



HDMI Switcher Series

User Manual

Model : HUS03-4K6G

4K60 3x1 HDMI/USB-C Presentation Switcher



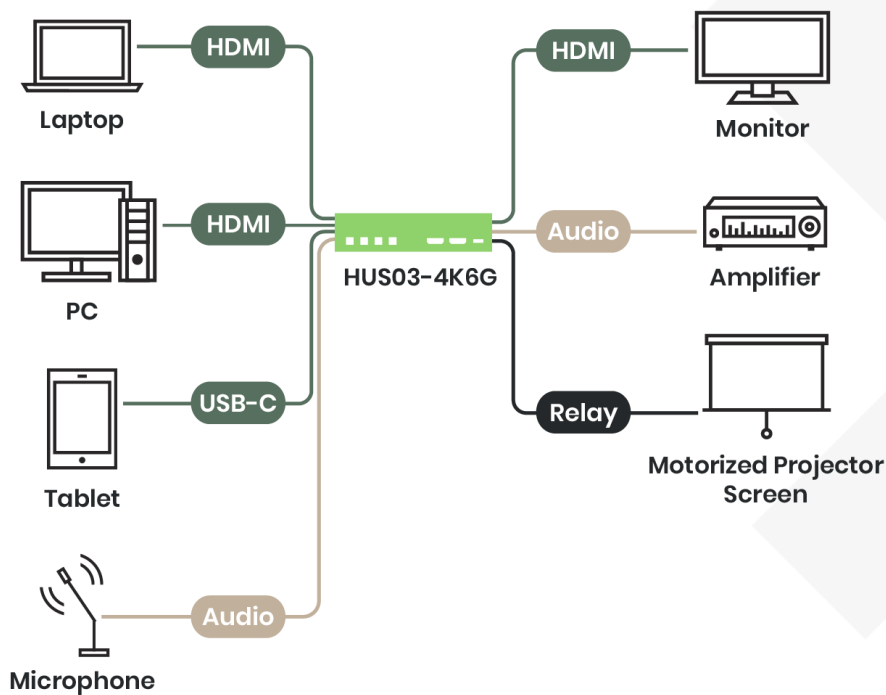
Introduction

HUS03-4K6G is a 3-in-1-out 4K@60Hz 4:4:4 video switcher designed to provide a user-friendly and intuitive operation for presenters to have their thoughts well-delivered during a meeting. The switcher supports HDMI and USB Type-C interfaces which can connect with most electronic devices and fulfill the BYOD need.

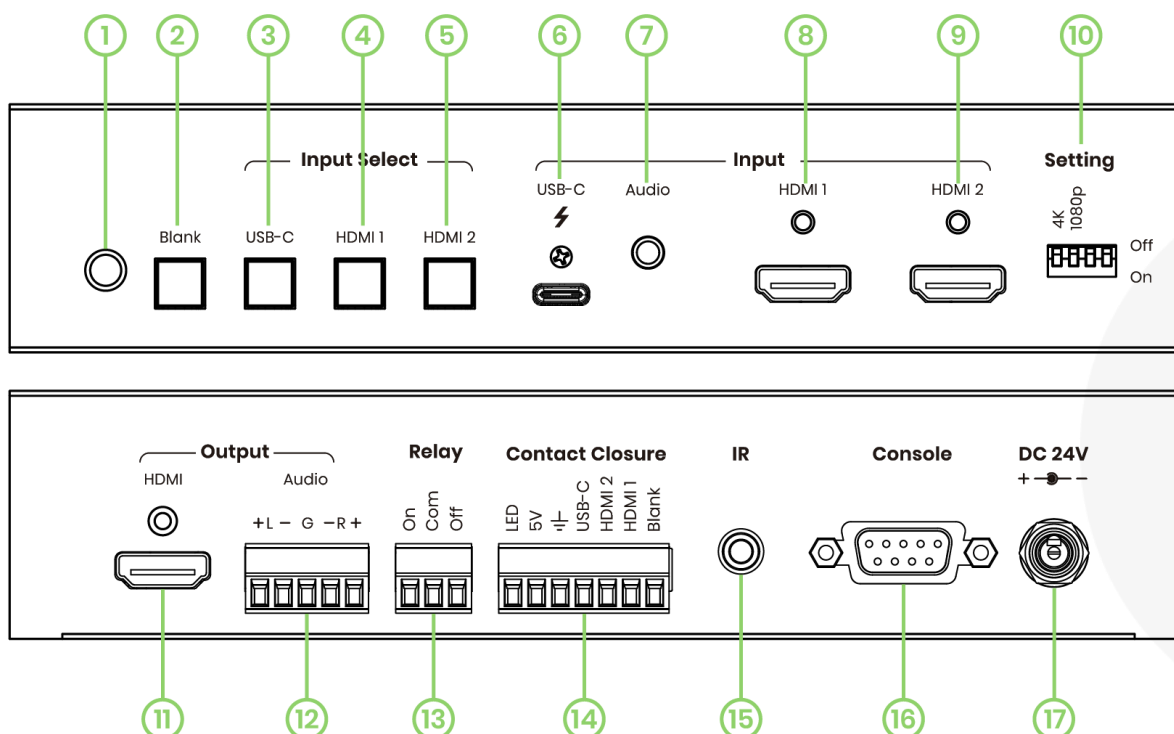
Features

- Resolution up to 4K@60Hz 4:4:4 and 1080p@120Hz.
- Built-in 2 HDMI and 1 USB-C input ports.
- USB Type-C supports PD (Power Delivery) for device charging.
- Built-in contact closure for an external control keypad, 2-CH audio output, and relay for projector screen control.
- Supports auto sensing for HDMI and USB-C input.
- Controllable via IR remote, RS232 command and external control keypad.

Diagram



Panel View



No	Interface/ Port	Description
1	Internal IR Receiver	To receive IR signal from IR remote, carrier frequency at 38KHz.
2	Blank LED Button	To turn on/off the video display, auto-sensing, and default to factory settings (Please refer to Description 7).
3	USB-C LED Button	To select USB Type-C DP Alternate Mode as the video output.
4	HDMI 1 LED Button	To select HDMI 1 as the video source
5	HDMI 2 LED Button	To select HDMI 2 as the video source
6	USB-C input Port	To use a USB-C cable to connect with a video/ audio source, can also charge the connected device (Please refer to Description 2).
7	Audio Input	To use a 3.5mm audio cable to connect with a DVD player or a microphone.
8	HDMI 1 Input Port	To use an HDMI cable to connect with an HDMI source (Please refer to Description 2).
9	HDMI 2 Input Port	To use an HDMI cable to connect with an HDMI source (Please refer to Description 2).
10	DIP Switch	To set up the EDID function (Please refer to Description 3)
11	HDMI Output Port	To Use an HDMI cable to connect with a HDMI display, such as a monitor or a projector.

12	Audio Output Interface	To use an audio cable to connect with speakers or an amplifier (Please refer to Description 4).
13	Relay Interface	To connect with a projector screen to adjust the screen position (Please refer to Description 5)
14	Contact Closure	To connect with an external control keypad.
15	External IR Interface	To use a 3.5mm IR cable to connect with an external IR receiver (carrier frequency at 38KHz).
16	RS232 Interface	To connect with a PC for firmware upgrade or RS232 control (Please refer to Description 7).
17	Power Interface	To connect with a lockable power supply (Suggest using at least DC 24V 3A power adapter).

Description 1 – LED Indications

LED Color	LED Status	USB-C / HDMI 1 / HDMI 2	Blank
No Color	Off	No Video	On
Blue	Blinking	Detecting	-
Blue	On	Video Display	Off

Description 2 – Recommended Cables & Connections

1. The USB-C port only delivers video/ audio and power, and doesn't support data transfer.
2. Some USB-C cables do not support video/audio transfer, please use those cables with e-mark and compliant with USB3.2.
3. Once unplugged the USB-C device, we recommend you wait for 5 seconds to connect with the next USB-C device. Frequently switching may result in the device undetected, which needs to unplug the device and plug it again to work.
4. We recommend using premium and certified cables
 - Using an HDMI cable within 5M is recommended.
 - Using a USB Type-C cable within 2M is recommended.
5. Bad quality cables, connectors, inappropriate connections may cause unstable signal transmission.

Description 3 – EDID

Mode & Configuration

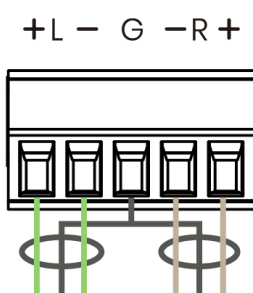
EDID Mode	Switch 1	Switch 2	Description
Pass Through Mode	OFF ↑	OFF ↑	Refer to the connected monitor EDID (audio supports 192KHz)
4K Mode	ON ↓	OFF ↑	Resolution at 4K (Audio supports 2CH@48KHz)
1080p Mode	Any	ON ↓	Resolution at 1080p (Audio supports 2CH@48KHz)

※ After finishing the setting, make sure to turn the product off and turn it on again.

Description 4 – Audio

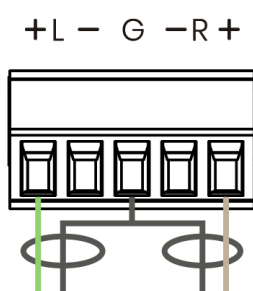
1. Connect Audio out to a balanced stereo audio speakers

Audio



2. Connect Audio out to an unbalanced stereo audio speakers

Audio



※ The surround sound will output only through 2 channels

Description 5 – Relay

Relay



Interface	Description
On	Normally Open
Com	Common Contact
Off	Normally Closed

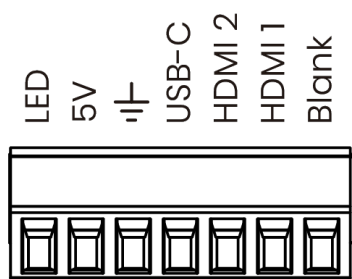
Contact Rating

Load Type	
Max. Allowable Voltage	AC 120V
	DC 24V
Max. Allowable Current	AC 1A

Description 6 – Contact Closure

Please pay attention to the electrical wiring, wrong wiring may damage the product.

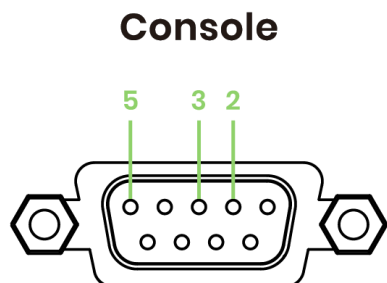
Contact Closure



Pin	Function
LED	To enable LED indications on the control keypad
5V	To provide 5V for the control keypad
GND	To connect a ground wire for the control keypad
USB-C	Connect a control keypad module to trigger USB-C button
HDMI 1	Connect a control keypad module to trigger HDMI 1 button
HDMI 2	Connect a control keypad module to trigger HDMI 2 button
Blank	Connect a control keypad module to trigger Blank button

Description 7 – Console

- Please use a male to female RS232 cable to connect the console port (Female) with a PC (Male).
- Pinout



Position	Pin Definition
Pin 2	TX
Pin 3	RX
Pin 5	GND

Description 8 – Switching Mode

Manual Mode

1. The priority of manual switching is over that of auto-switching.
2. When 2 inputs are connected, the manual switching function will turn off the auto switching function for 20 secs.
3. When turning off the auto-switching function, you can only switch the video through pushbuttons, IR remote, and RS232 commands.

Auto Mode

1. HUS03-4K6G will auto-detect the USB-C, HDMI 1, and HDMI 2 input and display the available video.
2. Auto mode priority

Priority	Input
1	Last Displayed/ Connected Video
2	USB Type-C
3	HDMI 1
4	HDMI 2

3. When multiple inputs are connected and remove one of them, HUS03-4K6G will auto-detect the inputs for 6 secs and display the next available video source.
4. When you connect a video input and then plug in the next one, HUS03-4K6G will display the last connected source.

Caution

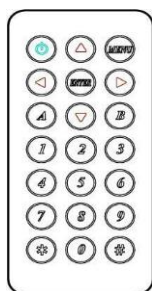
When switch between video inputs, HUS03-4K6G will need to wait for 5~8 secs to display the video source.



Turn On/ Off Auto Mode

1. Press and hold the “Blank” button for 3 secs to turn on/ off the auto mode.
2. Connect a PC with the console port and use RS232 command to turn on/ off the auto mode (Please refer to the RS232 command chart)
3. LED indications for Auto mode status
 - a. Auto Mode: On
 - a. LED Indications: USB-C, HDMI 1, HDMI 2 will blink 6 times (About 5 secs) after turning on HUS03-4K6G. And the LED of connected inputs will stay on.
 - b. Auto Mode: Off
 - a. LED Indications: USB-C, HDMI 1, HDMI 2 will blink 2 times (About 5 secs) after turning on HUS03-4K6G. And the LED of connected inputs will stay on.








Description 9 – IR Remote

















Configuration



If you use the IR remote for the first time or just replace the battery, please set up the IR remote ID as 0 by pressing  and  , which will match the remote ID with that of HUS03-4K6G.

Buttons & Functions

Button	Function
	Blank ON/ OFF
	To the previous video
	To the previous video
	To the next video
	To the next video
	Reserved
	Reserved

	Select USB-Type C as the video source
	Select HDMI 1 as the video source
	Select HDMI 2 as the video source
	Select USB Type-C/ HDMI 1/ HDMI 2 as the audio input source
	Select 3.5mm as the audio input source
	RELAY OFF
	RELAY ON
	Select HDMI audio as the audio output
	Select 3.5mm as the audio output
	Mute/ unmute the audio
	Reserved
	Reserved
	Reserved
	Reserved
 	Press and hold both buttons for 5 seconds to reset all settings

Description 10 – RS232 Configuration & Commands

- Serial Configuration: 8-N-1, Baud Rate at 115200
- All commands (Non-case sensitive) are shown below

Command	Description	Remark
BLANK△ 1/0	BLANK ON/OFF	1: OFF 0: ON
BLANK△ ?	Get BLANK status	
POWER△ 1/0	POWER ON/ OFF	1: ON 0: OFF
POWER△ ?	Get POWER status	
PORT△1/2/3	Switch to HDMI 1/ HDMI 2/ USB Type-C	1: USB Type-C
		2: HDMI 1
		3: HDMI 2
NEXT	To next port	
PREV	To previous port	
AUDIO△ 1/0	Switch Input audio source	0: Input Source 1: 3.5mm
AUDIO△ ?	Get input audio source status	
SPEAKER△ 1/0	Switch output audio source	0: HDMI 1: External Audio Output
SPEAKER△ ?	Get output audio source status	
AUDIOMUTE△ 1/0	Unmute/ mute output audio	0: unmute 1: mute
AUDIOMUTE△ ?	Get output audio mute status	
RELAY△ 1/0	RELAY ON/ OFF	0: OFF 1: ON
RELAY△ ?	Get RELAY status	
RESET	Reset the Device	
VERSION	Get firmware version	
AUTO△1/0	Auto Mode ON/ OFF	0: OFF 1: ON
AUTO△?	Get Auto Mode status	
DEFAULT	Default to Factory & Reset	
HELP	Show all commands	
?		

Description 11 – Factory Default

Use Blank Button

- Step 1 – Push and hold the “Blank” button when power off.
- Step 2 – Immediately put on the power and push and hold the “Blank” button for 5 secs until 4 LEDs being on.
- Step 3 – Wait on the Reboot and finish the reset.

Use IR Remote

- Step 1 – Push and hold the* and # for 5 secs.
- Step 2 – Wait on the Restart and finish the reset.

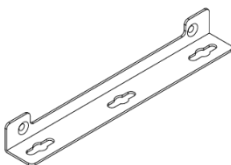



Description 12 – Setting Memorizing

The product will memorize the last settings before power off. For example, you select USB-C as the video input and turn off the power afterward. Then, you power the product, and your video output will still keep on USB-C.

Specification

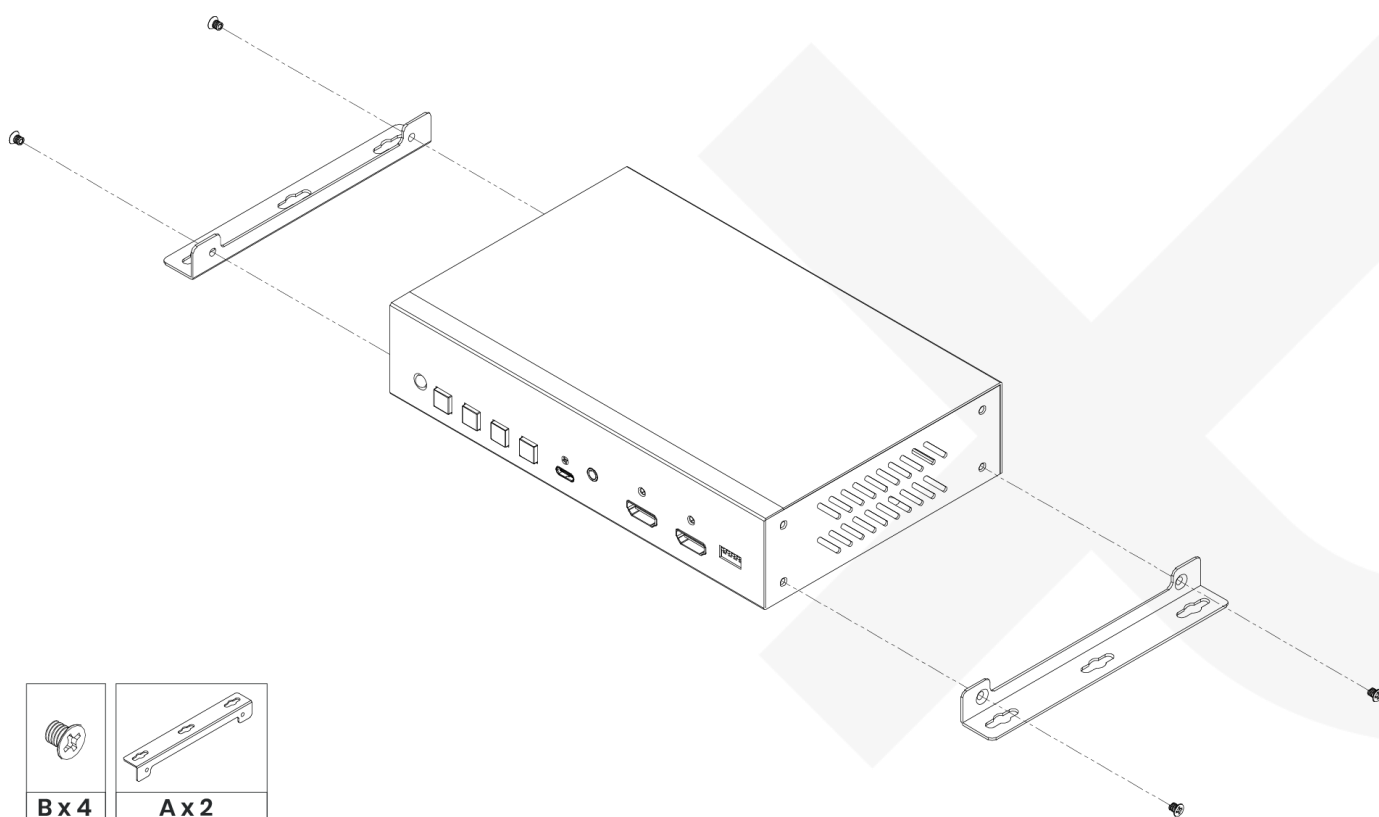
Item No	HUS03-4K6G
Support	
Compliance	HDMI 2.0、HDCP 1.4/2.3、HDR10、DPI.3
Max. Video Resolution	4096 x 2160@60Hz
Chroma Subsampling	4:4:4, 4:2:2, 4:2:0
Color Space	RGB, YCbCr
Color Depth	8-bit, 10-bit, 12-bit, 16-bit
Audio Format	LPCM 7.1 @ 192KHz / Dolby TrueHD / DTS-HD MA
Ports & Interfaces	
Video Input	1 x USB Type-C, 2 x HDMI Type-A
Contact Closure	1 x 7-pin Terminal Block
Relay	1 x 3-pin Terminal Block
Audio Input	1 x 5-pin Terminal Block
Console	1 x RS232 for firmware upgrade and RS232 command
Audio Output	1 x (3.5mm) Phone Jack
IR Interface	1 x Internal receiver, 1 x 3.5mm Phone Jack (38KHz / θ 45 deg / 6M)
Power	
Power Supply	DC24V 5A (120W)
Power Consumption	Max 21.6W (900mA), Low Power 4.8W (200mA)
USB-C Power Delivery	DC5V 3A(15W), DC9V 3A(27W), DC15V 3A(45W), DC20V 3A(60W)
Ambient Temperature	
Operation Temperature	-20 ~ 70℃
Storage Temperature	-25 ~ 85℃
Humidity	Up to 90%
Physical Characteristics	
Dimension	190 x 131.5 x 40mm
Weight	605g

Installation Guide

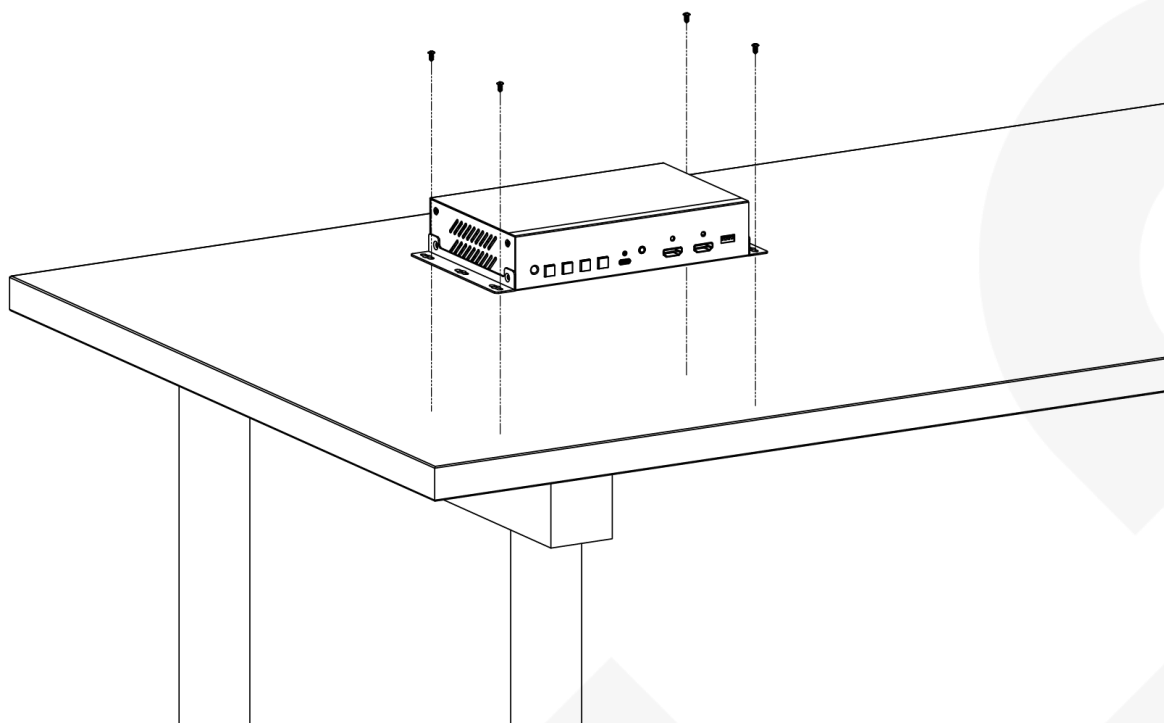
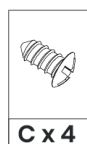
Accessory			
A	Corner Iron		x 2
B	SMF Screw (Machine Screw)		x 4
C	SWT Screw (Self-drilled Screw)		x 4
D	Rubber Pads		x 4

Fix on a Table

Step1- Evenly install 2 SMF screws and 1 corner iron on each side of HUS03-4K6G

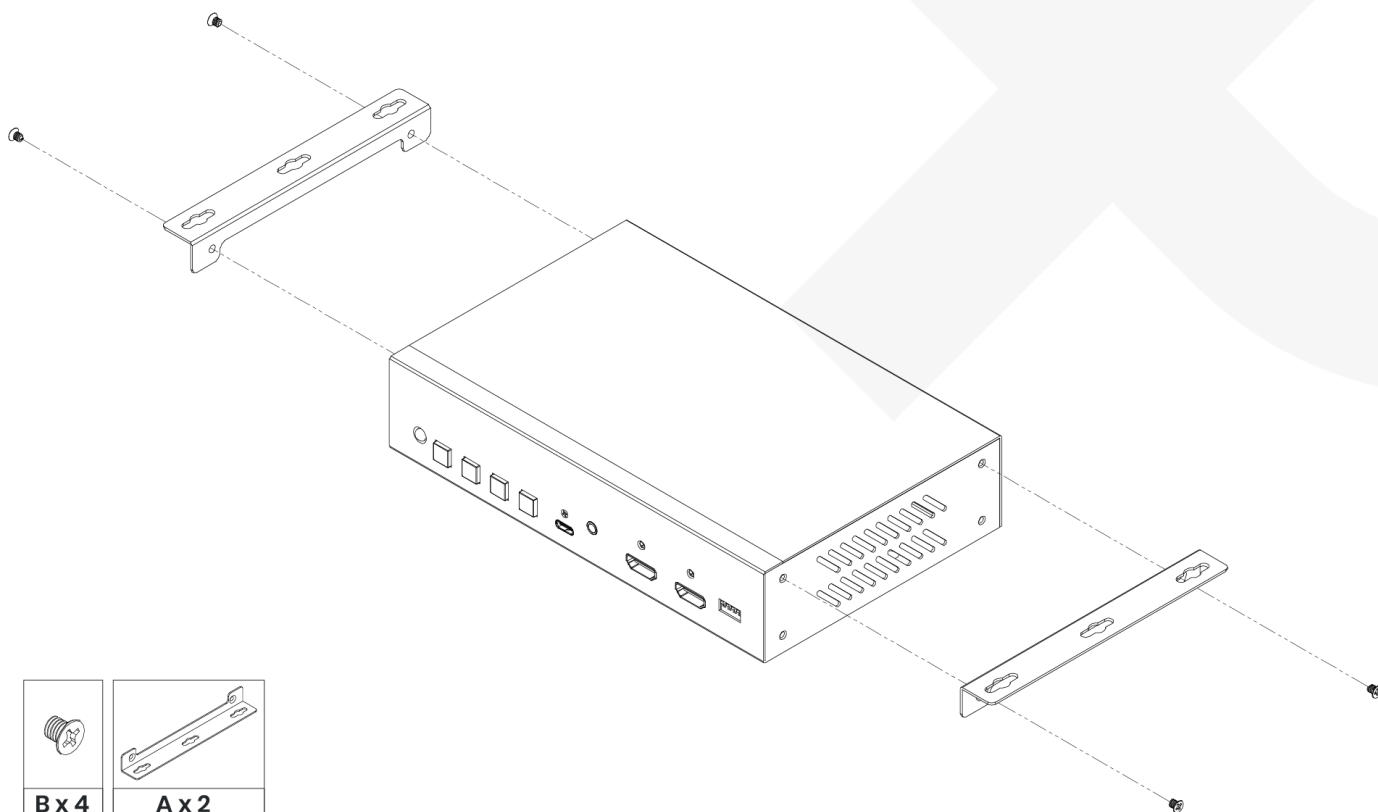


Step2 - Use 4 SWT screws to firmly fix HUS03-4K6G on a table.

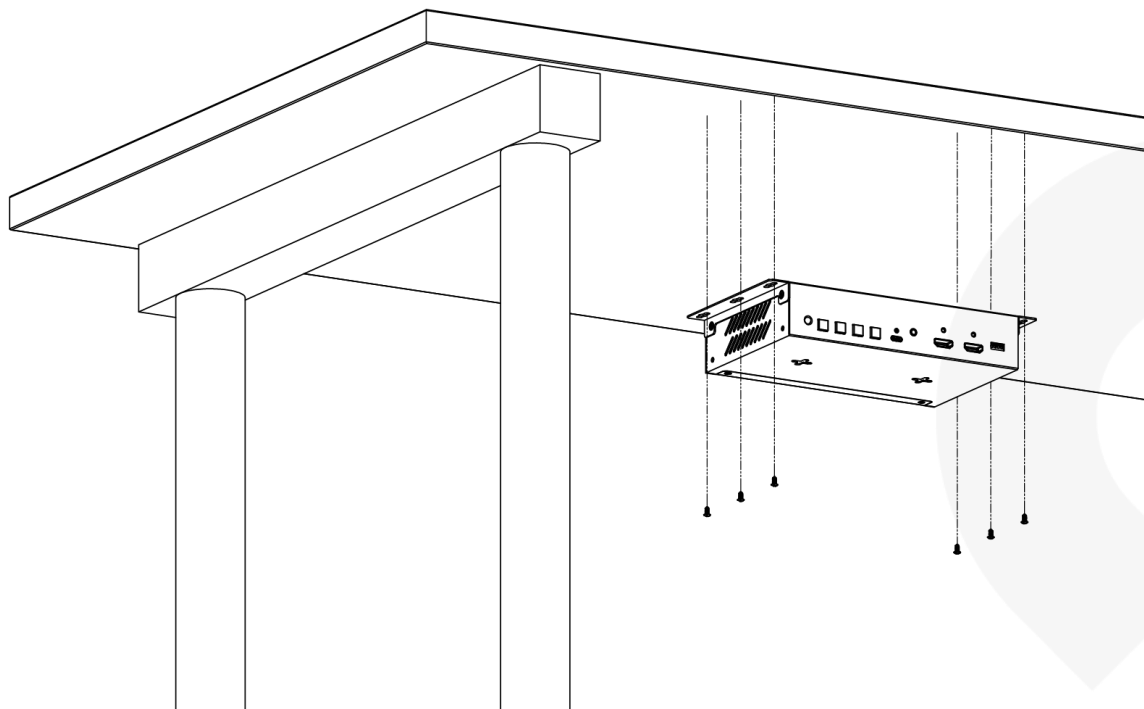
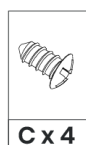


Fix beneath a table

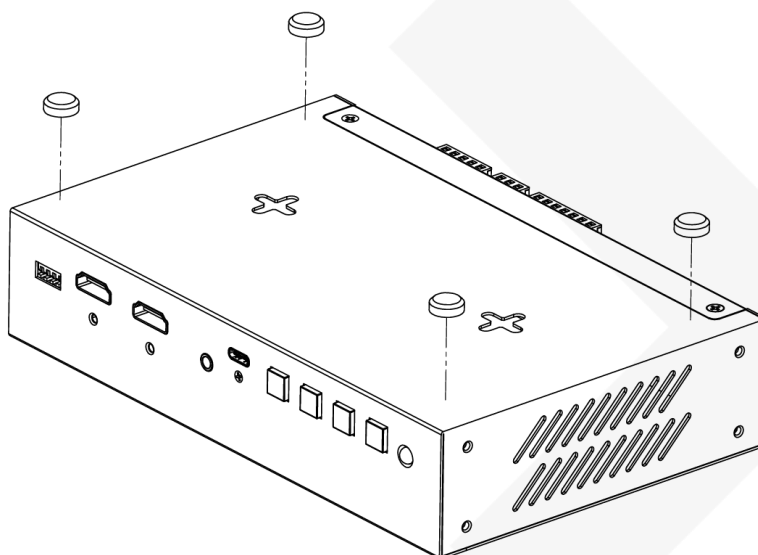
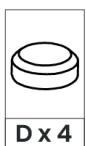
Step1 - Evenly install 2 SMF screws and 1 corner iron on each side of HUS03-4K6G



Step2 - Use 4 SWT screws to firmly fix HUS03-4K6G beneath the table.

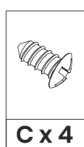
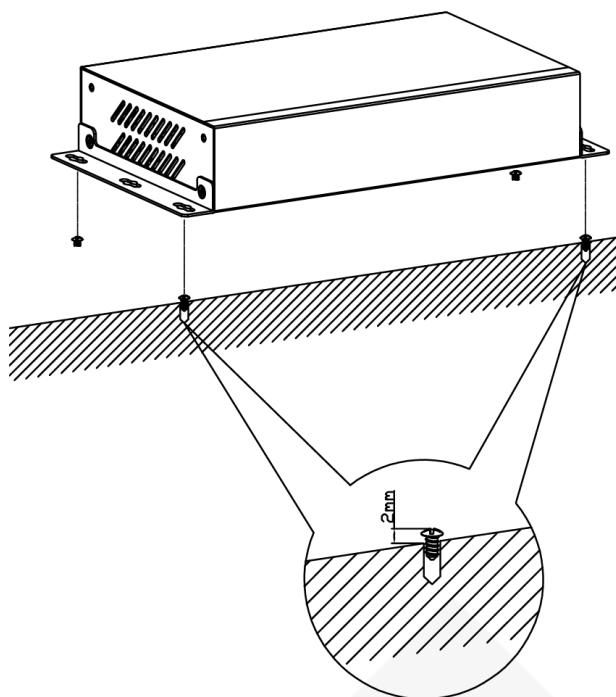


Use rubber pads to prevent the product from slipping down the platform

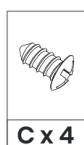
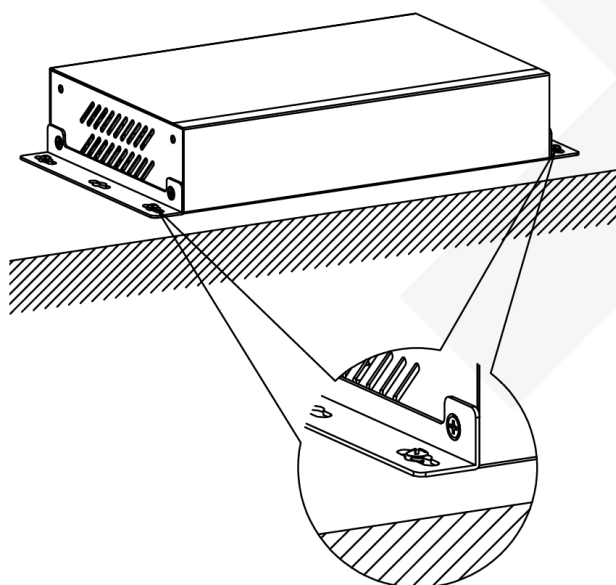


Wall Mounting

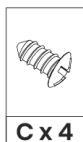
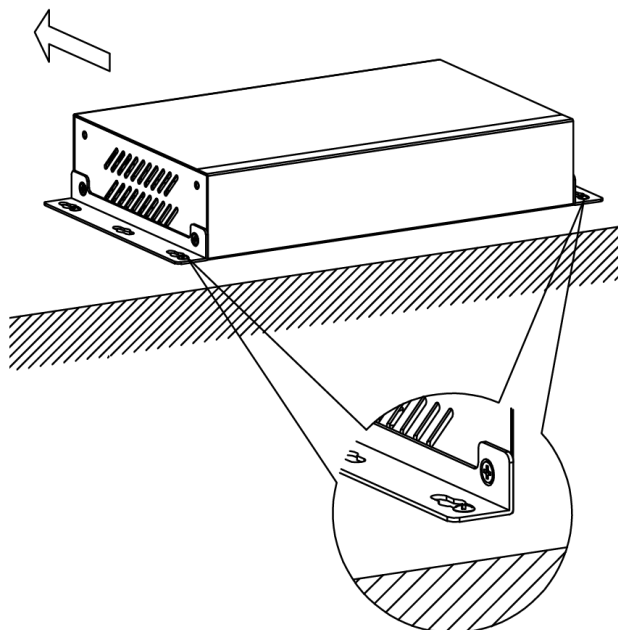
Step 1: Install the SWT screws on a platform, and leave a 2mm high clearance.



Step 2: Place HUS03-4K6G on the platform and fit its holes in the corresponding screw positions.



Step 3: Move HUS03-4K6G in a parallel direction until it gets fixed



Troubleshooting

If no videos are shown after connecting all cables and power, please follow the EDID configuration instruction or refer to the charts below to change your TV resolution to supported one.

Resolution

DCI Standard

	Resolution	Refresh Rate (Hz)		
		24	25	30
UHD/HD/SD	4096 × 2160p DCI	50	60	
		24	25	30
	3840 × 2160p UHD	50	60	
		24	25	30
	1080p	23.97	24	25
		29.97	30	50
		59.94	60	120
	1080i	50	60	
	720p	50	59.94	60
	576p	50		
	480p	59.94	60	
	480i	60		

VESA Standard

VESA	Resolution	Refresh Rate (Hz)		
	2560 × 1600	60		
	2560 × 1440	60		
	2048 × 1280	60		
	2048 × 1152	60		
	1920 × 1440	60	75	
	1920 × 1200	50	60	
	1920 × 1080	60		
	1856 × 1392	60	75	
	1792 × 1344	60	75	
	1680 × 1050	60		
	1600 × 1200	50	60	65
		70	75	
	1600 × 1024	60		
	1600 × 900	60		
	1440 × 960	72		
	1440 × 900	60	75	85
	1440 × 788	60		
	1400 × 1050	60		
	1400 × 788	60		
	1366 × 768	60		
	1360 × 768	60		
	1280 × 1024	60	75	85
	1280 × 960	60	85	
	1280 × 800	60	75	120
	1280 × 768	60	75	120
	1152 × 870	75		
	1152 × 864	75		
	1024 × 768	60	70	75
	1024 × 576	60		
	852 × 480	60		
	848 × 480	60		
	832 × 624	75		
	800 × 600	56	60	72
		75	85	120
	720 × 400	70	85	
	640 × 480	60	75	85