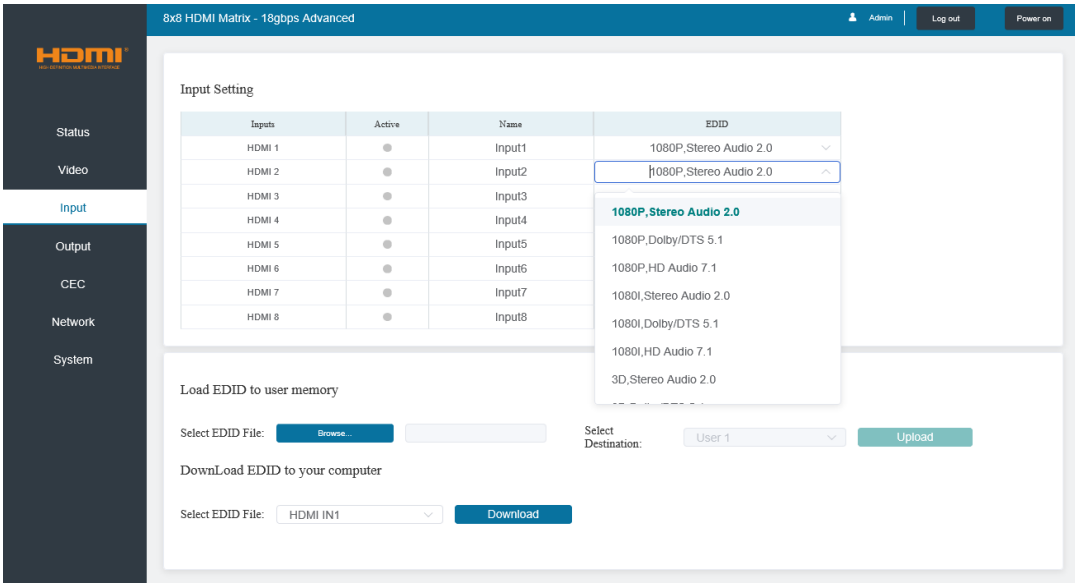
5.1 EDID管理

矩阵有21种工厂定义的EDID设置，2种用户自定义EDID模式和8种拷贝EDID模式。用户可以通过前面板按键，RS-232控制或Web GUI选择定义EDID模式或拷贝EDID模式。

前面板按键操作：在初始OLED显示屏状态下，按一次“MENU”键进入“Select EDID”界面，再按“UP/DOWN”键选择EDID类型，然后按“ENTER”键进入“Copy To Input：”界面，再使用“UP/DOWN”键选需要设置的输入口，最后按“ENTER”键确认。

RS-232控制操作：使用串口线连接矩阵和电脑，然后打开电脑上的串口指令工具发送ASCII指令“s edid in x from z！”来设置EDID。有关详请，请参阅“5.3 RS-232控制指令”章节中ASCII指令表的“EDID设置”。

Web GUI操作：请参阅“5.2 Web GUI操作指南”章节中“Input页面”的EDID管理。



产品的已定义EDID设置列表如下所示：

EDID模式	EDID描述
1	1080p, Stereo Audio 2.0
2	1080p, Dolby/DTS 5.1
3	1080p, HD Audio 7.1
4	1080i, Stereo Audio 2.0
5	1080i, Dolby/DTS 5.1
6	1080i, HD Audio 7.1
7	3D, Stereo Audio 2.0
8	3D, Dolby/DTS 5.1
9	3D, HD Audio 7.1
10	4K2K30_444, Stereo Audio 2.0
11	4K2K30_444, Dolby/DTS 5.1
12	4K2K30_444, HD Audio 7.1
13	4K2K60_420, Stereo Audio 2.0
14	4K2K60_420, Dolby/DTS 5.1
15	4K2K60_420, HD Audio 7.1
16	4K2K60_444, Stereo Audio 2.0
17	4K2K60_444, Dolby/DTS 5.1
18	4K2K60_444, HD Audio 7.1
19	4K2K60_444, Stereo Audio 2.0 HDR
20	4K2K60_444, Dolby/DTS 5.1 HDR
21	4K2K60_444, HD Audio 7.1HDR
22	USER1
23	USER2
24	Copy from hdmi output 1
25	Copy from hdmi output 2
26	Copy from hdmi output 3
27	Copy from hdmi output 4
28	Copy from hdmi output 5
29	Copy from hdmi output 6
30	Copy from hdmi output 7
31	Copy from hdmi output 8

5.2 Web GUI操作指南

本矩阵支持 Web GUI控制。具体操作方法如下：

步骤一：获取当前IP地址。

矩阵的默认IP地址是192.168.1.100。用户可以通过两种方法获取矩阵的当前IP地址：

方法一：通过面板按键获取。按面板上的“MENU”键进入IP页面，再按“UP/DOWN“键查看当前的IP地址。

方法二：通过RS-232控制获取IP地址。使用ASCII指令工具发送指令“r ipconfig!”，会出现以下反馈信息：

```
IP Mode: DHCP
IP:192.168.62.109
Subnet Mask:255.255.255.0
Gateway:192.168.62.1
TCP/IP port:8000
Telnet port:23
Mac address:6c-df-fb-0c-b3-8e
```

上图中的IP:192.168.62.109就是矩阵的当前IP地址（IP地址是可变的，具体取决于机器返回的内容）。

有关ASCII控制的详情，请参阅“5.3 RS-232控制指令”。

步骤二：使用UTP线将矩阵的TCP/IP接口连接到电脑，并设置电脑的IP地址与矩阵在同一网络段。

步骤三：在电脑的浏览器上输入矩阵的IP地址，进入Web GUI页面。

进入Web GUI主页面之前，先会出现登录页面，如下图所示：

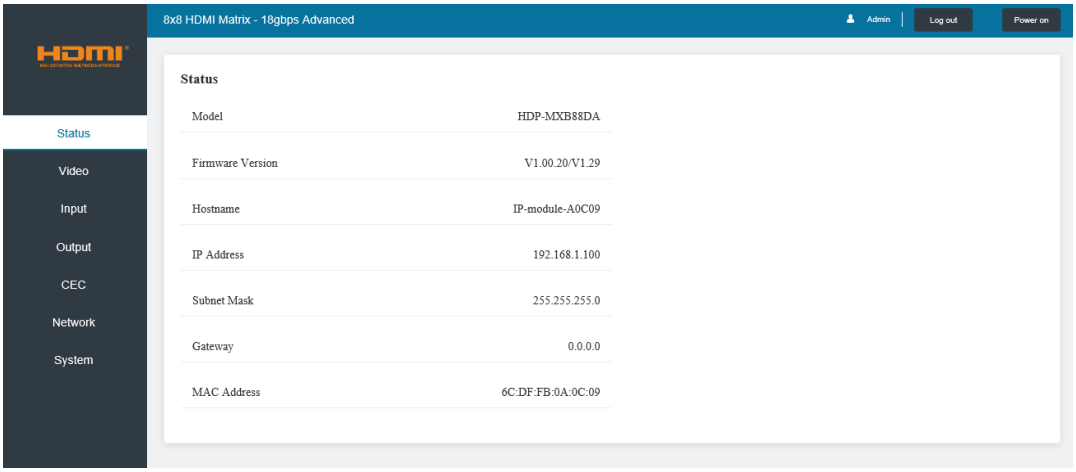
在下拉框中选择用户名，并输入密码。默认密码如下：

Username	**User**	**Admin**
Password	**user**	**admin**

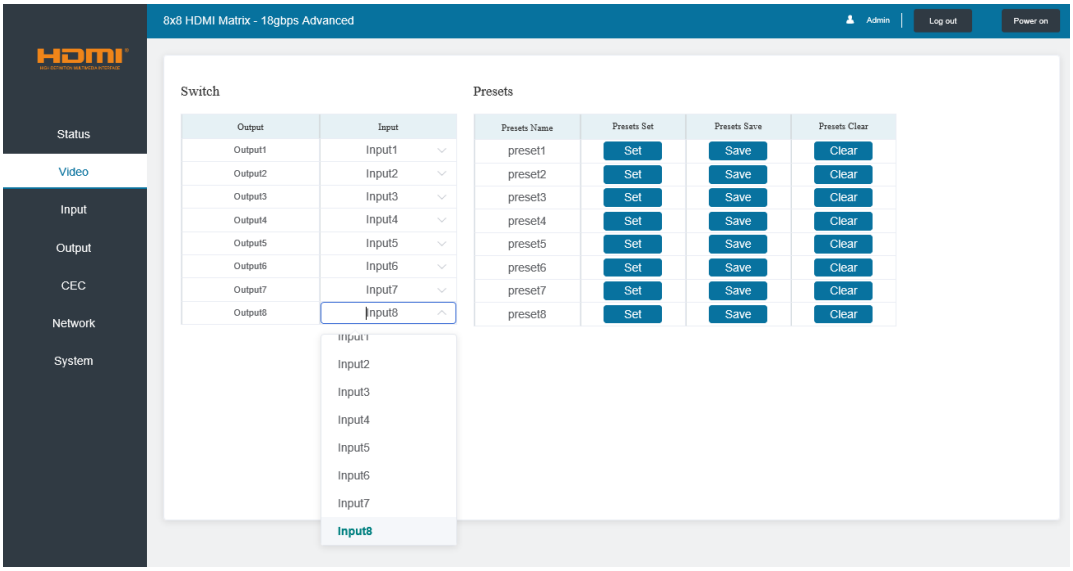
输入密码之后，点击“LOGIN”登录，将出现Status页面。

◆ Status页面

状态页面提供了设备的基本信息，如产品型号、安装的固件版本和网络设置。



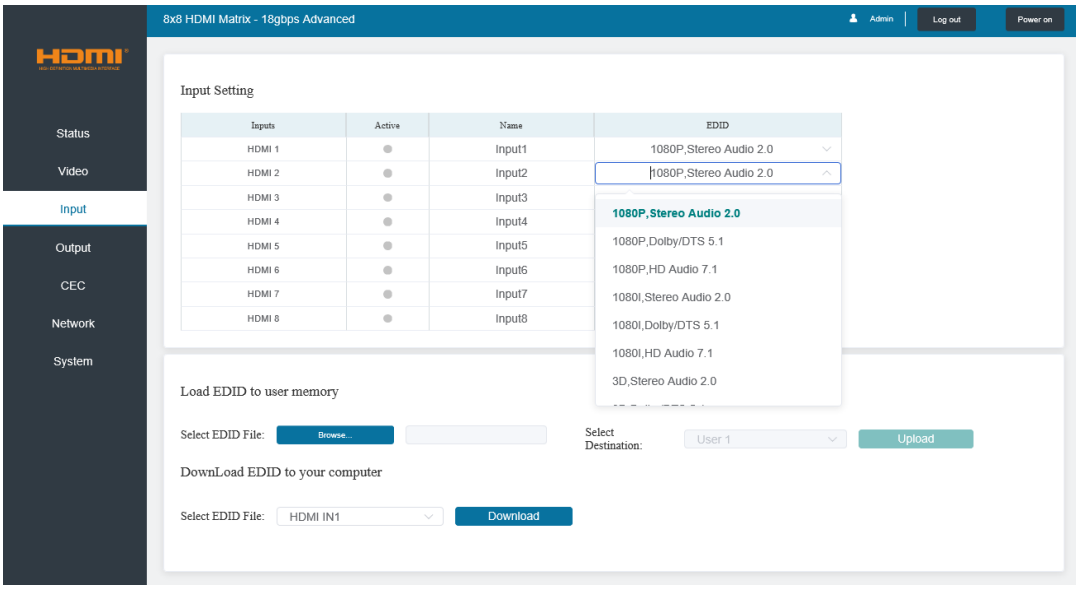
◆ Video页面



用户可以在视频页面进行以下操作：

① Output: 当前设备的输出口，可以为其选择信号源。
② Input: 可以点击下拉菜单为对应的输出口选择信号源。
③ Presets Name: 当前场景名，名称长度最长为12个字符，且名字不能为中文。
④ Presets Set: 恢复上次保存的音视频矩阵切换关系的设置。
⑤ Presets Save: 保存音视频矩阵切换关系。
⑥ Presets Clear: 清空已保存的音视频矩阵切换关系。

◆ Input页面



用户可以在输入页面进行以下操作：

① Inputs: 设备的输入通道。

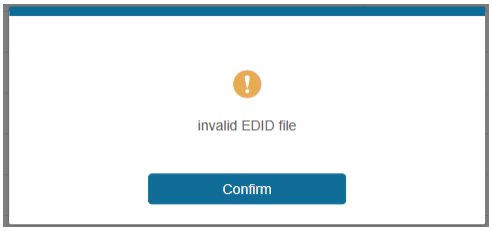
② Active: 指示该通道是否接入信号源。

③ Name: 输入通道的名称，若想修改可直接在输入框输入对应名称，名称长度最长为12个字符，且名称不能为中文。

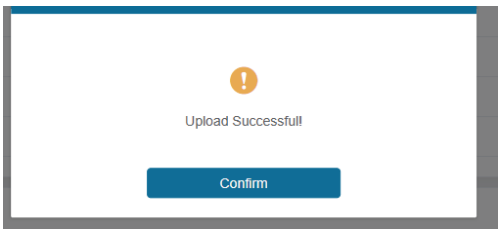
④ EDID: 可设置当前通道的EDID。具体操作如下：

为用户设置EDID

点击“Browse”后选择bin文件。若选择错误的EDID文件，会出现如下提示：



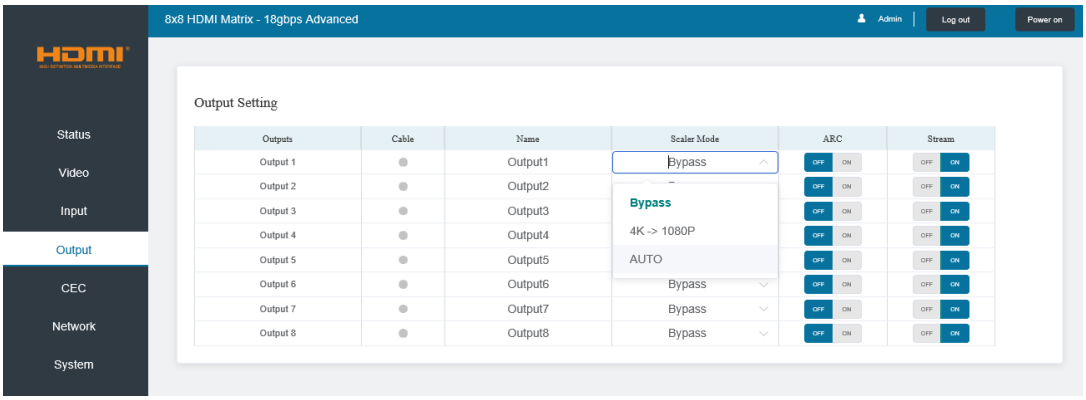
选择正确文件名后，可查看选择文件的文件名。选择User 1或User2后，点击“Upload”，设置成功后提示如下：



下载对应输入通道的EDID文件

点击“Select EDID File”右边的下拉框选择对应的输入通道后，点击“Download”下载对应的EDID文件。

◆ Output页面



用户可以在输出页面进行以下操作：

① Outputs: 设备的输出通道。

② Name: 输出通道的名称，若想修改可直接在输入框输入对应名称，名称长度最长为12个字符，且名称不能为中文。

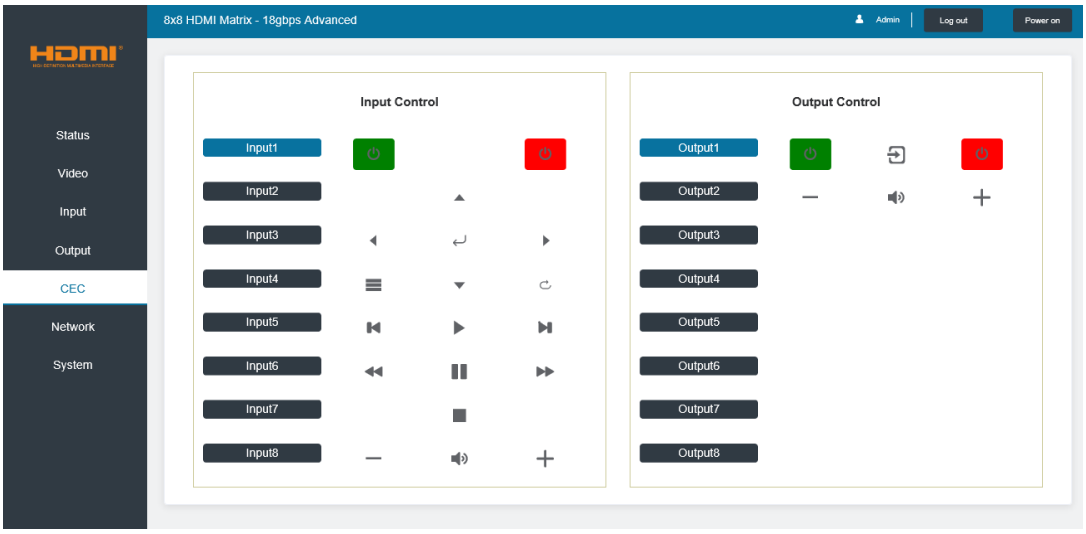
③ Cable: 指示当前输出通道是否有HDMI接收端。当输出口连接了显示器时，指示灯显示为绿色，否则显示为灰色。

④ Scalar Mode: 设置当前的输出分辨率模式。

⑤ ARC: 开启/关闭ARC功能。

⑥ Stream: 打开/关闭输出流。

◆ CEC页面

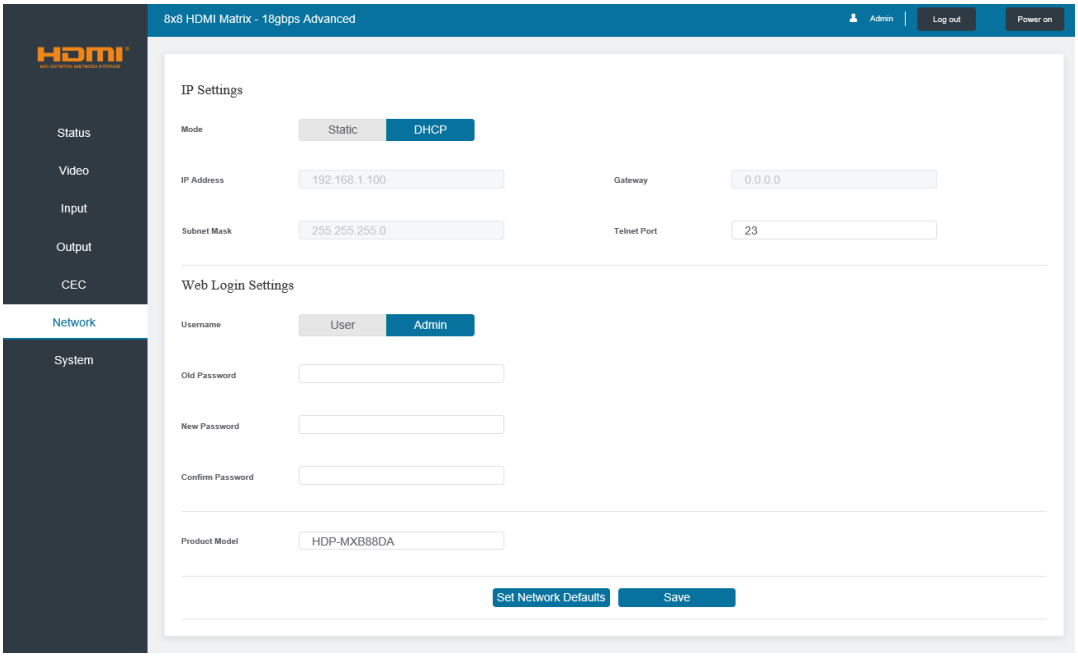


用户可以在此页面进行CEC管理：

① Input Control: 可以通过点击页面上的图标控制每个输入源的操作。

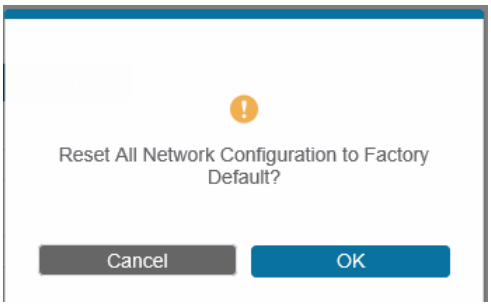
② Output Control: 可以通过点击页面上的图标控制每个输出口的操作，如开启/关闭，音量调节和信号源切换。

◆ Network页面

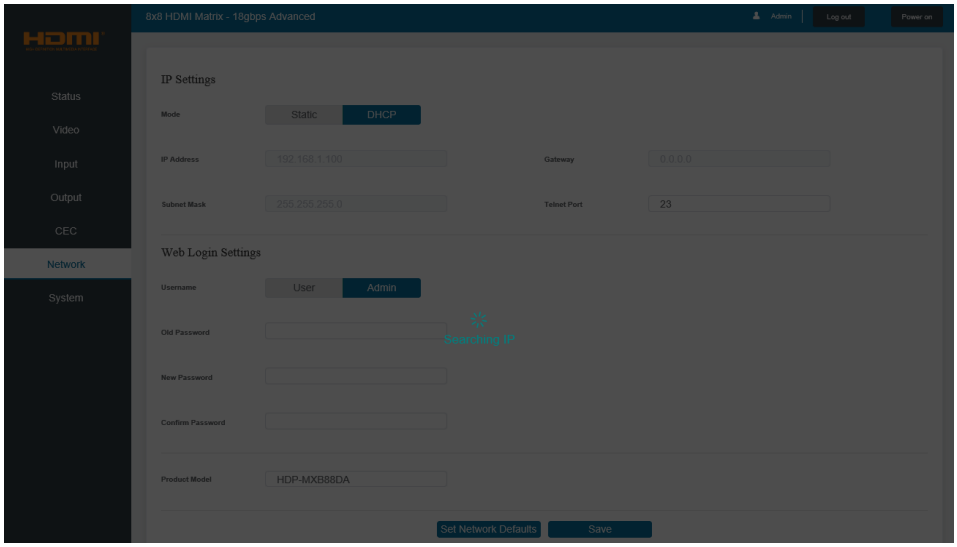


设置默认网络

点击“Set Network Defaults”，会出现如下提示:



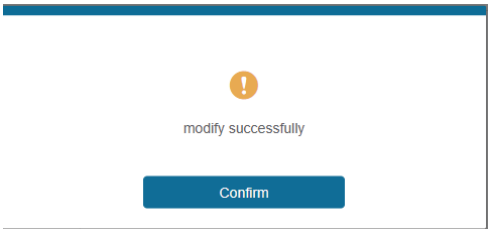
点击“OK”重新搜索IP地址，如下图所示：



当搜索完成后跳转到登录页面，就完成了设置默认网络设置。

修改用户密码

点击“User”后, 输入正确的旧密码和新密码以及确认密码，然后点击“Save”。修改成功之后，会出现如下提示：



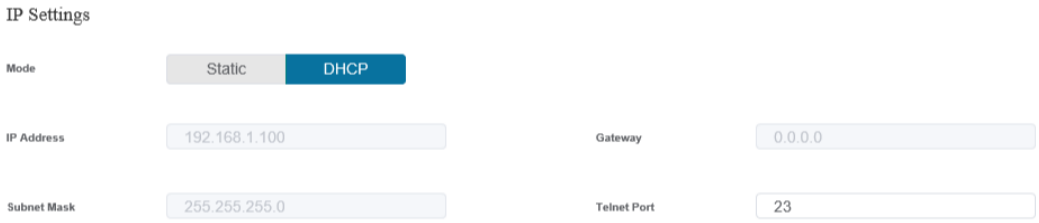
注意：修改密码时的输入规则：

1) 密码不能为空
2) New Password与Old Password不能相同
3) New Password与Confirm Password必须相同

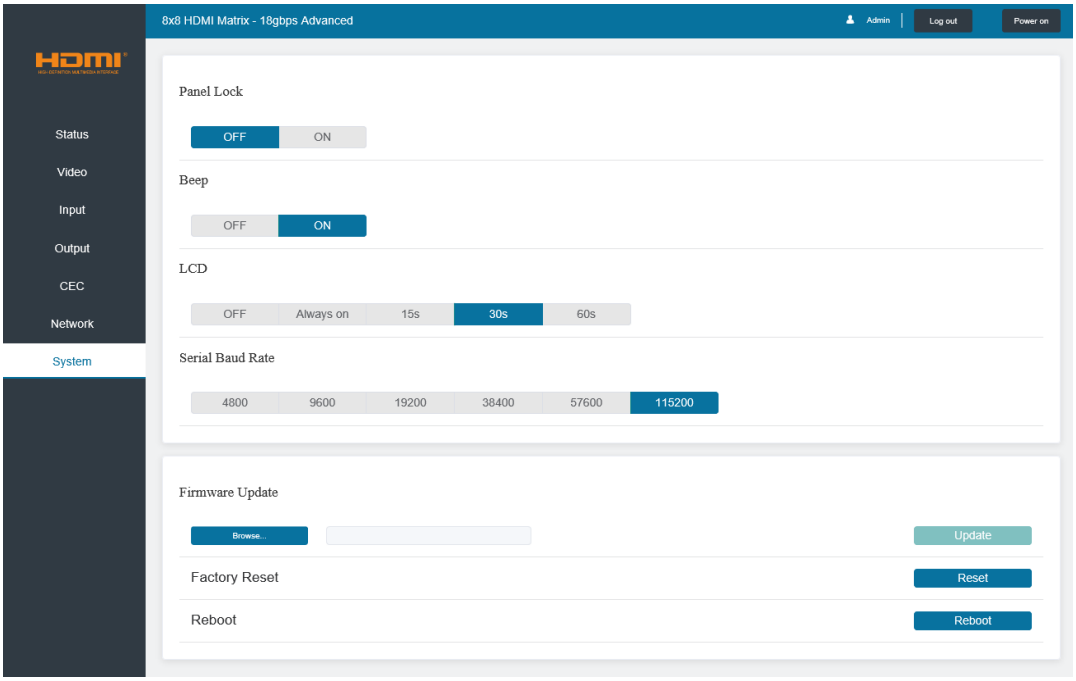
修改网络设置

可以按照需求修改Mode/IP Address/Gateway/Subnet Mask/Telnet Port，然后点击“Save”保存，设置会生效。

若修改后的Mode为“Static”，则跳转到对应的IP地址；若为“DHCP”，则会自动搜索路由器分配的IP地址后跳转到该IP地址。



◆ System页面



用户可以在System页面进行以下操作：

① Panel Lock: 锁定/解锁面板按键。选择 “On”，则面板按键不能使用；选择 “Off”，则面板按键可以使用。

② Beep：开启/关闭蜂鸣器。

③ LCD: 开启/关闭LCD，可以设置LED的开启时间(15s/30s/60s)。

④ Serial Baud Rate：点击对应数值，将设备波特率设为对应值。

⑤ Firmware Update：点击“Browse”选择升级文件，然后点击 “Update” 开始固件升级。

⑥ Factory Reset：点击“Reset”将设备恢复到出厂默认设置。

⑦ Reboot: 点击“Reboot”重启设备。

注意: 重置/重启设备之后，会跳转到登录页面。

5.3 RS-232控制指令

本矩阵支持RS-232串口控制。用户需要一根带RS-232公头（连接矩阵的RS-232接口）和DB9转USB公头（连接电脑的USB接口）的串口线来连接矩阵和电脑。连接成功之后，打开电脑上的串口指令工具发送ASCII指令来控制矩阵。该产品的ASCII指令列表如下所示。

ASCII指令				
串口协议： 波特率: 115200, 数据位： 8bit, 停止位:1, 检查位： 0 TCP/IP 端口号： 8000 x – 参数1； y – 参数2； ！ – 分隔符				
指令码	**功能描述**	**举例**	**反馈**	**默认设置**
电源				
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! power off	power on
r power!	Get current power state	r power!	power on/power off	
s reboot!	Reboot the device	s reboot!	Reboot... System Initializing... Initialization Finished! FW version x.xx.xx	
系统设置				
help!	List all commands	help!		
r type!	Get device model	r type!	HDP-MXB88DA	

指令码	功能描述	举例	反馈	默认设置
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 fw version!	Get Firmware version	r fw version!	MCU BOOT: Vx.xx.xx MCU APP: Vx.xx.xx WEB GUI: Vx.xx	
r link in x!	Get the connection status of the x input port，x=0~8(0=all)	r link in 1!	hdmi input 1: connect	
r link out y!	Get the connection status of the y output port，y=0~8(0=all)	r link out 1!	hdmi output 1: connect	
s reset!	Reset to factory defaults	s reset!	Reset to factory defaults System Initializing... Initialization Finished! FW version x.xx.xx	
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 on
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 1!	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 on, 2:15s, 3:30s, 4:60s)	s lcd on time 1!	lcd on 15 seconds	lcd on 30 seconds
r lcd mode!	Get the backlight status of lcd screen	r lcd mode!	lcd always on	
s save preset z!	Save switch state between all output port and the input port to preset z, z=1~8	s save preset 1!	save to preset 1	
s recall preset z!	Call saved preset z scenarios, z=1~8	s recall preset 1!	recall from preset 1	
s clear preset z!	Clear stored preset z scenarios, z=1~8	s clear preset 1!	clear preset 1	
r preset z!	Get preset z information, z=1~8	r preset 1!	video/audio crosspoint	
s logo1 **********!	Set the logo name displayed on the first line of LCD screen,the max character is 16	s logo1 Initializing...!	logo1:Initializing...	
s logo2 **********!	Set the logo name displayed on the second line of LCD screen,the max character is 16	s logo2 HDP-MXB88DA!	logo2 HDP-MXB88DA!	
s baud rate xxx!	Set the serial port baud rate of RS02 module, z=(115200,57600, 38400,19200,9600,4800)	s baud rate 115200!	Baudrate:115200	115200
r baud rate!	Get the serial port baud rate of RS02 module	r baud rate!	Baudrate:115200	
s id z!	Set the control ID of the product, z=000~999	s id 888!	id 888!	0
输出设置				
s in x av out y!	Set input x to output y， x=1~8 ，y=0~8(0=all)	s in 1 av out 2!	input 1 -> output 2	PTP
r av out y!	Get output y signal status y=0~8(0=all)	r av out 0!	input 1 -> output 1 ..... input 8 -> output 8	

指令码	功能描述	举例	反馈	默认设置
s hdmi y stream z!	Set output y stream on/off, y=0~8 (0=all) z=0~1(0:disable,1:enable)	s hdmi 1 stream 1! s hdmi 0 stream 1!	Enable hdmi output 1 stream Disable hdmi output 1 stream Enable hdmi all outputs stream Disable hdmi all outputs stream	enable
r hdmi y stream!	Get output y stream status, y=0~8(0=all)	r hdmi 1 stream!	Enable hdmi output 1 stream	
s hdmi y scaler z!	Set hdmi output y port output scaler mode，y=0~8(0=all), z=1~3(1=bypass,2=4k->1080p, 3=Auto)	s hdmi 1 scaler 1! s hdmi 0 scaler 1!	hdmi output 1 set to bypass mode hdmi all outputs set to bypass mode	hdmi all outputs set to bypass mode
r hdmi y scaler!	Get hdmi output y port output mode y=0~8(0=all)	r hdmi 1 scaler !	hdmi output 1 set to bypass mode	
EDID设置				
s edid in x from z!	Set input x EDID from default EDID z, x=0~8(0=all),z=1~31 1, 1080p,Stereo Audio 2.0 2, 1080p,Dolby/DTS 5.1 3, 1080p,HD Audio 7.1 4, 1080i,Stereo Audio 2.0 5, 1080i,Dolby/DTS 5.1 6, 1080i,HD Audio 7.1 7, 3D,Stereo Audio 2.0 8, 3D,Dolby/DTS 5.1 9, 3D,HD Audio 7.1 10, 4K2K30_444,Stereo Audio 2.0 11, 4K2K30_444,Dolby/DTS 5.1 12, 4K2K30_444,HD Audio 7.1 13, 4K2K60_420,Stereo Audio 2.0 14, 4K2K60_420,Dolby/DTS 5.1 15, 4K2K60_420,HD Audio 7.1 16, 4K2K60_444,Stereo Audio 2.0 17, 4K2K60_444,Dolby/DTS 5.1 18, 4K2K60_444,HD Audio 7.1 19, 4K2K60_444,Stereo Audio 2.0 HDR 20, 4K2K60_444,Dolby/DTS 5.1 HDR 21, 4K2K60_444,HD Audio 7.1 HDR 22, User1 23, User2 24~31, copy from hdmi output 1~8	s edid in 1 from 1! s edid in 0 from 1!	input 1 EDID:1080p, Stereo Audio 2.0 all inputs EDID:1080p, Stereo Audio 2.0	1080p,Stereo Audio 2.0
r edid in x!	Get EDID status of the input x，x=0~8(0=all input)	r edid in 0!	input 1 EDID: 4K2K60 _444,Stereo Audio 2.0 ..... input 8 EDID: 4K2K60 _444,Stereo Audio 2.0	
r edid data hdmi y!	Get the EDID data of the hdmi output y port，y=1~8	r edid data hdmi 1!	EDID: 00 FF FF FF FF FF FF 00	
音频设置				
s hdmi y arc z!	Turn on/off ARC of HDMI output y, y=0~8(0=all) z=0~1(z=0,off,z=1 on)	s hdmi 1 arc 1! s hdmi 0 arc 1!	hdmi output 1 arc on hdmi output 1 arc off hdmi all outputs arc on hdmi all outputs arc off	off
r hdmi y arc!	Get the ARC state of HDMI output y，y=0~8(0=all)	r hdmi 1 arc!	hdmi output 1 arc on	

指令码	功能描述	举例	反馈	默认设置
CEC设置				
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!	iInput 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!	iInput 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 output y power on by CEC, y=0~8(0=all output)	s cec hdmi out 1 on!	hdmi output 1 power on	
s cec hdmi out y off	set output y power off by CEC, y=0~8(0=all output)	s cec hdmi out 1 on!	hdmi output 1 power off	
s cec hdmi out y mute!	set output y volume mute by CEC, y=0~8(0=all output)	s cec hdmi out 1 mute!	hdmi output 1 volume mute	
s cec hdmi out y vol-!	set output y volume down by CEC, y=0~8(0=all output)	s cec hdmi out 1 vol-!	hdmi output 1 volume down	
s cec hdmi out y vol+!	set output y volume up by CEC, y=0~8(0=all output)	s cec hdmi out 1 vol+!	hdmi output 1 volume up	
s cec hdmi out y active!	set output y active source by CEC, y=0~8(0=all output)	s cec hdmi out 1 active!	hdmi output 1 active source	

指令码	功能描述	举例	反馈	默认设置
网络设置				
r ipconfig!	Get the Current IP Configuration	r ipconfig!	IP Mode: Static IP: 192.168.1.72 Subnet Mask: 255.255.255.0 Gateway: 192.168.1.1 TCP/IP port=8000 Telnet port=10 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 192.168.1.100!	Set IP address: 192.168.1.100 (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: 192.168.1.100	
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	
s gateway xxx.xxx.xxx.xxx!	Set network gateway	s gateway 192.168.1.1!	Set gateway: 192.168.1.1 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:192.168.1.1	
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 network reboot!	Network reboot... IP Mode: Static IP: 192.168.1.72 Subnet Mask: 255.255.255.0 Gateway: 192.168.1.1 TCP/IP port=8000 Telnet port=10 Mac address: 00:1C:91:03:80:01	

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