

MA-5288V2

8X8 HDBaseT Lite Matrix with PoC

User Manual



rev: 140530
Made in Taiwan



Safety and Notice

The **MA-5288V2 8x8 HDBaseT Lite matrix with PoC** has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the **MA-5288V2** should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Follow all instructions and warnings marked on this unit.
- Do not attempt to service this unit yourself, except where explained in this manual.
- Provide proper ventilation and air circulation and do not use near water.
- Keep objects that might damage the device and assure that the placement of this unit is on a stable surface.
- Use only the power adapter and power cords and connection cables designed for this unit.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.



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INTRODUCTION

The **MA-5288V2 8x8 HDBaseT Lite matrix with PoC** provides the most flexible and cost effective solution in the market to route high definition video sources plus multi-channel (up to 7.1-channel) digital audio from any of the eight HDMI sources to the remote displays at the same time. Through only one low cost Cat-5/5e/6 LAN cables, not only high quality video and audio can be transmitted to the display sites, but also users can switch among eight HDMI sources using the push button or remote control. Furthermore, the built-in IR extension function makes users at display site access the DVD player, PS3 or any HDMI supported devices directly! In addition, MA-5288V2 also supports PoC (Power over Cable) which can power both units from TX with power supply.

FEATURES

- Support HDMI Deep Color & full 3D (HDBaseT Technology)
- Extend the transmission up to 60m (198ft) from the HDMI source at Full HD 1080p 48-bit
- Support PoC(Power over Cable) which can power both units from TX side with power supply
- HDCP compliant
- Bi-directional IR pass-through
- Allows controlling local HDMI sources or display through control path
- Allows to control main matrix center through control line at remote receiver
- Pure unaltered uncompressed 7.1ch digital HDMI over Cat.5/5e/6 cable transmission
- Allows any source to be displayed on multiple displays at the same time
- Allows any HDMI display to view any HDMI source at any time
- Supports 7.1 channel digital audio
- Supports default HDMI EDID and learns the EDID of displays
- The matrix master can switch every output channels from any HDMI inputs by Push button, IR remote control, RS-232 and IP control, web-interface control
- Easy installation with rack-mounting
- Fast response time – 2~4 seconds for channel switch

PACKAGE CONTENTS

- 1x MA-5288V2
- 1x IR receiver
- 1x Rack-mounting ear set
- 1x Installation software CD
- 1x DC 24V 8.3A
- 1x IR blaster*
- 1x IR Remote control*
- 1x User Manual



* Additional IR remote controllers and IR blasters can be purchased as optional accessories to control the HDMI sources located separately.

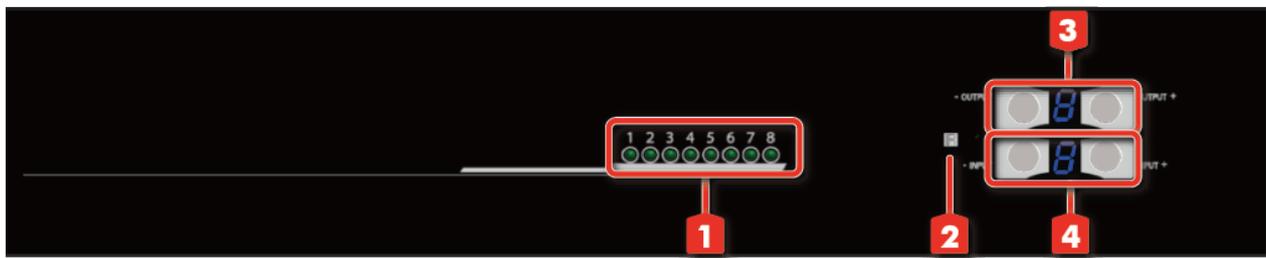
SPECIFICATIONS

Model Name	MA-5288V2	
Technical	MA-5288V2	MA-5288V2-RX
Role of usage	True 8x8 matrix switcher Transmitter [TX]	Receiver [RX]
HDMI compliance	HDMI Deep Color & full 3D	
HDCP compliance	Yes	
Video bandwidth	Single-link 340MHz [10.2Gbps]	
Video support	480i / 480p / 720p / 1080i / 1080p60	
Audio support	Surround sound (up to 7.1ch) or stereo digital audio	
PoC support	YES	
HDMI over UTP transmission range	1080p@60 60m (198ft) [CAT.X]	
Input TMDS signal	1.2 Volts [peak-to-peak]	
Input DDC signal	5 Volts [peak-to-peak, TTL]	
ESD protection	[1] Human body model — ±19kV [air-gap discharge] & ±12kV [contact discharge]	
PCB stack-up	4-layer board [impedance control — differential 100Ω; single 50Ω]	
Input	8x HDMI / 1x RS-232 / 1x RJ-45 for IP Control / 9x IR socket for IR receiver	1x RJ-45(HDBaseT) / 1x IR socket for IR receiver
Output	8x RJ-45(HDBaseT) / 4x HDMI / 9x IR socket for IR blaster	1x HDMI / 1x IR socket for IR blaster
HDMI Input selection	Push button / IR remote control / RS-232 control / IP control	IR remote control
HDMI source control	Controllable via IR pass-through from IR receiver at RX to IR blaster at TX	
IR remote control	Electro-optical characteristics: $\pi = 25^\circ$ / Carrier frequency: 30-56kHz	
HDMI connector	Type A [19-pin female]	
RJ-45 connector	WE/SS 8P8C	
RS-232 connector	DE-9 [9-pin D-sub female]	N/A
3.5mm connector	Earphone jack for IR blaster [All IR Out] IR signal from all outputs [IR1~IR8] IR control on individual source device Earphone jack for IR receiver [System IR] Receives IR commands from remote control [IR1~IR8] Receives IR commands from individual remote control	Earphone jack for IR blaster [IR] IR control on individual display device Earphone jack for IR receiver [IR] Receives IR commands from remote control
Mechanical	MA-5288V2	MA-5288V2-RX
Enclosure	Metal case	
Dimensions (L x W x H)	Model	TBA
	Package	TBA
	Carton	TBA
Weight	Model	TBA
	Package	TBA
Fixedness	2RU rack-mount with ears Wall hanging holes	Wall-mount with screws
Power supply	24V 8.3A DC	
Power consumption	120 Watts [max]	1 Watt [max]
Operation temperature	0~40°C [32~104°F]	
Storage temperature	-20~60°C [-4~140°F]	
Relative humidity	20~90% RH [no condensation]	

PANEL DESCRIPTIONS

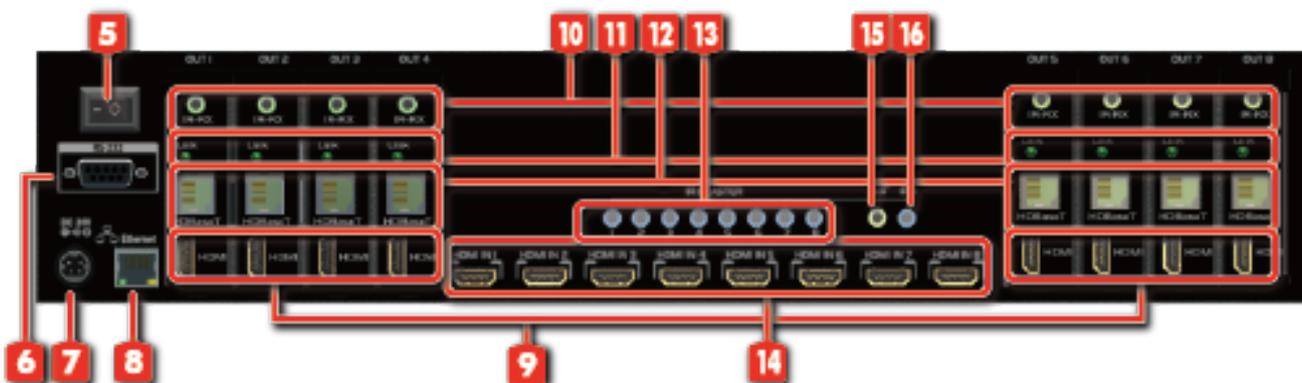
Transmitting unit ► MA-5288V2

Front Panel



- 1. Source Status:** Input source indicator LED
- 2. IR SENSOR:** IR sensor for receiving the IR commands from IR remote
- 3. Output Push Button & 7-segment LED:** Front panel push buttons used to select the number of display channel & LED display for output ports
- 4. Input Push Button & 7-segment LED:** Front panel push buttons used to select the number of input source & LED display for input channels

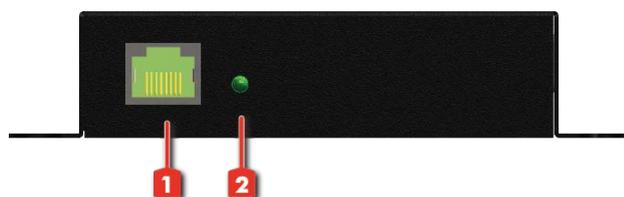
Rear Panel



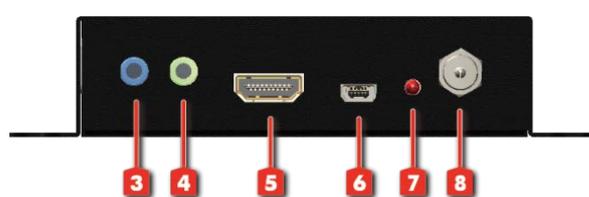
- 5. Power Switch**
- 6. RS-232:** RS-232 control port
- 7. +24V DC:** 24V DC power jack
- 8. Ethernet:** Ethernet control port
- 9. HDMI Local Loopout Port 1-8:** Local loopout HDMI outputs for each output channel
- 10. IR Receiver 1-8:** Infrared 3.5mm socket for plugging in the extension cable of IR receiver
- 11. LED:** Link indicator
- 12. RJ-45:** HDBT output port 1-8
- 13. IR Blaster 1-8:** 3.5mm IR blaster socket for individual HDMI source control
- 14. INPUT 1-4:** HDMI inputs
- 15. System IR Receiver:** Ext. IR receive
- 16. All IR Output:** 3.5mm IR blaster socket for HDMI source control on all 4 inputs

Receiving unit ► MA-5288V2-RX

Front Panel



Rear Panel



1. **RJ-45:** Plug in a Cat.X cable
2. **LED:** Power indicator
3. **IR Blaster:** Infrared 3.5mm socket for plugging in the extension cable of IR blaster
4. **IR Receiver:** Infrared 3.5mm socket for plugging in the extension cable of IR receiver
5. **HDMI Output:** Connect to HDTV with a HDMI cable
6. **Mini-USB:** F/W update
7. **LED:** Power indicator
8. **+24V DC:** 24V DC power jack

IR PASS-THROUGH

IR Extenders

IR Blaster



IR Receiver



IR Sockets

MA-5288V2

All IR Out: The default location for IR blaster to transmit all IR command signals received from any of the four remote receivers to all of the HDMI sources.

IR BLASTER 1-4: IR blaster connected here can only transmit IR command signals from the remote receivers that are setting at respective input channel from 1 to 4.

System IR: Receives IR commands from remote control

IR RECEIVER 1-4: Receives IR commands from individual remote control

MA-5288V2-RX

IR BLASTER: IR control on individual display device

IR RECEIVER: IR receiver connected here can receive all IR command signals from the IR remote controls of MA-5288V2 and all other HDMI source devices.

CAUTION!

Incorrect placement of IR Blaster and Receiver may result in the failure of the IR extenders. Please check carefully before plugging in the IR extender to the respective IR sockets. Warranty will not cover the damage.

Definition of IR Earphone Jack

IR Blaster



IR Receiver



You can buy any IR extension cables in the market that are compatible to the definition of the IR sockets for the matrix if necessary for replacement use. However, IR cables longer than 2m (6-ft) may not work.

OPERATION APPROACH

Method A: Push-in Button



1. IN/OUT MAP

- 1) Use the “+” or “-” output push button to select the number of display
- 2) Use the “+” or “-” input push button to select the number of input source
“+”: change selected input/output port in ascending order
“-”: change selected input/output port in descending order

After you select the desired input/output port, the LED will blink twice and the setting will be effective

2. Save Mapping Mode

- 1) Keep pushing “output+ (save)” button until the output LED shows “d.” to enter the Save Mapping Mode.
- 2) Use the “+” or “-” input push button to select the mapping configuration (1~8) which you want to save current input/output mapping
- 3) After you select the desired mapping configuration number, the LED will blink twice and the mapping setting will be saved
- 4) If you push the “output- (preset)” button before the mapping setting is saved, the LED will show “_.” “_.” to quit the Save Mapping Mode

3. Preset Mapping Mode

- 1) Keep pushing “output- (preset)” button until the output LED shows “P.” to enter the Preset Mapping Mode.
- 2) Use the “+” or “-” input push button to select the saved mapping configuration (1~8) which you want to recall
- 3) After you select the desired mapping configuration number, the LED will blink twice and the mapping setting will be effective
- 4) If you push the “output+ (save)” button before the mapping setting is effective, the LED will show “_.” “_.” to quit the Preset Mapping Mode

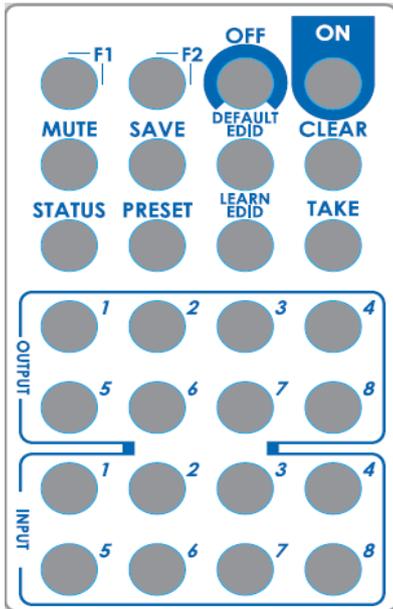
4. Default EDID Mode

- 1) Push “input+(default)”button to select the input channel which you want to learn default EDID and then keep pushing “input+(default)”button when you select your desired input channel
- 2) Push the “+”or “-” output push button and then the LED will show “E”“d” one time to enter Learn Default EDID Mode
- 3) Use “+”or “-” output push button to select the default EDID mode(1~8)
- 4) Release “input+(default)”button after selecting the desired default EDID mode, and then the LED will blink twice and the setting will be effective
- 5) It will quit the Learn Default EDID Mode if you push the “input- (learn)”button before the setting is effective
- 6) The LED will show “0”“0” if the setting is success
The LED will show “F”“F” if the setting is failure

5. EDID Learning Mode

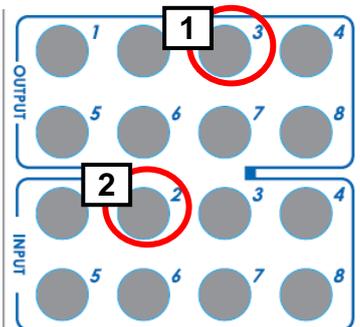
- 1) Connect display to input 8(EDID port for learning EDID from display).
- 2) Push “input- (learn)”button to select the input channel which you want to learn EDID from EDID Port and then keep pushing “input- (learn)”button when you select your desired input channel
- 3) Push the “+”or “-” output push button and then the LED will show “E”“Number” to enter Learn Output EDID Mode.
Ex: Learn EDID Port to Input 2
The LED will show “E”“2”
- 4) Release “input- (learn)”button, and then the LED will blink twice and the setting will be effective
- 5) It will quit the Learn Output EDID Mode if you push the “input+ (default)”button before the setting is effective
- 6) The LED will show “0”“0” if the setting is success
The LED will show “F”“F” if the setting is failure

Method B: IR Remote Control



1. IN/OUT Switch

Operation	Procedure	7-Segment LED
IN/OUT Switch	Output Number (1~8) + Input Number (1~8)	
Ex: Input 2 To Output 3	1. Press output number key "3" to select Output 3	3 -
	2. Press input number key "2" to select Input 2	3 2



2. Function Key

Button	Function
OFF	Standby mode
ON	Power on the matrix switcher
MUTE	Turn off output's video and audio
STATUS	Preset output status
SAVE	Save current mapping mode
PRESET	Preset mapping mode
DEFAULT EDID	Begin default EDID selection
LEARN EDID	Begin EDID learning from one output
CLEAR	Clear the previous IR operation procedure
TAKE	Trigger the previous setting
F1	Reserved
F2	Reserved

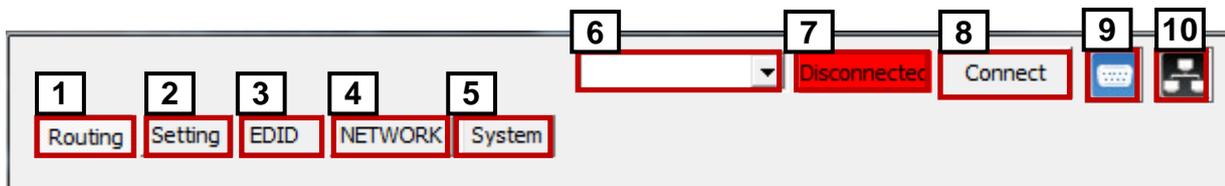
Operation	Procedure	7-Segment LED
Output Status	Status + Output Number (1~8) + Take	
Ex: Output 4 (Input 2)	1.Press "STATUS" button	- -
	2.Press output number key "4" to select Output 4	4 -
	3.Press "TAKE" button	4 2
Save Current Mapping	Save + Output Number (1-8 storage site) + Take	
Ex: Save current mapping to 5	1.Press "SAVE" button	d -
	2.Press output number key "5" to select the storage site 5	d 5
	3.Press "TAKE" button	
Preset Mapping	Preset + Output Number (1-8 storage site) + Take	
Ex: Preset saved mapping from 5	1.Press "PRESET" button	P -
	2.Press output number key "5" to select the storage site 5	P 5
	3.Press "TAKE" button	
Learn default EDID	Default EDID + Output Number (1-8 default EDID) + Input Number (input 1~8) + Take	
Ex: Default EDID 2 Input 3	1.Press "DEFAULT EDID" button	E d
	2.Press output number key "2" to select default EDID 2	2 d
	3.Press input number key "3" to select Input 3	2 3
	4.Press "TAKE" button	0 0 (success) F F(fail)
Learn EDID Port EDID	Learn + Output 8 (EDID Port) +Input Number (input 1~8) + Take	
Ex: Learn EDID Port Input 3	1.Press "LEARN" button	E L
	2.Press output number key "8" to select EDID Port	8 L
	3. Press input number key "3" to select Input 3	8 3
	4.Press "TAKE" button	0 0 (success) F F(fail)
Mute Output	Mute + Output Number (1~8) + Take	
Ex: Mute Output 3	1. Press "MUTE" button	- 0
	2. Press output number key "3" to select Output 3	3 0
	3.Press "TAKE" button	3 0

Method C: Software Control through RS-232 port / Ethernet port

1. System Requirement

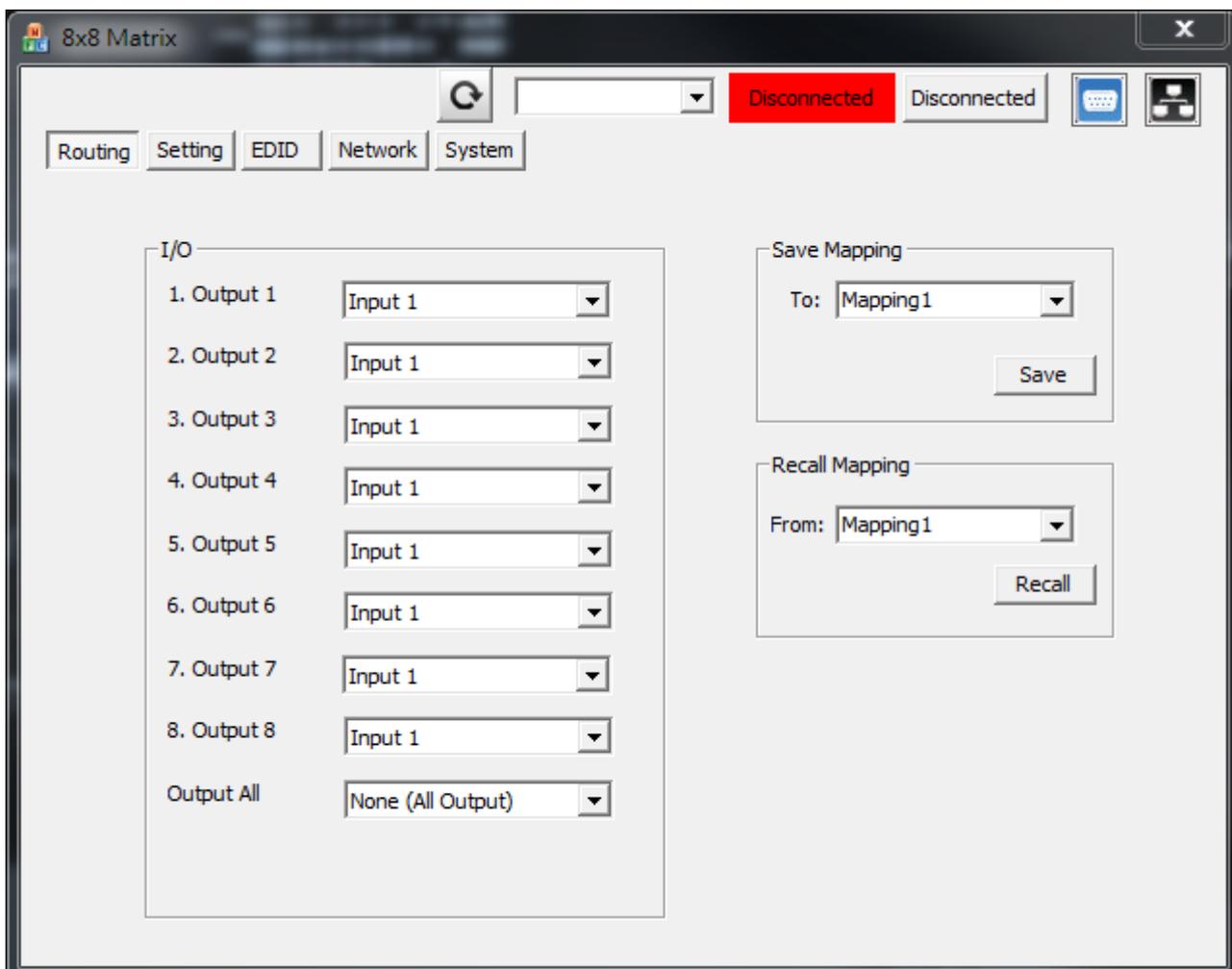
- 1) OS Information: MS WinXP/7
- 2) Baud rates: 9600
- 3) Software size: 3 MB
- 4) Minimum RAM requirement: 256 MB

Method D: Software Control through RS-232 port



1	I/O Routing Button	6	COM Port Selection
2	Setting Button	7	Connection Status
3	EDID Button	8	Connect/Disconnect Button
4	Network Button	9	Control SW via RS-232
5	System Button	10	Control SW via Network

1. I/O Routing Button

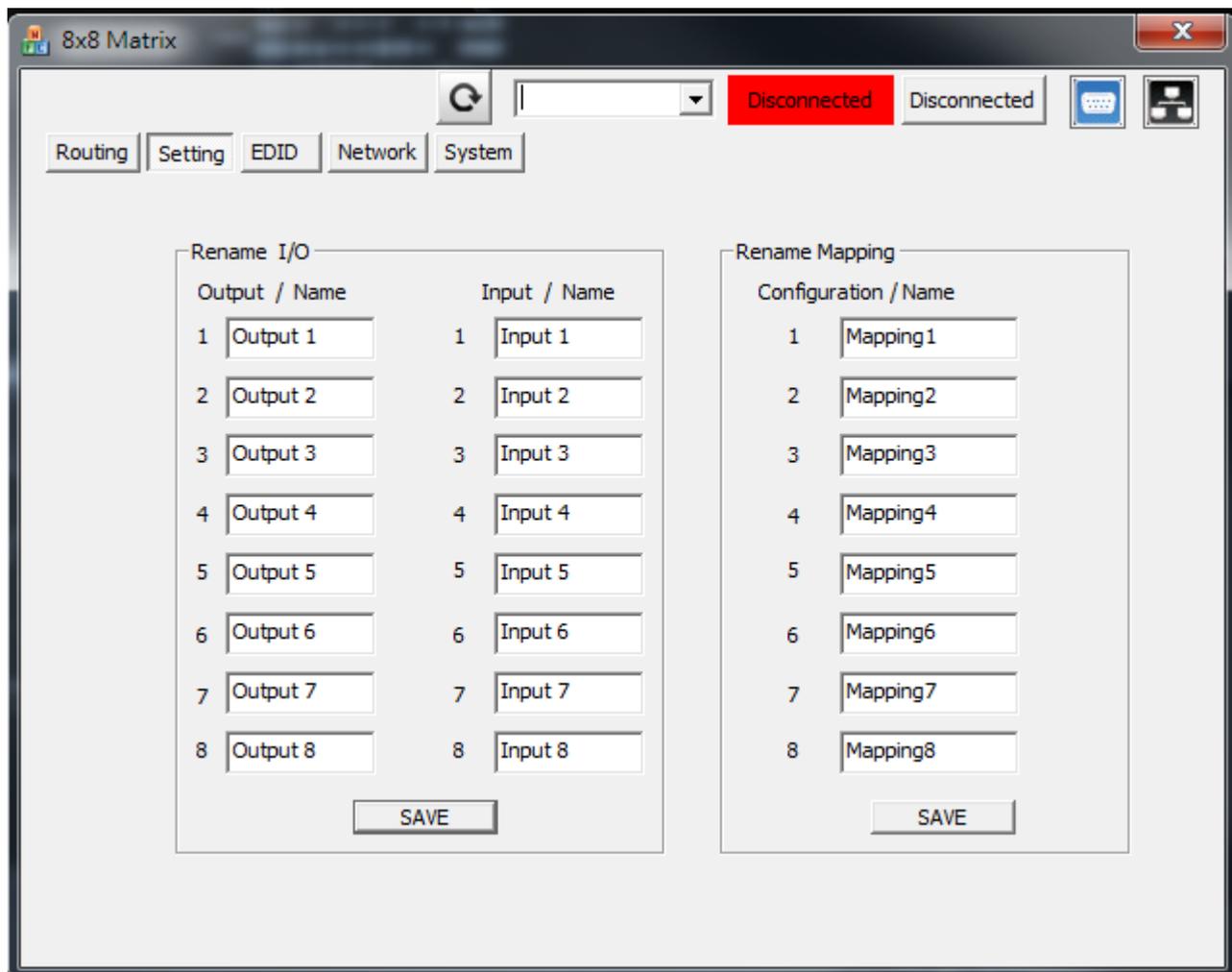


- 1) I/O:
 - a) Select the input
 - b) Click "Send" to change the I/O setting

- 2) Save Mapping:
 - a) Select Mapping(1-8)
 - b) Click “Save” button to save current mapping

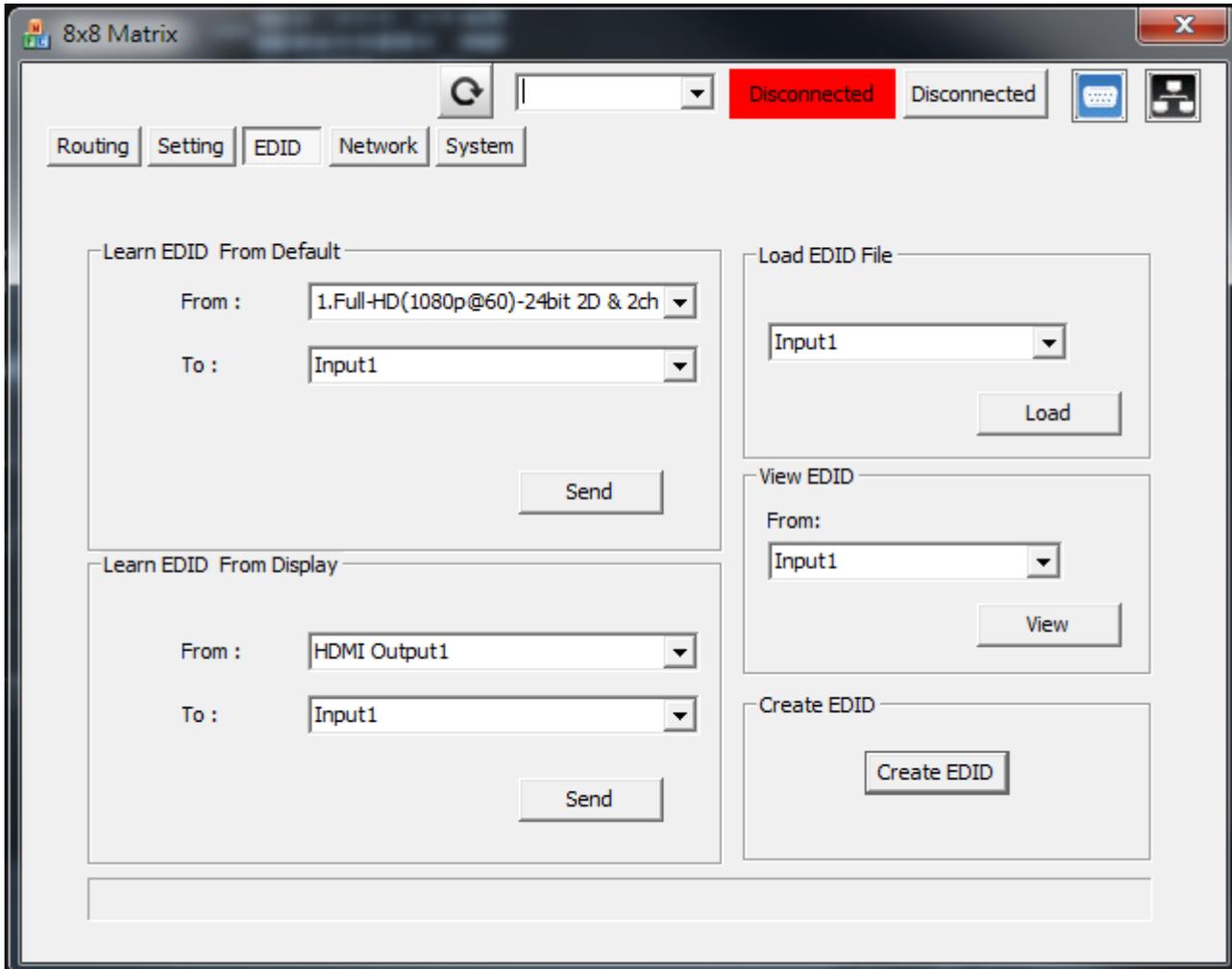
- 3) Preset Mapping:
 - a) Select Mapping(1-8)
 - a) Click “Recall” button to recall previous mapping which are saved

2. Rename I/O Button



- 1) Rename I/O:
 - a) Rename output name
 - b) Rename input name
- 2) Rename Mapping:
 - a) Rename Mapping name

3. EDID Button



- 1) Learn EDID from Default
 - a) Select Default EDID(1-8 Default EDID)
 - b) Select Input
 - c) Click "Send" button to learn default EDID
- 2) Learn EDID From Display
 - a) Select output
 - b) Select Input
 - c) Click "Send" button to learn display EDID
- 3) Load EDID File to Input
 - a) Select Input
 - b) Click "Load" button to select the EDID file
- 4) View EDID
 - a) Select Input or HDMI output
 - b) Click "View" button to read the EDID and analysis

5) Create EDID

- a) Click “Create” button to create EDID file

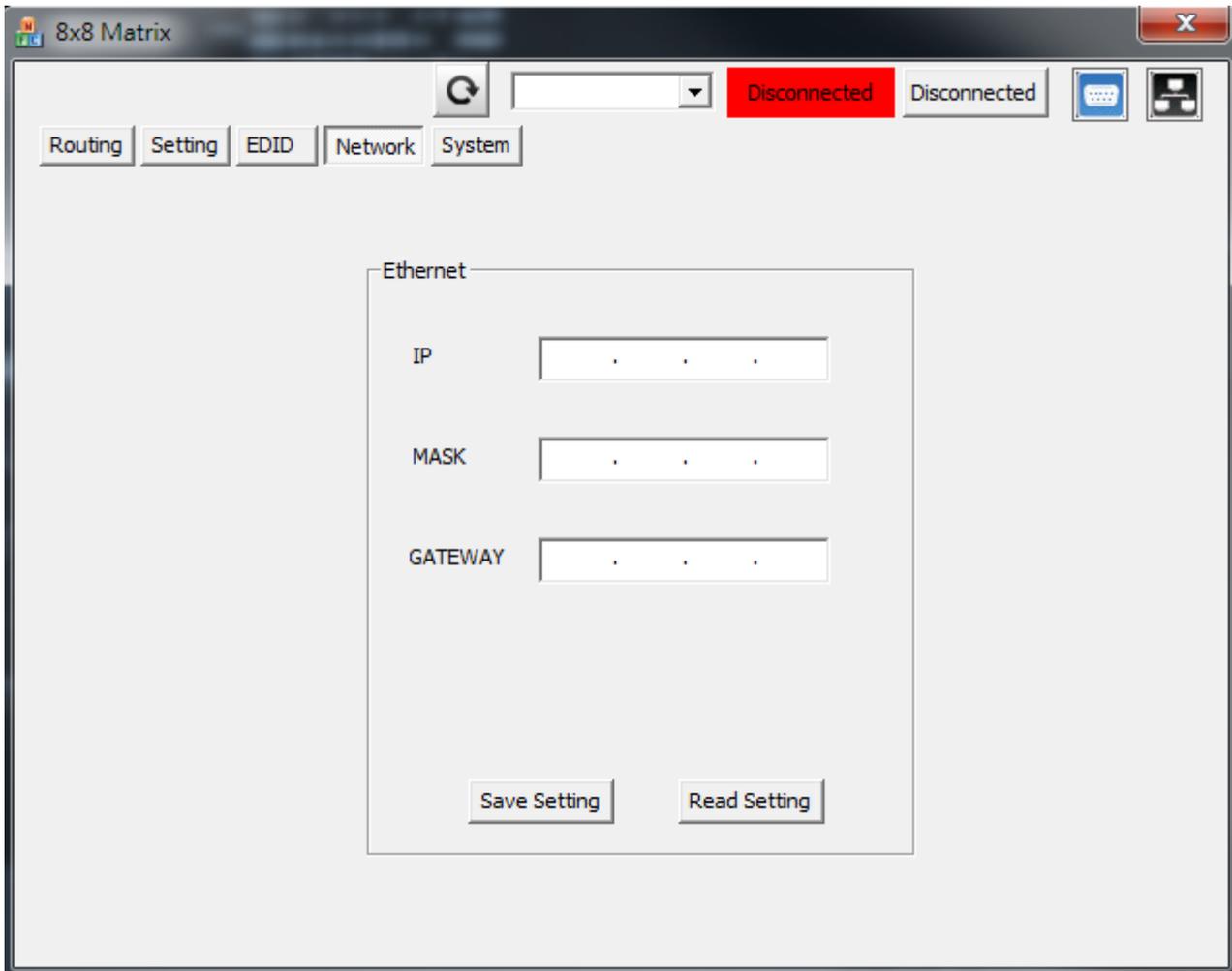
The screenshot shows the 'HDMI' configuration window with the following settings:

- VESA:** Resolution: 1024x768, Frequency: 60Hz. Add button.
- Audio:** Audio Type: LPCM, Content: 32kHz, Number of Channels: 1. Checkboxes for 24 Bit, 20 Bit, and 16 Bit are unchecked. Add button.
- HDTV:** Resolution: 640x480p, Frequency: 59.94Hz/60Hz. Radio buttons for 4:3 (selected) and 16:9. Add button.
- 3D Support:** Supports_AI, DC_Y444, DVI_Dual, Activates 3D, DC_48bit, DC_36bit, DC_30bit. Resolution: 1280x720p @ 23.98/24Hz. Format: Frame Packing. Add buttons.
- Monitor Name:** (13 Character) text input field.
- Speaker allocation:** Checkboxes for FL/FR, FC, RC, RLC/RRC, LFE, RL/RR, FLC/FRC. Add button.
- Buttons:** Confirm, Save EDID to computer, Clear All.

- b) Select the EDID content

- c) Click “Save EDID on Computer” to save the generated EDID as a file

4. Network Button



a) Save Setting

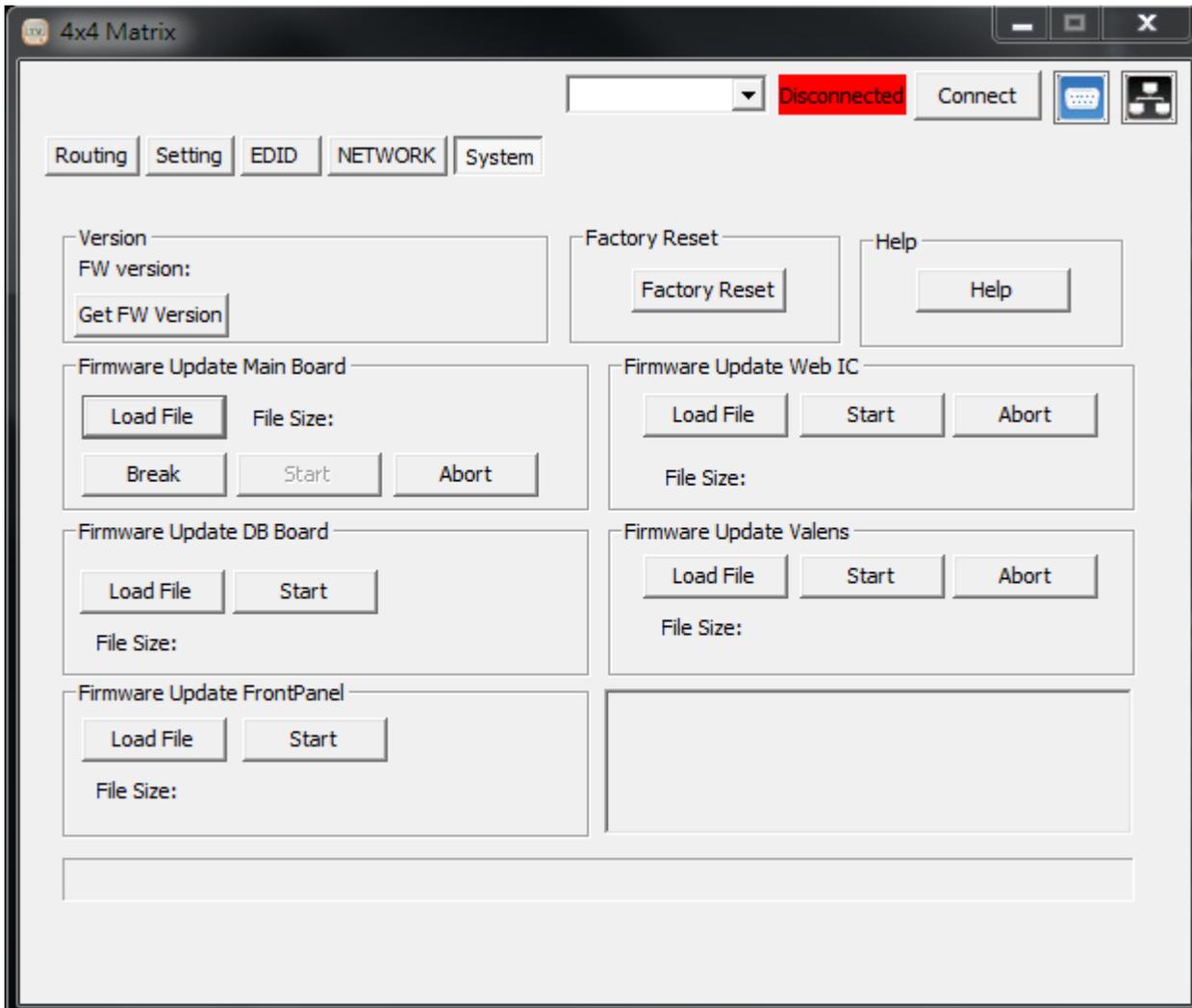
=> Save the IP address which you key in on the column

b) Read Setting:

=> Read the IP address from the device

PS: The default IP address is 192.168.1.111

5. System Button



- 1) Version:
=> To get the F/W version information
- 2) Factory Reset
- 3) Help
=> To view the steps of the firmware update
- 4) Firmware Update Main Board
- 5) Firmware Update Web IC
- 6) Firmware Update DB Board
- 7) Firmware Update Valens
- 8) Firmware Update Front Panel

6. COM Port Selection

Click “” button to select COM Port

7. Connection Status

- 1) Connected Status:

Connect

- 2) Connecting Status:

Connecting...

- 3) Disconnected Status:

Disconnected

8. Connect/Disconnect Button

Click this button “  ” to change connection status

9. RS-232 Button

- 1) Click “  ” button to switch to RS-232 function.
- 2) If RS-232 is connected, the button will show the sign image to let you know.

10. Ethernet Button

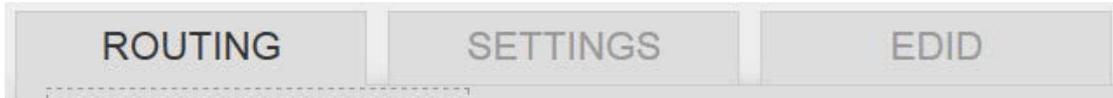
- 1) Click “  ” button to switch to Ethernet function
- 2) If Ethernet is connected, the button will show the sign image to let you know.

Method E: Web Interface Control

The default IP address: 192.168.1.111

Account: admin

Password: matrix



1	I/O Routing Button
2	Setting Button
3	EDID Button

1. I/O Routing Button

The screenshot shows the '4x4 Matrix' web interface. At the top, there are three tabs: 'ROUTING', 'SETTINGS', and 'EDID'. The 'ROUTING' tab is active. Below the tabs, there is a section titled 'I/O' with five rows. Each row has a label (1. Output, 2. Output, 3. Output, 4. Output, 5. Output All), a dropdown menu (all set to 'Input1'), and a blue 'Send' button. Below this is a 'Save Mapping' section with a 'To:' dropdown (set to 'Mapping1') and a blue 'Save' button. At the bottom is a 'Recall Mapping' section with a 'From:' dropdown (set to 'Mapping1') and a blue 'Recall' button.

- 1) I/O:
 - a) Select the input
 - b) Click "Send" to change the I/O setting
- 2) Save Mapping:
 - a) Select Mapping(1-8)
 - b) Click "Save" button to save current mapping
- 3) Preset Mapping:
 - a) Select Mapping(1-8)
 - b) Click "Recall" button to recall previous mapping which are saved

2. Setting Button

The screenshot shows the 'SETTINGS' tab with three sections:

- Rename I/O:** A table with two columns: 'Output / Name' and 'Input / Name'. It contains four rows of input fields. A 'Send' button is at the bottom right.
- Rename Mapping:** A table with two columns: 'Configuration / Name' and an unlabeled column. It contains eight rows of input fields. A 'Send' button is at the bottom right.
- Password Changing:** Three input fields labeled 'Old Password', 'New Password', and 'New Password Confirm'. A 'Submit' button is at the bottom right.

- 1) Rename I/O:
 - a) Rename output name
 - b) Rename input name
- 2) Rename Mapping:
 - a) Rename Mapping name
- 3) Password change: (the password has to be 6 characters)
 - a) Key in "old password"
 - b) Key in "new password"
 - c) Key in "new password" again

3. EDID Button

The screenshot shows the 'EDID' tab with two sections:

- Learn EDID From Default:** Two dropdown menus labeled 'From' and 'To'. The 'From' menu is set to '1.Full-HD-24bit 2D & 2ch' and the 'To' menu is set to 'Input 1'. A 'Send' button is to the right.
- Learn EDID From Display:** Two dropdown menus labeled 'From' and 'To'. The 'From' menu is set to '1.HDMI Output 1' and the 'To' menu is set to 'Input 1'. A 'Send' button is to the right.

- 1) Learn EDID from Default
 - a) Select Default EDID(1-8 Default EDID)
 - b) Select Input
 - c) Click "Send" button to learn default EDID

- 2) Learn EDID From Display
 - a) Select output
 - b) Select Input
 - c) Click "Send" button to learn display EDID

The EDID learning function is only necessary whenever you encounter any display on the HDMI output port that cannot play audio and video properly. Because the HDMI source devices and displays may have various level of capability in playing audio and video, the general principle is that the source device will output the lowest standards in audio format and video resolutions to be commonly acceptable among all HDMI displays. In this case, a 720p stereo HDMI signal output would be probably the safest choice. Nevertheless, the user can force the matrix to learn the EDID of the lowest capable HDMI display among others to make sure all displays are capable to play the HDMI signals normally.

There are **THREE methods** to do EDID Learning as below,

1. IR Remote Control: Please refer to the **Operation Approach\ Method B: IR Remote Control**
2. Software Control: Please refer to the **Operation Approach\ Method C: Software Control through RS-232 port**
3. Web Interface Control: Please refer to the **Operation Approach\ Method D: Web Interface Control**

There are **eight embedded default EDID** as below,

1. Full-HD(1080p@60)-24bit 2D & 2ch
2. Full-HD(1080p@60)-24bit 2D & 7.1ch
3. Full-HD(1080p@60)-24bit 3D & 2ch
4. Full-HD(1080p@60)-24bit 3D & 7.1ch
5. HD(1080i@60)(720p@60)-24bit 2D & 2ch
6. HD(1080i@60)(720p@60)-24bit 2D & 7.1ch
7. Full-HD(1080p@60)-36bit 2D & 2ch
8. Full-HD(1080p@60)-36bit 2D & 7.1ch

Q The quality of output video is not good enough, how can I do?

A Please adjust the 8-level equalization on the receiver units. The HDMI signal level varies from 0 (strongest) to 7 (weakest) for respective transmission length from longest possible range to short distance. It is recommended to switch from 7 to 0 to find the optimal visual experience.

Q Can I use any kind of LAN cable?

A Please check the NOTICE section for more information about how to pick up a suitable cable.

Q Can every TV work with the HDMI matrix?

A Basically, the answer is YES. But if your TV can not support 1080p, please refer the EDID LEARNING section to learn EDID from your TV.

Q What is EDID? Why do I need to learn EDID?

A EDID contains the whole information of the display such as the resolution and audio setting which this display can support. Therefore, based on the EDID information, media player will pick up the most suitable resolution and audio setting to the display. In order to faithfully transmit the EDID information from display to the media player, learning EDID from display to this device is necessary.

Q What should I do to learn EDID for the matrix?

A Due to the limitation of HDMI, the source device can only output one format of video and audio. In other words, the source device cannot output 720p and 1080p video at the same time, or output stereo and surround sound at the same time. Therefore, you may need to manually setup each HDMI input for desirable audio/video output format. The mechanism of EDID Learning is to pick up the HDMI display with the lowest capability among the ones you would use for this input source. For example, if user would like to play the Input-2 upon output-2, output-3 and output-4, and only output-3 cannot support 1080p [support up to 720p only], please learn the EDID from the display connected to the output-3 at the Input-2 port. Of course, if output-3 would get the HDMI signals from every HDMI input, please learn EDID information from output3 to all four HDMI inputs. For more information about EDID Learning, please refer to EDID LEARNING section.

Q My TV can support 1080p, but why there is no audio?

A The factory default EDID of this device is 1080p & 2ch audio. However, there would be a problem after you change to use 1080p & 7.1ch if the TV cannot support 7.1ch audio. Please use the default EDID, 1080p & 2ch audio.

Q When I set an audio amplifier (AV receiver) between TV and the matrix to extract 7.1ch audio, but why there is still no audio?

A Basically, the default EDID of the chosen input can support 7.1ch audio, but the problem is that the EDID of the amplifier still cannot match the default setting. Therefore, the best method is to learn EDID from the amplifier directly. Please refer to EDID LEARNING section and follow the steps to learn the EDID. When learning EDID from the amplifier, user just needs to connect the matrix and amplifier. **Please don't connect HDMI cable between amplifier and TV when the EDID learning is proceeding.**

Q When I play the same content upon multi-displays, why only the TV equipped with amplifier can have 7.1ch audio, and the others don't have 7.1ch audio even no stereo?

A Due to the limitation of HDMI, the source only can choose one video and one audio format to play, which can be either 1080p and 7.1ch or 1080p and stereo audio. It means when the user sets the matrix at 1080p and 7.1ch, the source will only play the content under this format. Therefore if the TV cannot decode 7.1ch audio, there is definitely no audio.

NOTICE

1. If the DVI or HDMI device requires the EDID information, please use EDID Reader/Writer to retrieve and provide DVI/HDMI EDID information.
2. All HDMI over CAT5 transmission distances are measured using Belden 1583A CAT5e 125MHz LAN cable and ASTRODESIGN Video Signal Generator VG-859C & VG-870B.
3. The transmission length is largely affected by the type of LAN cables, the type of DVI sources, and the type of DVI display. The testing result shows solid LAN cables (usually in bulk cable 300m/1000ft form) can transmit a lot longer signals than stranded LAN cables (usually in patch cord form). Shielded STP cables are better suited than unshielded UTP cables. A solid UTP CAT5e cable shows longer transmission range than stranded STP CAT6 cable. For long extension users, solid LAN cables are the only viable choice.
4. EIA/TIA-568-B termination (T568B) for LAN cables is recommended for better performance.
5. To reduce the interference among the unshielded twisted pairs of wires in LAN cable, one can use shielded LAN cables to improve EMI problems, which is worsen in long transmission.
6. Because the quality of the LAN cables has the major effect on how long the transmission limit can achieve and how good is the received picture quality, the actual transmission range is subject to one's choice of LAN cables. For desired resolutions greater than 1080i or 1280x1024, a Cat-6 cable is recommended.
7. If your HDMI display has multiple HDMI inputs, it is found that the first HDMI input [HDMI input #1] generally can produce better transmission performance among all HDMI inputs.
8. Additional IR remote controls and IR blasters can be purchased as optional accessories to control the HDMI sources located separately.



Performance Guide for HDMI over Category Cable Transmission

Performance rating		Type of category cable		
Wiring	Shielding	CAT5	CAT5e	CAT6
Solid	Unshielded (UTP)	★★★	★★★★★	★★★★★★
	Shielded (STP)	★★★	★★★	★★★★★
Stranded	Unshielded (UTP)	★	★★	★★
	Shielded (STP)	★	★	★★
Termination		Please use EIA/TIA-568-B termination (T568B) at any time		

WARRANTY

The SELLER warrants the **MA-5288V2 8x8 HDBaseT Lite Matrix with PoC** free from defects in the material and workmanship for 1 year from the date of purchase from the SELLER or an authorized dealer. Should this product fail to be in good working order within 1 year warranty period, The SELLER, at its option, repair or replace the unit, provided that the unit has not been subjected to accident, disaster, abuse or any unauthorized modifications including static discharge and power surge. This warranty is offered by the SELLER for its BUYER with direct transaction only. This warranty is void if the warranty seal on the metal housing is broken.

Unit that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for 90 days from the day of reshipment to the BUYER. If the unit is delivered by mail, customers agree to insure the unit or assume the risk of loss or damage in transit. Under no circumstances will a unit be accepted without a return authorization number.

The warranty is in lieu of all other warranties expressed or implied, including without limitations, any other implied warranty or fitness or merchantability for any particular purpose, all of which are expressly disclaimed.

Proof of sale may be required in order to claim warranty. Customers outside Taiwan are responsible for shipping charges to and from the SELLER. Cables and power adapters are limited to a 30 day warranty and must be free from any markings, scratches, and neatly coiled.

The content of this manual has been carefully checked and is believed to be accurate. However, The SELLER assumes no responsibility for any inaccuracies that may be contained in this manual. The SELLER will NOT be liable for direct, indirect, incidental, special, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. **Also, the technical information contained herein regarding the MA-5288V2 features and specifications is subject to change without further notice.**