



Zenty | Professional A/V Solution Provider

User Manual [v1.0]



4x4 4K 60Hz HDMI Matrix w/ Audio Out

ZT-114 | ZT-MT44A

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1. Introduction

The Zenty ZT-MT44A is a professional UHD 4K 60Hz 4:4:4 HDR HDMI video distribution matrix switcher. Supporting 18Gbps video bandwidth, HDMI 2.0, and HDCP 2.2, this 4x4 matrix allows for up to 4 independent sources be routed to 4 different UHD displays. All four outputs support audio de-embedding via coaxial SPDIF or analog connectors. Also features built in EDID & EDID copy function for maximum compatibility with different devices.

2. Features

- 4 x HDMI Inputs | 4 x HDMI Outputs | 4 x Coaxial SPDIF Audio Out | 4 x Analog Audio Out
- HDMI 2.0 | HDCP 1.4 / 2.2 Compliant
- Bandwidth up to 18Gbps
- Analog and SPDIF Audio Extraction
- EDID management and EDID copy
- Control via IR Remote | RS232 | WebGUI | TCP/IP
- PCM 2.0 | Dolby TrueHD | DTS-HD Master Audio | LPCM 7.1 | Audio sampling rate up to 192kHz
- HDR | HDR10 | HLG | Dolby Vision
- Firmware updates via USB

3. Package Contents

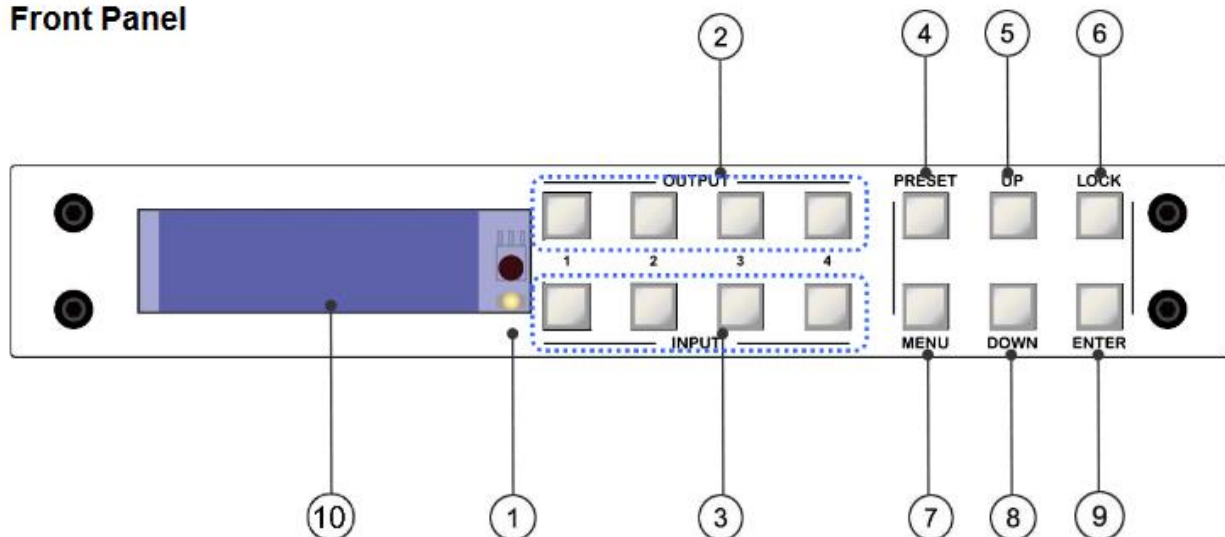
- (1) x Zenty ZT-MT44A Matrix Switcher
- (1) x 12V/2A DC Power Supply
- (1) x Remote Control
- (1) x IR Ext. Receiver Cable
- (5) x Phoenix Connectors
- (1) x User Manual

4. Specifications

Operating Temperature	32°F ~ 104°F
Operating Humidity	5% - 90% RH (No Condensation)
Max. Resolution	Up to 4K 60Hz YUV 4:4:4
HDCP Compliance	1.4 / 2.2
HDMI Standard	1.4 / 2.0
Audio Format Supported	PCM 2.0 Dolby TrueHD DTS-HD Master Audio LPCM 7.1
RS232 Serial Port	3-Pin Phoenix Connector
Ethernet Port (IP Control)	RJ45 (Female)
IR Ext. Port	3.5mm (TRS Female)
USB Port	Micro-USB Female
Bandwidth	18Gbps
Default IP Address	192.168.1.168
Rack-Mountable	Rack Ears Included
Dimensions (L x W x H)	8.51" x 5.06" x 1.33"
Net Weight	1.04lbs.
Power Consumption	14W (Max)

5. Panel Description

Front Panel



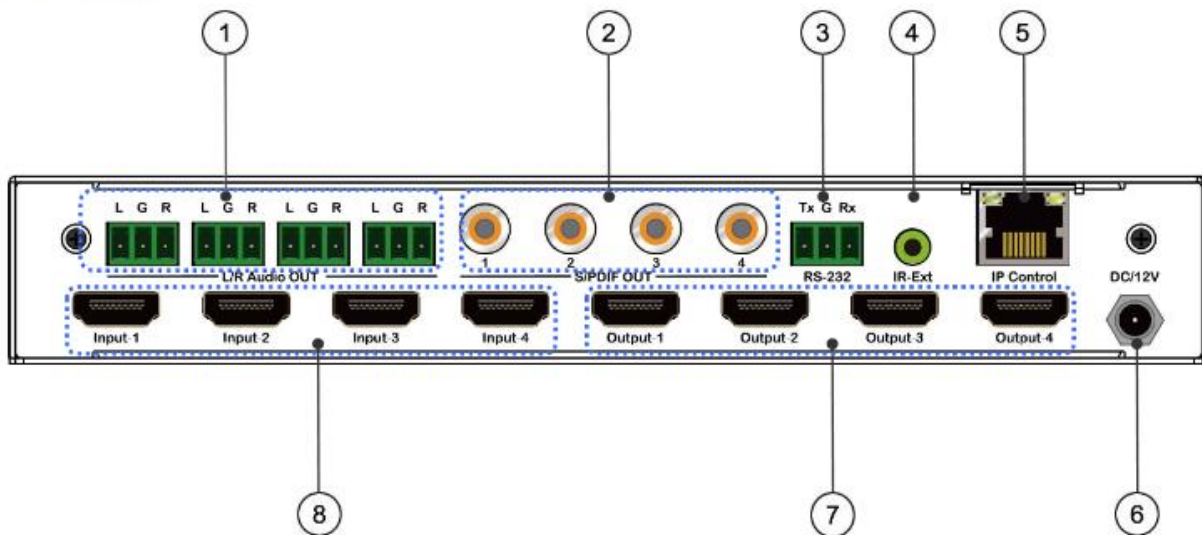
- ① **IR Receiver Sensor**
- ② **Output 1 - 4:** Short press to choose output (*press again to cancel*); long press to choose all outputs (*long press again to cancel*).
- ③ **Input 1 - 4:** Short press to choose input (*user must choose output first*); long press to choose one input for all outputs.
- ④ **PRESET:** Access Presets
- ⑤ **UP:** Navigate Up through menu
- ⑥ **LOCK:** Long press to enable button lock (*long press to unlock*). ***Note – All buttons are non-functional except for 'Lock' button when lock function is enabled.**
- ⑦ **MENU:** Access main menu or return to the previous menu interface
- ⑧ **DOWN:** Navigate Down through menu
- ⑨ **ENTER:** Short press to confirm selection
- ⑩ **LCD Screen**

***Note:** LCD screen will enter power saving mode if a selection has not been made within 60 seconds.



4X4 HDMI Matrix
Audio Extract
Initializing...

Rear Panel

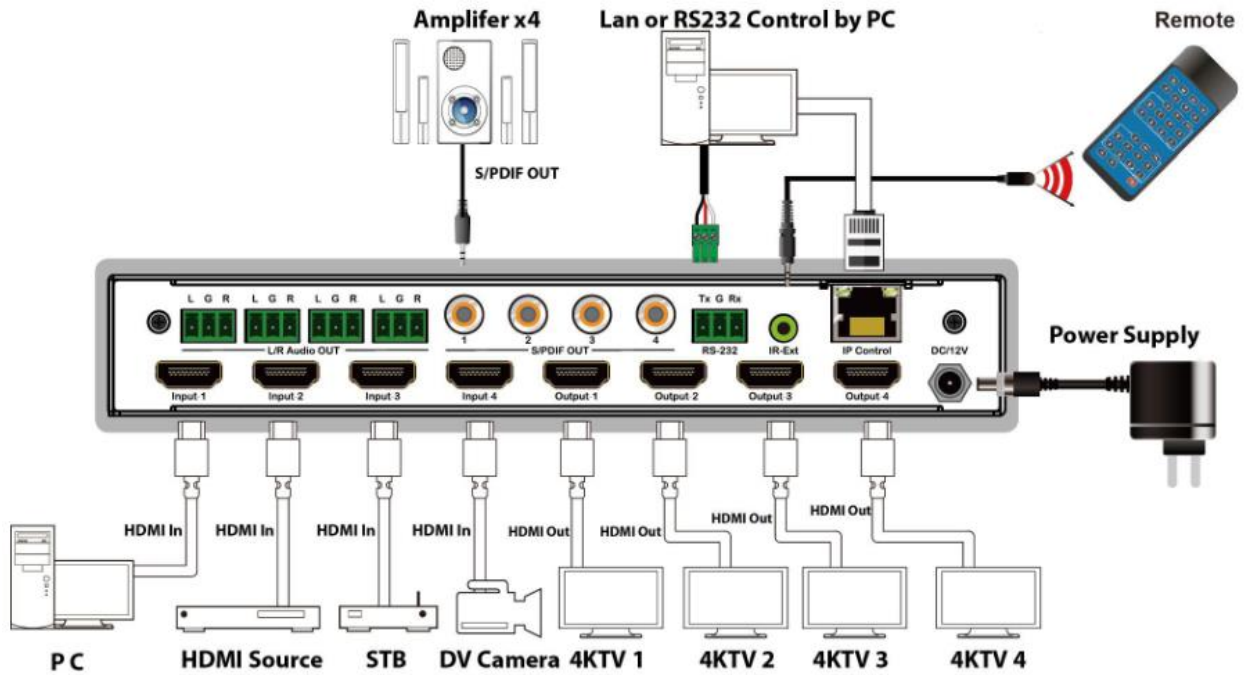


- ① Analog Audio Out (Phoenix)
- ② S/PDIF Audio Out (Coaxial)
- ③ RS232(Phoenix)
- ④ IR-Ext
- ⑤ Ethernet Port
- ⑥ DC12V/2A Power Adapter Port
- ⑦ HDMI Output Ports
- ⑧ HDMI Input Ports

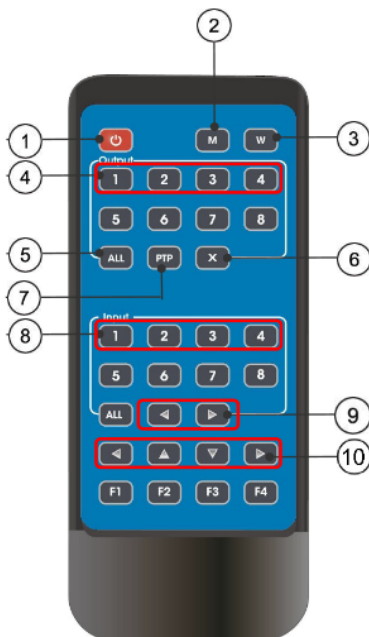
6. Connecting and Operating

- Connect source devices to the matrix's input ports via HDMI cable
- Connect HDMI from matrix's output ports to displays
- Optional: Connect RS232 cable from PC to RS232 port on the matrix
- Optional: Connect an Ethernet cable from the TCP/IP port of the matrix to a LAN
- Connect 12V power supply
- Power on the matrix, HDMI sources, and the displays

6.1 Application Diagram



6.2 Remote Control Description



- ① Power On / Standby
- ② **M**: Mute HDMI Output Audio
- ③ **W**: Lock Remote Control
- ④ Output 1-4 (*press output 1-4 then input 1-4 for routing*)
- ⑤ All Outputs Show 1 Input
 - a. Press "ALL" Button
 - b. Press Desired Input Button (1-4). Desired Input will be sent to all outputs
- ⑥ Turn Off Output Port
- ⑦ PTP button: Mirror All Inputs and Outputs (*Ex. Input 1 to output 1, input 2 to output 2, etc*)
- ⑧ Input 1-4 (*press output 1-4 then input 1-4 for routing*)
- ⑨ Cycle through Input Ports
- ⑩ Left | Up | Down | Right

Note:

Power On / Standby: Short press for standby mode; LCD screen will show, " System Shutdown" and TV will not display an image. Short press again to wake up from standby mode, HDMI output returns to normal

Video switch: Output + Input (ex: Output1 + Input2 switches Output 1 to Input 2)

Mute HDMI Output Audio: Output + M (ex: Output1+M mutes Output 1 audio)

Lock Remote Control: Short press "W" to lock remote buttons | Short press again to unlock

Turn Off Output Port: Output + X (ex: Output1 + X disables Output 1 Port | Output + X again to enable Output Port)

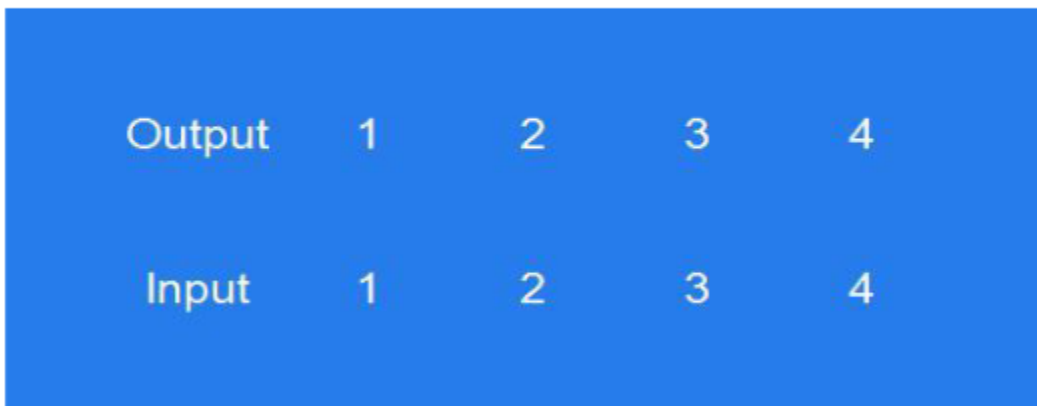
Cycle Through Input Ports: Output + "<" or ">"; (ex: All + "<" cycles backwards through source signals on ALL connected displays. Function automatically skips input port if no input signal is detected)

7. Front Panel Control

7.1 Video Switch Operation

Signal routing includes 4 input and 4 output channels that can be configured according to the desired effect to form a 1x4 through 4x4 matrix. Users can route any input signal to any output port or all output ports.

Operation Format - "Output Port" + "Input Port"



Output	1	2	3	4
Input	1	2	3	4

Examples :

1. Route Input 4 to Output 1

Operation: Press Output 1 + Input 4

2. Route Input 2 to Output 1, 2 & 3

Operation: Press Output 2, Output 1, Output 3 + Input 2

3. Route Input 4 to All Outputs

Operation: Press ALL + Long Press Input 4

7.2 Video Control

There are 2 sub-menus in the video menu: Switching | On/Off

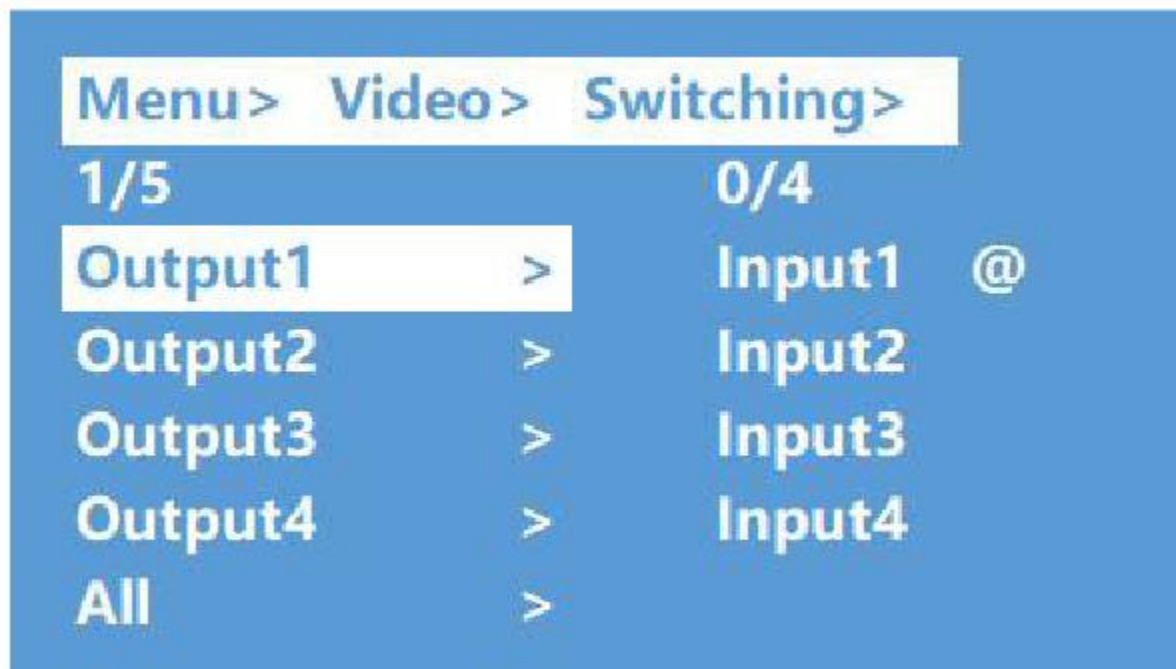


7.2.1 Video Switching

Operation:

- ① Select "Video" in the main menu & press "ENTER" button
- ② Press "Up and Down" buttons to highlight "Switching" sub-menu
- ③ Press "ENTER" to enter the "Switching" sub-menu
- ④ Press "Up and Down" buttons to select "Output 1 – Output 4" or "All". Your current selection will be highlighted in white
- ⑤ Press "ENTER" to enter the next sub-menu

- ⑥ Press the “Up and Down” buttons to select the de sired input. Your current selection will be highlighted in white.
- ⑦ Press "ENTER" button to complete video switching



7.2.2 Output Switch Control

You can enable or disable any output port or all output ports. Output ports are enabled by default. Operation:

- ① In the main menu, select "Video" and press "ENTER" button
- ② Press "Up and Down" buttons to select "On/Off"
- ③ Press "ENTER" button to enter the next sub-menu
- ④ Press "Up and Down" buttons to select "Output 1-4"
- ⑤ Press "ENTER" to enter the next sub-menu
- ⑦ Press the "Up and Down" buttons to select "Off" or "On"
- ⑧ Press "ENTER" button to apply your selection



7.3 Audio Control Menu

There are 2 sub-menus in Audio Control menu: Line Out | De-Embed



7.3.1 Switching Output Audio

“Line out” function allows users to enable or disable HDMI Output audio while maintaining HDMI Output video.

Operation :

- ① Select “Audio” in main menu and press the “ENTER” button.
- ② Press “Up and Down” buttons to select “Line Out” and press the “ENTER” button. Select “Output 1-4” or “All” via “Up and Down” buttons. Press “ENTER” to choose, “On” (audio enabled) or “Off” (audio disabled).
- ③ Example: Mute audio of TV connected to HDMI Output 1

Operation: “Audio” + “ENTER” > “Line Out” > “Output1” > “Off” + “ENTER”

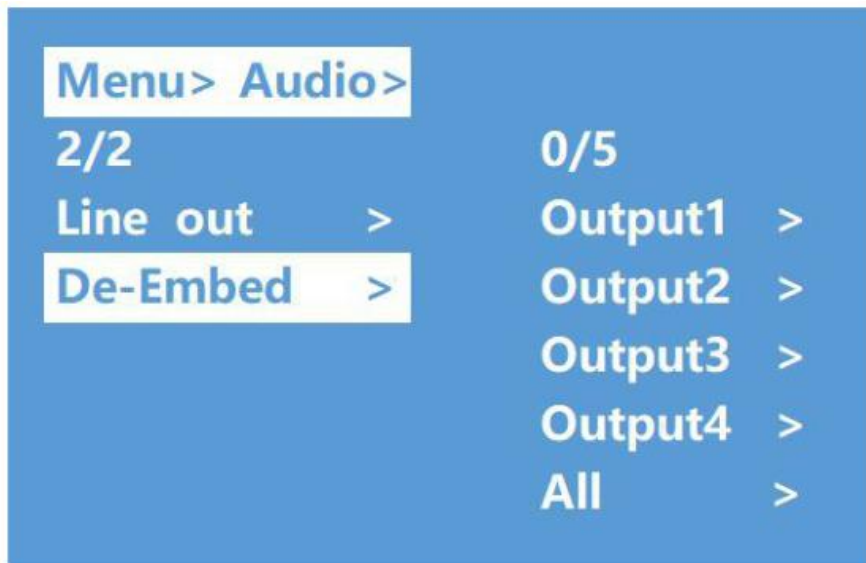
7.3.2 Audio Extraction Control

“De -Embed” function allows users to enable or disable Analog and Digital Audio Output ports.

Operation :

- ① Select “Audio” in main menu and press the “ENTER” button.
- ② Press “Up and Down” buttons to select “De -Embed” and press the “ENTER” button. Select “Output 1-4” or “All” via “Up and Down” buttons. Press “ENTER” to choose “On” (audio enabled) or “Off” (audio disabled).
- ③ Example: Disable audio extraction of HDMI Output 1

Operation: “Audio” + “ENTER” > “De-Embed” > “Output 1” > “Off” + “ENTER”

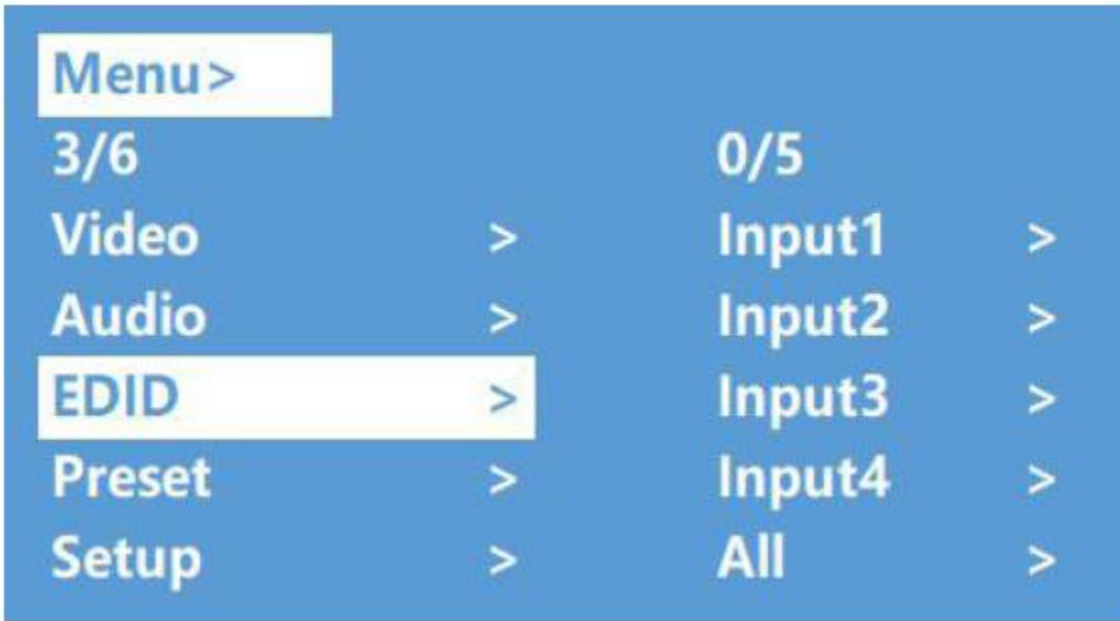


7.4 EDID Setting Menu

EDID Management: User EDID | Built-in EDID | Copy EDID Function

*Note - The default EDID profile is “Default1”

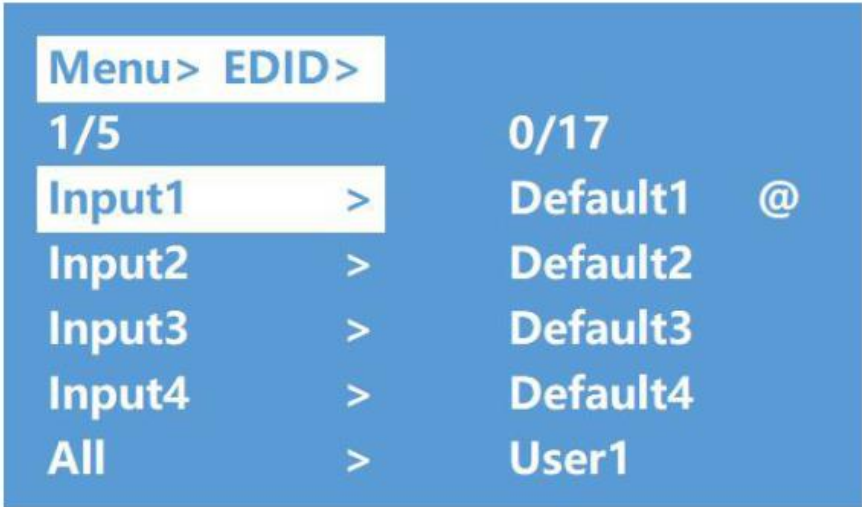
Default1	4K60 444-LPCM: 2.0, HDR: HLG	Default2	4K60 420-LPCM: 2.0, HDR: None
Default3	4K30 444-LPCM: 2.0, HDR: None	Default4	1080P60 444-LPCM: 2.0, HDR: None



Example: Apply EDID profile “Default 1” to HDMI Input 1

Operation :

- ① Select “EDID” in the main menu and press the “ENTER” button
- ② Press the “Up and Down” buttons to select “Input 1”
- ③ Press the "ENTER" button to enter the next sub-menu
- ④ Press the “Up and Down” buttons to select “Default1” and press “ENTER” to apply the EDID profile
- ⑤ EDID Profile settings (max resolution | audio format | HDR) will be shown when the EDID profile is highlighted.



7.5 Preset Application

“Preset” function allows users to save the current audio video routing, EDID settings and system settings. The JTECH-4KM44A supports 8 presets that can be set via web GUI, RS232 commands or front panel buttons.

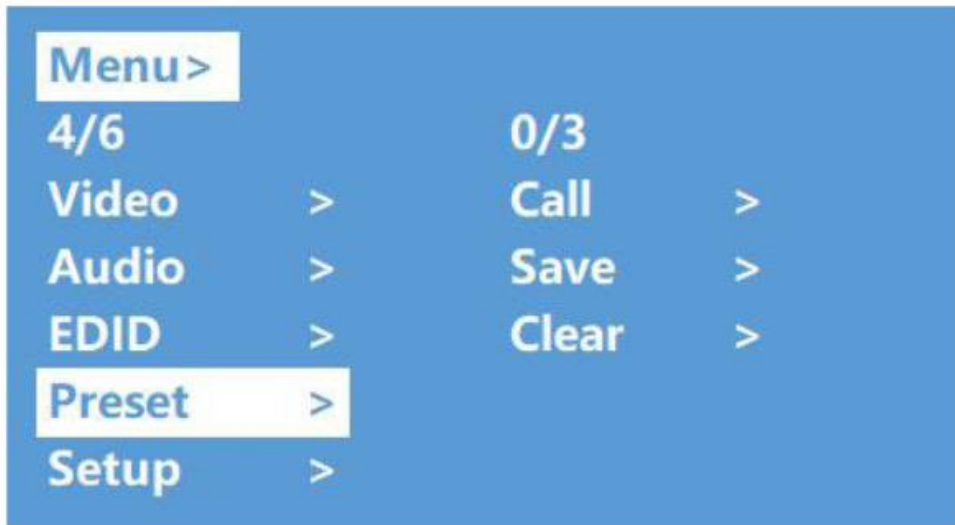
Preset Control Interface has three sub-menus:

Call Scene | Save Scene | Clear Scene

Operation:

- ① Select “Preset” in the main menu and press the “ENTER” button
- ② Save Preset: Select Save > Highlight desired Preset (Preset 1 through 8) > “ENTER”
- ③ Call Preset: Select Call > Highlight desired Preset (Preset 1 through 8) > “ENTER”

④ Clear Preset: Select Clear > Highlight any of the previously saved Presets (Preset 1 through 8) > “ENTER”



7.6 Setup Interface

The Setup interface allows users to set serial port baud rate, enable DHCP, reboot the device and apply a factory reset.



7.6.1 Baud Rate Setting

4 Baud Rate Settings: 9600 | 19200 | 57600 | 115200 (default)

Example: Setting Baud Rate to 9600

Operation:

- ① Select "Setup" in the main menu and press the "ENTER" button
- ② Press the "Up and Down" buttons to select "Baud"
- ③ Press "ENTER" to enter the next sub-menu
- ④ Press the "Up and Down" buttons to select "9600"
- ⑤ Press "ENTER" to apply the setting change



7.6.2 DHCP

DHCP On: Dynamic IP address

DHCP Off(default): Static IP address

DHCP Operation:

Select "Setup" in main menu and press the "ENTER" button

- ② Press the "Up and Down" buttons to select "DHCP" setting
- ③ Press "ENTER" to enter the next sub-menu
- ④ Press "Up and Down" buttons to select "On"
- ⑤ Press "ENTER" to enable DHCP & to allocate IP address automatically



7.6.3 Reboot

- ① Select "Setup" in main menu and press the "ENTER" button
- ② Press the "Up and Down" buttons to select "Reboot"
- ③ Press "ENTER" to enter the next sub-menu
- ④ Press the "Up and Down" buttons to select "Yes"
- ⑤ Press "ENTER" to begin rebooting the device



7.6.4 Factory Reset

“Factory Reset” is a function that allows the JTECH-4KM44A to revert back to its initial factory settings. There are two factory settings:

1. **Factory Common:** Factory reset for AV routing, EDID, audio line out and de-embed settings and device setting (IP address can't be reset with the “Factory Common” reset).
2. **Factory All:** Factory reset for AV routing, EDID, audio line out and de-embed settings, device settings, presets and device name.

Example: Factory All Reset

- ① Select “Setup” in the main menu and press the “ENTER” button
- ② Press the “Up and Down” buttons to select “Factory”
- ③ Press “ENTER” to enter the next sub-menu
- ④ Press the “Up and Down” buttons to select “ALL” and press the “ENTER” button
- ⑤ Press the “Up and Down” buttons to select “Yes” and press the “ENTER” button



Menu> Setup> Factory >Common>

1/2

No	@	Reset information:	
Yes		1.Video	2.Audio
		3.EDID	4.Setup

Menu> Setup> Factory >All>

1/2

No	@	Reset information:	
Yes		1.Video	2.Audio
		3.EDID	4.Setup
		5.Preset	6.Name

7.6.5 Query Information Interface

Query IP and System Information

System Interface: Query company name, device name and version information

IP Interface: Query device IP address, MAC address and DHCP status

Operation :

- ① Select "INFO" in the main menu and press the "ENTER" button
- ② Press the "Up and Down" buttons to select "System" or "IP"

③ Press “ENTER” to enter the next sub-menu here system or IP information is available



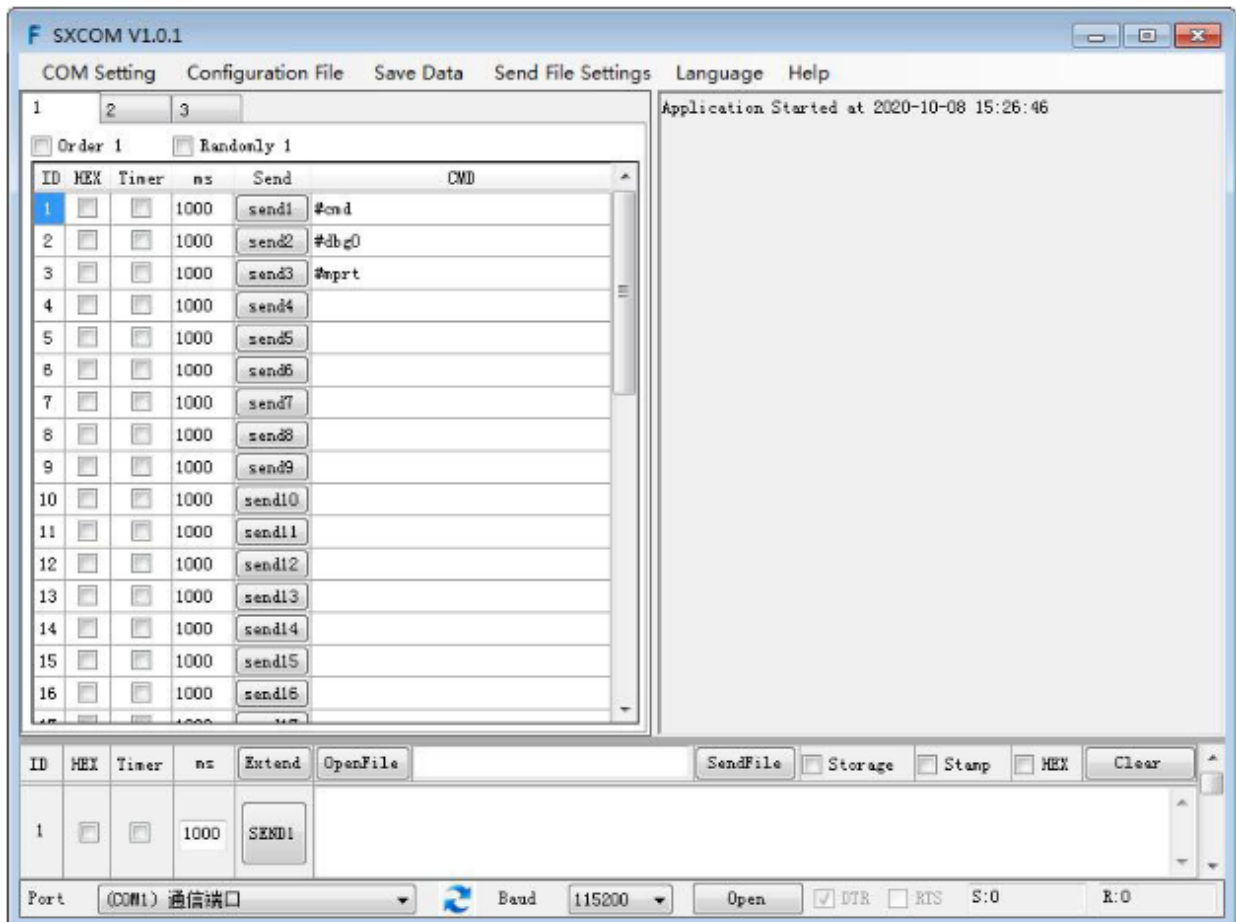
8. RS232 Control

8.1 Comport Settings

Choose correct COM port that connects to the PC in the parameter configuration area

Baud Rate:	115200 bps (Default)
Parity:	None
Data Bit:	8 bit
Stop Bit:	1 bit

8.2 Sending Port Commands



8.3 Command List

- 1). All commands start with “#”
- 2). “_” the underline cannot be omitted.
- 3) Command head, Parameter and target need to have one “SPACE”.

The following table is only an example. Please refer to the list of instructions.

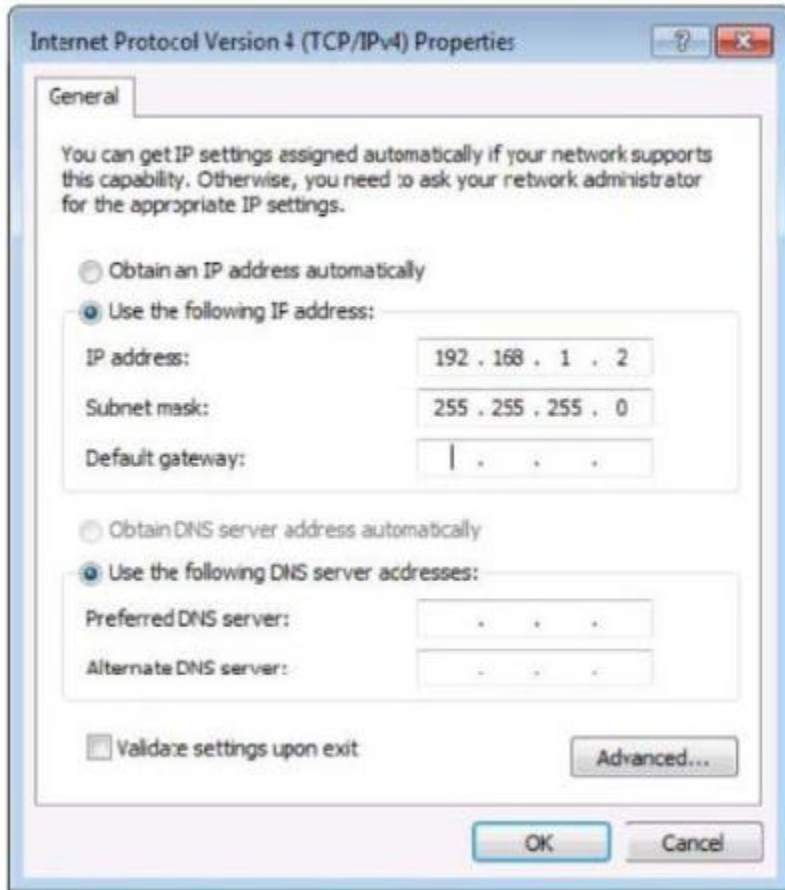
Type	Format	Value	Regulation
Command head	#cmd	without	
Explain	Can be used to search command, after receiving command, the system will feedback all open command format fields		
Example1	#cmd		
	Search all open command		

9. Web Control

9.1 Change PC IP Address

Before configuring the device through the web GUI, it is necessary to configure the IP address of the computer connected to the JTECH-4KM44A (to ensure that the computer and the device are set in the same network segment).

- 1). Open Network Settings > Change Adapter Properties and set the computer's IP address
- 2). Choose to use Static IP (Use the following IP address), with the IP address set to 196.168.1.x (x ranges from 0 to 254, excluding 168 [device's default IP])
- 3). Subnet mask set to 255.255.255.0
- 4). Gateway set to 192.168.1.1

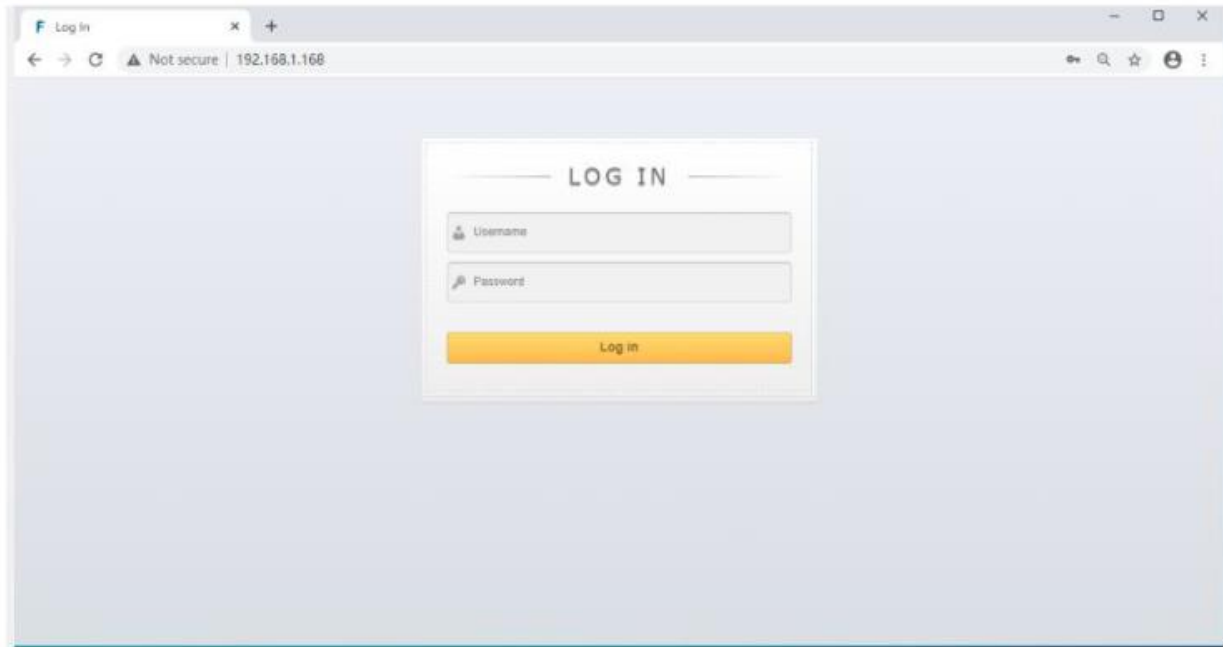


9.2 Log-in via Browser

Enter the default IP address of the matrix (192.168.1.168) in your browser's address bar

Type in user name and password (default user name: admin | default password: 123456)

Note: We recommend to using the latest version of Google Chrome, Mozilla Firefox and Microsoft Edge web browsers for the best compatibility.



9.3 Video Interface

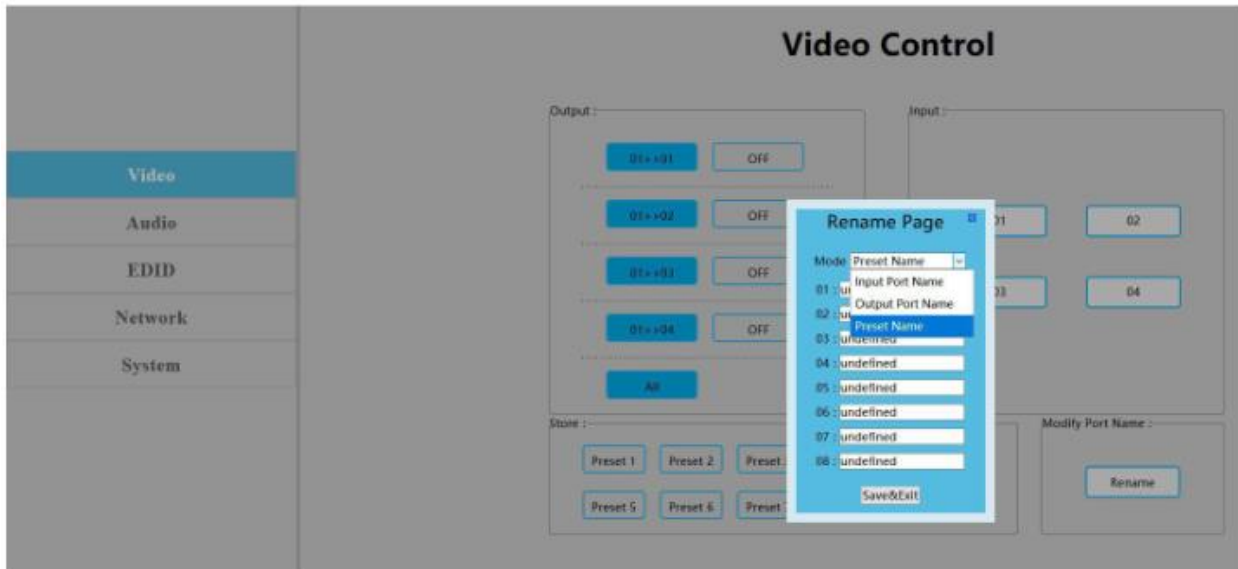
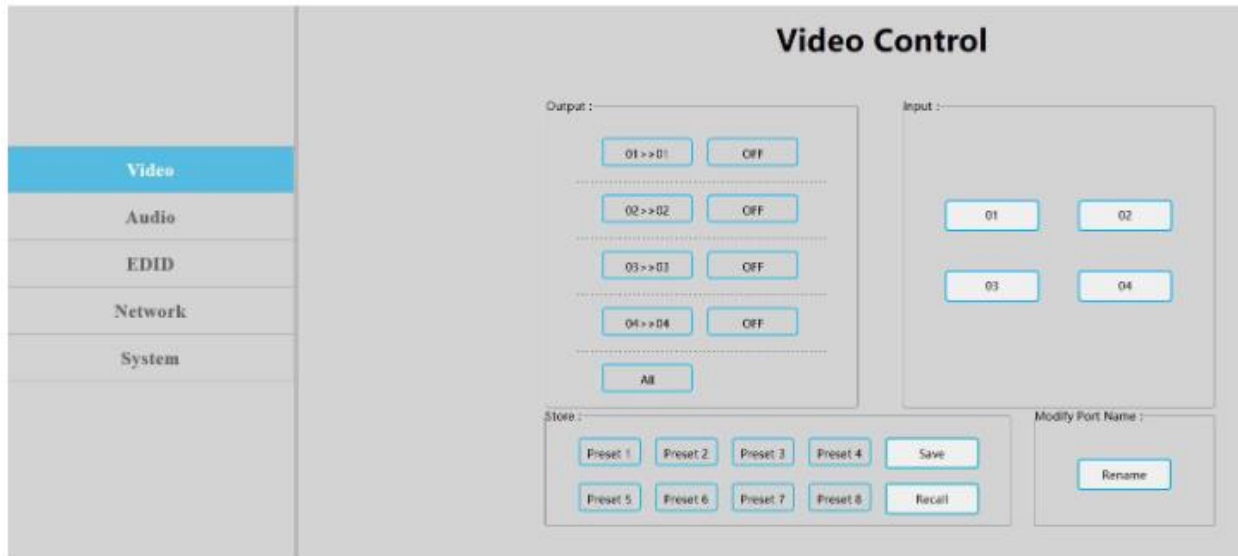
1. **Output:** 01 >> 02 | 01 = Input & 02 = Output
2. **Input:** HDMI Inputs 1 - 4
3. **OFF:** Disable Output Port | Click, " OFF" to close output port
4. **Store:** Preset 1 – Preset 8 | Recall: recall the preset | Save: save the preset

Operation steps:

- 1) **Call Preset:** Preset1 + Recall | recall Preset 1
- 2) **Save Preset:** Preset2 + Recall | save Preset 2

Modify Port Name

1. Select desired mode from drop down menu – Input Port Name | Output Port Name | Preset Name.
2. Select desired input or output port. Rename port in field. Click "Save & Exit" to apply changes.



9.4 Audio Interface

1. Click Output 1 - 4 "HDMI": Enable / Disable HDMI Output Audio

Ex: Disable HDMI Output 1 Audio

Operation:

Click Output 1 "HDMI" button. Button color will change and audio will be disabled.

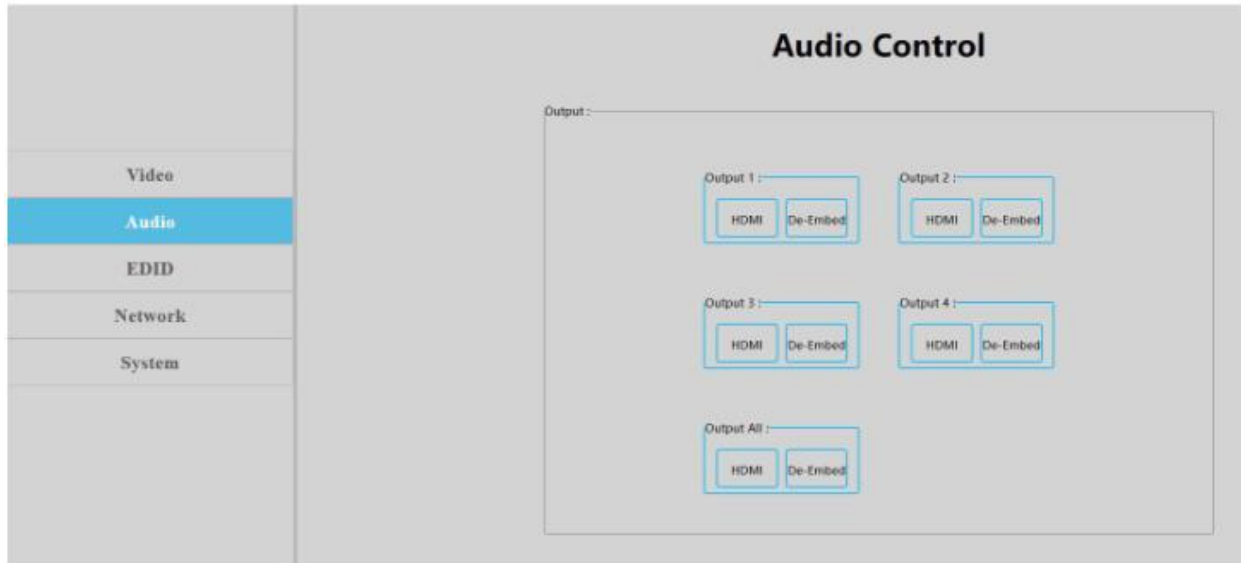
Press again to enable audio.

2. Click Output 1 - 4 "De-Embed": Enable / Disable Audio De-Embed Function

Ex: Disable Audio De-Embed Function on Output 1

Operation:

Click Output 1 “De-Embed” button. Button color will change and audio de-embed ports will be disabled. Press again to enable de-embed audio ports.



9.5 EDID Interface

1. Input : 00>>Input1 | 00 - 16: EDID number | Input 1 - 4: HDMI Input Port 1 - 4
2. Output : 00 - 03: Default EDID | 04 - 07: User EDID | 08 - 11: Copy EDID | 12 - 15: Input EDID | 16: Temp EDID

00	4K60 444-LPCM: 2.0, HDR:HLG	01	4K60 420-LPCM: 2.0, HDR:None
02	4K30 444-LPCM: 2.0, HDR:None	03	1080P60 444-LPCM: 2.0, HDR:None
04	User1	05	User2
06	User3	07	User3
08	Copy HDMI Out 1	09	Copy HDMI Out 2
10	Copy HDMI Out 3	11	Copy HDMI Out 4
12	Copy Input 1	13	Copy Input 2
14	Copy Input 3	15	Copy Input 4
16	Default is empty. Requires EDID to be saved to device to take effect. <i>*Doesn't support power-off memory</i>		

1. EDID Information Field: This field shows EDID info.

Ex : Click “00>>Input1” or “00:Default1” to show resolution, audio format, audio channels, HDR and serial number.

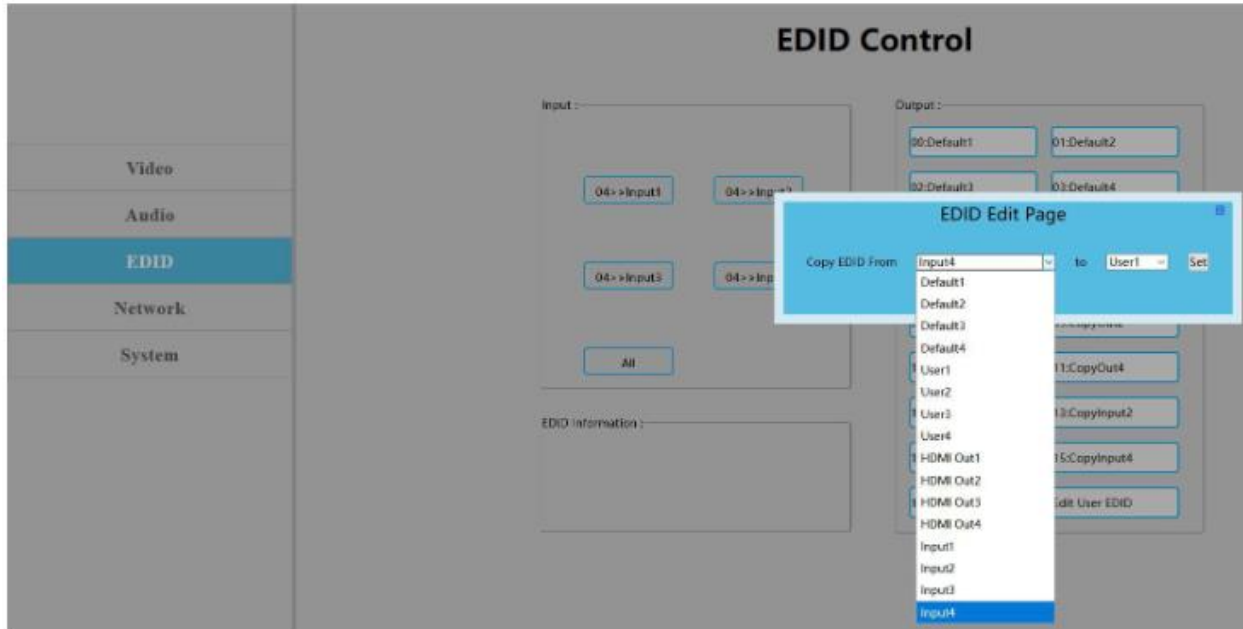
2. Edit User EDID: Click “Edit User EDID”. Choose EDID profile from the drop-down menu on “EDID Edit Page” and then save to User 1-4 profiles.

Operation :

1) Apply Default2 EDID Profile to HDMI Input 1: Click “00>>Input1” and then click “01:Default2”.

2) Save HDMI Out 1 EDID to User1 Profile: Choose ”Default1” in “EDID Edit Page” and then choose “User1” and click “Set” to finish.





9.6 Network Interface

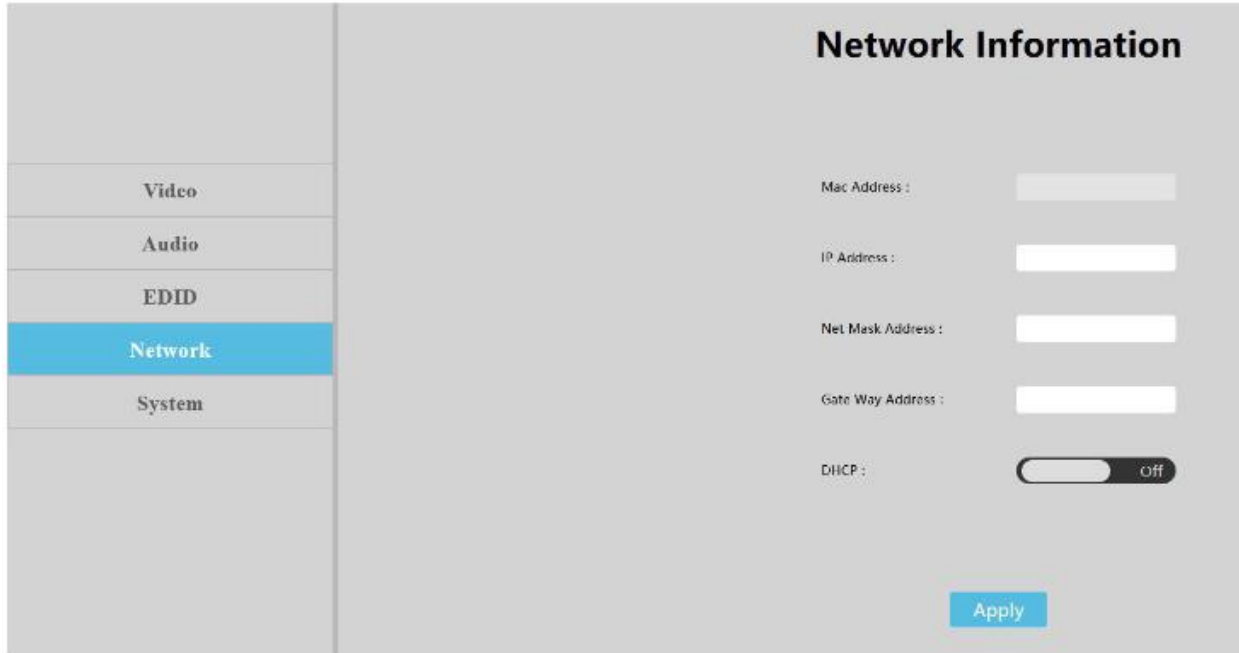
*****Note** - MAC address cannot be modified

Static IP: Click DHCP switch (DHCP Off) to disable DHCP. Input desired static IP address to the “IP Address” field and then click “Apply” button to apply changes. If device IP address is the same as client IP, the user will need to re-login to the web GUI.

Dynamic IP: Click DHCP switch (DHCP On). IP address will be assigned by router and will turn grey to signify that the IP address cannot be modified.

IP Address | Net Mask Address | Gateway Address can be modified only when DHCP is disabled. Cannot be modified when DHCP is enabled.

Default IP address: 192.168.1.168



9.7 System Setting Interface

1. System Setting :

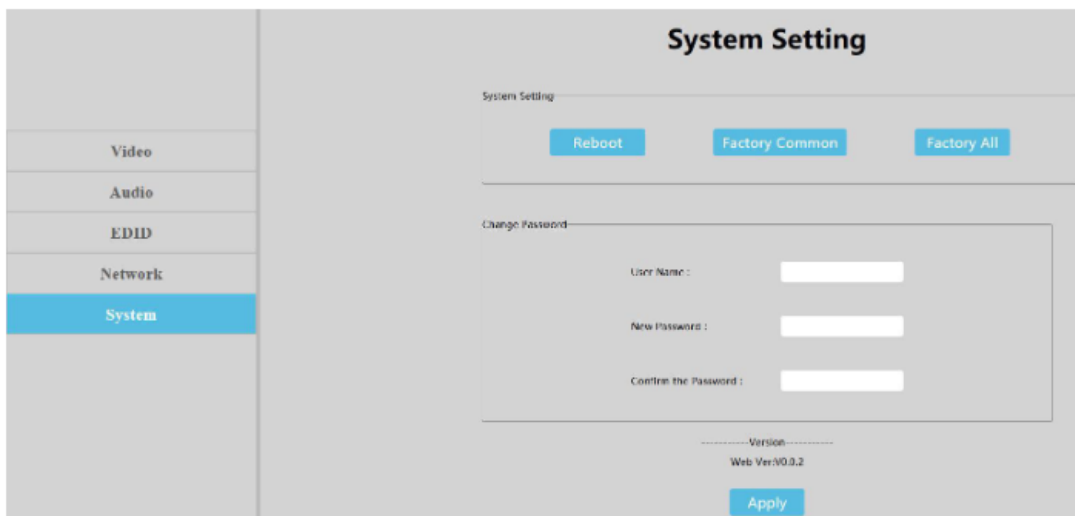
Reboot: Click to reboot device | Reboot will not clear user parameters

Factory Common: Click to reset device to partial factory settings | Will not clear network and preset parameters

Factory All: Click to reset device to full factory settings

2. Change Password: Change user name and password and then click," Apply".

***Note:** The username and password only support 6 - 15 characters



10. Firmware Upgrade

After upgrading the MCU application, upgrade the web application using the USB micro-port. (Both MCU and GUI are upgradeable via USB). If firmware is encrypted, decrypt before updating.

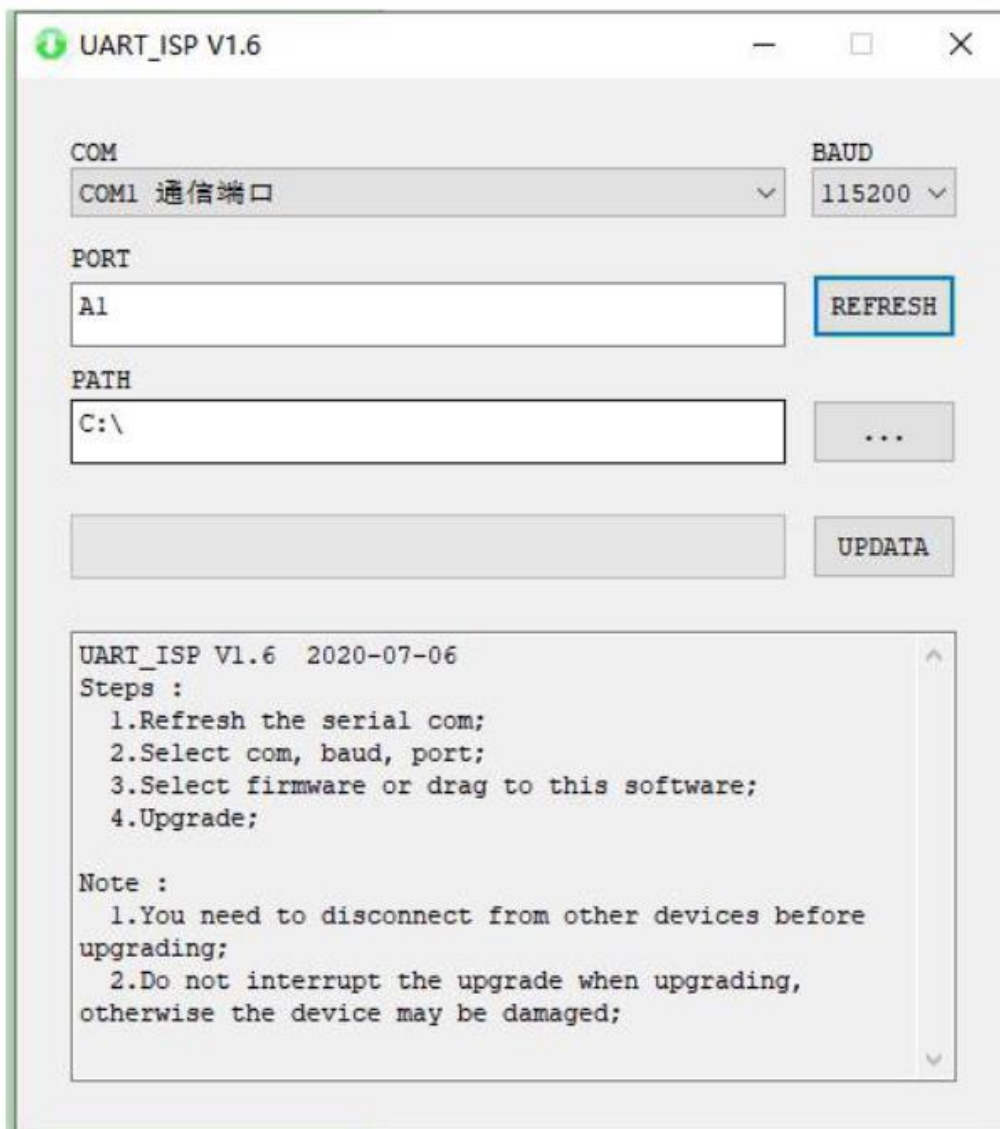
10.1 MCU Application Layer Upgrade

Connect unit to PC via USB cable from micro-USB port.

Open Application, "UART_ISP_V1.6.exe" and select correct USB/COM port

Set Baud Rate: 115200 | Type in "A1" in PORT | Select PATH and then click

UPDATA to apply update.



10.1 Web Upgrade

Connect unit to PC via USB cable from micro-USB port.

Open Application" UART_ISP_V1.6.exe" and select correct USB/COM port

Set Baud Rate: 115200 | Type in "FO" in PORT | Select PATH and then click UPDATA to apply update.

The screenshot shows the UART_ISP V1.6 application window. It features several configuration fields and buttons:

- COM:** A dropdown menu set to "COM1 通信端口".
- BAUD:** A dropdown menu set to "115200".
- PORT:** A text input field containing "FO".
- PATH:** A text input field containing "C:\".
- Buttons:** "REFRESH" (next to PORT), "..." (next to PATH), and "UPDATA" (at the bottom right).
- Text Area:** A scrollable area containing the following text:

```
UART_ISP V1.6 2020-07-06
Steps :
 1.Refresh the serial com;
 2.Select com, baud, port;
 3.Select firmware or drag to this software;
 4.Upgrade;

Note :
 1.You need to disconnect from other devices before
upgrading;
 2.Do not interrupt the upgrade when upgrading,
otherwise the device may be damaged;
```

11. Maintenance

Clean this unit with a soft, dry cloth. Never use alcohol, paint thinner, or benzene to clean.

12. Warranty

If your product does not work properly because of a defect in materials or workmanship, our company (referred to as “the warrantor”) will, for the length of the period indicated as below, “Parts and Labor (5) Years”, which starts with the date of original purchase (“Limited Warranty period”), at its option either (a) repair your product with new or refurbished parts, or (b) replace it with a new or a refurbished product. The decision to repair or replace will be made by the warrantor.

During the “Labor” limited warranty period, there will be no charge for labor. During the “Parts” warranty period, there will be no charge for parts. You must mail-in your product during the warranty period. This Limited Warranty is extended only to the original purchaser and only covers products purchased as new. A purchase receipt or other proof of original purchase date is required for Limited Warranty service.

13. Mail-In Service

When shipping the unit, carefully pack and send it prepaid, adequately insured, and preferably in the original carton. Include a letter detailing the complaint and provide a day time phone and/or email address where you can be reached.

14. Limited Warranty Limits and Exclusions

This Limited Warranty ONLY COVERS failures due to defects in material or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage. The Limited Warranty ALSO DOES NOT COVER damages which occurred in shipment, or failures which are caused by products not supplied by warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, set-up adjustments, mis-adjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, or service by anyone other than a Factory Service center or other Authorized Servicer, or damage that is attributed to acts of God.

THERE ARE NO EXPRESS WARRANTIES EXCEPT AS LISTED UNDER “LIMITED WARRANTY COVERAGE”. THE WARRANTOR IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY. (As examples, this excludes damages for lost time, cost of having someone remove or re-install an installed unit if applicable, travel to and from the service, loss of or damage to media or images, data or other recorded content. The items listed are not exclusive, but are for illustration only.) PARTS AND SERVICE, WHICH ARE NOT COVERED BY THIS LIMITED WARRANTY, ARE YOUR RESPONSIBILITY.



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