User Manual

MP-SC-31T Codec

Video Conference Hub over HDBT 3.0 3x1 w/ 100W Charge

Version: MP-SC-31T Codec_V1.0

Preface

Read this user manual carefully before using the product. Pictures shown in this manual are for reference only. Different models and specifications are subject to real product.

This manual is only for operation instruction, please contact the local distributor for maintenance assistance. The functions described in this version were updated till Mar, 2025. In the constant effort to improve the product, we reserve the right to make functions or parameters changes without notice or obligation. Please refer to the dealers for the latest details.

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 B 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 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. It may result in electrical shock or burn.
- 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 extension cable in case of extrusion.
- 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 fine ventilation to avoid damage caused by overheat.
- 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.

Table of Contents

1. Product Introduction

The MP-SC-31T Codec is a 3x1 18G KVM switcher extender kit. It has one USB-C, two HDMI with one USB-B host, one HDMI loopout and HDBaseT output allow video signal to be transmitted up to 40m at 4K@60Hz and 70m at 4K@30Hz over a single CAT6A cable.

It supports audio pass-through, two-way IR, USB extend and RS232 pass-through. 24V PoC feature makes it possible for the TX and the RX to be powered from each other, which means that only one power adapter is needed in system, either TX or RX should be powered.

1.1 Features

- 3x1 18G presentation switcher with HDBaseT output.
- 18Gbps high bandwidth, HDMI 2.0, HDCP2.2.
- HDMI and USB-C video resolution up to 4K@60Hz 4:4:4, HDR10, Dolby Vision.
- Supports to transmit up to 40m at 4K@60Hz or 70m at 4K@30Hz.
- Controlled by button on the front panel, GUI (via TCP/IP) and RS232.
- Supports audio volume adjust for both TX and RX.
- Supports two-way IR and 24V PoC.
- Provides HDMI loop out.
- Supports upgrading both MCU and HDBaseT at the same time.

1.2 Packing List

● 1 x MP-SC-31T Codec Tx	● 1 x MP-SC-31T Codec Rx
● 4 x Mounting Ears with 4 Screws	● 8 x Rubber Feet
● 2 x 5-pin Terminal Block	● 1 x Power Adapter (DC 24V/6.5A)
● 2 x 2*3pin Terminal Block	● 1 x 3-pin Terminal Block
● 1 x User Manual	

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

2. Specification

	Transmitter	Receiver
Video		
Input	1 x USB-C, 2 x HDMI, 1x USB-B	1 x HDMI, 1 x USB-B, 1 x HDBaseT
Input Connector	1 x USB Type C, 2 x Type-A female HDMI, 1 x USB Type-B	1 x Type-A female HDMI, 1 x USB Type-B 1 x RJ45
Input Resolution	Support up to 4K@60Hz 4:4:4	
Output	1 x HDBaseT, 1 x LOOPOUT	1 x HDMI
Output Connector	1 x RJ45, 1 x Type-A female HDMI	1 x Type-A female HDMI
Output Resolution	Up to 4K@60Hz 4:4:4	
Audio		
Output	1 x Analog audio output	1 x Analog audio output
Output Connector	1 x 5-Pin terminal block	1 x 5-Pin terminal block
Audio Format	Supports PCM 2.0	
Frequency Response	20Hz ~ 20KHz, ±3dB	
Max Output Level	2.0Vrms ± 0.5dB. 2V = 16dB headroom above -10dBV (316mV) nominal consumer line level signal	
THD+N	< 0.05% (-80dB), 20Hz~20KHz bandwidth, 1kHz sine at 0dBFS level (or max level)	
SNR	> 80dB, 20Hz-20kHz bandwidth	
Crosstalk Isolation	-70dB, 10kHz sine at 0dBFS level (or max level before clipping)	
L-R Level Deviation	< 0.3dB, 1kHz sine at 0dBFS level (or max level before clipping)	
Frequency Response Deviation	20Hz - 20kHz, ±3dB	
Output Load Capability	1KΩ and higher (Supports 10x paralleled 10KΩ loads)	
Stereo Channel Separation	> 70dB@1KHz	

	Transmitter	Receiver
Control		
Control Part	2 x DEVICES 2 x RS232 1 x TCP/IP 1 x SELECT BUTTON 1 x DISPLAY ON/OFF BUTTON 1 x SCREEN MUTE BUTTON 1 x PoC ON/OFF Dip 1 x ETHERNET	4 x DEVICES 1 x RS232 1 x LOCAL BUTTON 2 x Relay control 1 x PoC ON/OFF Dip 1 x USB Management Dip
Control Connector	2 x USB 3.2 Gen1 Type-A 2 x 3-pin Terminal Block 1 x RJ45 1 x 2-pin DIP Switch 1 x RJ45	2 x USB 3.2 Gen1 Type-A 2 x USB 3.2 Gen1 Type-C 1 x 3-pin Terminal Block 2 x 3-pin Terminal Block 2 x 2-pin DIP Switch
General		
Bandwidth	18Gbps	
HDMI Standard	2.0	
HDCP Version	Input: HDCP 2.2, HDCP 1.4 compliant. Support HDCP management.	
Two-way PoC	Supported two-way 24V	
HDMI V2.0 Cable Length	4K@60Hz 4:4:4 ≤ 5m, 4K@30Hz 4:4:4 ≤ 10m, 1080p ≤ 15m	
Transmission Standard	HDBaseT	
Transmission Distance	4K@60 4:4:4 ≤ 40m; 4K@30 4:4:4 ≤ 70m, 1080p@60 4:4:4 ≤ 70m	
Operation Temperature	-5°C to +55°C (+23° to +131°F)	
Storage Temperature	-25°C to +70°C (-13°F to +158°F)	
Relative Humidity	10% to 90%, non-condensing	
Power Supply	DC 24V/6.5A	
Dimension (W x H x D)	218mm x 26mm x 130mm	177mm x 26mm x 110mm
Net Weight	700g	540g

Note: *Please use high-qualified HDMI cable fully compliant with HDMI2.0 for reliable transmission and connection.*

3. Panel Description

3.1 MP-SC-31T Codec Tx Front Panel

① **POWER LED:** Illuminates blue when power is applied. Illuminates Red when unit is power standby**.**

② **LED 1-3:** Illuminates blue when correspond input source is selected.

RX LED: Illuminates blue when HDMI input at RX is selected.

③ **SELECT Button:** Click the button to select the input source, press and hold for 3 seconds to enter or exit automatic switching mode.

Manual Switching: Press the SELECT AUTO/3s button repeatedly to cycle through the video inputs, and the corresponding source LED illuminates blue immediately.

Automatic Switching:

New input: Once detecting a new input, the switcher will automatically select the new input.

Reboot: Once power is restored to the switcher, it will automatically reconnect the input before powered off.

Source removed: When an active source is removed, the switcher will switch to the next active input.

Display ON/OFF Button: Turn on/ off the display.

Screen MUTE Button: To mute both video and audio at the same time.

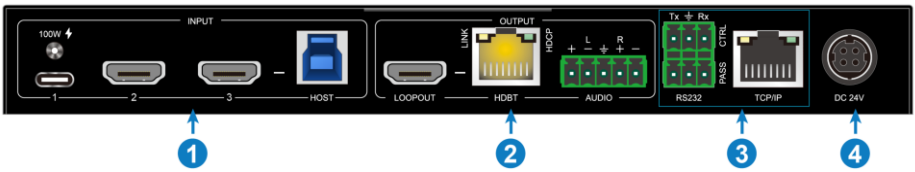
④ **PoC:** DIP switch for PoC ON/OFF.

Ethernet: RJ45 port for input sources to connect with network.

⑤ **DEVICES:** Two USB3.2 Gen1 Type-A ports, provide 500mA shared current in total.

⑥ **FW:** USB-C for FW upgrading.

3.2 MP-SC-31T Codec Tx Rear Panel



① **USB-C IN:** USB Type-C with 100w charging capability to connected source.

HDMI IN 2-3: HDMI input as the source. (HDM 3 with USB-B host)

HOST: USB3.2 Gen1 Type-B port for PC connection. The PC can be controlled by the USB devices which are connected to the HOST port of transmitter.

② **LOOPOUT:** Connects to HDMI display device.

HDBT OUT: RJ45 port to connect the HDBT output port of receiver by CAT6A Ethernet cable. The LINK LED (green LED) illuminates when there is a valid HDBaseT link between the transmitter and the receiver. The HDCP LED (yellow LED) illuminates when the video contains HDCP content, and the HDCP LED flashes when there is no HDCP.

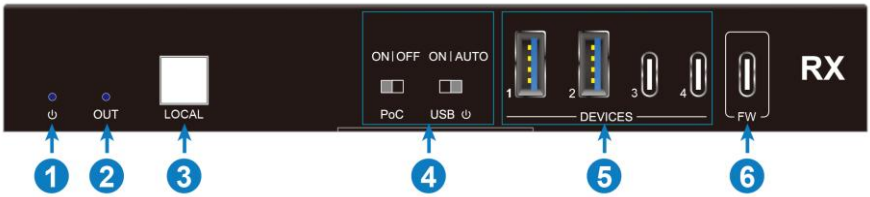
AUDIO: 5-pin terminal block for balanced audio output.

③ **RS232:** 2 x 3-pin terminal block, for RS232 pass through and control.

TCP/IP: 1 x RJ45 port for GUI control.

④ **DC 24V:** DC port for power adapter connection.

3.3 MP-SC-31T Codec Rx Front Panel



① **POWER LED:** Illuminates blue when power is applied.

② **OUT LED:** Illuminates blue when there is a HDMI display device is connected to HDMI output port and when input source is detected.

③ **LOCAL Button:** Illuminates when local HDMI is connected.

④ **PoC:** DIP switch for PoC ON/OFF

USB POWER Management: DIP switch for USB power management.

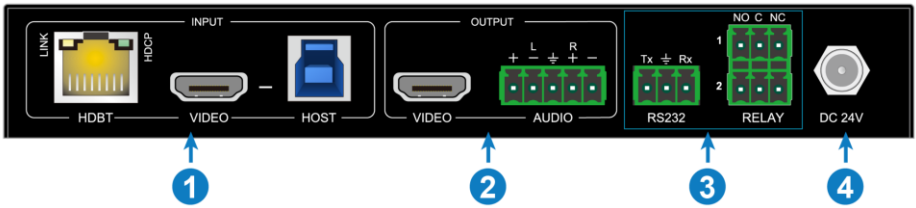
ON: USB device ports output power all the time.

AUTO(Default): Follow Host, USB device ports will only output power when a host is active connected.

⑤ **Devices:** 2 x USB-A and 2 x USB-C shared 3A current.

⑥ **FW:** USB-C port for FW upgrading.

3.4 MP-SC-31T Codec Rx Rear Panel



① **HDBT IN:** RJ45 port to connect the HDBT input port of receiver by CAT6A Ethernet cable. The LINK LED (green LED) illuminates when there is a valid HDBaseT link between the transmitter and the receiver. The HDCP LED (yellow LED) illuminates when the video contains HDCP content, and the HDCP LED flashes when there is no HDCP.

Video INPUT: Connects to HDMI input source.

HOST: Connect to LOCAL PC.

② **VIDEO OUT:** Connects to HDMI display device.

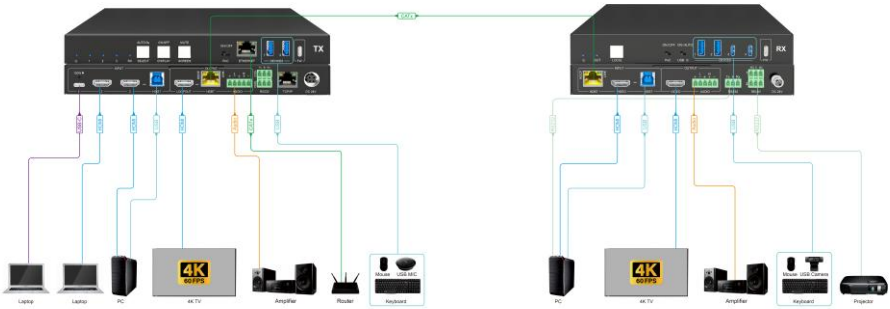
③ **AUDIO:** 5-pin terminal block for balanced audio output.

RS232: 3-pin terminal block, for RS232 pass through and control.

Relay： Relay 1 and reply 2 for screen or curtain control.

④ **DC 24V:** DC port for power adapter connection.

4. System Connection



5. GUI Control

5.1 Login

The extender also be controlled via TCP/IP. The default IP settings are:

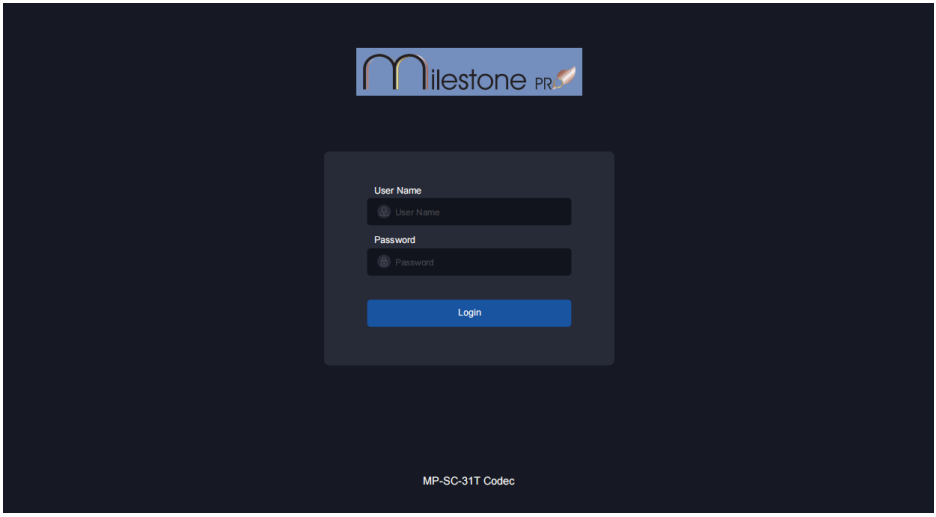
IP Address: 192.168.0.178

Subnet Mask: 255.255.255.0

Gateway: 192.168.0.1

Telnet Port: 4001

Type ***192.168.0.178*** in the internet browser, it will enter the below log-in webpage:

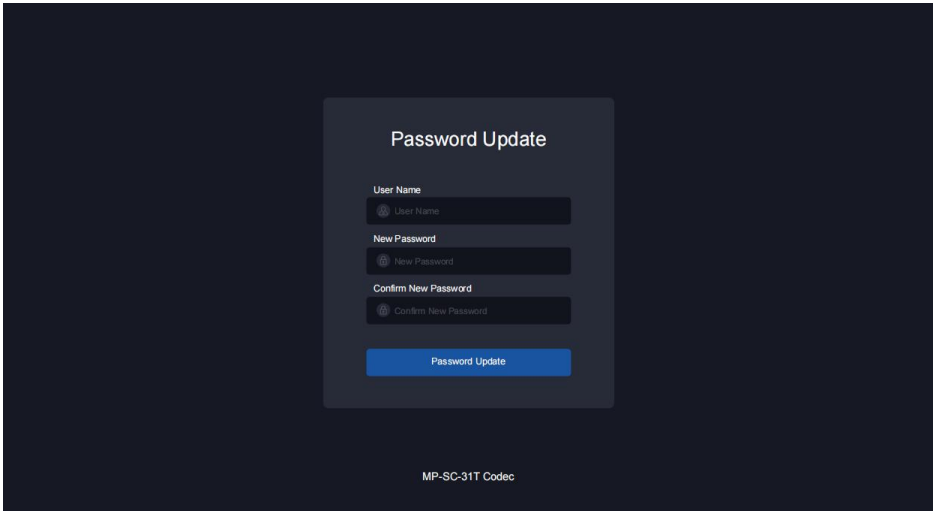


User Name: admin

Password: admin

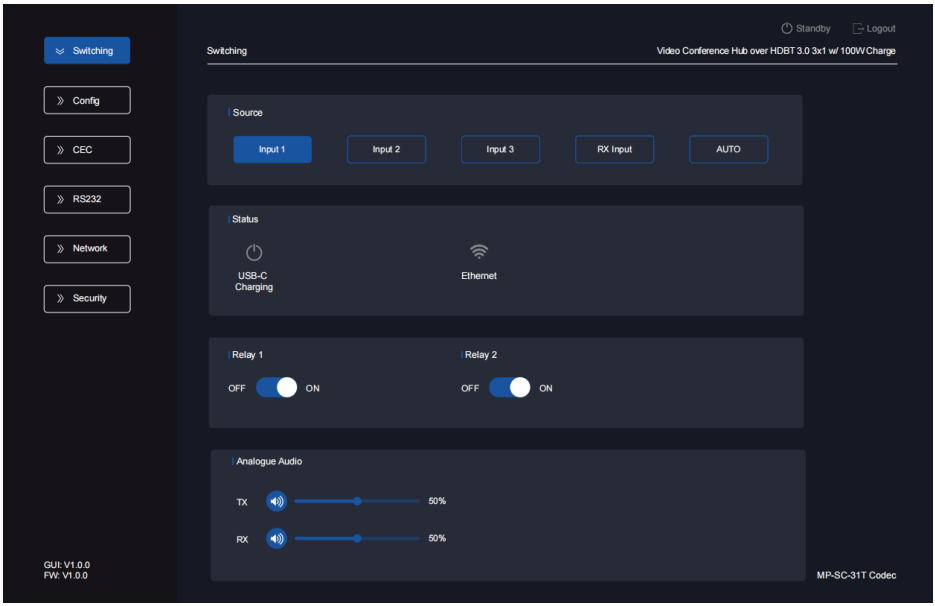
Type the user name and password, and then click **Login** to enter the section for video switching.

5.2 Password Update



- Modify the login password.

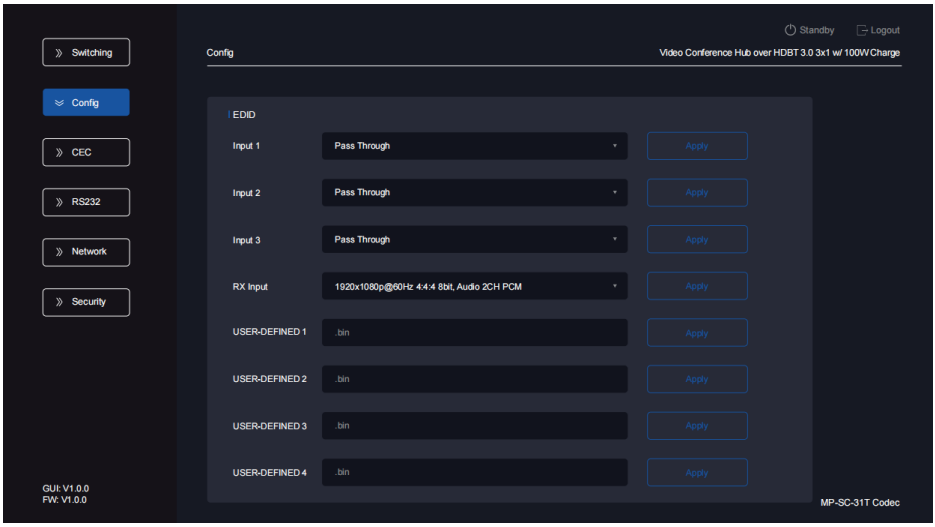
5.3 Switching



- **Source :** Select a video input source from input 1-3 or RX input.
- **Auto:** Select for auto switching mode.
- **Status:** Checking the status for charging Status and Ethernet.
- **Relay:** Turn on/off Relay 1 and Relay 2.
- **Analogue audio:** Adjust the analogue audio volume on TX and Rx separately.

5.4 Configuration Tab

EDID Settings



Choose the desired EDID format or define the appropriate EDID format.

- **Pass Through:**

  Learn EDID of video output, prioritize learning the far end output, if far end output not connected, then will learn the local output.

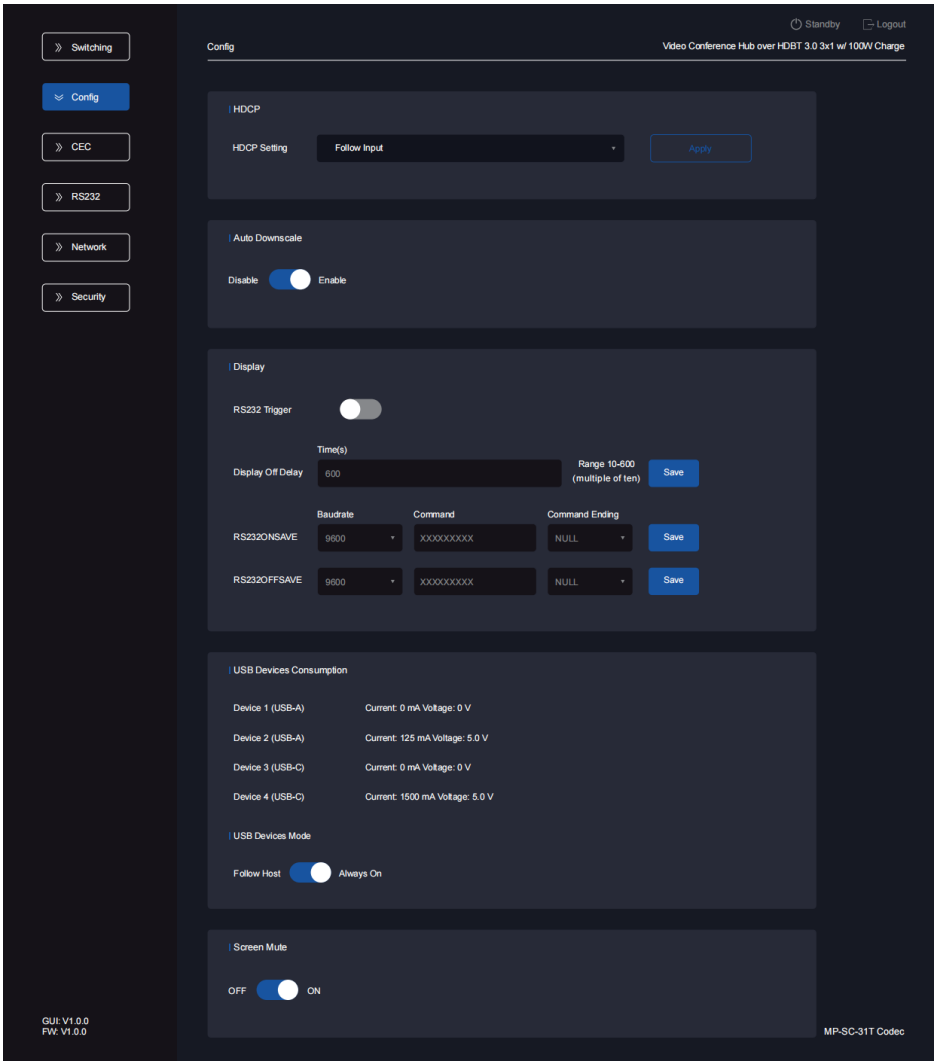
- **Built-in EDID:** There are 7 built-in EDID values can be selected by this tab.
- **User-defined EDID:** There are 4 EDID values can be customized by the below steps:

  Step 1: Prepare the EDID file (.bin) on the control PC.

  Step 2: Select the user-defined.

  Step 3: Click the black box .bin, and then select the EDID file (.bin) according the tooltip.

  Step 4: Click **Apply** to upload the user-defined EDID.



HDCP Settings

Select HDCP mode: Follow input, Follow output, HDCP ON.

USB Devices Consumption

This is the USB Device consumption detect function, for each USB port, there is a list to show current and voltage in time. To make sure field monitoring.

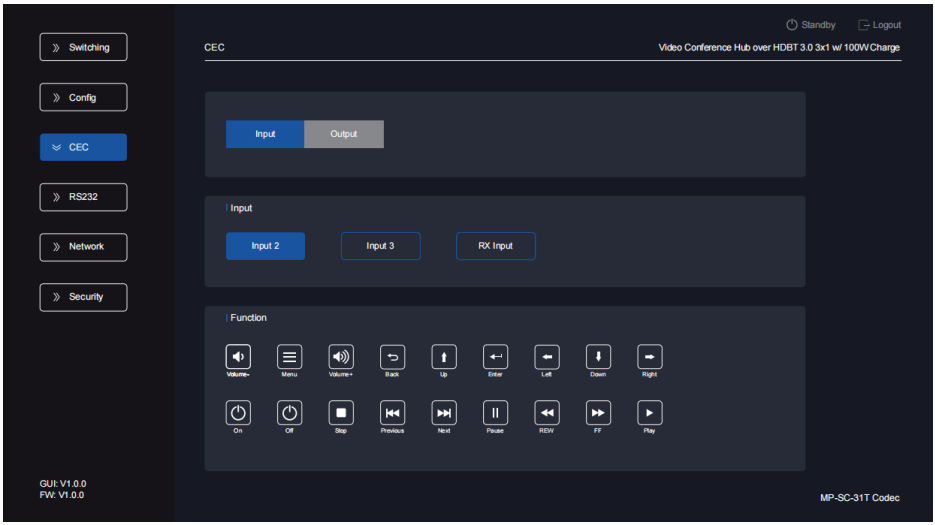
USB Devices Mode

- Follow Host: when there is a host connecting, the USB devices will be charged, when there is no host connecting, the USB devices won't be charged.
- Always On: No matter there is Host connecting or not, the USB devices won't be charged.

Screen Mute

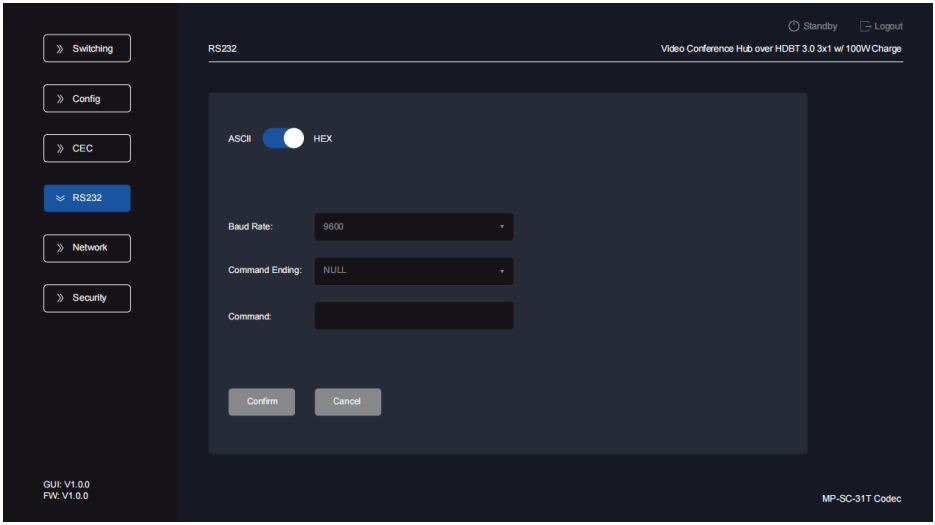
- Screen Mute On means to mute both video and audio at the same time.
- Screen Mute Off means to recovery both video and audio.

5.5 CEC Control



- Set the CEC function for inputs and outputs accordingly.

5.6 RS232 Tab

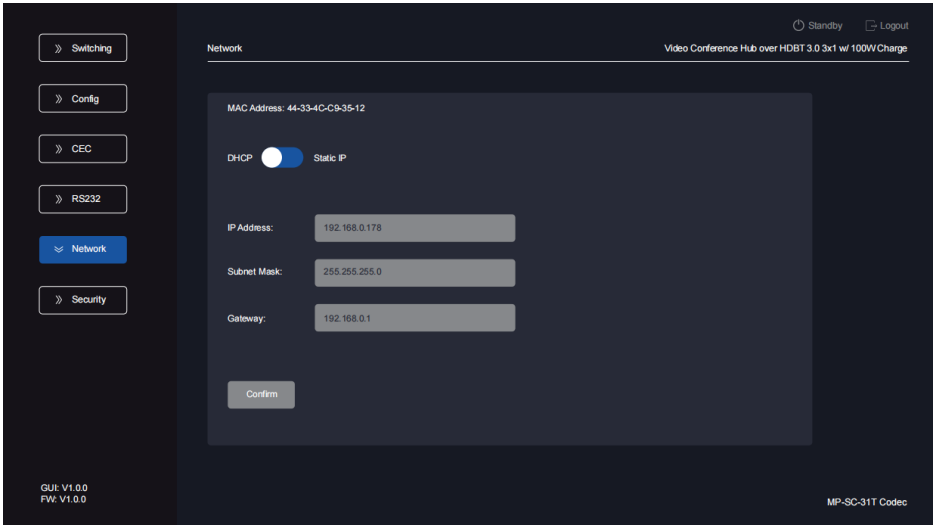


Baud Rate: Supports 2400, 4800, 9600, 19200, 38400, 57600, 115200.

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

Command: Type the command to control the third-party device which is connected to the RS232 port of the MP-SC-31T Codec.

5.7 Network Tab

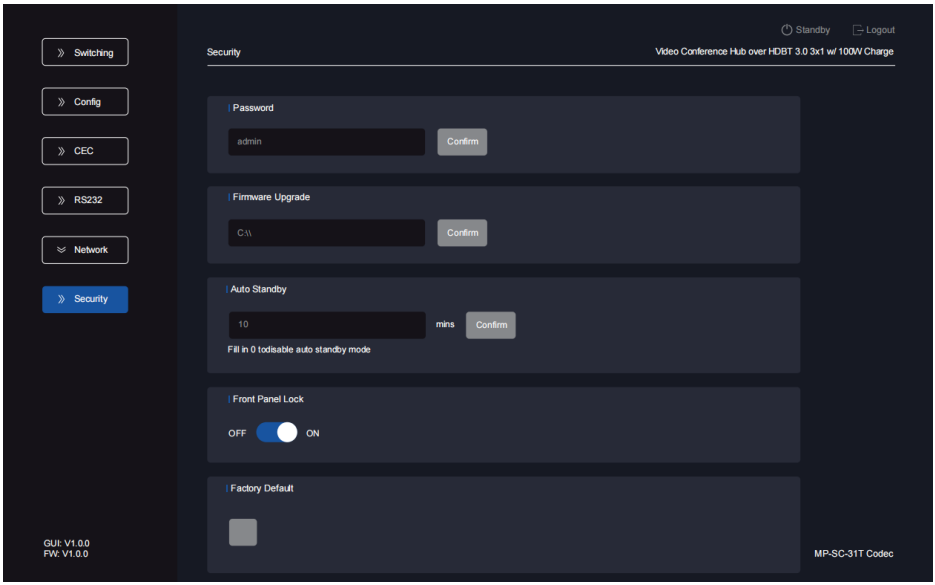


Choose either Static IP or DHCP (Dynamic Host Configuration Protocol).

DHCP: The device will automatically generate the IP Address, Subnet Mask and Gateway.

Static IP: Manually modify the static IP Address, Subnet Mask, and Gateway.

5.8 Security Tab

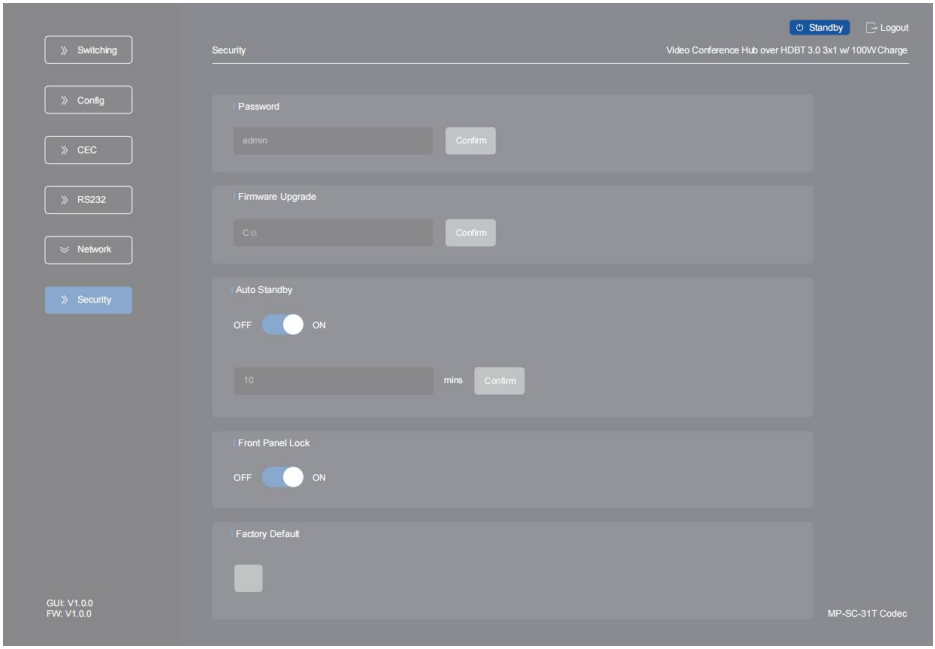


In this tab, you can change the login password, upgrade the firmware, auto standby, lock the Front Panel and factory default the device.

- Password: Modify the GUI login password;
- Choose the firmware upgrade file and click confirm to upgrade the firmware;
- To set auto standby time;
- Lock or unlock the front panel buttons;
- Factory Default the MP-SC-31T Codec.

When to choose unit standby, the whole GUI page will become gray.

5.9 Standby Mode



6. RS232 Control

Connect the control device (PC) to the RS232 port of MP-SC-31T Codec, the MP-SC-31T Codec can be controlled by sending RS232 commands via RS232 control software installed in PC.

The RS232 port supports pass-through function, in additional, RS232 commands can be transmitted bi-directional between MP-SC-31T Codec and receiver, so it is able to control a third-party device from local or remote. The baud rate supports 2400, 4800, 9600(default), 19200, 38400, 57600 or 115200.

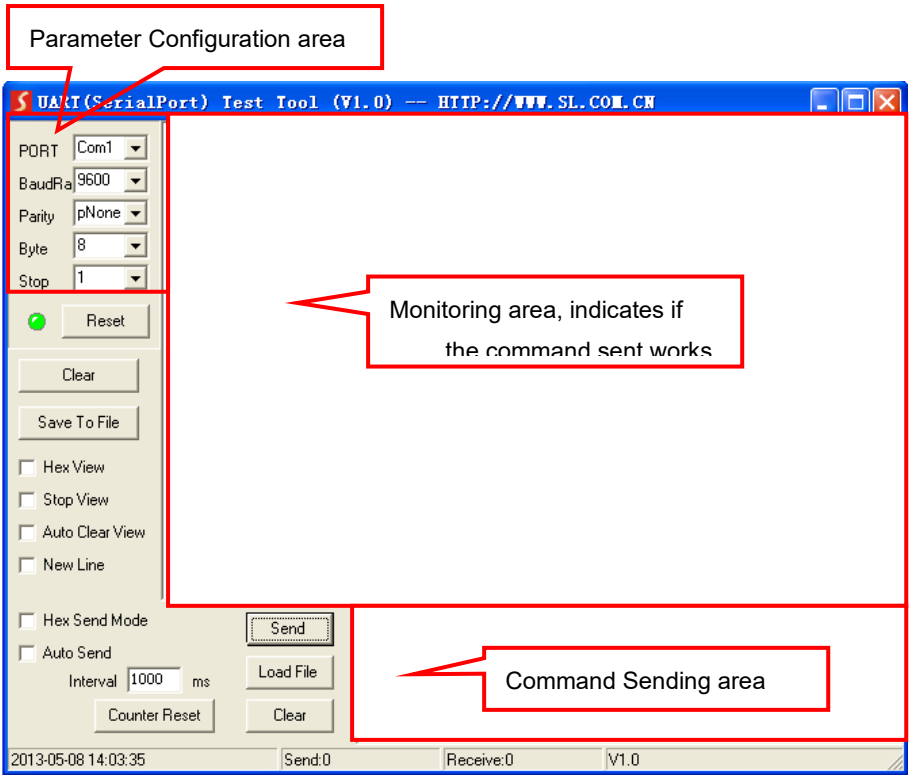
6.1 RS232 Control Software

- **Installation:** Copy the control software file to the computer connected with MP-SC-31T Codec.
- **Uninstallation:** Delete all the software files in corresponding file path.
- **Basic Settings:**

First to connect MP-SC-31T Codec with all input devices and output devices needed, then to connect it with a computer which is installed with RS232 control software. Finally, double-click the software icon to run this software.

Here we take the software **CommWatch.exe** as example. The icon is showed as below:

The interface of the control software is showed as below:



Please set the parameters of COM number, bound rate, data bit, stop bit and the parity bit correctly, and then the command is ready to be sent in Command Sending Area.

6.2 RS232 Command

Communication protocol: RS232 Communication Protocol

Baud rate: 9600 Data bit: 8 Stop bit: 1 Parity bit: none

Command	Description	Command & Feedback Example
STATUS	Get the system status	- Model name: MP-SC-31T Codec - Model type: Video Conference Hub 3x1 Switcher - FW Version: 1.0.0a - Power: on - Front panel: unlocked - Local RS232 baudrate: 115200 - MAC: 00-00-00-00-00-00 - DHCP: off - IP addr: 192.168.0.170 - IP Mask: 255.255.255.0 - IP Gateway: 192.168.0.1 - Auto switch: on - Signal trigger mode: hot plug - Input 1 EDID: 1 - Input 2 EDID: 1 - Input 3 EDID: 1 - Rx input EDID: 1 - Output black screen: off - Output: input 1 - HDCP: follow input - Down scale: on - Analog audio 1 mute: off - Analog audio 1 volume: 60 - Analog audio 2 mute: off - Analog audio 2 volume: 60 - USB device power mode: follow host - RS232 trigger mode: the change of power state - RS232ON: 3:1:1234 - RS232OFF: 3:1:1234 - No signal delay time: 60 seconds - Standby mode delay time: 60 mins - Rx relay 1: on - Rx relay 2: on!

RESET	Factory reset.	OK: Factory Default.
Baudrate[x].	Set the RS232 baud rate. [x]=1 ~ 7 1 - 2400 2 - 4800 3 - 9600 4 - 19200 5 - 38400 6 - 57600 7 - 115200	Example: Baudrate3. Feedback: OK: Set baudrate to 9600.
POWON.	Power on system.	OK: Power on.
POWOFF.	System standby.	OK: Power Off.
POWERSTATUS.	Query the status of the switch.	- Power: on.
VIDEO[x]:<y>	Switch input VIDEO [x]Select the x output，0 represents all output <y>Select input port, y=1-4;	Example:VIDEO:1/VIDEO0:1 Feedback:OK: Output switch to input 1.
AUTOSWITCH:ON	Auto switch mode on.	OK: Auto switch mode on.
AUTOSWITCH:OFF	Auto switch mode off.	OK: Auto switch mode off.
AUTOSWITCHSTAS	Query the status of auto switch mode.	- Auto switch: on
LOCKED	Lock front panel buttons.	OK: Front panel locked.
UNLOCKED	Unlock front panel buttons.	OK: Front panel unlocked.
OUTBLACK[x]:ON	Output black screen on. [x]Indicates the route output，0 represents all output	OK: Output black screen on.
OUTBLACK[x]:OFF	Output black screen off. [x]Indicates the route output，0 represents all output	OK: Output black screen off.
OUTBLACKSTATUS	Query the status of output black screen.	- Output black screen: off
EDID[x]:<y>	The input port x uses the built-in EDID numbered y. x=0 ~ 4 1 - USB-C 1 2 - HDMI 2 3 - HDMI 3 4 - HDBT in 0 - All input	Example:EDID1:1 Feedback:OK: Input 1 EDID upgraded by 1 EDID.

	<y>1-12 1:Learning output screen EDID(no remote end,learn local.) 2:1920x1080p@60Hz 4:4:4 8bit, Audio 2CH PCM 3:1920x1080p@60Hz 4:4:4 8bit, Audio 5.1CH DTS/Dolby 4:3840x2160@30Hz 4:4:4 8bit, Audio 2CH PCM 5:3840x2160@30Hz 4:4:4 8bit, Audio 5.1CH DTS/Dolby 6:3840x2160@60Hz 4:4:4 8bit, Audio 2CH PCM(default) 7:3840x2160@60Hz 4:4:4 8bit, Audio 7.1CH DTS/Dolby/HD 8:3840x2160@60Hz HDR, Audio 7.1CH DTS/Dolby/HD 9: User-defined EDID1 10: User-defined EDID2 11: User-defined EDID3 12: User-defined EDID4	
EDIDU[:x]	The serial port upgrades EDID data. [x]=1-4represents User-defined build-in EDID(It can be saved in the machine and called at any time） After receiving the instruction, the machine will prompt to send the EDID file. The file format must be .bin within 10s. After the definition is complete, it needs to be called automatically.	Example:EDIDU:1 Feedback:OK: User define EDID 1 upgraded.
UDPOWERMODE[x]:<y>	Set the power mode of device at Tx: [x]=0-2，0 represents all the device <y>=1-2 1: Follow Host(default) 2: Always On	Example:UDPOWERMODE:1 Example:UDPOWERMODE:2 Feedback:OK: Set USB devices power mode follow host. OK: Set USB devices power mode always on.
SIGTRGMODE:<x>	Set the testing mode of auto switch. <x>=1-2 1:Hot plug(default)	Example:SIGTRGMODE:1 Feedback:OK: Set signal trigger mode to hot plug.

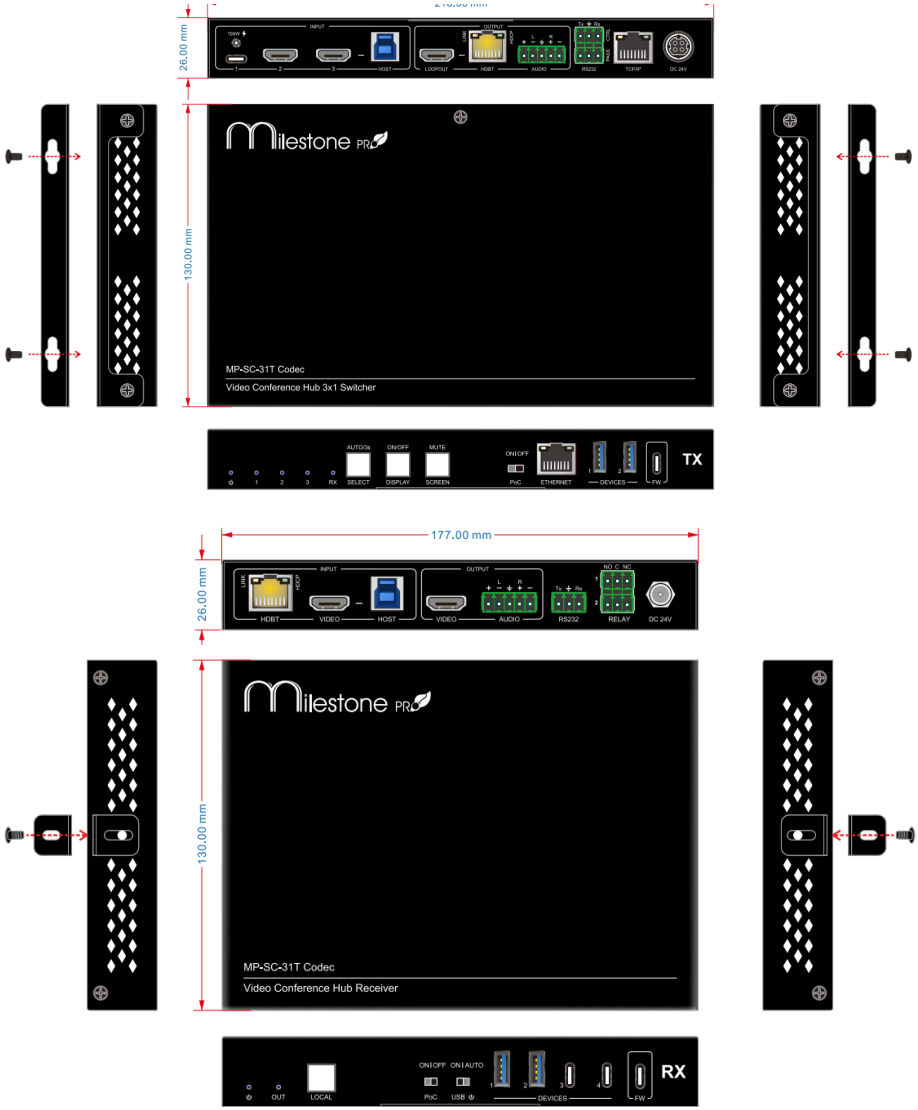
	2:Video signal	
SETIP:<xxx.xxx.xxx.xxx>	Set GUI IP Address	Example:SETIP:192.168.0.178 Feedback:OK: IP addr: 192.168.0.178
SETMASK:<xxx.xxx.xxx.xxx>	Set GUI Mask	Example:SETMASK:255.255.255.0 Feedback:OK: IP Mask: 255.255.255.0
SETGATEWAY:<xxx.xxx.xxx.xxx>	Set GUI Gateway	Example:SETGATEWAY:192.168.0.1 Feedback:OK: IP Gateway: 192.168.0.1
SETETHMAC:<xx-xx-xx-xx-xx-xx>	Change the MAC address	Example:SETETHMAC:01-02-03-04-05-06 Feedback:OK: ETH MAC: 01-02-03-04-05-06
DHCP:ON	Set DHCP on	OK: DHCP on.
DHCP:OFF	Set DHCP off	OK: DHCP off.
DHCPSTATUS	Query the status of DHCP	- DHCP: off
RS232SEND[x]:<y>:<z>:<aaa>	The local RS232 to control third-party devices <y> =1 ~ 7 1 - 2400 2 - 4800 3 - 9600 4 - 19200 5 - 38400 6 - 57600 7 - 115200 <z> =1 ~ 2 1 - ASCii code 2 - HEX code <aaa> Indicates the data to be sent. Space must be added between HEX codes	Example:RS232SEND:3:1:123456 RS232SEND:3:2:31 32 33 34 35 36 OK: RS232SEND: 3:1:123456 123456 OK: RS232SEND: 3:2:31 32 33 34 35 36 123456
DS[x]:ON	Turn on automatic downscale [x]represents which way of output,0represents all the output.	OK: Output down scale on.
DS[x]:OFF	Turn off automatic downscale [x]represents which way of output,0 represents all the output.	OK: Output down scale off.
DSSTATUS	Query the status of downscale.	- Down scale: on
CECI[x]:<yyy>	Input send the CEC data. <x> =0 ~ 4 1 - USB-C 1 2 - HDMI 2	Example:CECI2:04444A(DVD out) Feedback:OK: Input 2 CEC send <04 44 4A>.

	3 - HDMI 3 4 - HDBT In 0 - All inputs <yyy> Indicates the CEC command to be sent. The format is HEX and the maximum length is 12 bytes.	
CECO[x]:<yyy>	Output port send CEC data. [x]= 0-2 0 = all HDMI output 1 = local output 2 = remote output. <yyy> indicates the CEC command to be sent. The format is hexadecimal and the maximum length is 12 bytes.	Example: CECO1:4004(TV ON) CECO1:4036(TV standby) Feedback:OK: Output 1 CEC send <40 04>. OK: Output 1 CEC send <40 36>.
HDCP:PAS	Output HDCP follow input	Example: HDCP:PAS Feedback: OK: Output HDCP follow input.
HDCP:MAT	Output HDCP follow display	Example: HDCP:MAT Feedback: OK: Output HDCP follow display.
HDCP[x]:ON	Output HDCP1.4 on.	Example:HDCP:ON Feedback:OK: Output HDCP on..
HDCPSTATUS	Query the status HDCP	- HDCP: follow input
RS232TRG:<x>	RS232ON/RS232OFF command trigger mode. <x>=0-3 0=off 1=system POWERON or OFF	Example: RS232TRG:0 RS232TRG:1 Feedback:OK: RS232 trigger mode off. OK: RS232 trigger mode is the change of power state.
NSIGTIME:<x>	Set the time for no signal when the device detects no video input. <x>= 0- 600(default 600). 0= never go into no signal state. The value must be an integer multiple of 10.	Example: NSIGTIME:0 NSIGTIME:600 Feedback:OK: Never go into no signal state. OK: Set 600 seconds go into no signal state.
RS232ON<y>:<z>:<aaa>	Set and save RS232 command for TV on. <y> =1 ~ 7 1 - 2400 2 - 4800	Example: RS232ON:3:1:123456 RS232ON:3:2:31 32 33 34 35 36 Feedback:OK: RS232ON:3:1:123456 OK: RS232ON: 3:2:31 32 33 34 35 36

	3 - 9600 4 - 19200 5 - 38400 6 - 57600 7 - 115200 <z> =1 ~ 2 1 - ASCii code 2 - HEX code <aaa> Indicates the data to be sent. Space must be added for HEX code	
RS232OFF<y>:<z>:<aaa>	Set and save RS232command for TV Standby. <y> =1 ~ 7 1 - 2400 2 - 4800 3 - 9600 4 - 19200 5 - 38400 6 - 57600 7 - 115200 <z> =1 ~ 2 1 - ASCii code 2 - HEX code <aaa> Indicates the data to be sent. Space must be added for HEX code	Example: RS232OFF:3:1:123456 RS232OFF:3:2:31 32 33 34 35 36 Feedback: OK: RS232OFF: 3:1:123456 OK: RS232OFF: 3:2:31 32 33 34 35 36
STANDBYTIME:<x>	Set the time for system standby when no signal. <x>= 0-180mins(default 5mins) <x>= 0, never go into standby mode	Example: STANDBYTIME:0 STANDBYTIME:5 Feedback: OK: Nerver go into standby mode. OK: Set 5 mins go into standby mode.
AUDVOL[y]:<xxx>	Audio control [y] Indicates analog audio output. [y]=0-2 0=all the output 1= TX audio output 2= RX audio output <xxx> is a number,set the volume,it can be 0-100 <xxx> = MU，means mute	Example: AUDVOL1:60 AUDVOL1:MU AUDVOL1:UM AUDVOL1:+ AUDVOL1:- Feedback: OK: Analog audio 1 volume 60. OK: Analog audio 1 volume mute.

	<xxx> =UM，means unmute <xxx> = +, means the volume increase 1 <xxx> =-, means volume minus 1	OK: Analog audio 1 volume ummute. OK: Analog audio 1 volume 61. OK: Analog audio 1 volume 59.
RELAY[x]:ON	Relay on [x] = 0-2 0 = Relay 1 and Relay 2 1= Relay 1 2= Relay 2	Example:RELAY1:ON Feedback:OK: Rx relay 1 on.
RELAY[x]:OFF	Relay off. [x] = 0-2 0 = Relay 1 and Relay 2 1= Relay 1 2= Relay 2	Example:RELAY1:ON Feedback:OK: Rx relay 1 off.
RELAYSTATUS	Query the status of relay.	- Rx relay 1: on - Rx relay 2: on

7. Panel Diagram



8. Troubleshooting & Maintenance

Problems	Potential Causes	Solutions
Output image with snowflake	Bad quality of the connecting cable.	Try another high-quality cable.
	Fail or loose connection.	Make sure the connection is good
No output image when switching	No signal at the input / output end.	Check with oscilloscope or multimeter if there is any signal at the input/ output end.
	Fail or loose connection.	Make sure the connection is good.
	The extender is broken.	Send it to authorized dealer for repairing.
POWER indicator doesn't work or no respond to any operation	Fail connection of power cord.	Make sure the power cord connection is good.
Static becomes stronger when connecting the video connectors	Bad grounding.	Check the grounding and make sure it is connected well.
Cannot control the device by control device (e.g. a PC) through RS232 port	Broken RS232 port.	Send it to authorized dealer for checking.

Note: *If your problem still remains after following the above troubleshooting steps, please contact your local dealer or distributor for further assistance.*

9. Customer Service

The return of a product to our Customer Service implies the full agreement of the terms and conditions hereinafter. There terms and conditions may be changed without prior notice.

1) Warranty

The limited warranty period of the product is fixed 3 years.

2) Scope

These terms and conditions of Customer Service apply to the customer service provided for the products or any other items sold by authorized distributor only.

3) Warranty Exclusion

- Warranty expiration.
- Factory applied serial number has been altered or removed from the product.
- Damage, deterioration or malfunction caused by:
  - ✓ Normal wear and tear.
  - ✓ Use of supplies or parts not meeting our specifications.
  - ✓ No certificate or invoice as the proof of warranty.
  - ✓ The product model showed on the warranty card does not match with the model of the product for repairing or had been altered.
  - ✓ Damage caused by force majeure.
  - ✓ Servicing not authorized by distributor.
  - ✓ Any other causes which do not relate to a product defect.
- Shipping fees, installation or labor charges for installation or setup of the product.

4) Documentation

Customer Service will accept defective product(s) in the scope of warranty coverage at the sole condition that the defeat has been clearly defined, and upon reception of the documents or copy of invoice, indicating the date of purchase, the type of product, the serial number, and the name of distributor.

Remarks: Please contact your local distributor for further assistance or solutions.