

SCAM85TS-4K KIT

8 x 5 Switcher/Processor



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**Version: SCAM85TS-4K KIT
_2023V1.1**

Preface

Read this user manual carefully before using the product. Pictures shown in this manual are for reference only. Different product model specifications may vary.

This manual is only for operation instruction, please contact the local distributor for maintenance assistance. The functions described in this version were updated January, 2023. In order to continue improving the product, we reserve the right to make function or parameter changes without notice or obligation. Please refer to the dealers for the latest details.

Trademarks

Product model and logo are trademarks. Any other trademarks mentioned in this manual are acknowledged as the properties of the trademark owner. No part of this publication may be copied or reproduced without the prior written consent.

FCC Statement

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. It has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation.

Operation of this equipment in a residential area is likely to cause interference, in which case the user at their own expense will be required to take whatever measures may be necessary to correct the interference.

Any changes or modifications not expressly approved by the manufacture would void the user's authority to operate the equipment.



Safety Precautions

To ensure the best performance from the product, please read all instructions carefully before using the device. Save this manual for further reference.

- Unpack the equipment carefully, and save the original box and packing material for possible future shipment
- Follow basic safety precautions to reduce the risk of fire, electrical shock, and injury to persons
- Do not dismantle the housing or modify the module (electrical shock or burn hazard)
- Using supplies or parts not meeting the products' specifications may cause damage, deterioration, or malfunction
- Refer all servicing to qualified service personnel
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water
- Do not put any heavy items on the product's power cable
- Do not remove the housing of the device as opening or removing housing may expose you to dangerous voltage or other hazards
- Install the device in a place with sufficient ventilation to avoid damage caused by overheating
- Keep the module away from liquids
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.
- Do not twist or pull by force ends of the optical cable. It can cause malfunction.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- Unplug the power cord when left unused for a long period of time
- Information on disposal for scrapped devices: do not burn or mix with general household waste, please treat them as normal electrical wastes

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1. Product Introduction

The SCAM85TS-4K KIT is a 8 x 5 Switcher/Processor KIT. The matrix kit includes one matrix and two receivers.

The matrix supports eight inputs including seven HDMI and one powered USB-C. Other features include both HDMI and HDBaseT outputs, an ethernet passthrough port, four audio inputs and two audio outputs. This feature allows the audio mixing, Mic with phantom power selection and AEC noise cancellation, the matrix also support 12 flexible Multi-view configurations for showing up to 4 sources at one screen.

1.1 Features

- Supports 4K@60Hz 4:4:4, HDR, Dolby Vision, HDCP2.3.
- Supports HDBaseT output resolutions up to 4K@60Hz 4:2:0.
- Provide up to 60w charging, USB data (USB 3.0/2.0) and 4K@60 4:4:4 video transmission on USB-C port.
- Supports built-in HDMI-USB3.0 video encoder, allows to capture single or multi-view video to USB host.
- Supports 12 flexible Multi-view configurations for showing up to 4 sources at one screen.
- HDBT outputs support 24V PoC power to the receivers.
- Receiver can be powered over CATx cable with 12~48V.
- EDID management (EDID learning/preset/customized EDID).
- Mic with phantom power selection and AEC noise cancellation.
- Controllable via RS232, IR remote, front panel buttons, Web-UI and TCP/IP commands.
- Provides Ethernet capability at the receivers.
- Supports PoE(30W) for third-party PoE device.

1.2 Package List

1.2.1 SCAM85TS-4K

- 1x Matrix
- 2x Mounting Ears with 6 Screws
- 4x Plastic Cushions
- 1x RS232 cable (3-pin to DB9)
- 1x IR Receiver
- 1x Remote control
- 8x 3-pin Terminal Blocks
- 1x Power cable
- 1x User Manual

1.2.2 TP455R-4K

- 2x Receiver
- 4x Mounting Ears with 4 Screws
- 8x Plastic Cushions
- 2x 3-pin Terminal Blocks

Note: Please contact your distributor immediately if any damage or defect in the components is found.

2. Specifications

2.1 Matrix

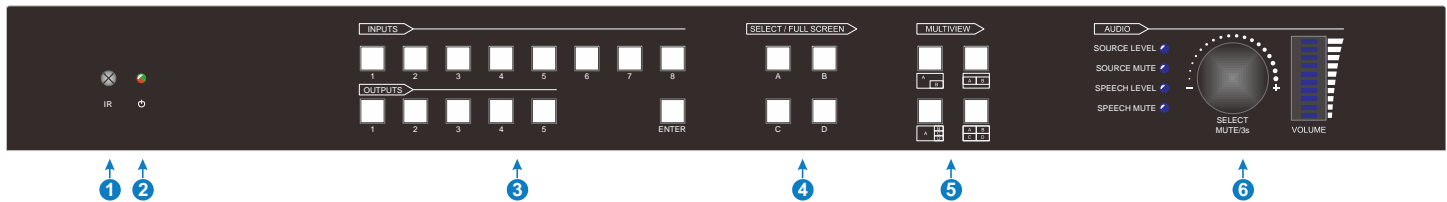
Video Input	
Video Input	(7) HDMI IN (Type-A, Female) (1) USB-C (USB Type-C, Female)
Input Resolution	HDMI (1~7): Up to 4K@60Hz 4:4:4 USB-C: Up to 4K@60Hz 4:4:4
Video Output	
Video Output	(3) HDMI (Type-A, Female) (2) HDBaseT (RJ45)
Output Resolution	HDMI: Up to 4K@60Hz 4:4:4 HDBaseT: Up to 4K@60Hz 4:2:0
HDMI Standard	Up to 2.0
HDCP Version	Up to 2.3
Audio Input	
Audio Input	(4) AUDIO IN
Audio Input Connector	(4) 3-pin terminal blocks
Support mic	condenser microphone, resistive microphone, 48V
Audio Output	
Audio Output	(2) 3-pin terminal block
Audio Format	PCM 2.0
Frequency Response	20Hz to 20kHz, ± 1 dB
Max Output Level	3.4 ± 0.1 Vrms
THD+N	< 0.05%, 20Hz to 20kHz bandwidth, 1kHz sine at 0dBFS level (or max level)
Signal-to-Noise Ratio	> 80dB, 20Hz to 20kHz bandwidth
Output Load Capability	1k Ω and higher (Supports 10x paralleled 10k Ω loads)
Noise Level	- 80dB
Control	
Control port	(2) HOST, (3) DEVICES, (1) IR EYE, (3) RS232, (1) TCP/IP, (1) Ethernet
Control Connector	(2) Type-B USB, (3) Type-A USB 3.0, (1) 3.5mm jack, (3) 3-pin terminal block, (2) RJ45
General	
Transmission Distance	328 feet (100 meters)
Bandwidth	18Gbps
Operation Temperature	23° ~ 131°F (-5°C - 55°C)
Storage Temperature	-13° ~ 158°F (-25°C ~ 70°C)
Relative Humidity	10% to 90%, Non-condensing
External Power Supply	Input: 100 ~ 240VAC, 50/60Hz
Power Consumption	195W(Max)
USB-C Power Charging	60W(Max)
Product Dimensions	436.4 x 44 x 360mm
Product Weight	12.1lbs(5.49kg)

2.2 Receiver

Video	
Video Input	(1) HDBT IN (RJ45)
Video Output	(1) HDMI OUT (Type-A, Female)
HDBT Input Resolution	Up to 4K@60Hz 4:2:0
HDMI Output Resolution	Up to 4K@60Hz 4:4:4
HDMI Standard	Up to 2.0
HDCP Version	Up to 2.2
Audio	
Audio Output	(1) SPDIF OUT (Toslink)
Audio Format	PCM 2.0
Max Output level	±0.3dBFS
Frequency Response	20Hz to 20kHz, ±1dB
THD+N	< 0.05%, 20Hz to 20kHz bandwidth, 1kHz sine at 0dBFS level (or max level)
Signal-to-Noise Ratio	> 90dB, 20Hz to 20kHz bandwidth
Crosstalk isolation	< -70dB, 10kHz sine at 0dBFS level (or max level before clipping)
Noise Level	- 90dB
Control	
Control	(1) PC, (3) DEVICES, (1) FW, (1) ETHERNET, (1) IR IN, (1) IR OUT, (1) RS232
Control Connector	(1) Type-B USB, (3) Type-A USB 3.0, (1) Micro-USB, (1) RJ45, (2) 3.5mm jack, (1) 3-pin terminal block
General	
Transmission Distance	328 feet (100 meters)
Bandwidth	18Gbps
Operation Temperature	23° ~131°F (-5 ~55°C)
Storage Temperature	-13° ~158°F (-25 ~ 70°C)
Relative Humidity	10% to 90%, Non-condensing
External Power Supply	Power over Cable (PoC) Not supplied
Power Consumption	PoC with 12~48V range 10w (Max)
Product Dimensions	168 x 23 x 135mm
Product Weight	1.1lbs (500g)

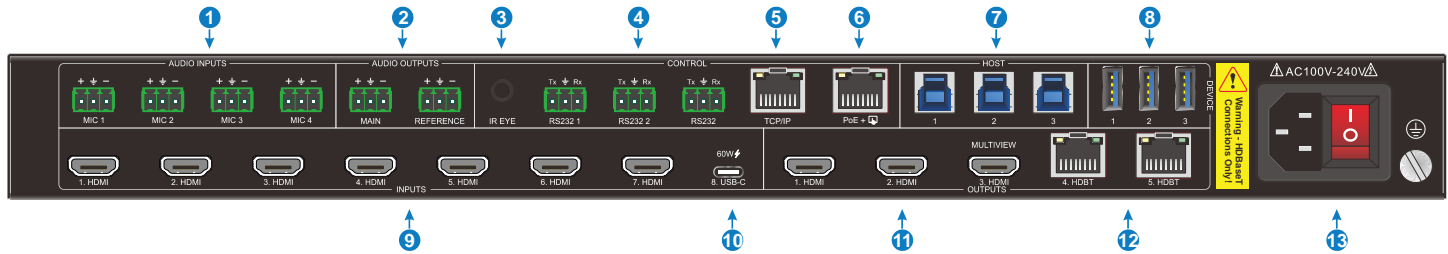
3. Panel Description

3.1 Matrix Front Panel



1. **IR:** 1 x Built-in IR sensor for IR control.
2. **Power Indicator:** 1x LED Indicator, The indicator light turns green when powered on and red when in standby mode.
3. **INPUTS & OUTPUTS:**
 - **INPUTS:** 8 x White button with blue backlit for source channel selection.
 - **OUTPUTS:** 5 x White button with blue backlit for output channel selection.
 - **ENTER:** Press the ENTER button to confirm video switching.
4. **SELECT/FULL SCREEN:** 4 x White button with blue backlit for selecting one of four sources as full screen when it is in Multi-view mode.
5. **MULTIVIEW:** 4 x White button with blue backlit for Multi-view mode selection.
6. **AUDIO:**
 - 2 x Audio blue indicators for source.
 - 2 x Audio blue indicators for speech
 - 1 x Array audio volume/gain indicator.
 - 1 x Audio source select/control knob.
 - i. Momentary press to select source/speech.
 - ii. Press and hold the knob for at least 3 seconds to mute the selected audio; rotate the knob to unmute.

3.2 Matrix Rear Panel



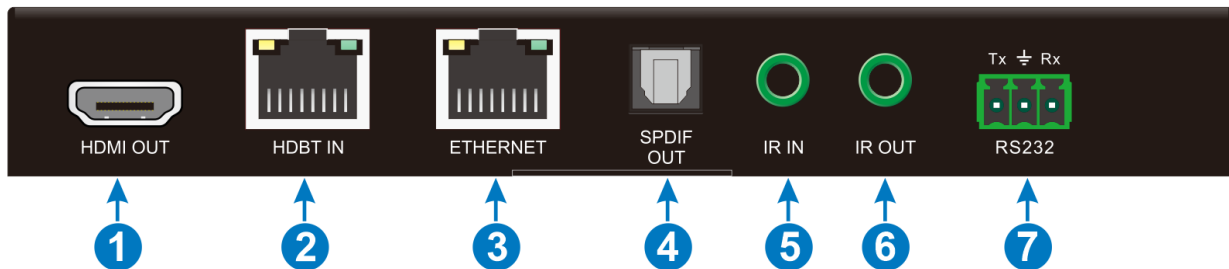
1. **AUDIO INPUT:** 4x 3-pin terminal block for Mic input.
2. **AUDIO OUTPUT:**
 - REFERENCE(balanced mono audio): Output any sound corresponding to the input.
 - MAIN(balanced mono audio): It is from Volume Mixer which mix Source audio and Speech Mix audio
 - HDBT OUT4: It is from Volume Mixer which mix Source audio and Speech Mix audio and is embedded in HDBaseT 4 or output any sound corresponding to the input.
 - HDMI3 OUT(MULTIVIEW): It is from Volume Mixer which mix Source audio and Speech Mix audio.
3. **IR EYE:** 1x IR EYE(3.5mm stereo jack) to connect with IR receiver to control the matrix.
4. **RS232:**
 - 2x3-pin terminal block for RS232 pass-through (RS232-1 --> HDBT OUT4; RS232-2 -->HDBT OUT5.);
 - 1x 3-pin terminal block for RS232 to control the matrix
5. **LAN:** Web-UI and TCP/IP control.
6. **ETHERNET:** Ethernet pass-through; Supports PoE(30W).
7. **HOST:** Type-B USB3.0 for PC
8. **DEVICES:** USB3.0, 5V900mA charging each;
9. **HDMI IN:** HDMI2.0, supports resolution up to 4K@60Hz 4:4:4, HDR, Dolby Vision.
10. **USB-C IN:** 4K@60Hz 4:4:4 video transmission; USB3.0, provides up to 60w charging to USB-C device
11. **HDMI OUT:** 3x HDMI Type-A female, connect to local HDMI displays
12. **HDBT OUT:** 2x HDBT RJ45, connect to the receivers.
13. **AC 100-240V:** Power supply

3.3 Receiver Front Panel



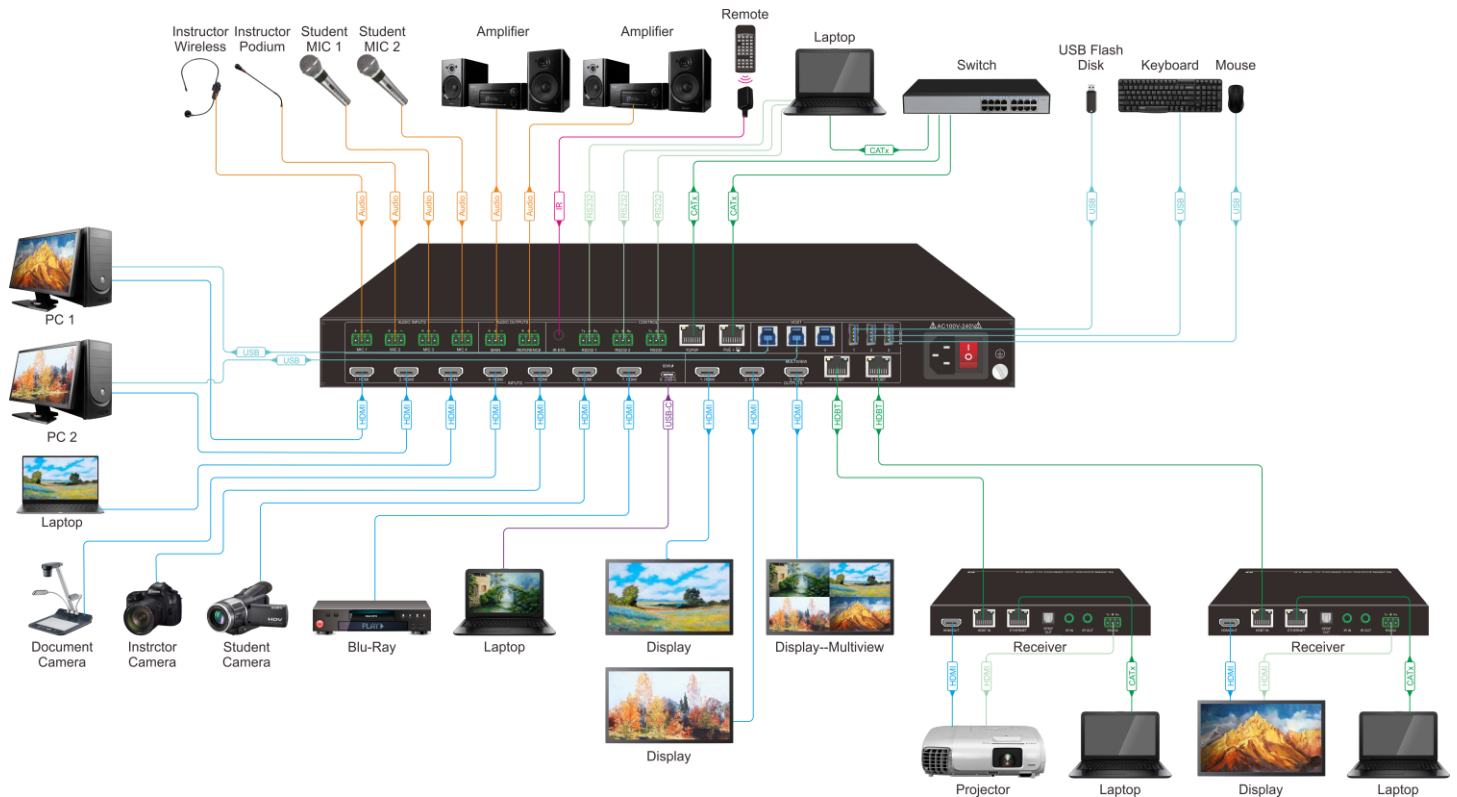
1. **POWER LED:** Lights up red when device is powered on
2. **HDMI LED:** Lights up green when there is an HDMI signal output
3. **PC:** Type-B USB port for Host PC connection. The Host PC can be controlled by the USB devices (e.g. mouse, keyboard, etc.) which are connected to the USB Type-A ports (DEVICES).
4. **DEVICES (1~3):** Three type-A USB ports for USB device connection (e.g. mouse, keyboard, etc.). These USB devices are used to control the selected Host PC.
5. **FW:** Micro-USB for firmware upgrade.

3.4 Receiver Rear Panel



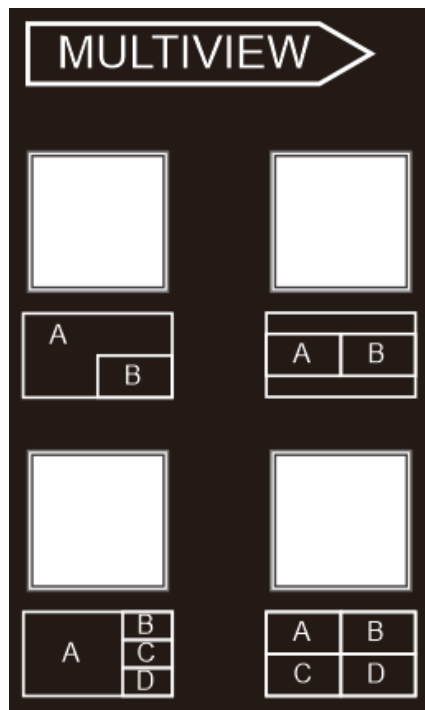
1. **HDMI OUT:** Connects to display device.
2. **HDBT IN:** Connects to the HDBT output port of switcher via CAT cable. The orange LED lights up when there is a valid HDBaseT link between the switcher and the receiver. The green LED lights up when the video contains HDCP content.
3. **ETHERNET:** RJ45 port for network signal extension. When the TCP/IP port of the switcher is connected to network, the port will gain network signal via HDBT input.
4. **SPDIF OUT:** Connects to speaker or amplifier for audio de-embedding.
5. **IR IN:** Connects to IR receiver for IR pass-through.
6. **IR OUT:** Connects to IR emitter for IR pass-through.
7. **RS232:** Connects to a control device (e.g. PC) or a third-party device for RS232 pass-through control.

3.5 System Connection



4. Front Panel Control

4.1 Multiview Mode Selection



There are four built-in Multiview modes which can be selected via the front panel buttons.

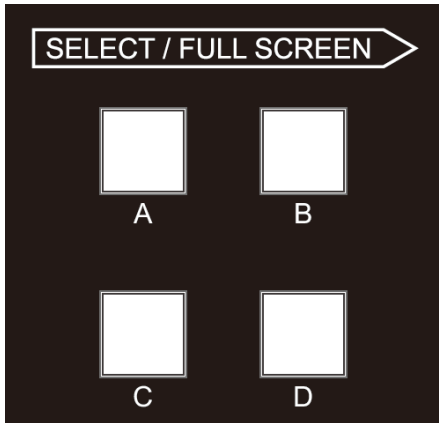
Input 1 -> Window A
 Input 2 -> Window B
 Input 3 -> Window C
 Input 4 -> Window D.

The view buttons' LEDs (A~D) turn blue

When switching to two-window (A&B) mode, the corresponding mode LED will turn blue, and the window A and B LEDs turn blue. The factory default correspondence between the two input sources and the two output windows is:

Input 1 -> Window A
 Input 2 -> Window B

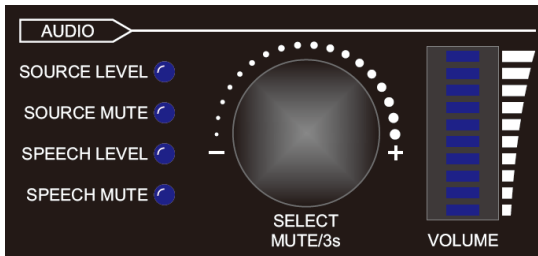
4.2 Full Screen Setting



The factory default mode is full screen and the correspondence is: Input 1 -> Window A.

In Multiview mode, press Window A~D button to select the corresponding window to display in full screen. Meanwhile, the corresponding input source button LED and window button A LED illuminate blue, other window buttons and previous Multiview mode button LED goes out.

4.3 Audio Control



By default, the HDMI and HDBT output audio follows the video source in Full screen mode. But in the Multiview modes, there will be no output audio. The audio source can be changed via GUI or RS232 command.

Press the volume knob to select Source level or Speech level.

Rotate the knob to increase or decrease the volume of the selected audio. Press and hold the knob for at least 3 seconds to mute the selected audio; rotate the knob to unmute.

4.4 Video Signal Switching

In Multiview modes

Operation: Input # + Output 3 + Select # + Enter

Example: Switch Input 1 to Window B:

Press "Input 1" (The input 1 LED will turn blue.) → Press "Output 3" (The output 3 LED will turn blue, and the A~D LEDs will flash.) → Press "Window B" (The A, C, and D LEDs will go out) → Press ENTER (and then the input 1, output 3 and Window B LEDs will flash three times. The input 1 and output3 LED will then go out, and the A~D LEDs will turn blue.)

In Full Screen mode

Operation: Input # + Output 3 + Enter

If the current status is Input 2 set to full screen Window A, press "**Input 3**" + "**Output 3**" to switch the HDMI input 3 to Window A. The Input 3 and Window A LEDs will then turn blue.

4.5 Switching Status

In Multiview mode (Window A, B, C, and D LEDs will turn blue).

Operation: Press and hold **Window #** button for at least 3 seconds.

Example: Press and hold **Window B** button for at least 3 seconds (A, C, and D LEDs go out, and then the corresponding input source LED will turn blue). After 3 seconds, A, B, C, and D LEDs will turn blue.

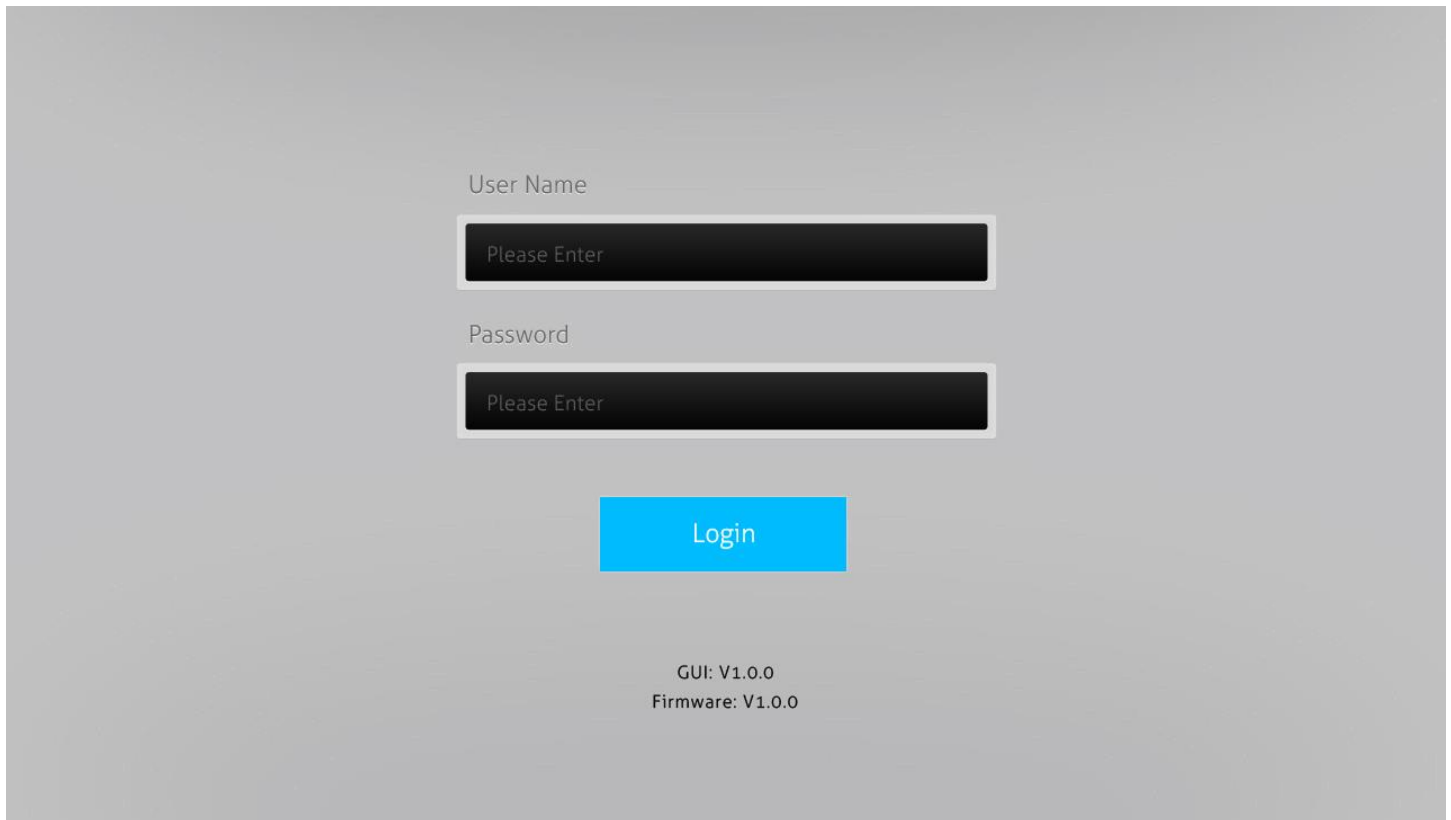
5. GUI Control

The switcher can be controlled via TCP/IP. The default IP settings are:

IP Address: 192.168.0.178

Subnet Mask: 255.255.255.0

Type **192.168.0.178** in a web browser, and it will enter the log-in page below:



User Name

Please Enter

Password

Please Enter

Login

GUI: V1.0.0
Firmware: V1.0.0

Username: admin

Password: admin

Type the username and password, then click “Login” to enter the section for video switching.

5.1 Control Tab

5.1.1 Video Control



Use the 8x8 button grid on the page to set which inputs are directed to which outputs. For example, clicking the button on the Input 1 row and Output 1 column, directs input 1 to output 1.

Use the 6 numbered buttons under scene area to save and load layout presets.



- To save a given layout, first click one of the numbered buttons, then click the **Save** button.
- To load a previously saved layout, first click one of the numbered buttons, then click the **Recall** button.

5.1.2 Audio Control

Matrix

Multiview

Audio

CEC

RS232

EDID

Network

Tags

Security

Additional

Video

Audio

Source Ref

OFF

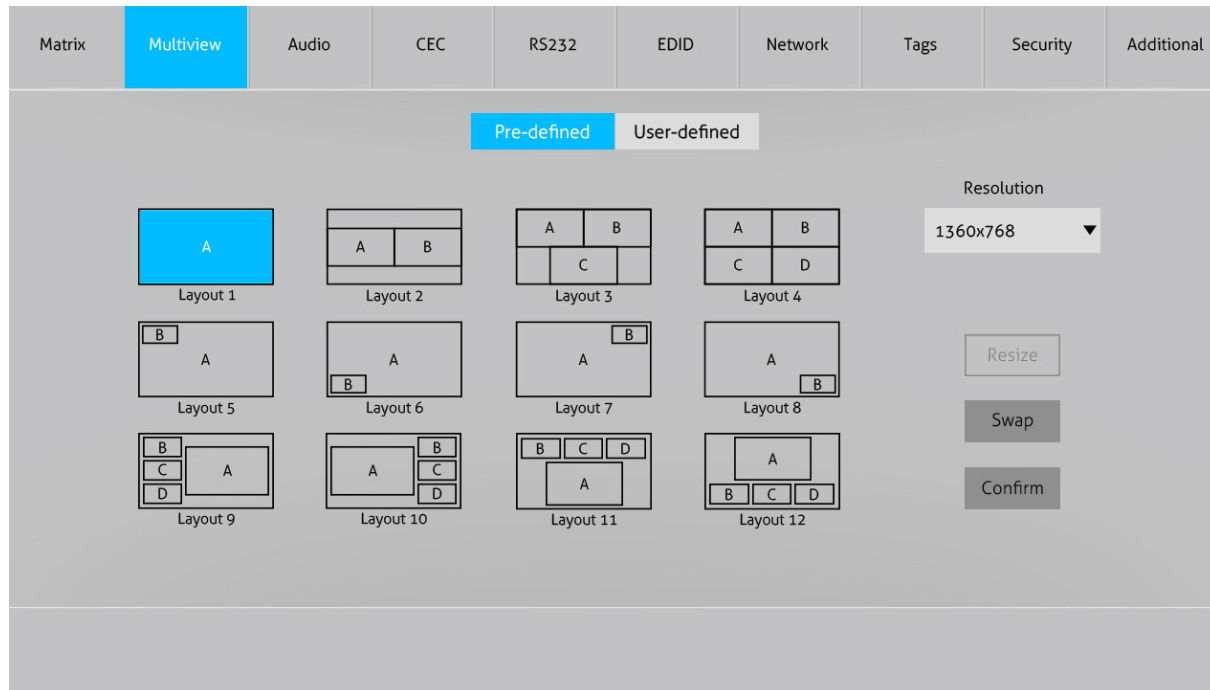
	Main	Far-End	AEC Ref.
Input 1	<div></div>	<div></div>	<div></div>
Input 2	<div></div>	<div></div>	<div></div>
Input 3	<div></div>	<div></div>	<div></div>
Input 4	<div></div>	<div></div>	<div></div>
Input 5	<div></div>	<div></div>	<div></div>
Input 6	<div></div>	<div></div>	<div></div>
Input 7	<div></div>	<div></div>	<div></div>
Input 8	<div></div>	<div></div>	<div></div>

Power Off

Use the 8x3 button grid on the page to set audio combination.
Source Ref: When ON is selected, AEC Ref will automatically follow Main, but it will not light up.
When AEC Ref is selected again, the automatic following will be canceled.

5.2 Multiview Tab

5.2.1 Pre-Defined Multiview Mode

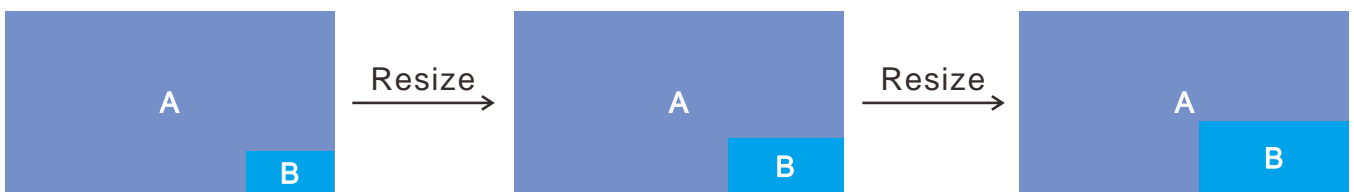


Up to 12 pre-defined Multiview modes can be selected, and then click the gear icon to enter the interface below to select the input source for each window.

Resize: Click the button to adjust the window size. Note that only Layout 2, Layouts 5 ~ 8, and Layouts 9 ~ 12 can be adjusted.



Example: Bisection

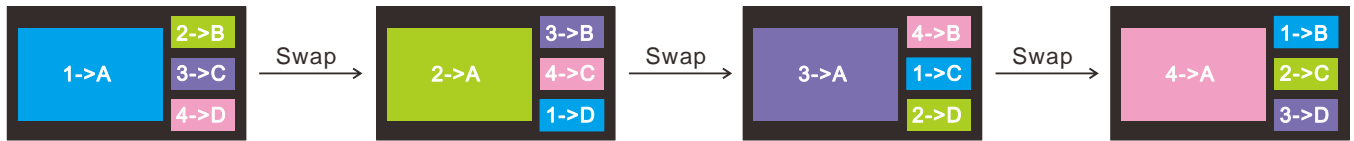


Example: PIP (Picture in Picture)

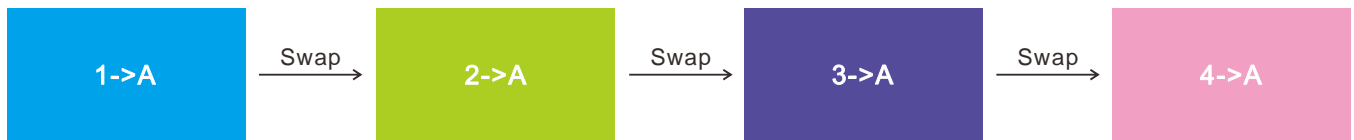
Example: One large and three small



Swap: Press the button to cycle through the video sources displayed in each window.

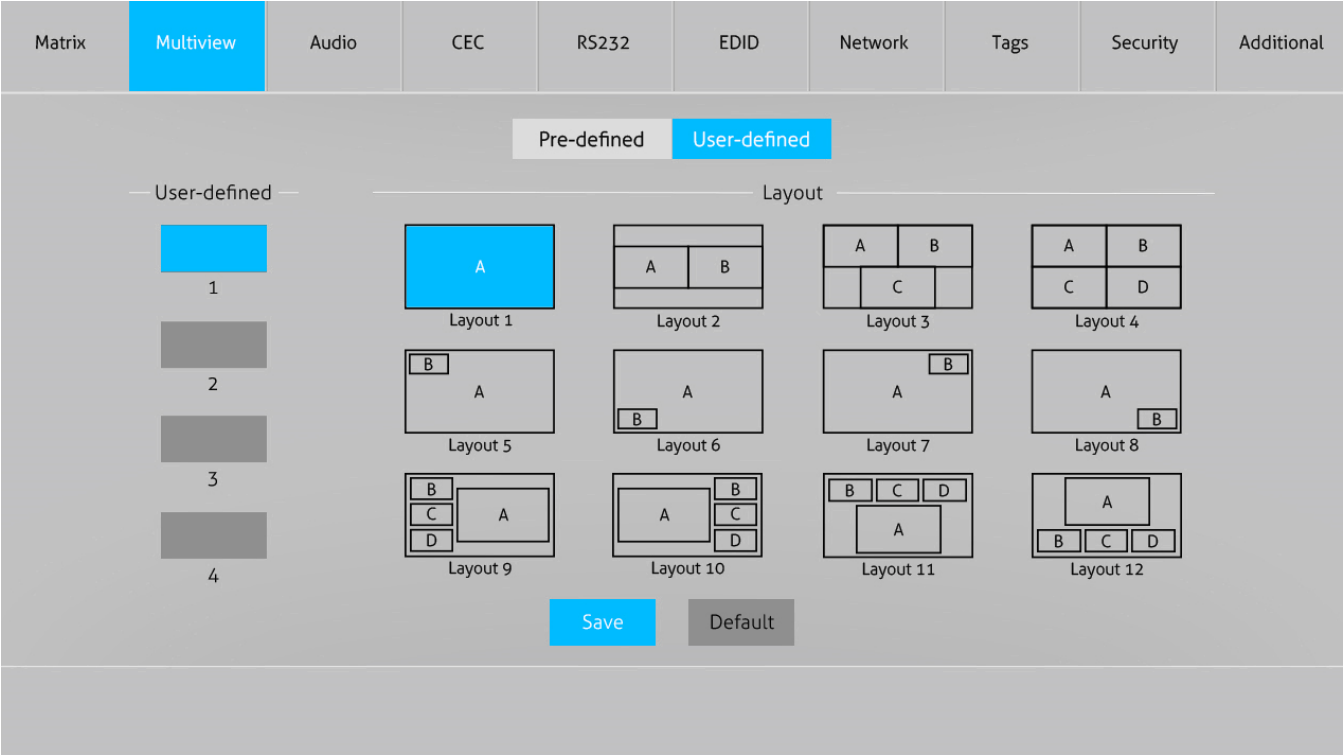


Example: In Multiview Mode



Example: In Full screen Mode

5.2.2 User-Defined Multiview Mode



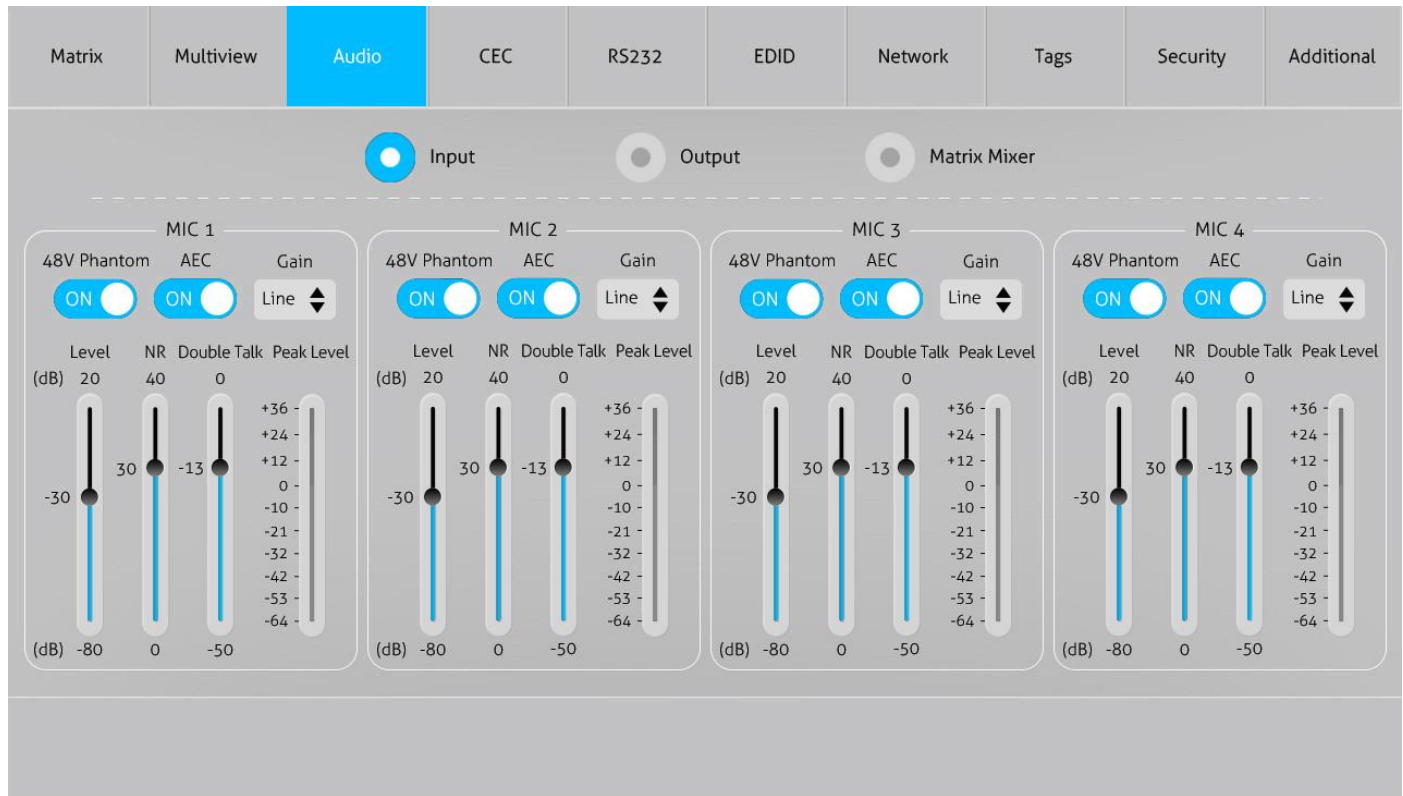
- **User-defined:** Select the user-defined layout number 1~4
- **Layout:** Select the Layout to be saved, and then click “Save” to save the user-defined layout.
- The factory defaults of user-defined layouts 1~4 are:

User-defined	Layout
1	<div>A</div>
2	<div>A</div>
3	<div>A</div>
4	<div>A</div>

Note: The user-defined Multiview mode can be invoked by using the “User 1 ~ User 4” buttons on the IR remote.

5.3 Audio Tab

5.3.1 Input Tab



48V Phantom: Click to turn on/off 48 Phantom power supply

AEC: Click to turn on/off AEC

Gain: Click to choose the Gain

5.3.2 Output Tab

Matrix

Multiview

Audio

CEC

RS232

EDID

Network

Tags

Security

Additional

Input

Output

Matrix Mixer

Speech Mix 5EQ

60Hz

230Hz

910Hz

3.6KHz

14KHz

(dB) 12

12

12

12

12

6

6

6

6

6

(dB) -12

-12

-12

-12

-12

Output Levels

Source

Reference

Speech

Far-End

(dB) 0

0

0

0

-15

-15

-15

-15

(dB) -60

-60

-60

-60

Audio Embedded

4. HDBT Audio

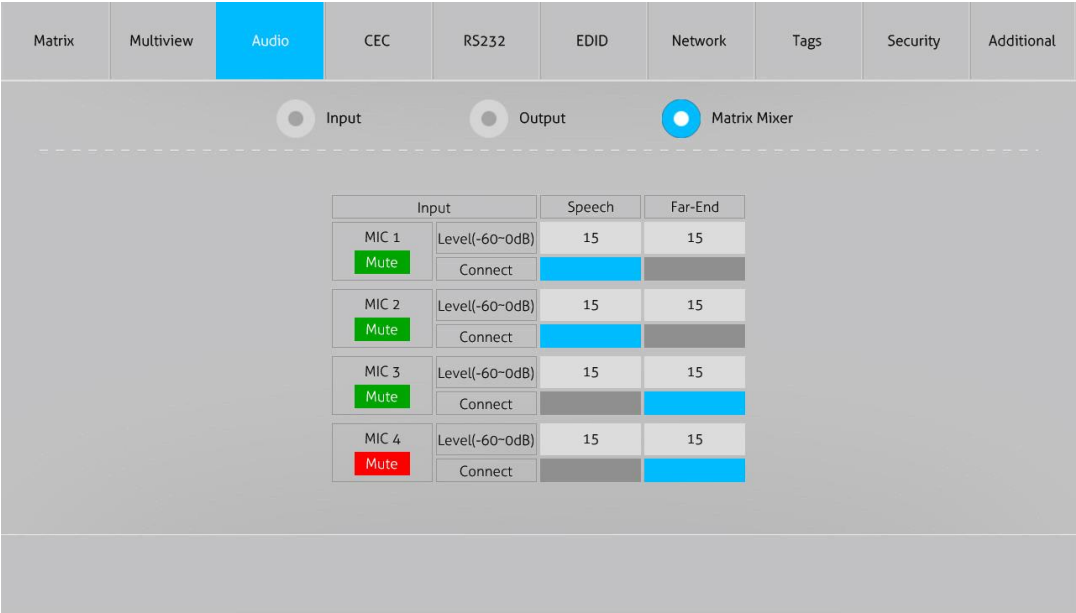
Source & Speech Mix

Multiview Audio

Far-End

Click to choose the different parameter of Speech Mix 5 and Output Levels

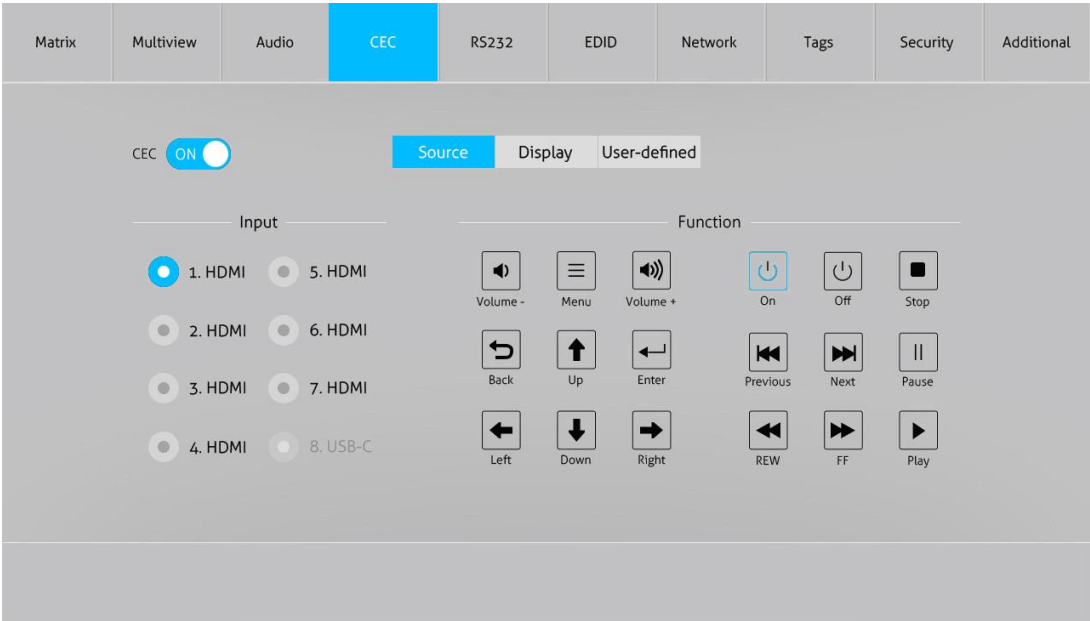
5.3.3 Matrix Mixer Tab



Enter the 0-42 parameter to adjust Speech and Far-End audio.
Click to choose connect or disconnect the Speech and Far-End.

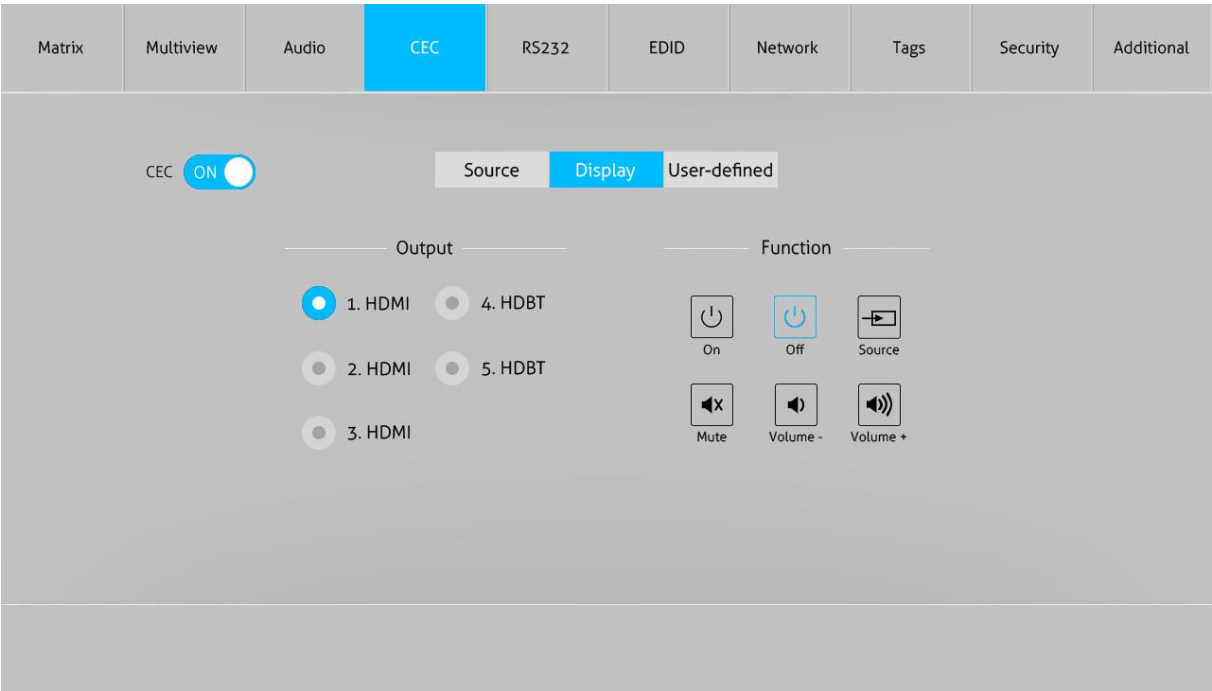
5.4 CEC Tab

5.4.1 Source Control



Select the HDMI input source to be controlled and then click the desired function buttons.

5.4.2 Display Control



Select the output display device to be controlled, and then click the desired function buttons.

5.4.3 User-Defined

The screenshot shows the CEC configuration interface. At the top, there are tabs: Matrix, Multiview, Audio, CEC (highlighted), RS232, EDID, Network, Tags, Security, and Additional. Below the tabs, there is a CEC toggle switch set to 'ON'. Underneath, there are three tabs: Source, Display, and User-defined (highlighted). The User-defined tab is divided into two main sections: Input and Output. Each section has a list of devices (1. HDMI, 2. HDMI, 3. HDMI, 4. HDMI, 5. HDMI, 6. HDMI, 7. HDMI, 8. USB-C) and a corresponding 'Trigger 1' and 'Trigger 2' box with a 'Send' button.

Select input source or display device, then type the CEC command in the corresponding “Trigger 1” or “Trigger 2” box to send that command to control the selected device.

<https://www.cec-o-matic.com/>

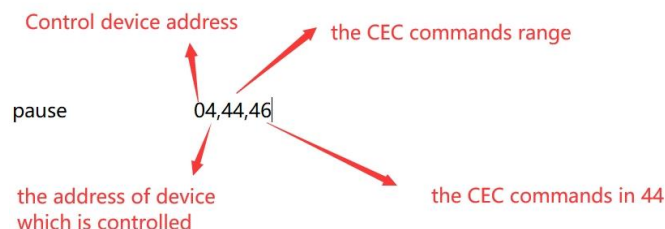
Playback Device

pause 04,44,46
Play 04,44,44
Stop 04,44,45
PwrOn 04,44,6D
PwrOff 04,44,6C

Display

PowerOn 40,04
PowerOff F0,36 / 40,36
Volume Up 40,44,41
Volume Down 40,44,42
Mute 40,44,43

How the CEC commands are made:



Address Device list

0 TV
1 Recording Device 1
2 Recording Device 2
3 Tuner 1
4 Playback Device 1
5 Audio System
6 Tuner 2
7 Tuner 3
8 Playback Device 2
9 Recording Device 3
A Tuner 4
B Playback Device 3
C Reserved
D Reserved
E Specific Use
F Unregistered (as Initiator address)
Broadcast (as Destination address)

Note: The CEC standard is primarily formulated by TV manufacturers, and is generally compatible with TVs and Blu-ray Players and may not be compatible with the source devices of other manufacturers, such as, Apple TV, etc.

5.5 Rs232 Tab

Matrix	Multiview	Audio	CEC	RS232	EDID	Network	Tags	Security	Additional
--------	-----------	-------	-----	-------	------	---------	------	----------	------------

☒ Local

☐ 4. HDBT Out

☐ 5. HDBT Out

HEX

ASCII

Baud Rate: 9600 ▼

Command Ending: NULL ▼

Command: xxxxxx

Confirm

Cancel

Local/4:HDBT OUT/5:HDBT OUT: The RS232 port of matrix switcher.

Baud Rate: 9600

Command Ending: NULL, CR, LF or CR+LF can be chosen.

Command: Type the command in this box to control the third-party device which is connected to the RS232 port of the matrix switcher. If click the **HEX**, the RS232 commands can be typed with hexadecimal value.

5.6 EDID Tab

5.6.1 EDID Copy

Matrix	Multiview	Audio	CEC	RS232	EDID	Network	Tags	Security	Additional
--------	-----------	-------	-----	-------	------	---------	------	----------	------------

☒ EDID Copy

☐ EDID Setting

☐ Upload

1. HDMI

2. HDMI

3. HDMI

4. HDMI

5. HDMI

6. HDMI

7. HDMI

8. USB-C

☒ 1. HDMI Out

☐ 4. HDBT Out

Confirm

Select the compatible HDMI Out EDID for the selected input source.

5.6.2 EDID Setting

Matrix	Multiview	Audio	CEC	RS232	EDID	Network	Tags	Security	Additional
--------	-----------	-------	-----	-------	------	---------	------	----------	------------

☐ EDID Copy

☒ EDID Setting

☐ Upload

1. HDMI

2. HDMI

3. HDMI

4. HDMI

5. HDMI

6. HDMI

7. HDMI

8. USB-C

☐ 1920x1080@60Hz DVI No Audio

☐ 3840x2160@60Hz 4:2:0 Deep Color Stereo Audio

☐ 1920x1080@60Hz 8 bit Stereo Audio

☒ 3840x2160@60Hz Deep Color Stereo Audio

☐ 1920x1200@60Hz 8 bit Stereo Audio

☐ User-defined

☐ 3840x2160@30Hz 8 bit Stereo Audio

Confirm

Select the compatible built-in EDID for the selected input source. Use the pass through to get the EDID of the connected device.

5.6.3 EDID Upload

Matrix	Multiview	Audio	CEC	RS232	EDID	Network	Tags	Security	Additional
--------	-----------	-------	-----	-------	------	---------	------	----------	------------

☐ EDID Copy

☐ EDID Setting

☒ Upload

User-defined

Apply

Prepare the EDID file (.bin) on the control PC, click the user-defined box to select the EDID file (.bin), then click “Apply” to upload the user-defined EDID.

5.7 Network Tab

Matrix	Multiview	Audio	CEC	RS232	EDID	Network	Tags	Security	Additional
--------	-----------	-------	-----	-------	------	---------	------	----------	------------

MAC Address: 44-33-4C-C9-35-12

DHCP ☐

☒ Static IP

IP Address:

Subnet Mask:

Gateway:

Confirm

Select “Static IP” or “Dynamic Host Configuration Protocol” (DHCP)
Modify the static IP Address, Subnet Mask, and Gateway (Static IP only)

5.8 Tags Tab

Matrix	Multiview	Audio	CEC	RS232	EDID	Network	Tags	Security	Additional
--------	-----------	-------	-----	-------	------	---------	------	----------	------------

☒ Input & Ouput

☐ Multiview Mode

Input

Output

Input 1

Input 2

Input 3

Input 4

Input 5

Input 6

Input 7

Input 8

Output 1

Output 2

Output 3

Output 4

Output 5

Confirm

Modify the Input and Output or Multiview Mode labels

5.9 Security Tab

Matrix	Multiview	Audio	CEC	RS232	EDID	Network	Tags	Security	Additional
--------	-----------	-------	-----	-------	------	---------	------	----------	------------

Password

admin

Confirm

Firmware Upgrade

C:\

Update

Factory Default

Front Panel Lock

ON

OFF

Modify the login password, or lock/unlock the front panel buttons

5.10 Additional Tab

Matrix	Multiview	Audio	CEC	RS232	EDID	Network	Tags	Security	Additional
--------	-----------	-------	-----	-------	------	---------	------	----------	------------

☒ Setting

☐ HDBaseT Cable Link Quality

USB Host:

Auto Switch ▼

4. HDBT Out PoC: ☒

5. HDBT Out PoC: ☒

- **Auto Switch:** Auto (In 1 = USB 1, In 3 = USB 2, In 4 = USB 3, In 8 = USB C), auto will be linked to Input selected to Output 1
- **Manual:** Manually set the USB Host to PC (USB-B) or USB-C or RX1 or RX2
- **HDBT PoC:** Enable or disable PoC for the HDBT output

6. IR Remote Control

The switcher provides an **IR EYE** port for IR receiver connection, and can be controlled by the IR remote shown below.

Note: *There is no long-pressing function on this IR remote.*



1. **INPUTS:** Eight buttons for input source selection

2. **Outputs:** Five buttons for output selection

3. **Menu:**

- To set the EDID for one or more source devices to the EDID capabilities of a specific output, press the EDID button, then press the desired INPUTS, then press the OUTPUTS button corresponding to the desired display, finally press the ENTER button to execute the operation.

- **CLEAR:** Press the CLEAR button if want to withdraw an operation before the ENTER button comes into effect, meanwhile, the matrix will return to the previous status.

4. **Volume:**

- **MIC:** Press 3s to choose Source or Speech.

- **Mute:** Source mute or Speech mute.

5. **Multiview:**

Window A~D buttons for output window selection and full screen setting;

 Cycle the video source displayed in each viewing window

 Adjust the window size

 Select output resolution

Four buttons for user-defined 1~4 Multiview mode selection. The user-defined modes can set in the GUI Multiview tab

Four buttons for built-in Multiview mode selection;

Note: *All IR remote buttons function in the same way as those in the GUI tab. Please refer to 5. GUI Control for more details.*

7. RS232 Control

The RS232 port of switcher has two control methods.

Local control: Connect the RS232 port to a control device (e.g. PC) to control the switcher with RS232 commands.

Display device control: The RS232 port is used with the RS232 port of a far-end HDBaseT receiver to control the display device (e.g. Projector).

RS232 Commands:

The command lists are used to control the switcher. The RS232 control software needs to be installed on the control PC to send RS232 commands.

After installing the RS232 control software, set the parameters of COM number, baud rate, data bit, stop bit, and parity bit correctly, then commands can be sent to the device.

Baud rate: 9600

Data bit: 8

Stop bit: 1

Parity bit: None

Notes:

- All commands need to be terminated with "<CR>"
- All feedbacks are terminated with "<CR><LF>"
- In the commands, "[" and "]" MUST be typed in actual operation
- Type commands carefully, as they are case-sensitive
- These same commands are used with TCP/IP port 4001

7.1 Audio and video switchings

Commands	Function	Example and Feedback
OUT[xx]:[yy].	[xx] = 00,01,02,04,05,A,B,C,D 00 - All Output 01 - HDMI1 02 - HDMI2 04 - HDBT4 05 - HDBT5 A,B,C,D - Windows [yy] = 00~08 00 - OFF 01~08 - Input	OUT 01:04. \OUT A:04. Output 01 Switch To In 04! \Output A Switch To In 04!
STA_OUT.	Get the current Video switching status of the output channel STA_OUT.	STA_OUT. Output 01 Switch To In 04! Output 02 Switch To In 04! Output 04 Switch To In 04! Output 05 Switch To In 04! Output A Switch To In 04! Output B Switch To In 04! Output C Switch To In 04! Output D Switch To In 04!
AUDIO[xx]:[yy].	Switch an input audio signal to outputs [xx] = 01~03 01 - Main 02 - Far-End 03 - AEC Ref. [yy] = 01~08 01~08 - Input (AEC Ref:[yy] = 01~09,01~08 - Input,09 = Main)	AUDIO 01:04. \AUDIO 03:09. Output Audio 01 Switch To In 04! \Output Audio 03 Switch To In 09!
STA_AUDIO.	Get the current Audio switching status of the output channel	STA_AUDIO. Output Audio 01 Switch To In 04! Output Audio 02 Switch To In 04! Output Audio 03 Switch To In 04!

7.2 Audio Setting

Commands	Function	Example and Feedback
MIC48V[xx]ON. /MIC48V[xx]OFF.	Enable/Disable MIC 48V function	MIC48V 01 ON. /MIC48V 01 OFF.

	[xx] = 00~04 00 - All MIC 01 - MIC1 02 - MIC2 03 - MIC3 04 - MIC4	MIC 01 48V ON! /MIC 01 48V OFF!
STA_MIC48V.	Get MIC 48V status	STA_MIC48V. MIC 01 48V ON! MIC 02 48V ON! MIC 03 48V ON! MIC 04 48V ON!
MICAEC[xx]ON. /MICAEC[xx]OFF.	Enable/Disable AEC function [xx] = 00~04 00 - All MIC 01 - MIC1 02 - MIC2 03 - MIC3 04 - MIC4	MICAEC 01 ON. /MICAEC 01 OFF. MIC 01 AEC ON! /MIC 01 AEC OFF!
STA_MICAEC.	Get MIC AEC status	STA_MICAEC. MIC 01 AEC ON! MIC 02 AEC ON! MIC 03 AEC ON! MIC 04 AEC ON!
MICGAIN[xx]:[yy].	Set Gain function [xx] = 00~04 00 - All MIC 01 - MIC1 02 - MIC2 03 - MIC3 04 - MIC4 [yy] = 00~07 0 = Line, 1 = 6dB, 2 = 12dB, 3 = 18dB, 4 = 24dB, 5 = 30dB, 6 = 36dB, 7 = 42dB(One unit is six dB)	MICGAIN 01:01. MIC 01 Gain 01!
STA_MICGAIN.	Get MIC Gain status	STA_MICGAIN. MIC 01 Gain 01! MIC 02 Gain 01! MIC 03 Gain 01! MIC 04 Gain 01!
MICLEVEL[xx]:[yy].	Set MIC Level function	MICLEVEL 01:60.

	[xx] = 00~04 00 - All MIC 01 - MIC1 02 - MIC2 03 - MIC3 04 - MIC4 [yy] = 00~60(-80 - 20dB) 0 - 20: Step 3 dB 20 - 60: Step 1 dB	MIC 01 Volume Level 60!
STA_MICLEVEL.	Get MIC Level status	STA_MICLEVEL. MIC 01 Volume Level 01! MIC 02 Volume Level 01! MIC 03 Volume Level 01! MIC 04 Volume Level 01!
MICNR[xx]:[yy].	Set NR function [xx] = 00~04 00 - All MIC 01 - MIC1 02 - MIC2 03 - MIC3 04 - MIC4 [yy] = 00 ~ 40	MICNR 01:40. MIC 01 Noise Reduction 40!
STA_MICNR.	Get MIC NR status	STA_MICNR. MIC 01 Noise Reduction 40! MIC 02 Noise Reduction 40! MIC 03 Noise Reduction 40! MIC 04 Noise Reduction 40!
MICDT[xx]:[yy].	Set DoubleTalk function [xx] = 00~04 00 - All MIC 01 - MIC1 02 - MIC2 03 - MIC3 04 - MIC4 [yy] = 00 ~ 50	MICDT 01:50. MIC 01 DoubleTalk 50!
STA_MICDT.	Get MIC Double Talk status	STA_MICDT. MIC 01 DoubleTalk 50! MIC 02 DoubleTalk 50! MIC 03 DoubleTalk 50! MIC 04 DoubleTalk 50!

MIX5EQ[xx]:[yy].	Set Mix5EQ function [xx] = 01 ~ 05 01 - 60Hz 02 - 230Hz 03 - 910Hz 04 - 3.6KHz 05 - 14KHz [yy] = 00 ~ 24 00 - 12: -12 - 0dB 12 - 24: 0 - 12dB	MIX5EQ 01:12. Speech Mix 01 Equilibrium Gain 00!
STA_MIX5EQ.	Get Mix 5EQ status	STA_MIX5EQ. Speech Mix 01 Equilibrium Gain 12! Speech Mix 02 Equilibrium Gain 12! Speech Mix 03 Equilibrium Gain 12! Speech Mix 04 Equilibrium Gain 12! Speech Mix 05 Equilibrium Gain 12!
OUTPUTLV[xx]:[yy].	Set Output Levels function [xx] = 01 ~ 04 01 - Source 02 - Reference 03 - Speech 04 - Far-End [yy] = 00 ~ 60 00 - 60: -60 - 0dB "MU":Mute "UM":Unmute	OUTPUTLV 01:60. \OUTPUTLV 01:MU. \OUTPUTLV 01:UM. Output 01 Volume Level 60! \Output 01 Volume Level Mute! \Output 01 Volume Level Unmute!
STA_OUTPUTLV.	Get Output Levels status	STA_OUTPUTLV. Output 01 Volume Level 60! Output 02 Volume Level 60! Output 03 Volume Level 60! Output 04 Volume Level 60!
MIXSPEECH[xx]ON. \MIXSPEECH[xx]OFF.	Set MixSpeech function [xx] = 00~04 00 - All MIC 01 - MIC1 02 - MIC2 03 - MIC3 04 - MIC4	MIXSPEECH 01 ON. \MIXSPEECH 01 OFF. Speech Mix MIC 01 ON! \Speech Mix MIC 01 OFF!
MIXSPEECHLV[xx]:[yy].	Set MixSpeech Levels function [xx] = 00~04 00 - All MIC	MIXSPEECHLV 01:60. Speech Mix MIC 01 Volume Level 60!

	01 - MIC1 02 - MIC2 03 - MIC3 04 - MIC4 [yy] = 00 ~ 60 00 - 60: -60 - 0dB	
STA_MIXSPEECH.	Get Mix Speech status	STA_MIXSPEECH. Speech Mix MIC 01 ON! Speech Mix MIC 02 ON! Speech Mix MIC 03 ON! Speech Mix MIC 04 ON! Speech Mix MIC 01 Volume Level 60! Speech Mix MIC 02 Volume Level 60! Speech Mix MIC 03 Volume Level 60! Speech Mix MIC 04 Volume Level 60!
MIXFAREND[xx]ON. \MIXFAREND[xx]OFF.	Set MixFarEnd function [xx] = 00~04 00 - All MIC 01 - MIC1 02 - MIC2 03 - MIC3 04 - MIC4	MIXFAREND 01 ON. MIXFAREND 01 OFF. Far End Mix MIC 01 ON! Far End Mix MIC 01 OFF!
MIXFARENDLV[xx]:[yy].	Set MixFarEnd Levels function [xx] = 00~04 00 - All MIC 01 - MIC1 02 - MIC2 03 - MIC3 04 - MIC4 [yy] = 00 ~ 60 00 - 60: -60 - 0dB	MIXFARENDLV 01:60. Far End MIC 01 Volume Level 60!
STA_MIXFAREND.	Get MixFarEnd status	STA_MIXFAREND. Far End Mix MIC 01 ON! Far End Mix MIC 02 ON! Far End Mix MIC 03 ON! Far End Mix MIC 04 ON! Far End Mix MIC 01 Volume Level 60! Far End Mix MIC 02 Volume Level 60! Far End Mix MIC 03 Volume Level 60! Far End Mix MIC 04 Volume Level 60!
MIXMIC[xx]MU. \MIXMIC[xx]UM.	Set Mix MIC mute [xx] = 01~04	MIXMIC 01 MU. \MIXMIC 01 UM.

	01 - MIC1 02 - MIC2 03 - MIC3 04 - MIC4	Set Mix Audio MIC 01 Mute! \Set Mix Audio MIC 01 Unmute!
STA_MIXMUTE.	Get Mix MIC mute	STA_MIXMUTE. Mix Audio MIC 01 Mute! Mix Audio MIC 02 Mute! Mix Audio MIC 03 Mute! Mix Audio MIC 04 Mute!
HDBTAUDIOEMON. \HDBTAUDIOEMOFF.	Set HDBT Audio Embedded Enable	HDBTAUDIOEMON. \HDBTAUDIOEMOFF. HDBT Audio Embedded ON! \HDBT Audio Embedded OFF!
STA_HDBTAUDIOEM.	Get HDBT Audio Embedded Enable	STA_HDBTAUDIOEM. HDBT Audio Embedded ON!
MVAUDIOEMON. \MVAUDIOEMOFF.	Set Multiview Audio Embedded Enable	MVAUDIOEMON. \MVAUDIOEMOFF. Multiview Audio Embedded ON! \Multiview Audio Embedded OFF!
STA_MVAUDIOEM.	Get Multiview Audio Embedded Enable	STA_MVAUDIOEM. Multiview Audio Embedded ON!

7.3 Function Setting

Commands	Function	Example and Feedback
Baudrate[xx].	Set the RS232 baud rate [xx] = 115200, 57600, 38400,19200,9600	Baudrate115200. Set Local RS232 Baudrate Is 115200!
HDCPIN[xx]ON. \HDCPIN[xx]OFF.	Turn on/off HDCP on HDMI input [xx] = 00~08 00 - All HDMI Input 01 - Input HDMI1 02 - Input HDMI2 03 - Input HDMI3 04 - Input HDMI4 05 - Input HDMI5 06 - Input HDMI6 07 - Input HDMI7 08 - Input HDMI8	HDCPIN 01 ON. \HDCPIN 01 OFF. Set HDMI 01 Input HDCP ON! \Set HDMI 01 Input HDCP OFF!
STA_HDCPIN.	Get the HDCP status of	STA_HDCPIN.

	HDMI input	HDMI 01 Input HDCP ON! HDMI 02 Input HDCP ON! HDMI 03 Input HDCP ON! HDMI 04 Input HDCP ON! HDMI 05 Input HDCP ON! HDMI 06 Input HDCP ON! HDMI 07 Input HDCP ON! HDMI 08 Input HDCP ON!
HDCP[xx]:[yy].	Set the HDCP mode for output port [xx] = (01,02,04,05) HDMI Output Port [yy] = 00~02 [yy] = 00: Off [yy] = 01: HDCP1.4 [yy] = 02: HDCP 2.2	HDCP 01:00. HDCP 02:01. HDCP 03:02. OUT 01 HDCP OFF! \OUT 01 HDCP 1.4! \OUT 01 HDCP 2.2!
STA_HDCP.	Get the HDCP mode of output port	STA_HDCP. OUT 01 HDCP OFF! OUT 02 HDCP OFF! OUT 04 HDCP OFF! OUT 05 HDCP OFF!
EDID/[xx]/[yy].	Set the EDID mode [xx] = 01~08 01~08 - Input Port [yy] = 01 ~ 08 00 - From HDMI Out 1 Display 01 - 1920x1080@60Hz DVI No Audio 02 - 1920x1080@60Hz 8 bit Stereo Audio 03 - 1920x1200@60Hz 8 bit Stereo Audio 04 - 3840x2160@30Hz 8 bit Stereo Audio 05 - 3840x2160@60Hz 4:2:0 Deep Color Stereo Audio 06 - 3840x2160@60Hz Deep Color Stereo Audio 07 - From HDBT Out 4 Display 08 - USER	EDID/03/01. Input 03 EDID Upgrade OK By 01 EDID!

STA_EDID.	Get the EDID mode	STA_EDID. Input 01 EDID Upgrade OK By 01 EDID! Input 02 EDID Upgrade OK By 01 EDID! Input 03 EDID Upgrade OK By 01 EDID! Input 04 EDID Upgrade OK By 01 EDID! Input 05 EDID Upgrade OK By 01 EDID! Input 06 EDID Upgrade OK By 01 EDID! Input 07 EDID Upgrade OK By 01 EDID! Input 08 EDID Upgrade OK By 01 EDID!
EDIDUpgrade.	Upload the user EDID	EDIDUpgrade. User EDID ready,Please send edid data in 10s. UpdateUserEDID True/False. /Time out to send EDID.
CECON. \CECOFF.	Enable/Disable CEC	CECON. \CECOFF. Set CEC ON! \Set CEC OFF!
STA_CEC.	Get the Enable/Disable CEC	STA_CEC. CEC ON!
Lock. \Unlock.	Lock/unlock the keypad	Lock. \Unlock. Front Panel Locked! \Front Panel UnLock!
STA_Lock.	Get the keypad locking status	STA_Lock. Front Panel Locked!
PowerON. \PowerOFF.	Enter/exit standby mode	PowerON. \PowerOFF. Power ON!
STA.	Get the system status	STA. Power ON! Output 01 Switch To In 00! Output 02 Switch To In 00! Output 04 Switch To In 00! Output 05 Switch To In 00! Output A Switch To In 00! Output B Switch To In 00! Output C Switch To In 00! Output D Switch To In 00! Output Audio 01 Switch To In 02!

		Output Audio 02 Switch To In 00! Output Audio 03 Switch To In 00! Output 01 Volume Level 60! Output 02 Volume Level 52! Output 03 Volume Level 00! Output 04 Volume Level 00! MIC 01 Volume Level 00! MIC 02 Volume Level 00! MIC 03 Volume Level 00! MIC 04 Volume Level 00! Speech Mix MIC 01 OFF! Speech Mix MIC 02 OFF! Speech Mix MIC 03 OFF! Speech Mix MIC 04 OFF! Speech Mix MIC 01 Volume Level 00! Speech Mix MIC 02 Volume Level 00! Speech Mix MIC 03 Volume Level 00! Speech Mix MIC 04 Volume Level 00! Far End Mix MIC 01 OFF! Far End Mix MIC 02 OFF! Far End Mix MIC 03 OFF! Far End Mix MIC 04 OFF! Far End Mix MIC 01 Volume Level 00! Far End Mix MIC 02 Volume Level 00! Far End Mix MIC 03 Volume Level 00! Far End Mix MIC 04 Volume Level 00! Mix Audio MIC 01 Unmute! Mix Audio MIC 02 Unmute! Mix Audio MIC 03 Unmute! Mix Audio MIC 04 Unmute! MIC 01 48V OFF! MIC 02 48V OFF! MIC 03 48V OFF! MIC 04 48V OFF! MIC 01 AEC OFF! MIC 02 AEC OFF! MIC 03 AEC OFF! MIC 04 AEC OFF! MIC 01 Gain 00! MIC 02 Gain 00! MIC 03 Gain 00! MIC 04 Gain 00! MIC 01 Noise Reduction 00! MIC 02 Noise Reduction 00! MIC 03 Noise Reduction 00! MIC 04 Noise Reduction 00! MIC 01 DoubleTalk 50!
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		MIC 02 DoubleTalk 50! MIC 03 DoubleTalk 50! MIC 04 DoubleTalk 50! Speech Mix 01 Equilibrium Gain 12! Speech Mix 02 Equilibrium Gain 12! Speech Mix 03 Equilibrium Gain 12! Speech Mix 04 Equilibrium Gain 12! Speech Mix 05 Equilibrium Gain 12! HDBT Audio Embedded OFF! Multiview Audio Embedded OFF! CEC ON! HDBT Power 01 ON! HDBT Power 02 ON! Multiview Output Resolution 04! Input 01 EDID Upgrade OK By 02 EDID! Input 02 EDID Upgrade OK By 02 EDID! Input 03 EDID Upgrade OK By 02 EDID! Input 04 EDID Upgrade OK By 02 EDID! Input 05 EDID Upgrade OK By 02 EDID! Input 06 EDID Upgrade OK By 02 EDID! Input 07 EDID Upgrade OK By 02 EDID! Input 08 EDID Upgrade OK By 02 EDID! Front Panel UnLock! Multiview Mode 01! USB Mode 01! Multiview Window A Freeze OFF! Multiview Window B Freeze OFF! Multiview Window C Freeze OFF! Multiview Window D Freeze OFF! Gui_IP: 192.168.0.178! Gui_Mask: 255.255.255.0! Gui_Gate: 192.168.0.1!
HDCPPOC[xx]ON. \HDCPPOC[xx]OFF.	Enable/Disable POC function [xx] = 00~02 00 - POC All 01 - POC1 02 - POC2	HDCPPOC[01]ON. \\HDCPPOC[02]OFF. HDBT Power 01 ON! \\HDBT Power 01 OFF!
STA_HDCPPOC.	Get POC status	STA_HDCPPOC. HDBT Power 01 ON! HDBT Power 02 ON!
USBMODE[xx].	Set USB host mode [xx] = 01 ~ 07 01 - Auto switch Auto (In 01 = USB 01, In 03 = USB 02, In 04 = USB	USBMODE 01. Set USB Mode 01!

	03, In 08 = USB C) Auto will be linked to Input selected to HDBT Output 04 02 - USB-C 03 - Host1 04 - Host2 05 - Host3 06 - HDBT4-RX1 07 - HDBT5-RX2	
STA_USBMODE.	Get USB host mode	STA_USBMODE. USB Mode 01!
PresetSave[xx].	Preset Video scenario mode function [xx] = 01~06 01~06 - Preset Video scenario number	PresetSave 01. Preset 01 Sta: Out 01 In 01! Out 02 In 01! Out 04 In 01! Out 05 In 01! Out A In 01! Out B In 01! Out C In 01! Out D In 01!
PresetSta[xx].	Get Video scenario mode [xx] = 01~06 01~06 - Preset Video scenario number	PresetSta 01. Preset 01 Sta: Out 01 In 01! Out 02 In 01! Out 04 In 01! Out 05 In 01! Out A In 01! Out B In 01! Out C In 01! Out D In 01!
PresetRecall[xx].	Recall Video scenario mode [xx] = 01~06 01~06 - Preset Video scenario number	PresetRecall 01. Preset 01 Sta: Output 01 Switch To In 02! Output 02 Switch To In 02! Output 04 Switch To In 02! Output 05 Switch To In 02! Output A Switch To In 02! Output B Switch To In 02! Output C Switch To In 02! Output D Switch To In 02!
HDBTCtrl[xx]ON.	Enable remote control of	HDBTCtrl 01 ON.

\HDBTCtrl[xx]OFF.	the local [xx] = 00~02 00 - All Port 01 - HDBT1 02 - HDBT2	\HDBTCtrl 01 OFF. Set HDBTCtrl 01 ON! \Set HDBTCtrl 01 OFF!
STA_HDBTCtrl.	Get remote control local	STA_HDBTCtrl. HDBTCtrl 01 ON! HDBTCtrl 02 ON!
HDBTCLQ.	Get HDBT connection signal quality	HDBTCLQ. HDBT Cable 01 Link Quality 09! HDBT Cable 02 Link Quality 09!

7.4 Windows Setting

Commands	Function	Example and Feedback
MVRES[xx].	Set the multiview output resolution [xx] = 01~07 01 - 1360x768 60 02 - 1440x900 60 03 - 1920x1080 50 04 - 1920x1080 60 (Default) 05 - 3840x2160 30 06 - 3840x2160 50 07 - 3840x2160 60	MVRES 01. Set Multiview Output Resolution 01!
STA_MVRES.	Get the multiview output resolution	STA_MVRES. Multiview Output Resolution 01!
MVMODE[xx].	Set multiview mode [xx] = 01 ~ 12 01 - 1 WINDOWS Full 02 - 2 WINDOWS PBP 03 - 3 WINDOWS 2U1D 04 - 4 WINDOWS SAME SIZE 05 - 2 WINDOWS PIP LU 06 - 2 WINDOWS PIP LD 07 - 2 WINDOWS PIP RU 08 - 2 WINDOWS PIP RD 09 - 4 WINDOWS PBP 3L1R 10 - 4 WINDOWS PBP 1L3R	MVMODE 01. Set Multiview Mode 01!

	11 - 4 WINDOWS PBP 3U1D 12 - 4 WINDOWS PBP 1U3D	
STA_MVMODE.	Get multiview mode	STA_MVMODE. Multiview Mode 01!
MVUser[xx]:[yy].	Preset user key mode [xx] = 01 ~ 04 01 ~ 04 - User key number [yy] = 01 ~ 12 01 - 1 WINDOWS Full 02 - 2 WINDOWS PBP 03 - 3 WINDOWS 2U1D 04 - 4 WINDOWS SAME SIZE 05 - 2 WINDOWS PIP LU 06 - 2 WINDOWS PIP LD 07 - 2 WINDOWS PIP RU 08 - 2 WINDOWS PIP RD 09 - 4 WINDOWS PBP 3L1R 10 - 4 WINDOWS PBP 1L3R 11 - 4 WINDOWS PBP 3U1D 12 - 4 WINDOWS PBP 1U3D	MVUser 01:01. Set Multiview User Mode 01 To 01!
STA_MVUser.	Get user key mode	STA_MVUser. Multiview User Mode 01 To 01! Multiview User Mode 02 To 01! Multiview User Mode 03 To 01! Multiview User Mode 04 To 01!
SwapSRC.	Swap input source	SwapSRC. Output A Switch To In 01! Output B Switch To In 02! Output C Switch To In 03! Output D Switch To In 04!
ResizeWIM.	Resize display windows	ResizeWIM. Resize Display Windows!
FreezeWIN[xx]ON. \FreezeWIN[xx]OFF.	Set multiview window freeze	FreezeWIN A ON. \FreezeWIN A OFF.

	[xx] = A~D Windows [xx] = F: All Windows	\FreezeWIN F OFF. Set Multiview Window A Freeze ON! \Set Multiview Window A Freeze OFF! \Set Multiview Window All Freeze OFF!
STA_FreezeWIN.	Get multiview window freeze status	STA_FreezeWIN. Multiview Window A Freeze ON! Multiview Window B Freeze ON! Multiview Window C Freeze ON! Multiview Window D Freeze ON!

7.5 CEC Function Command

Commands	Function	Example and Feedback
CECSRCMENU[xx].	Send CEC MOnU command to source [xx] = 01~07 01~07 - Input HDMI	CECSRCMENU 01. Set CEC Source MENU 01!
CECSRUP[xx].	Send CEC UP command to source [xx] = 01~07 01~07 - Input HDMI	CECSRUP 01. Set CEC Source UP 01!
CECSRCDOWN[xx].	Send CEC DOWN command to source [xx] = 01~07 01~07 - Input HDMI	CECSRCDOWN 01. Set CEC Source DOWN 01!
CESRCLEFT[xx].	Send CEC LEFT command to source [xx] = 01~07 01~07 - Input HDMI	CESRCLEFT 01. Set CEC Source LEFT 01!
CESRCRIGHT[xx].	Send CEC RIGHT command to source [xx] = 01~07 01~07 - Input HDMI	CESRCRIGHT 01. Set CEC Source RIGHT 01!
CESRCBACK[xx].	Send CEC BACK command to source [xx] = 01~07 01~07 - Input HDMI	CESRCBACK 01. Set CEC Source BACK 01
CESRCENTER[xx].	Send CEC ENTER command to source [xx] = 01~07 01~07 - Input HDMI	CESRCENTER 01. Set CEC Source ENTER 01!
CECSRCON[xx].	Send CEC ON command to source [xx] = 01~07 01~07 - Input HDMI	CESRCON 01. Set CEC Source ON 01!

CECSRCOFF[xx].	Send CEC OFF command to source [xx] = 01~07 01~07 - Input HDMI	CECSRCOFF 01. Set CEC Source OFF 01!
CECSRCASTOP[xx].	Send CEC STOP command to source [xx] = 01~07 01~07 - Input HDMI	CECSRCASTOP 01. Set CEC Source STOP 01!
CECSRCPPLAY[xx].	Send CEC PLAY command to source [xx] = 01~07 01~07 - Input HDMI	CECSRCPPLAY 01. Set CEC Source PLAY 01!
CECSRCPAUSE[xx].	Send CEC PAUSE command to source [xx] = 01~07 01~07 - Input HDMI	CECSRCPAUSE 01. Set CEC Source PAUSE 01!
CESRCPREV[xx].	Send CEC PREV command to source [xx] = 01~07 01~07 - Input HDMI	CESRCPREV 01. Set CEC Source PREV 01!
CECSRCPNEXT[xx].	Send CEC NEXT command to source [xx] = 01~07 01~07 - Input HDMI	CECSRCPNEXT 01. Set CEC Source NEXT 01!
CECSRCPREWIND[xx].	Send CEC rewind command to source [xx] = 01~07 01~07 - Input HDMI	CECSRCPREWIND 01. Set CEC Source REWIND 01!
CECSRCPFASTFW[xx].	Send CEC fast-forward command to source [xx] = 01~07 01~07 - Input HDMI	CECSRCPFASTFW 01. Set CEC Source Fast-Forward 01!
CECSRCPMUTE[xx].	Send CEC MUTE command to source [xx] = 01~07 01~07 - Input HDMI	CECSRCPMUTE 01. Set CEC Source MUTE 01!
CESRCPVOLPLUS[xx].	Send CEC volume plus command to source [xx] = 01~07 01~07 - Input HDMI	CESRCPVOLPLUS 01. Set CEC Source Volume Plus 01!
CESRCPVOLMINUS[xx].	Send CEC volume minus command to source [xx] = 01~07 01~07 - Input HDMI	CESRCPVOLMINUS 01. Set CEC Source Volume Minus 01!
CECDISPLAYON[xx].	Send CEC ON command to displayer	CECDISPLAYON 01.

	[xx] = 01 ~ 05 01 ~ 03 - Output HDMI 04 ~ 05 - Output HDBT	Set CEC Display ON 01!
CECDISPLAYOFF[xx].	Send CEC OFF command to displayer [xx] = 01 ~ 05 01 ~ 03 - Output HDMI 04 ~ 05 - Output HDBT	CECDISPLAYOFF 01. Set CEC Display OFF 01!
CECDISPLAYSRC[xx].	Send CEC SOURCE command to displayer [xx] = 01 ~ 05 01 ~ 03 - Output HDMI 04 ~ 05 - Output HDBT	CECDISPLAYSRC 01. Set CEC Display SOURCE 01
CECDISPLAYMUTE[xx].	Send CEC MUTE command to displayer [xx] = 01 ~ 05 01 ~ 03 - Output HDMI 04 ~ 05 - Output HDBT	CECDISPLAYMUTE 01. Set CEC Display MUTE 01
CECDISPLAYVOLPLUS[xx].	Send CEC volume plus command to displayer [xx] = 01 ~ 05 01 ~ 03 - Output HDMI 04 ~ 05 - Output HDBT	CECDISPLAYVOLPLUS 01. Set CEC Display Volume Plus 01
CECDISPLAYVOLMINUS[xx].	Send CEC volume minus command to displayer [xx] = 01 ~ 05 01 ~ 03 - Output HDMI 04 ~ 05 - Output HDBT	CECDISPLAYVOLMINUS 01. Set CEC Display Volume Minus 01
>CEC<xx1,xx2,xx3,xx...>.	Send cec user custom instructions to the monitor or source device Send a user-defined CEC command. xx1 = 1~ 12 (port) 1 - In 1 2 - In 2 3 - In 3 4 - In 4 5 - In 5 6 - In 6 7 - In 7 8 - Out 1 9 - Out 2 10 - Out 3 11 - Out 4	>CEC<1,04,44,46>. CEC send to device:1 Header : 0x04 Opcode : 0x44 Message : 0x46 >CEC<1,04,44,46>

	12 - Out 5 xx2 = DEVICE ADDRESS xx3 = OPCODE xx... = COMMAND	
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7.6 System Function Command

Commands	Function	Example and Feedback
/^Version.	Get the firmware version	/^Version. V1.0.0
RST.	Factory Default	RST. Factory Default!
Reboot.	System reboot	Reboot. Rebooted.
SetGuiIP:xxx.xxx.xxx.xxx.	Set the IP to access GUI	SetGuiIP:192.168.0.176. SetGuiIP: 192.168.0.178!
SetGuiMask:xxx.xxx.xxx.xxx.	Set the Mask to access GUI	SetGuiMask:255.255.255.0. SetGuiMask: 255.255.255.0!
SetGuiGate:xxx.xxx.xxx.xxx.	Set the Gate to access GUI	SetGuiGate:192.168.0.1. SetGuiGate: 192.168.0.1!
GetGuiIP.	Get the IP to access GUI	GetGuiIP. Gui_IP: 192.168.0.178!
GetGuiMask.	Get the Mask to access GUI	GetGuiMask. Gui_Mask: 255.255.255.0!
GetGuiGate.	Get the Gate to access GUI	GetGuiGate. Gui_Gate: 192.168.0.1!

7.7 Special Command

Commands	Function	Example and Feedback
/+[x]/[y]:zzzz	Send the command "XXXX" with ASCII format to far-end device. Send ASCII command "zzzz" to a far-end device	/+5/0:123\r\x31\x3278 1231278

	<p>[x] = Baud rate (1 ~ 5) 5 - 9600 4 - 19200 3 - 38400 2 - 57600 1 - 115200 [y] = 0 ~ 2 0 - Local 1 - Output HDBT 1 2 - Output HDBT 2 zzzz = ASCII data to be sent (Up to 48 characters) Notes: 1. When reading "\x", the two characters after "\x" will be converted to HEX automatically 2. When typing "\\ ", only one "\" will be sent 3. When reading "\r", "\r" will be converted to "0x0D" in HEX 4. When reading "\n", "\n" will be converted to "0x0A" in HEX</p>	
<p>/-[x]/[y]:zz zz</p>	<p>Send the command "XXXX" with HEX format to far-end device. Send the HEX command "zz zz" to far-end device [x] = Baud rate (1 ~ 5) 5 - 9600 4 - 19200 3 - 38400 2 - 57600 1 - 115200 [y] = 0 ~ 2 0 - Local 1 - Output HDBT 1 2 - Output HDBT 2 y = number of octets in HEX command zz zz = HEX data to be sent (z = 0~9, A~F and up to 20 octets)</p>	<p>/-5/0:30 31 32 33</p> <p>123</p>

8. Firmware Upgrade

8.1 Switcher

Follow the steps below to upgrade the matrix's firmware via the **GUI**:

1. Prepare the latest upgrade file (.bin) on your PC.
2. Login GUI with PC.
3. Select Security tab and click the path box.
4. Find upgrade file (.bin) on your computer.
5. Double-click upgrade file (.bin) then it will return to the GUI interface, click Update.
6. Close GUI after the firmware upgrade, and reboot the switcher.

8.2 Receiver

Follow the steps below to upgrade the receiver's firmware via the **FW** port on the front panel:

1. Prepare the latest upgrade file (.bin) and rename it to "FW_MERG.bin".
2. Power off the receiver, and connect the receiver to a PC with a Micro-USB to type-A USB cable.
3. Power on the receiver, and then the PC will automatically detect a flash drive titled "BOOTDISK".
4. Double-click the flash drive, and a file titled "READY.TXT" will be present
5. Directly copy the latest upgrade file (.bin) to the "BOOTDISK" flash drive.
6. Reopen the flash drive to check that the filename "READY.TXT" automatically changes to "SUCCESS.TXT". If this is the case, then the firmware has updated successfully. If this is not the case, then the firmware upgrade has failed. Confirm the name of the upgrade file (.bin), and then repeat the above steps to update again.
7. Remove the USB cable after firmware upgrade, and reboot the receiver.