BG-UM-88ANS
8x8 HDMI 18Gbps Matrix with Audio De-embedded

User Manual

Thank you for purchasing this product

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

Surge protection device recommended

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

Table of Contents

1.Introduction 3
2.Features 3
3.Package Contents 3
4.Specifications 4
5.Operation Controls and Functions 5
5.1 Front Panel 5
5.2 Rear Panel..... 8
6.Remote Control 9
7.Web GUI User Guide 9
8.FAQ 17
9.Application Example..... 18
Warranty / Mission Statement..... 19

1. Introduction

The 8x8 HDMI Matrix supports the transmission of video (up to 4K2K@60Hz YUV 4:4:4, 18Gbps, HDCP 2.2) and multi-channel digital audio from 8 HDMI sources to 8 HDMI displays. Audio de-embedded is supported from 8 HDMI output ports. Control is via button, IR, RS-232, LAN and Web GUI.

2. Features

☆ HDMI 2.0b, HDCP 2.2 and HDCP 1.4 compliant
☆ Up to 4K2K@60Hz (YUV 4:4:4) on all HDMI ports
☆ Supports pass-through audio up to 7.1 channels of High Definition audio (LPCM, Dolby TrueHD, and DTS-HD Master Audio)
☆ Audio de-embedded is supported via coax port
☆ HDR, CEC and smart EDID management supported
☆ Control is via on-panel Button, IR, RS-232, LAN and Web UI
☆ 1U rack mounted design with metal enclosure

3. Package Contents

① 1x 8x8 HDMI Matrix
② 1x 12V/3A Locking Power Adaptor
③ 1x Remote Control
④ 1x Wideband IR Receiver cable
⑤ 1x RS-232 male to female serial cable
⑥ 1x User Manual

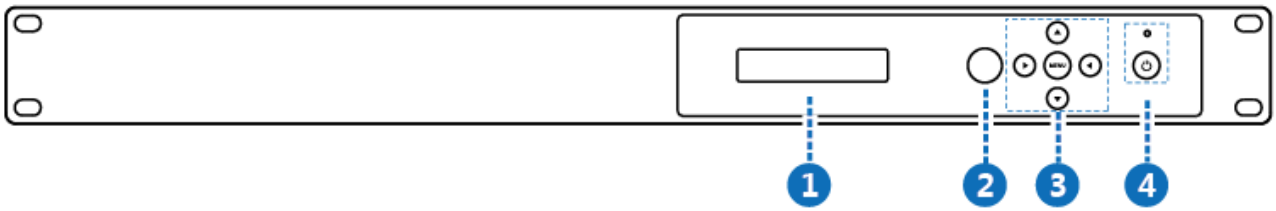
4. Specifications

Technical	
HDMI Compliance	HDMI 2.0b
HDCP Compliance	HDCP 2.2 and HDCP 1.4
Video Bandwidth	18Gbps
Video Resolutions	Up to 4K2K@50/60Hz (YUV 4:4:4), 4K2K@30Hz, 1080p@120Hz, and 1080p 3D@60Hz
Color Depth	8-bit, 10-bit, 12-bit
Color Space	RGB, YCbCr 4:4:4, YCbCr 4:2:2
HDMI Audio Formats	LPCM 2/5.1/7.1, Dolby Digital, DTS 5.1, Dolby Digital+, Dolby TrueHD, DTS-HD Master Audio, Dolby Atmos, DTS:X
Audio Formats	PCM2.0, 32K/44.1K/48K/88.2K/96K/192K, 16/20/24bit
ESD Protection	Human-body Model: ±8kV (Air-gap discharge) , ±4kV (Contact discharge)
Connections	
Inputs	8x HDMI Type A [19-pin female] 1x LAN [RJ45, Control] 1x RS-232 [9-pin D-sub, Control] 1x IR EXT [3.5mm Stereo Mini-jack]
Outputs	8x HDMI Type A [19-pin female] 8x Coaxial Audio [RCA]
Mechanical	
Housing	Metal Enclosure
Color	Black
Dimensions	483mm (W)×253mm (D)×44.5mm (H)
Weight	3.35kg
Power Supply	Input: AC100~240V 50/60Hz, Output: DC12V/3A (US/EU standards, CE/FCC/UL certified)
Power Consumption	26.5W (max)
Operating Temperature	0°C ~ 40°C / 32°F ~ 104°F

Storage Temperature	-20°C ~ 60°C / -4°F ~ 140°F
Relative Humidity	20~90% RH (non-condensing)

5. Operation Controls and Functions

5.1 Front Panel



Number	Name	Function descriptions
1	OLED display	Display system input/output port status, EDID management and matrix IP address.
2	IR Window	IR receiver window, it receives IR remote control signal to control this device.
3	Left/Right/Up/ Down/Menu Buttons	After system power up, the OLED screen default displaysthe input and output status of the last power off. A) On the initial OLED display, first press the 'Left' or 'Right' button to select output port, then press the 'up' or 'down' button to select the input port, then press the 'MENU' button to confirm this operation. B) On the initial OLED display, you can press the 'Up' or 'Down' button to check each input EDID setting, press the 'Menu' button go back to the initial OLED display. C) On the initial OLED display, you can press 'Menu' button to operate the following functions by the combination of these five buttons, press 'Up' or 'Down' button to select function: 1. Select EDID: Press the 'Right' button, then press the 'Up' or 'Down' button to select EDID as showed in the

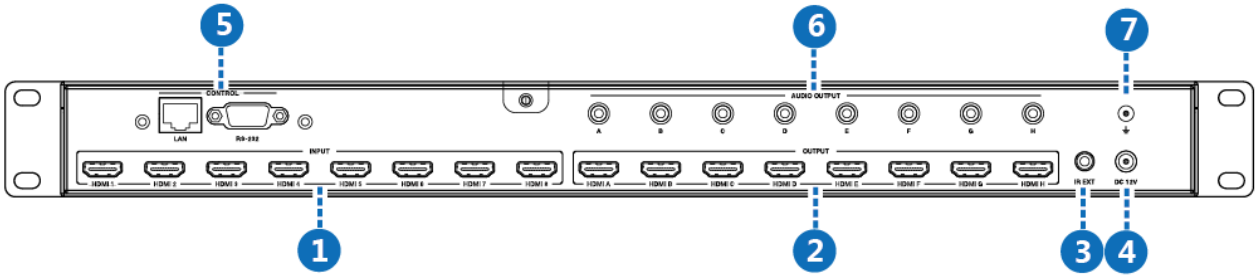
		below table. Once you complete EDID selection, press the ‘Right’ button then press the ’Left’ or ‘Right’ button to select which input port to copy EDID , press the ‘Right’ button to confirm this operation. 2. PTP Set: Press the ’Right’ button to set PTP mode (point to point, means IN1-OUT A, IN2-OUT B, IN3-OUT C...). 3. Save Preset: Press the ‘Right’ button to save current configuration to preset, press ‘Up’ or ’Down’ button to select storage location, press the‘Right’ button to confirm this operation. 4. Recall Preset: Press the ‘Right’ button to recall previous preset, press ’Up’ or ’Down’ button to select preset you want, press the ‘Right’ button to confirm this operation. 5. View IP: Press the ’Right’ button to check IP address and DHCP status. 6. Select Baud: Press the ‘Right’ button, then press the ‘Up' or ’Down’ button to select baud, press the ’Right’ button to confirm this operation. 7. Factory Reset: Press the ’Right' button to set factory reset status, then press the ’Right’ button to confirm this operation or the ’Left’ button to quit this operation.
4	Power andPower LED	Long press this button to power on/off device. The LED will illuminate in green when the device is power on and show in red when this device is standby.

The EDID table:

EDID Mode	EDID Description
1	720P 2.0 CH
2	1080P 2.0 CH

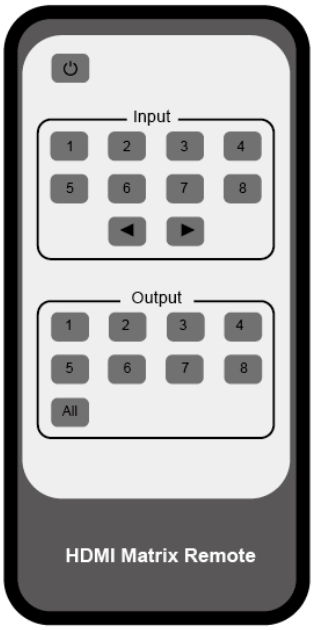
3	1080P 5.1 CH
4	1080P 7.1CH
5	1080I 2.0 CH
6	1080I 5.1 CH
7	1080I 7.1CH
8	3D 2.0 CH
9	3D 5.1 CH
10	3D 7.1 CH
11	4K*2K@30 2.0 CH
12	4K*2K@30 5.1 CH
13	4K*2K@30 7.1 CH
14	4K60_420 2.0CH
15	4K60_420 5.1CH
16	4K60_420 7.1CH
17	4K*2K@60 2.0 CH
18	4K*2K@60 5.1 CH
19	4K*2K@60 7.1 CH
20	Copy HDMI Out A
21	Copy HDMI Out B
22	Copy HDMI Out C
23	Copy HDMI Out D
24	Copy HDMI Out E
25	Copy HDMI Out F
26	Copy HDMI Out G
27	Copy HDMI Out H

5.2 Rear Panel



Number	Name	Function descriptions
1	HDMI INPUT	Connect to the HDMI input source devices such as a DVD player or Set-top Box.
2	HDMI OUTPUT	Connect to the HDMI output source devices such as a TV player or monitor.
3	IR EXT	If the front IR sensor of unit is obstructed or the unit is installed in a closed area out of infrared line of sight, the IR receiver cable can be inserted to this IR EXT port to extend IR signal.
4	DC 12V	Plug the 12V/3A adapter to AC wall outlet for power supply.
5	CONTROL	LAN: connects to an active Ethernet link by an RJ-45 cable. RS-232: Connect to a PC or control system by D-Sub 9-pin cable to control the matrix with RS-232 commands.
6	AUDIO OUTPUT	Connect to audio amplifiers or speakers.
7	GND	Connect the GND port to the ground.

6. Remote Control



⏻:Power on or set it to standby status.

Input 1/2/3/4/5/6/7/8: Press these button to select input signal source.

◄►: Press these button to select the last or the next input signal source.

Output 1/2/3/4/5/6/7/8: Press these button to select output signal source.

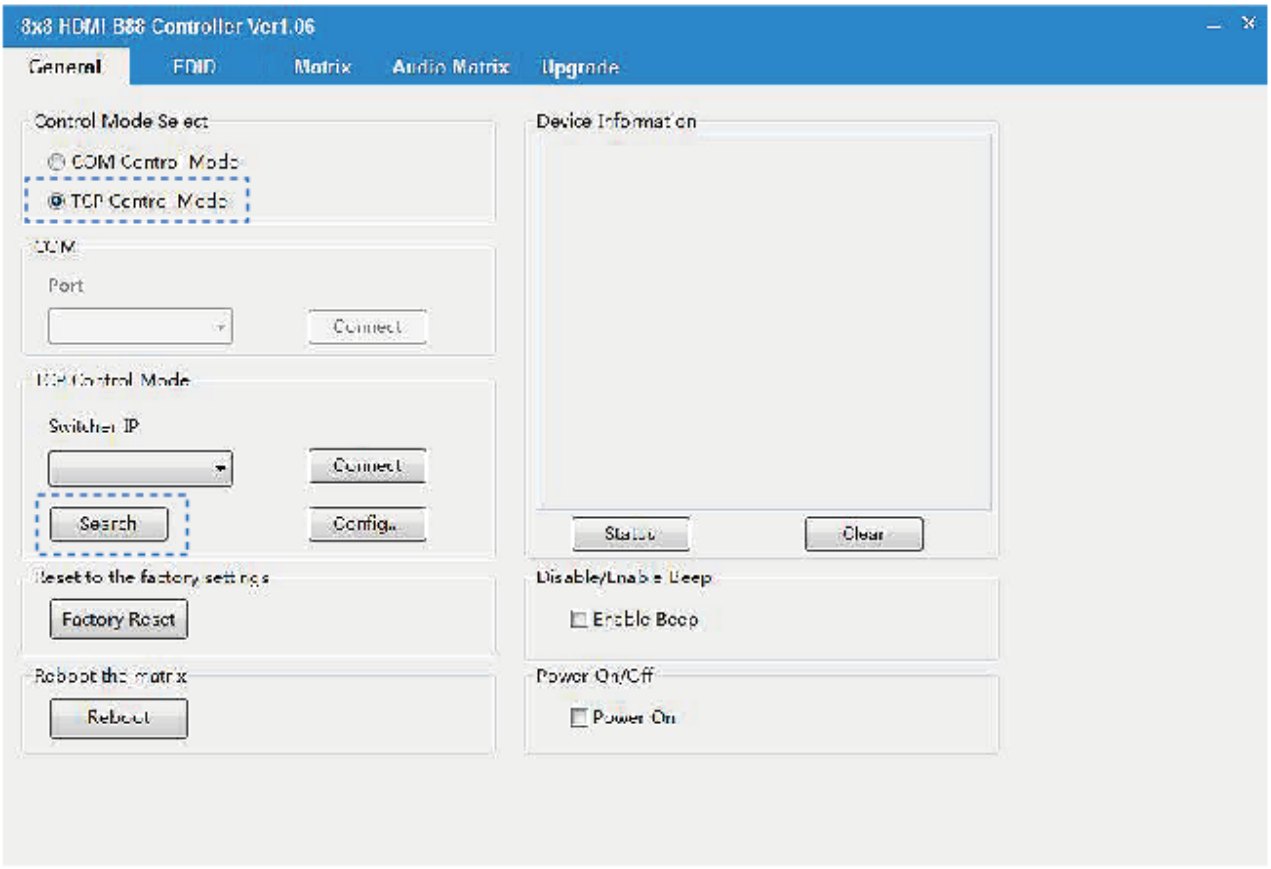
All: Press this button to select all output signal source simultaneously.

Operating instructions: User needs to select output button first and then select desired input button.

7. Web GUI User Guide

The Matrix can be controlled via Web GUI. You must know the current IP address of the matrix. The static IP address is 192.168.1.100. You can connect PC Web GUI through dynamic IP address. Generally speaking, you can get IP address from two ways. The first way gets the IP address via Upper Controller . The second way gets IP address via on-panel button. Then you need set the IP address to your PC or laptop or mobile device is within the same IP address segment with the Matrix. After above, you can enter the Matrix IP address in the web browser to access Web GUI.

The first way: The Matrix gets IP address via Upper Controller. The RS-232 port connects USB port on PC. The LAN port and the PC connect via a router. At this time, you need to open the Upper Computer software of the product. The page looks as below:



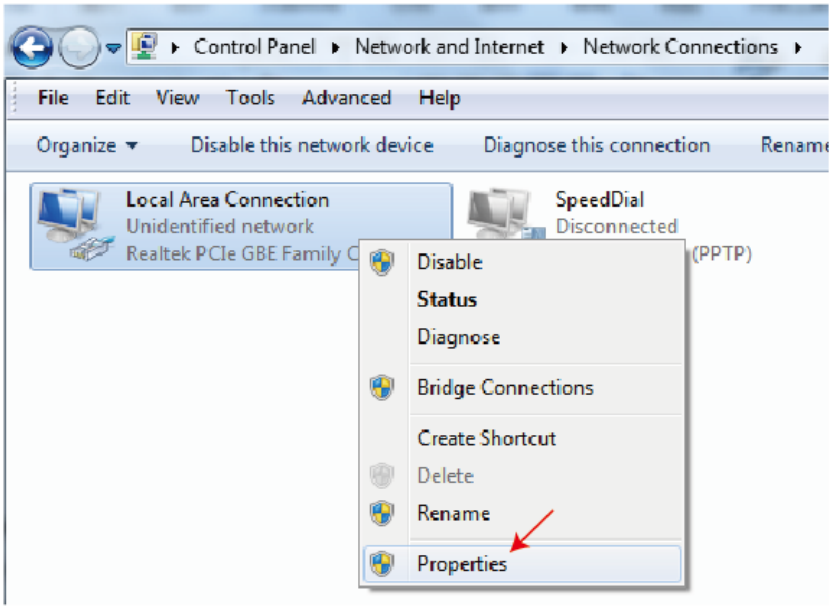
Select “TCP Control Mode” port, then click the “Search” button. At this point you can get current IP address. Enter the IP address inyour web browser to enter Web GUI page.

The second way: The Matrix gets IP address via on-panel button. On the initial OLED display, you can press the “Menu” button to enter function page. Then press ″Up" or "Down" button to select function.

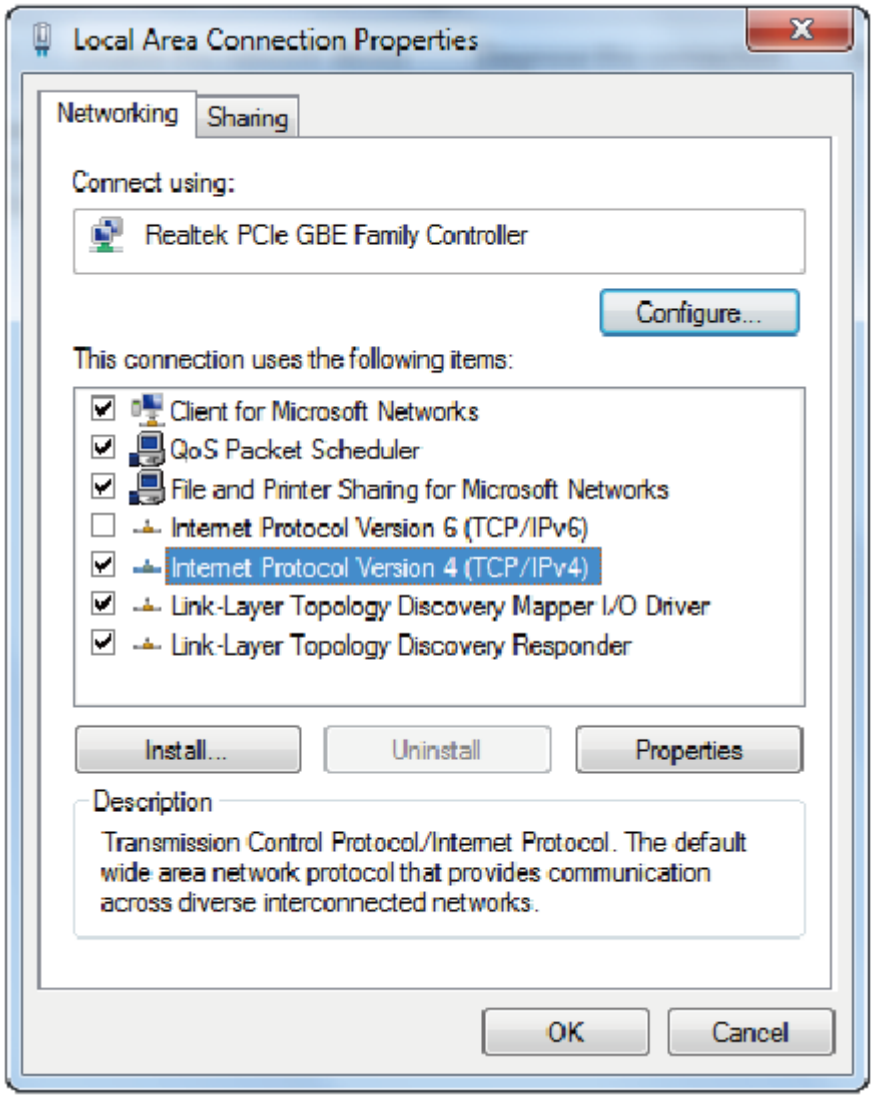
Select the "View IP" function, then press the "Right" button to check current IP address and DHCP status. At this point, you can get the current IP address.

Step 1: The LAN port connects directly PC with an UTP cable.

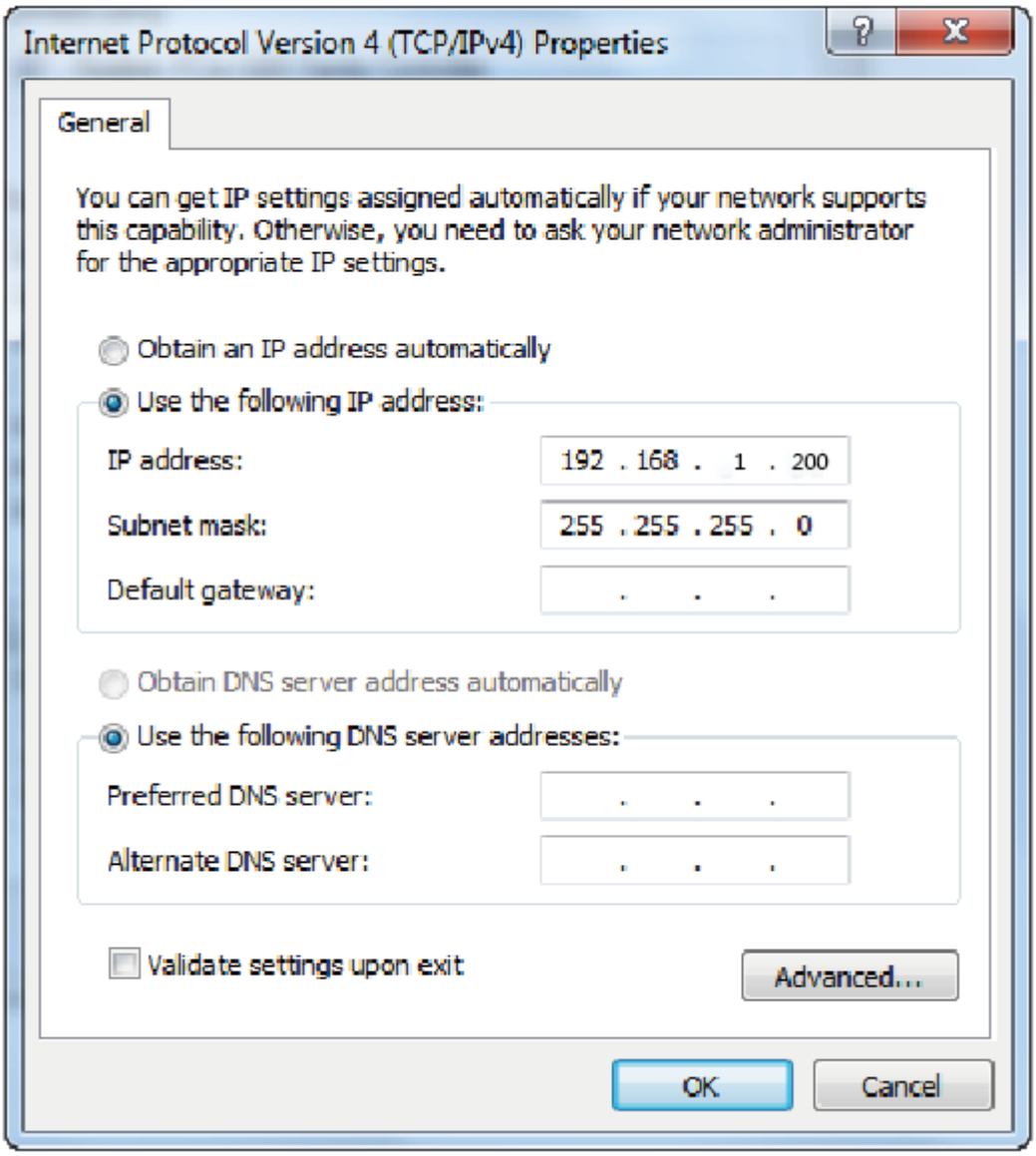
Step 2: On the PC, go to **Control Panel**> **Network and Internet**>**Network Connections**> **Local Area Connections**, right click on it, choose Propertiers.



Double click Internet Protocol Version 4 (TCP/IPv4)



Choose Use the following IP address, input 192.168.1.200 as IP address, 255.255.255.0 as Subnet mask, and then click on OK, click on OK again.

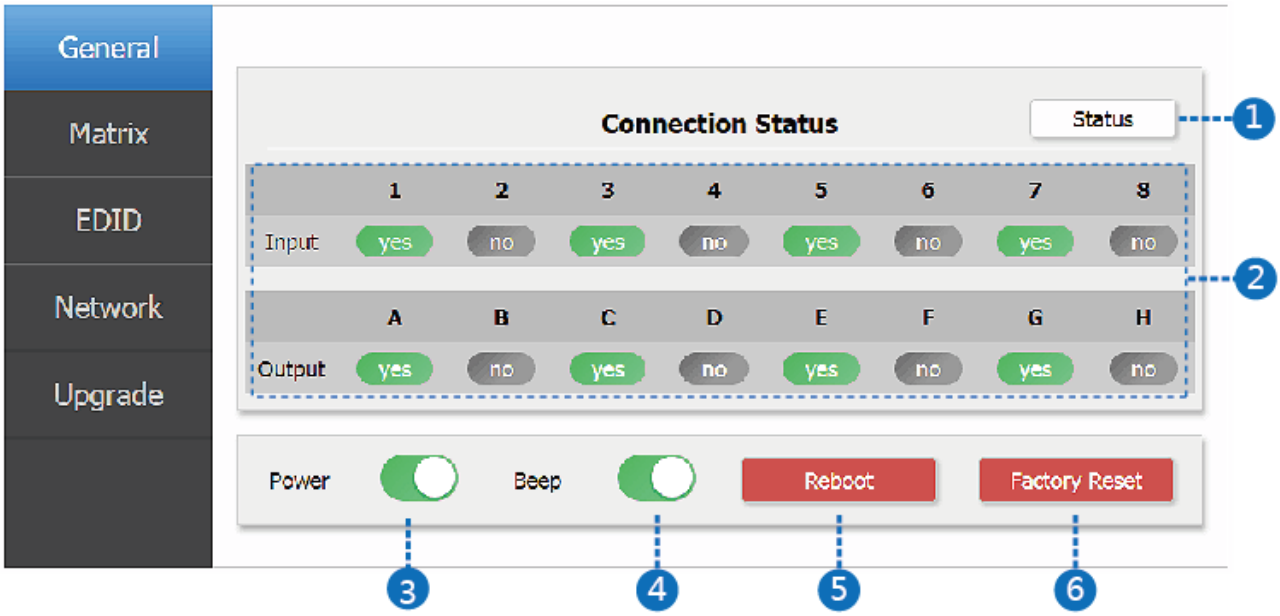


Note: The IP address of the computer and matrix should be in the same network segment. As the matrix's IP address is 192.168.10.100, the computer's IP should be 192.168.10.X (X contains 1~255 except 100).

Step 3. Input the IP address from front panel into a brower on the PC to enter Web GUI page, The pages like below.

The Web GUI :

General page



① Click this button to check current the Matrix connection status.

② Display currently the Matrix input and output port status. The "yes" have connected input or output source and "no" represent not connection.

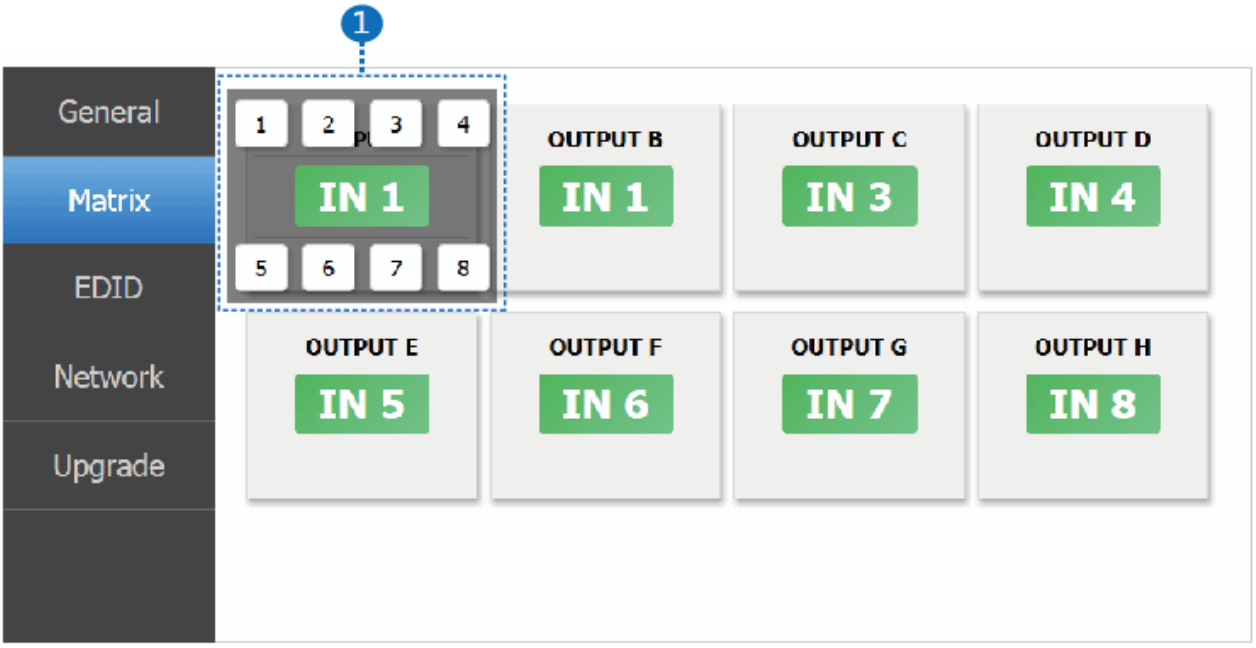
③ Power switch. The Matrix will work when open this switch. Otherwise, the Matrix will standby.

④ Beep switch. Open this switch, press the Matrix on-panel button will have voice. Close this switch, it will mute.

⑤ Click this button will reboot device.

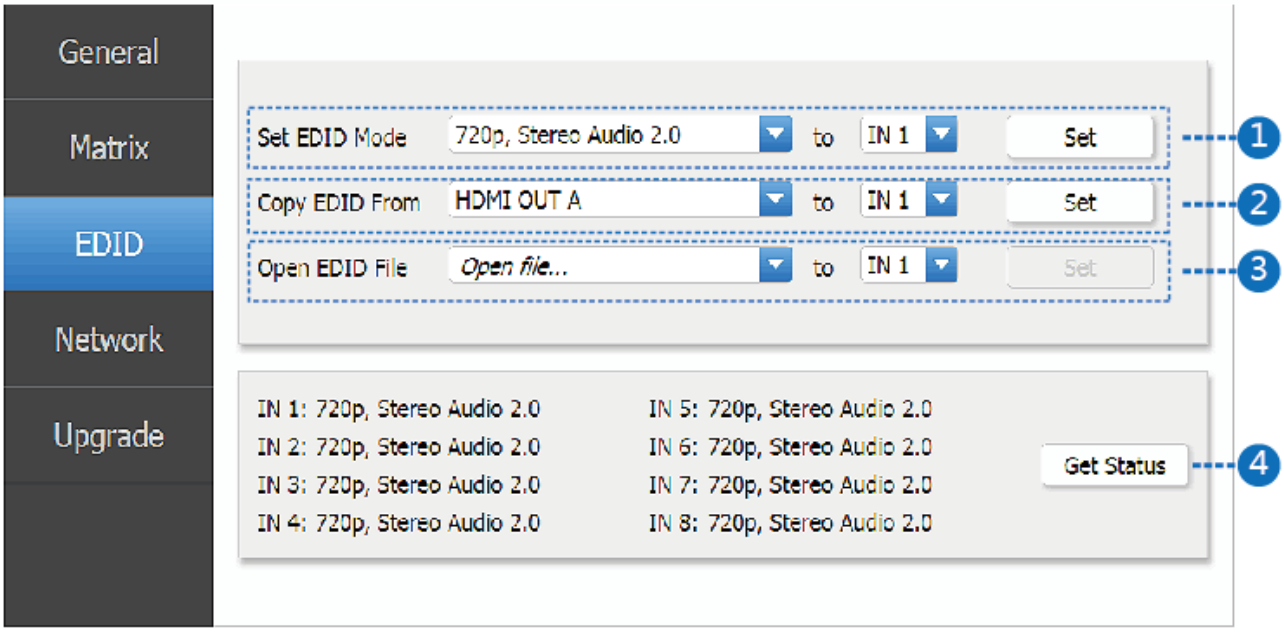
⑥ Click this button will set it to factory reset.

Matrix page



① You need click green area and then choose one input source to the OUTPUT A port. (The others OUTPUT ports have similar to function about Tab ①.)

EDID page



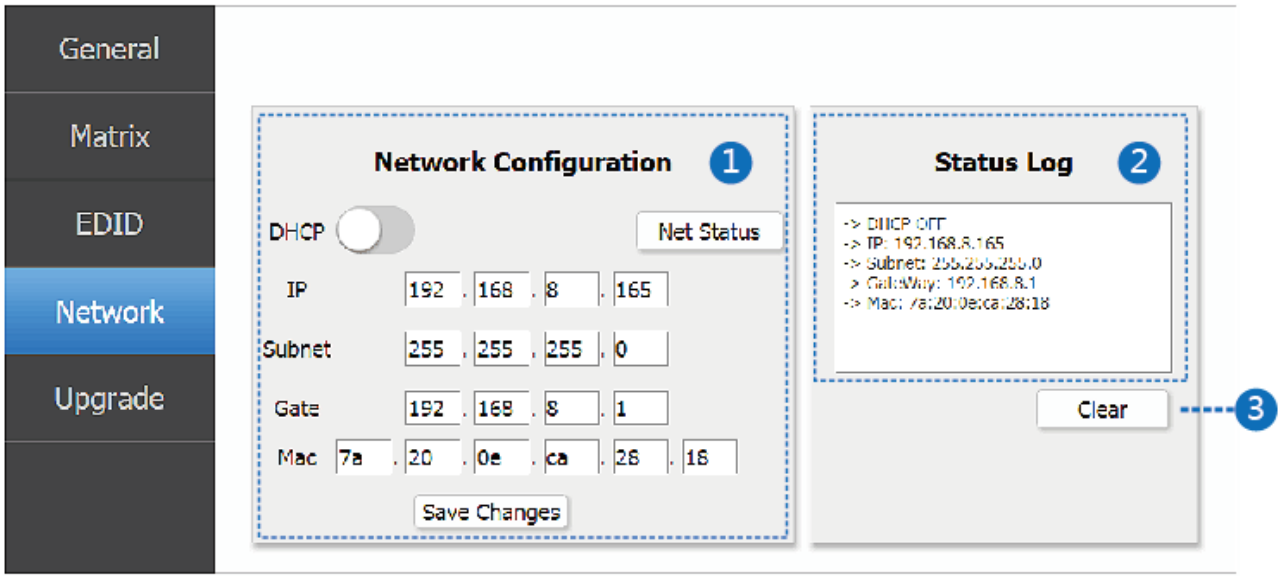
① Select EDID mode to input source, then click “Set” button.

② Copy EDID from output display to input source, then click “Set” button.

③ Open EDID file to input source.

④ Display the input source EDID mode status.

Network page



① Network Configuration

◆ In DHCP open status:

DHCP switch: Obtian the network configuration information, including IP address, Subnet, Gateway and MAC. Then click “Set” button to save DHCP status.

◆ In DHCP close status:

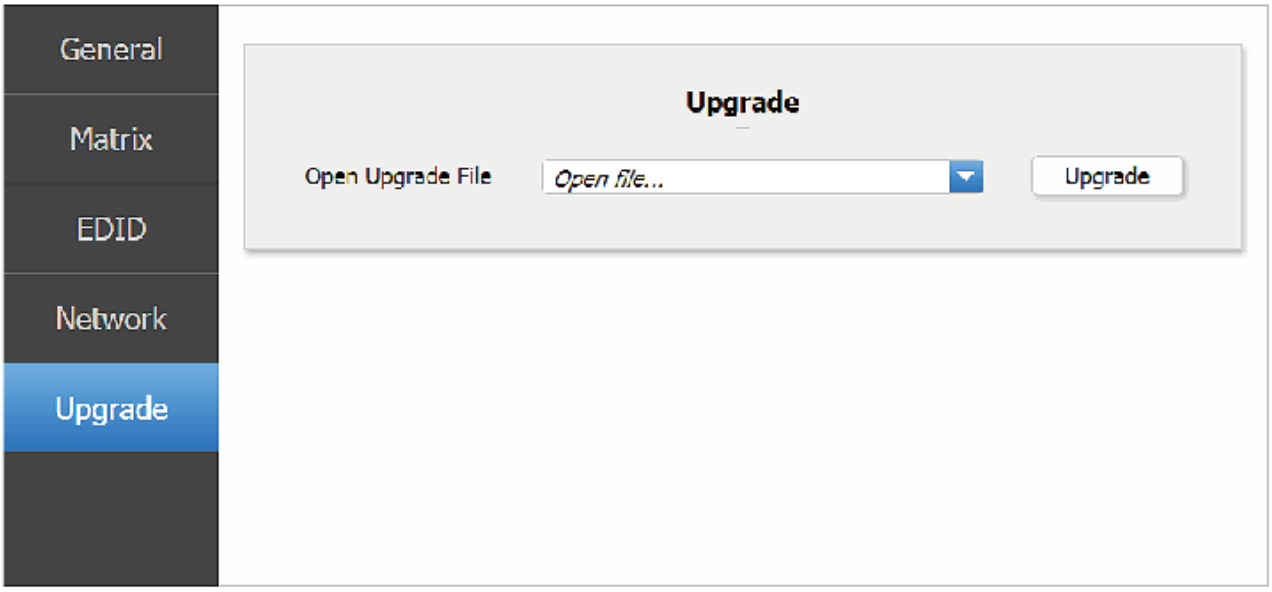
DHCP switch: If the DHCP switch has been closed, user can set IP, Subnet, Gateway and Mac address. In this moment, click the “Set” button to save current status information. (Note: If user have set a new IP address and click the “Set” button. At this moment, user have changed the IP address.)

Net Status button: Clicking this button will refresh currently network configuration information to display in Status Log.

② Status Log: Display the Net configuration information.

③ Clear button: Clear the Status Log information.

Upgrade page



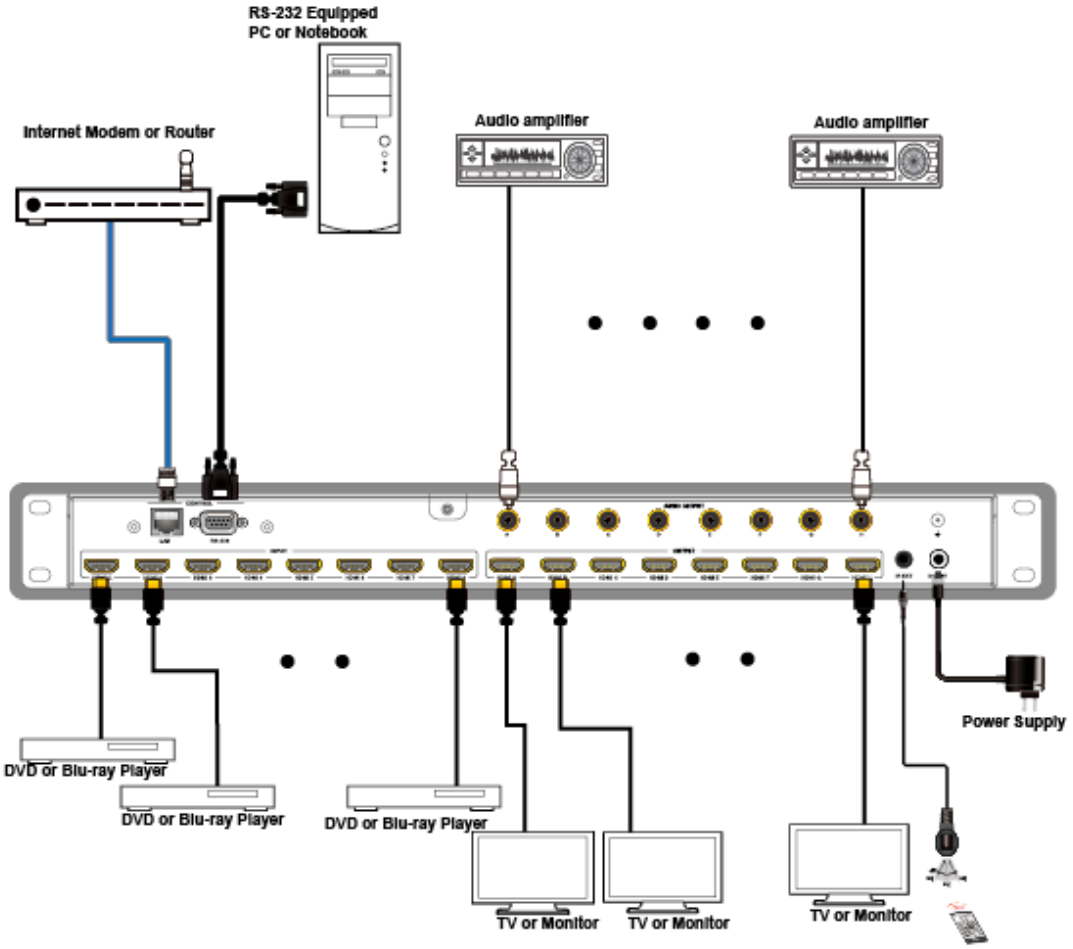
① Open upgrade file, then click the “Upgrade” button.

8. FAQ

1. Q: Does this product require an HDMI line length for the connection interface?
A: According to HDMI line length test, HDMI input / output with 4K2K@60Hz YUV 4:4:4 is the longest line length up to 16.4ft / 5m.

The use of ″Premium High Speed HDMI" cables is recommended.

9. Application Example



10. Warranty

BZBGEAR wants to assure you peace of mind. We're so confident in the quality of our products that along with the manufacturer's one-year limited warranty, we are offering free second-year warranty coverage upon registration*.

Taking advantage of this program is simple, just follow the steps below:

1. Register your product within 90 days of purchase by visiting BZBGEAR.com/warranty.

2. Complete the registration form. Provide all necessary proof of purchase details, including serial number and a copy of your sales receipt.

For questions, please call 1.888.499.9906 or email support@bzbgear.com.

For complete warranty information, please visit BZBGEAR.com/warranty or scan the QR code below.

*Terms and conditions apply. Registration is required.

11. Mission Statement

BZBGEAR manifests from the competitive nature of the audiovisual industry to innovate while keeping the customer in mind. AV solutions can cost a pretty penny, and new technology only adds to it. We believe everyone deserves to see, hear, and feel the advancements made in today's AV world without having to break the bank. BZBGEAR is the solution for small to medium-sized applications requiring the latest professional products in AV.

We live in a DIY era where resources are abundant on the internet. With that in mind, our team offers system design consultation and expert tech support seven days a week for the products in our BZBGEAR catalog. You'll notice comparably lower prices with BZBGEAR solutions, but the quality of the products is on par with the top brands in the industry. The unparalleled support from our team is our way of showing we care for every one of our customers. Whether you're an integrator, home theater enthusiast, or a do-it-yourselfer, BZBGEAR offers the solutions to allow you to focus on your project and not your budget.