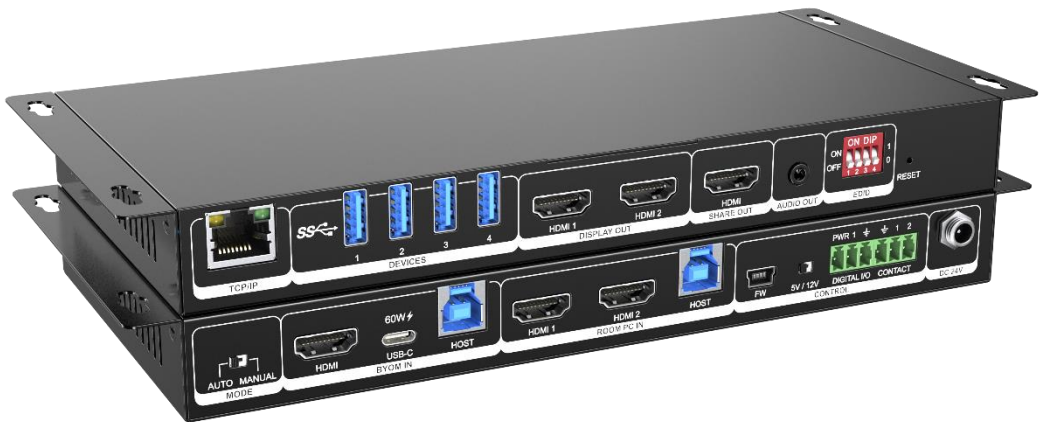


MP-SUH43-KVM

18G 4x3 VC Switcher w/ Charging



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Version: MP-SUH43-KVM_2023V1.0

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1. Product Introduction

Thanks for choosing the MP-SUH43-KVM HDMI 2.0 Web-Conferencing Room Switcher! The matrix switcher simplifies meeting room and presentation space system integration by providing two video mode (BYOM mode and Standard mode) with three HDMI inputs, one USB-C input and three HDMI output. The USB-C input supports video, data (USB host) and power charging up to 60w. There is a 4 port USB client hub built with 3 USB host ports that can be switched independently.

The matrix switcher supports resolution up to 4K@60Hz@4:4:4, is HDCP 2.2 compliant and has a built in USB 3.0 switching hub for control and integration of USB devices such as USB cameras and microphones.

The matrix switcher supports auto switching, allows users to control the system functionality via TCP/IP, Digital I/O, contact and front panel.

1.1 Features

- HDMI 2.0 and HDCP 2.2 compliant.
- Video resolution up to 4K@60Hz 4:4:4, 8bit deep color.
- Supports auto switching.
- USB-C input supports power charging up to 60w.
- Provides an audio output for audio de-embedding.
- Automatically switch between the dedicated room system and bring your own meeting (BYOM). Supports audio output volume control.
- Use the same Laptop cable between wired screen sharing and bring your own meetings.
- Send CEC signals to the room displays via events and built-in scheduler.
- Supports EDID management.
- Occupancy sensor integration.
- Controllable via TCP/IP, Digital I/O, contact and front panel.

1.2 Package List

- 1x MP-SUH43-KVM
- 4x Mounting Ear Screws
- 4x Plastic Cushions
- 1x RS232 Cable (USB-A to Mini-USB)
- 1x Power Adaptor (24V DC 5A)
- 1x User Manual

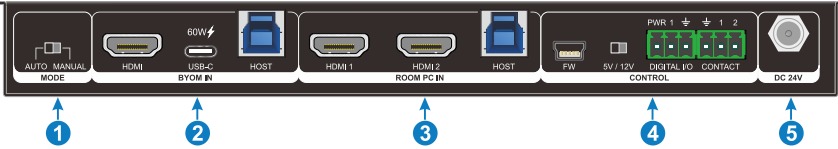
Note: *Please contact your distributor immediately if any damage or defect in the components is found.*

2. Specification

Video Input	
Video Input	(3) HDMI, (1) USB-C
Video Input Connector	(3) Type-A female HDMI, (1) USB-C
Video input Video Resolution	Up to 4K@60Hz 4:4:4, HDR
Video Output	
Video Output	(3) HDMI
Video Output Connector	(3) Type-A Female HDMI
Video output Video Resolution	HDMI: Up to 4K@60Hz 4:4:4, HDR
Audio Output	
Audio Output	(1) AUDIO OUT
Audio Output Connector	(1) 3.5mm Jack
Frequency Response	20Hz to 20kHz, ± 3 dB
Max Output Level	2.2 ± 0.1 Vrms
THD+N	< 0.1%, 20Hz to 20kHz bandwidth, 1 kHz sine at 0dBFS level (or max level)
SNR	> 80dB, 20Hz to 20kHz bandwidth
Crosstalk Isolation	< -70 dB, 10kHz sine at 0dBFS level
L-R Level Deviation	< 0.3 dB, 1kHz sine at 0dBFS level (or max level before clipping)
Output Load Capability	1k Ω and higher (supports 10x paralleled 10K Ω loads)
Noise Level	- 75dB
Control Part	
Control Port	(1) TCP/IP, (1) FIRMWARE, (1) Digital I/O (1) Contact, (2) USB Host, (4) USB Device
Control Connector	(1) RJ45, (1) Mini-USB, (2) 3-pin terminal blocks, (2) Type-B USB, (4) Type-B USB
General	
HDMI Version	Up to 2.0
HDCP Version	Up to 2.2
Bandwidth	18Gbps
Operation Temperature	-5 to +55°C (+23° to +131°F)
Storage Temperature	-25 to +70°C (-13° to +158°F)
Relative Humidity	10% to 90%, Non-condensing
External Power Supply	24V DC 5A
Power Consumption	70W (Max)
Dimension (W*H*D)	220mm x 25mm x 110mm
Net Weight	0.55KG

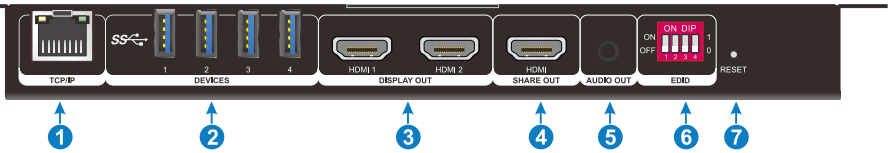
3. Panel Description

3.1 Front Panel



- ① **MODE:** A mode switch to select auto/manual switching.
 - **AUTO:** The unit will automatically switch between BYOM and STANDARD mode by detecting input signals.
 - **MANUAL:** User can select BYOM or STANDARD mode manually. CONTACT 1 trigger for BYOM mode and CONTACT 2 trigger for STANDARD mode by default.
- ② **BYOM IN:** BYOM IN inputs will work when BYOM mode is selected.
 - **HDMI IN:** Connects to HDMI source device for audio and video signal.
 - **USB-C:** Connects to USB-C source device for audio, video, USB signal and up to 60w power delivery.
 - **USB-B:** Connects to USB host, work with HDMI IN to transmit USB signal to the source device.
- ③ **ROOM PC IN:** ROOM PC IN inputs will work when STANDARD mode is selected.
 - **HDMI IN:** Connects to HDMI source device for audio and video signal.
 - **USB-B:** Connects to USB host, work with HDMI IN to transmit USB signal to the source device.
- ④ **CONTROL:** Control ports to control the unit.
 - **FW:** Mini-USB port for RS232 control, normally for firmware upgrade.
 - **DIGITAL I/O:** connects to the sensor, supporting 5V or 12V power for the sensor.
 - **CONTACT:** 2 contact ports to trigger events.
- ⑤ **DC 24V:**
 - Locking power supply port.

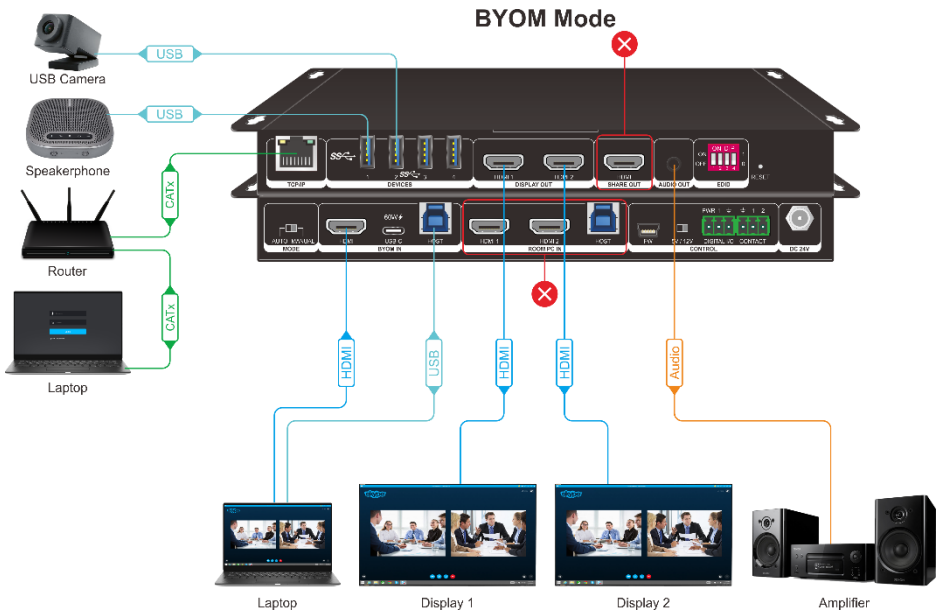
3.2 Rear Panel



- ① **TCP/IP:** Connects to the LAN to control the switcher by Web GUI.
- ② **DEVICES:** 4 port USB3.0 client hub.
- ③ **DISPLAY OUT:** 2 HDMI output ports.
- ④ **SHARE OUT:** 1 HDMI output port.
- ⑤ **AUDIO OUT:** Connects to audio playback device for audio de-embedding.
- ⑥ **EDID:** DIP switch to select EDID.
- ⑦ **RESET:** Button to reset the unit.

4. Video Mode

4.1 BYOM Mode

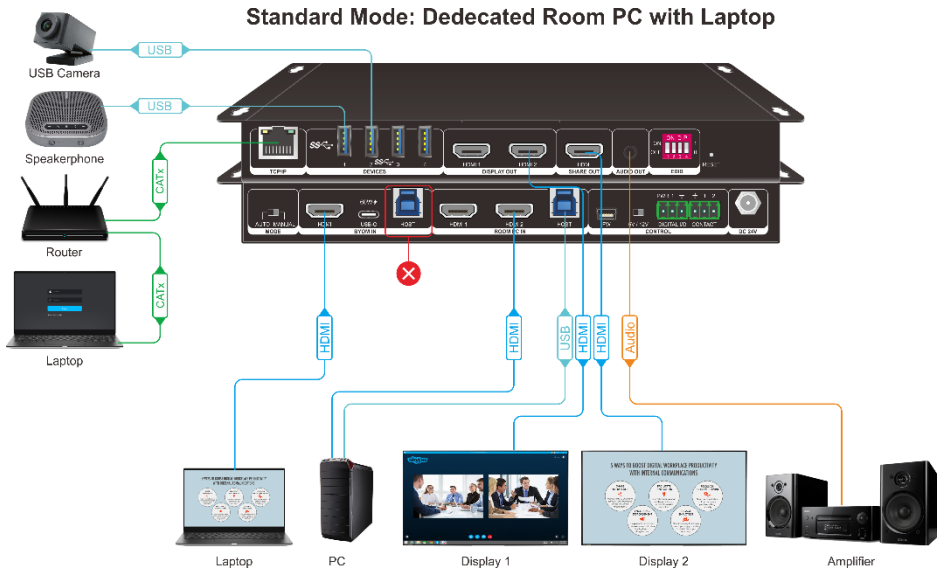


BYOM (Bring Your Own Meeting) mode allows users to bring their own device to meeting.

- 1) USB-C or HDMI of LAPTOP IN will switch to 2 HDMI outputs of DISPLAY OUT.
- 2) USB devices will switch to the USB Host of LAPTOP-IN (USB-B port if HDMI source is using and USB-C port if USB-C source is using).
- 3) Audio output will de-embedded from USB-C or HDMI of LAPTOP IN.

Note: HDMI signal will be selected if both USB-C and HDMI of LAPTOP IN are connected.

4.2 Standard Mode



- 1) 2 HDMI inputs of ROOM PC-IN will switch to DISPLAY separately. USB-C or HDMI of LAPTOP IN will switch to SHARE OUT.
- 2) USB devices will switch to the USB-B Host of ROOM PC-IN.
- 3) Audio output will de-embedded from HDMI 1 of ROOM PC-IN.

5. Switching Mode

5.1 Manual Switching

When the DIP switch of rear panel is selected to MANUAL, the switcher is in manual switching mode. User can select BYOM or STANDARD mode via Web GUI manually.

5.2 Auto Switching

When the DIP switch of rear panel is selected to AUTO, the switcher is in auto-switching mode. BYOM or STANDARD mode will be automatically selected by signal detected according to the following rules:

- 1) If the USB-C or USB-B signal of LAPTOP IN is detected, BYOM mode is selected.
- 2) If none of the USB-C or USB-B signal of LAPTOP IN is detected, STANDARD mode is selected.

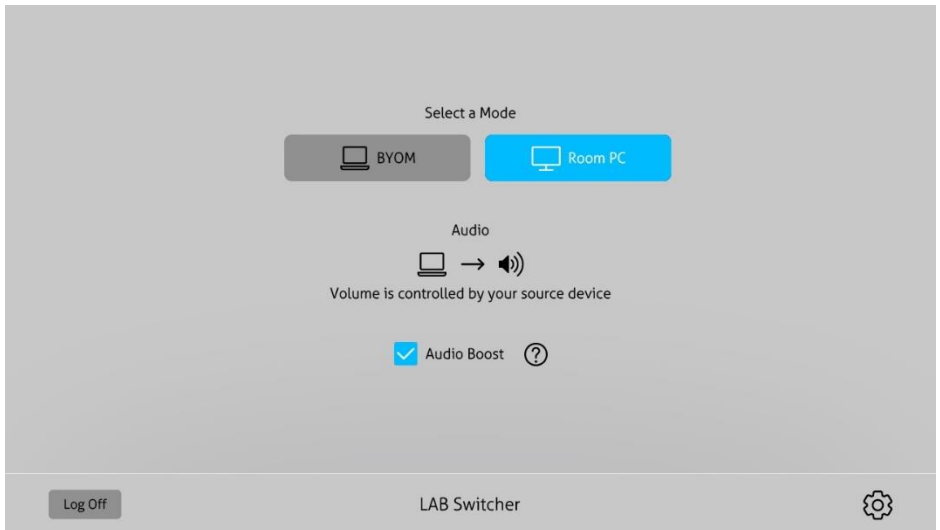
6. GUI Control

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 the internet browser, it will enter the below Operation page:



- **Mode Selection:** Select BYOM or Standard mode.
- **Audio Boost:** Boost the HDMI output TV via CEC.
- **Power:** Turn on/off the unit.
- **Setting:** Configuration page, not available when using mobile phone.

6.1 Manage Page

The screenshot shows the 'Manage Events' page with four tabs: 'Manage Events' (active), 'Schedule', 'Network Setting', and 'System Setting'. The main area displays a list of six events, each with a pencil icon for editing and a 'Test' button. The events are: Display On 1, Display On 2, Display On 5, Display On 4, Display On 1, and Display On 6. Below the list is an 'Exit' button. On the right, the 'Device Status' panel shows various system components with status indicators (blue circles for connected/active, white circles for inactive).

Device Events

Display On 1 User description of event

Display On 2 User description of event

Display On 5 User description of event

Display On 4 User description of event

Display On 1 User description of event

Display On 6 User description of event

Device Status

- Network Connected
- BYOD HDMI
- BYOD USB-C
- BYOD Host
- ROOM PC HDMI 1
- ROOM PC HDMI 2
- ROOM PC Host
- Display 1
- Display 2
- Digital I/O
- Contact 1
- Contact 2
- Mute

LAB Switcher 02:30 PM
3 November 2022

- **Event list:** 6 events list here, click the pencil for event setting

The screenshot shows the 'Display On Details' page for editing an event. It has the same tabs as the previous page. The 'Display On Details' section includes fields for 'Button Label' (Display On 1), 'Trigger' (USB detect-laptop), 'Show Button' (ON), 'Description' (User description of event), and 'Display Icon' (Laptop). There are two lists of 'Available Actions' and 'Event Actions' with left and right arrow buttons between them. A 'Test' button is also present. At the bottom are 'Save' and 'Cancel' buttons. The 'Device Status' panel is on the right.

Display On Details

Button Label:

Trigger:

Show Button:

Available Actions:

- 1 Second Delay
- CEC Display 1 Power On
- CEC Display 1 Power Off
- CEC Display 1 Mute
- CEC Display 1 Volume up
- CEC Display 1 Input
- CEC Display 2 Power On

Event Actions:

- 1 Second Delay
- CEC Display 1 Volume up
- CEC Display 1 Input
- CEC Display 2 Power On
- CEC Display 2 Power Off
- Power On
- Power Off

Description:

Display Icon:

Device Status

- Network Connected
- BYOD HDMI
- BYOD USB-C
- BYOD Host
- ROOM PC HDMI 1
- ROOM PC HDMI 2
- ROOM PC Host
- Display 1
- Display 2
- Digital I/O
- Contact 1
- Contact 2
- Mute

LAB Switcher 02:30 PM
3 November 2022

- **Information:** Event's information like label, description, button show, display icon.
- **Trigger:** 7 triggers can be selection.
 - 1) USB detect-laptop
 - 2) HDMI Sync-laptop
 - 3) Digital I/O
 - 4) Contact 1
 - 5) Contact 2
 - 6) Schedule ON
 - 7) Schedule OFF

6.2 Schedule

Manage Events	Schedule	Network Setting	System Setting
<h3>Schedule</h3> <p>Current Date / Time: 02:30 PM 3 November 2022 Change</p> <p>System On: 8:00 ▼ AM ▼</p> <p>System Off: 4:00 ▼ PM ▼</p> <p>Days: <input checked="" type="checkbox"/> Sun <input type="checkbox"/> Mon <input checked="" type="checkbox"/> Tues <input type="checkbox"/> Wed <input checked="" type="checkbox"/> Thur <input checked="" type="checkbox"/> Fri <input type="checkbox"/> Sat</p> <p>Save Exit</p>		<h3>Device Status</h3> <ul style="list-style-type: none"><input checked="" type="radio"/> Network Connected<input checked="" type="radio"/> BYOD HDMI<input type="radio"/> BYOD USB-C<input type="radio"/> BYOD Host<input type="radio"/> ROOM PC HDMI 1<input checked="" type="radio"/> ROOM PC HDMI 2<input checked="" type="radio"/> ROOM PC Host<input checked="" type="radio"/> Display 1<input checked="" type="radio"/> Display 2<input type="radio"/> Digital I/O<input type="radio"/> Contact 1<input type="radio"/> Contact 2<input type="radio"/> Mute	
LAB Switcher		02:30 PM 3 November 2022	

- Current Date/ Time setting.
- System on/off setting.

6.3 Network Setting

Manage Events	Schedule	Network Setting	System Setting
<h3>Network Setting</h3> <p>Configure IPv4: Manual ▼</p> <p>IPv4 Address: 192.168.0.178</p> <p>Subnet Mask: 255.255.255.0</p> <p>Router: 192.168.0.1</p> <p>DHCP Client ID: SCU43-KVM</p> <p>Renew DHCP Lease</p> <p>Reset Network: Reset Setting</p> <p>Save Exit</p>		<h3>Device Status</h3> <ul style="list-style-type: none"><input checked="" type="radio"/> Network Connected<input checked="" type="radio"/> BYOD HDMI<input type="radio"/> BYOD USB-C<input type="radio"/> BYOD Host<input type="radio"/> ROOM PC HDMI 1<input checked="" type="radio"/> ROOM PC HDMI 2<input checked="" type="radio"/> ROOM PC Host<input checked="" type="radio"/> Display 1<input checked="" type="radio"/> Display 2<input type="radio"/> Digital I/O<input type="radio"/> Contact 1<input type="radio"/> Contact 2<input type="radio"/> Mute	
LAB Switcher		02:30 PM 3 November 2022	

- IPv4 and IPv6 setting.

6.4 System Setting

Manage Events Schedule Network Setting **System Setting**

System Setting

Room Name: LAB Switcher

Time Setting

Set Time Automatically: ON Time Zone: GMT-00:00 London, Western E ▼

Daylight Saving: ON

System Configuration

Configuration Name: Default Firmware: Current Version: V1.0.0a

Factory Reset:

Device Status

- Network Connected
- BYOD HDMI
- BYOD USB-C
- BYOD Host
- ROOM PC HDMI 1
- ROOM PC HDMI 2
- ROOM PC Host
- Display 1
- Display 2
- Digital I/O
- Contact 1
- Contact 2
- Mute

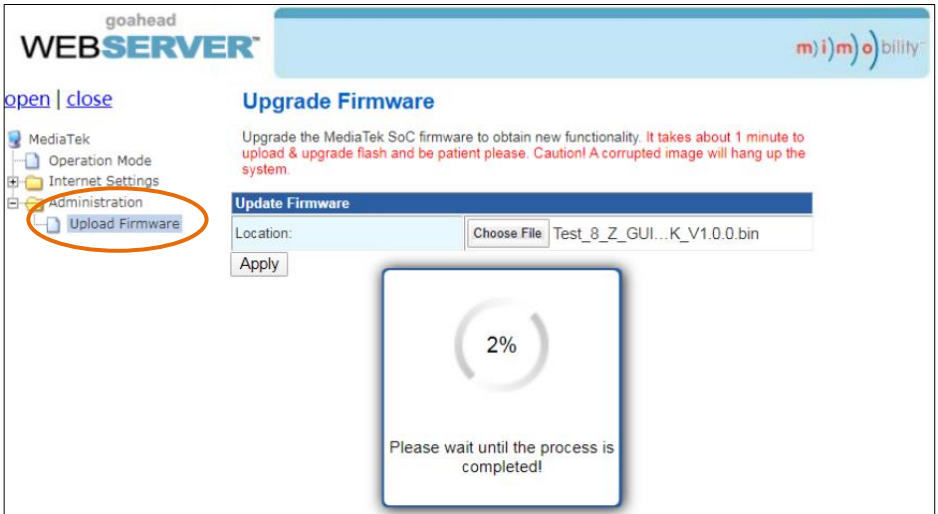
LAB Switcher 02:30 PM
3 November 2022

- Room name, Logo setting.
- Time setting:
 - 1) Auto/ Manual setting.
 - 2) Daylight saving time.
- System Configuration:
 - 1) Upload or download configuration file.
 - 2) Firmware update.
 - 3) Factory Reset.

6.5 GUI Upgrade

Please visit at <http://192.168.0.178:100> for GUI online upgrade.

Type the username and password (the same as the GUI log-in setting, modified password will be available only after rebooting) to login the configuration interface. After that, click **Administration** in the source menu, and then click **Upload Firmware**, select the desired update file and press **Apply**, it will start upgrading then.



7. EDID Switch

The DIP switch on rear panel is an EDID selector, please see details below.

DIP	EDID
0000	1920x1080@60 8bit Stereo (default)
0001	WUXGA 1920x1200
0010	1920x1080@60 8bit High Definition Audio
0011	3840x2160@60Hz 4:2:0 Deep Color Stereo Audio
0100	3840x2160@60Hz Deep Color Stereo Audio
0101	3840x2160@30Hz 8bit Stereo Audio
0110	3840x2160@60Hz Deep Color High Definition Audio
0111	3840x2160@60Hz Deep Color HDR LPCM 6CH
1000	Copy EDID from SHARE-OUT
1001	Copy EDID from DISPLAY-OUT-1
1010	Copy EDID from DISPLAY-OUT-2
1011	EDID pass-through (follow SHARE-OUT)

Note: If the unit fail to copy the EDID of HDMI output, default EDID will be used.

8. RS232

RS232 commands can be transmitted to the unit for local control.

RS232 Control Software

Installation/uninstallation

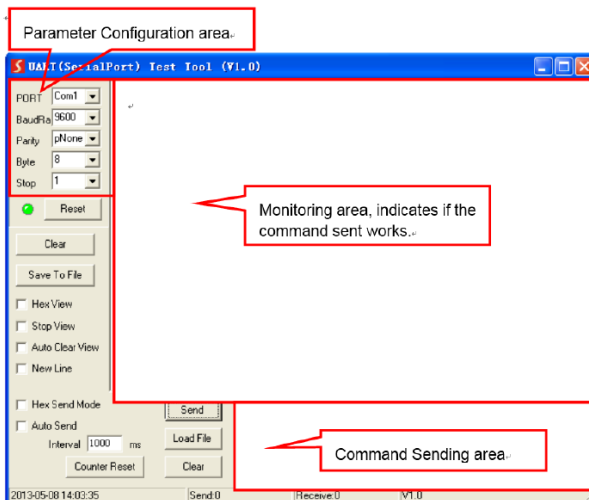
- Installation: Copy the control software file to the computer connected with the transmitter.
- Uninstallation: Delete all the control software files in corresponding file path.

Basic Settings

First connect the transmitter with all input devices and output devices needed, then connect it with a PC which is installed with RS232 control software. Double-click the software icon to run this software. Here we take the software CommWatch.exe as example. The icon is shown as below:



The interface of the control software is shown as below:



Please set the parameters of COM number, bound rate, data bit, stop bit and the parity bit correctly, and then you are able to send command in command sending area.

8.1 RS232 CONTROL COMMANDS

Communication protocol: RS232 Communication Protocol

Baud rate: 115200 Data bit: 8 Stop bit: 1 Parity bit: none

The end mark of command is "<CR><LF>".

Command	Function	Command & Feedback Example
>Help	Get the list of all commands	<Set the HDMI switch mode >SetAV Param Param = M1,M2 M1 - BYOM Mode M2 - Standard Mode
>GetFireware Version	Get the firmware version	>GetFirewareVersion <V1.0.0
>FactoryReset	Factory Default	>FactoryReset <FactoryReset_True
>SetAV	>SetAV Param Param = M1,M2 M1 - BYOM Mode M2 - Standard Mode	>SetAV M1 <AV M1
>GetAV	>GetAV	>GetAV <AV M1
>SetAudioMute	>SetAudioMute Param Param = ON,FF ON - ON FF - OFF	>SetAudioMute ON <AudioMute ON
>SetEDID	>SetEDID Param1 To Param2 Param1 = 00 ~ 04 00~04 - Input Param2 = 00 ~ 12 00 - 1920x1080@60 8bit Stereo	>SetEDID 01 To 01 <EDID IN 01 STA 01

	(default) 01 - WUXGA 1920x1200 02 - 1920x1080@60 8bit High Definition Audio 03 - 3840x2160@60Hz 4:2:0 Deep Color Stereo Audio 04 - 3840x2160@60Hz Deep Color Stereo Audio 05 - 3840x2160@30Hz 8bit Stereo Audio 06 - 3840x2160@60Hz Deep Color High Definition Audio 07 - 3840x2160@60Hz Deep Color HDR LPCM 6CH 08 - copy EDID from Share output 09 - copy EDID from HDMI L output 10 - copy EDID from HDMI R output 11 - EDID passthrough(follow HDMI share)	
>GetEDID	>GetEDID	>GetEDID <EDID IN 01 02 03 04 STA 01 01 01 01
>SetPower	>SetPower Param Param = On,Off Off - Power off On - Power on	>SetPower On >SetPower Off <Power On <Power Off
>GetPower	>GetPower	>GetPower <Power On
>SetIOMode	>SetIOMode Param1 Param1 = 1 ~ 2	>SetIOMode 1 <IOMode 1

	1 - IO Mode 1 2 - IO Mode 2	
>GetIOMode	>GetIOMode	>GetIOMode <IOMode 1
>SetCtlCecOn	>SetCtlCecOn Param Param = ON,FF ON - ON FF - OFF	>SetCtlCecOn ON <CtlCecOn ON
>GetCtlCecOn	>GetCtlCecOn	>GetCtlCecOn <CtlCecOn ON
>SetSchedule	>SetSchedule <Param1,Param2,Param3,Param4,Param5,Param6,Param7,Param8,Param9,Param10,Param10> Param1 = 0 ~ 24(hour) Param2 = 0 ~ 60(min) Param3 = 0 ~ 24(hour) Param4 = 0 ~ 60(min) Param5 = 0 ~ 1(Sun) Param6 = 0 ~ 1(Mon) Param7 = 0 ~ 1(Tues) Param8 = 0 ~ 1(Wed) Param9 = 0 ~ 1(Turs) Param10 = 0 ~ 1(Fri) Param11 = 0 ~ 1(Sat)	>SetSchedule <1,0,1,0,0,1,1,1,1,1,1 > <SetSchedule <1,0,1,0,0,1,1,1,1,1,1 >
>GetSchedule	>GetSchedule	>GetSchedule <Time: 1,0,1,0,0,1,1,1,1,1,1>
>SetDaylight	>SetDaylight Param Param = On,Off Off - Power off On - Power on	>SetDaylight On <Daylight On

>GetDaylight	>GetDaylight	>GetDaylight <Daylight On
>SetTime	>SetTime <Param,Param1,Param2,Param3,Param4,Param5> Param = 1970 ~ 2099(year) Param1 = 1 ~ 12(month) Param2 = 1 ~ 31(date) Param3 = 0 ~ 24(hour) Param4 = 0 ~ 60(min) Param5 = 0 ~ 60(sec)	>SetTime <2020,1,1,1,1,1> <SetTime <2020,1,1,1,1,1>
>GetTime	>GetTime	>GetTime <Time: 2020,1,1,1,1,1>
>GetIpAddress	>GetIpAddress	>GetIpAddress <IpAddress: 192.168.0.178> <SubNetMask: 255.255.255.0> <GateWay: 192.168.0.1>
>SetIP	>SetIP <XXX.XXX.XXX.XXX> <YYY.YYY.YYY.YYY> <ZZZ.ZZZ.ZZZ.ZZZ> XXX = 0 ~ 255(IP ADDRESS) YYY = 0 ~ 255(MASK) ZZZ = 0 ~ 255(GATE)	>SetIP <192.168.0.178> <255.255.255.0> <192.168.0.1> >SetIP <192.168.0.178> <> <> <SetIP <192.168.0.178> <255.255.255.0> <192.168.0.1> <SetIP <192.168.0.178> <255.255.255.0>

		<192.168.0.1>
>SetCecSrcMenu	>SetCecSrcMenu Param Param = 1~3 1 - HOSTA HDMI 2 - HOSTB(L) HDMI 3 - HOSTB(R) HDMI	>SetCecSrcMenu 1 <CecSrcMenu 1
>SetCecSrcUp	>SetCecSrcUp Param Param = 1~3 1 - HOSTA HDMI 2 - HOSTB(L) HDMI 3 - HOSTB(R) HDMI	>SetCecSrcUp 1 <CecSrcUp 1
>SetCecSrcDown	>SetCecSrcDown Param Param = 1~3 1 - HOSTA HDMI 2 - HOSTB(L) HDMI 3 - HOSTB(R) HDMI	>SetCecSrcDown 1 <CecSrcDown 1
>SetCecSrcLeft	>SetCecSrcLeft Param Param = 1~3 1 - HOSTA HDMI 2 - HOSTB(L) HDMI 3 - HOSTB(R) HDMI	>SetCecSrcLeft 1 <CecSrcLeft 1
>SetCecSrcRight	>SetCecSrcRight Param Param = 1~3 1 - HOSTA HDMI 2 - HOSTB(L) HDMI 3 - HOSTB(R) HDMI	>SetCecSrcRight 1 <CecSrcRight 1
>SetCecSrcBack	>SetCecSrcBack Param Param = 1~3 1 - HOSTA HDMI 2 - HOSTB(L) HDMI 3 - HOSTB(R) HDMI	>SetCecSrcBack 1 <CecSrcBack 1
>SetCecSrcEnt	>SetCecSrcEnter Param	>SetCecSrcEnter 1

er	Param = 1~3 1 - HOSTA HDMI 2 - HOSTB(L) HDMI 3 - HOSTB(R) HDMI	<CecSrcEnter 1
>SetCecSrcOn	>SetCecSrcOn Param Param = 1~3 1 - HOSTA HDMI 2 - HOSTB(L) HDMI 3 - HOSTB(R) HDMI	>SetCecSrcOn 1 <CecSrcOn 1
>SetCecSrcOff	>SetCecSrcOff Param Param = 1~3 1 - HOSTA HDMI 2 - HOSTB(L) HDMI 3 - HOSTB(R) HDMI	>SetCecSrcOff 1 <CecSrcOff 1
>SetCecSrcStop	>SetCecSrcStop Param Param = 1~3 1 - HOSTA HDMI 2 - HOSTB(L) HDMI 3 - HOSTB(R) HDMI	>SetCecSrcStop 1 <CecSrcStop 1
>SetCecSrcPlay	>SetCecSrcPlay Param Param = 1~3 1 - HOSTA HDMI 2 - HOSTB(L) HDMI 3 - HOSTB(R) HDMI	>SetCecSrcPlay 1 <CecSrcPlay 1
>SetCecSrcPause	>SetCecSrcPause Param Param = 1~3 1 - HOSTA HDMI 2 - HOSTB(L) HDMI 3 - HOSTB(R) HDMI	>SetCecSrcPause 1 <CecSrcPause 1
>SetCecSrcPre	>SetCecSrcPrev Param	>SetCecSrcPrev 1

v	Param = 1~3 1 - HOSTA HDMI 2 - HOSTB(L) HDMI 3 - HOSTB(R) HDMI	<CecSrcPrev 1
>SetCecSrcNext	>SetCecSrcNext Param Param = 1~3 1 - HOSTA HDMI 2 - HOSTB(L) HDMI 3 - HOSTB(R) HDMI	>SetCecSrcNext 1 <CecSrcNext 1
>SetCecSrcRewind	>SetCecSrcRewind Param Param = 1~3 1 - HOSTA HDMI 2 - HOSTB(L) HDMI 3 - HOSTB(R) HDMI	>SetCecSrcRewind 1 <CecSrcRewind 1
>SetCecSrcFastForward	>SetCecSrcFastForward Param Param = 1~3 1 - HOSTA HDMI 2 - HOSTB(L) HDMI 3 - HOSTB(R) HDMI	>SetCecSrcFastForward 1 <CecSrcFastForward 1
>SetCecDisplayOn	>SetCecDisplayOn Param Param = 1~3 1 - Display HDMI OUT L 2 - Display HDMI OUT R 3 - HDMI SHARE OUT	>SetCecDisplayOn 1 <CecDisplayOn 1
>SetCecDisplayOff	>SetCecDisplayOff Param Param = 1~3 1 - Display HDMI OUT L 2 - Display HDMI OUT R 3 - HDMI SHARE OUT	>SetCecDisplayOff 1 <CecDisplayOff 1
>SetCecDisplaySource	>SetCecDisplaySource Param Param = 1~3 1 - Display HDMI OUT L 2 - Display HDMI OUT R	>SetCecDisplaySource 1 <CecDisplaySource 1

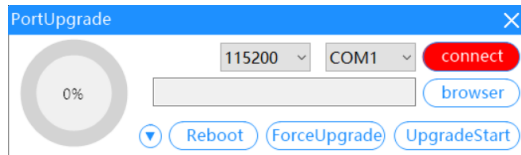
	3 - HDMI SHARE OUT	
>SetCecDisplay Mute	>SetCecDisplayMute Param Param = 1~3 1 - Display HDMI OUT L 2 - Display HDMI OUT R 3 - HDMI SHARE OUT	>SetCecDisplayMute 1 <CecODisplayMute 1
>SetCecDisplay VOLPlus	>SetCecDisplayVOLPlus Param Param = 1~3 1 - Display HDMI OUT L 2 - Display HDMI OUT R 3 - HDMI SHARE OUT	>SetCecDisplayVOL Plus 1 <CecDisplayVOLPlus 1
>SetCecDisplay VOLMinus	>SetCecDisplayVOLMinus Param Param = 1~3 1 - Display HDMI OUT L 2 - Display HDMI OUT R 3 - HDMI SHARE OUT	>SetCecDisplayVOL Minus 1 <CecDisplayVOLMinus 1

9. Firmware Upgrade

User can upgrade the firmware via Web GUI or FW port.

Please follow the steps as below to upgrade firmware by the **FW** port on the rear panel:

- 1) Prepare the latest upgrade file on PC.
- 2) Power off the switcher, and connect the **FW** port of switcher to the PC with a suitable cable, make sure the RS232 port works normally (Baud Rate: 115200).



- 3) Use the firmware upgrade software, click **browser** to choose the latest upgrade file.
- 4) Click the **UpgradeStart** button to upgrade.
- 5) After firmware upgrade successfully, the switcher should be restarted via unplug and plug the power adapter.