SC&T

HDMI Distributor

User Manual

Model : HUE03-4K

4K HDMI/DisplayPort/USB-C CAT5e.6 Extender

Introduction

HUE03-4K features the latest video interfaces, HDMI/ DisplayPort/USB-C, supporting up to 4K resolution, which provides user BYOD (Bring Your Own Device) presentations and collaborative meetings with a complete panel for smartphones, laptops & tablets.

With the compatible HDMI receiver, HE03R-4K & HE03LR-4K, the solution suits any size of meeting rooms from small to the large scales. Video presents on up to 250 HDMI displays simultaneously without integrating with HDMI distributors.
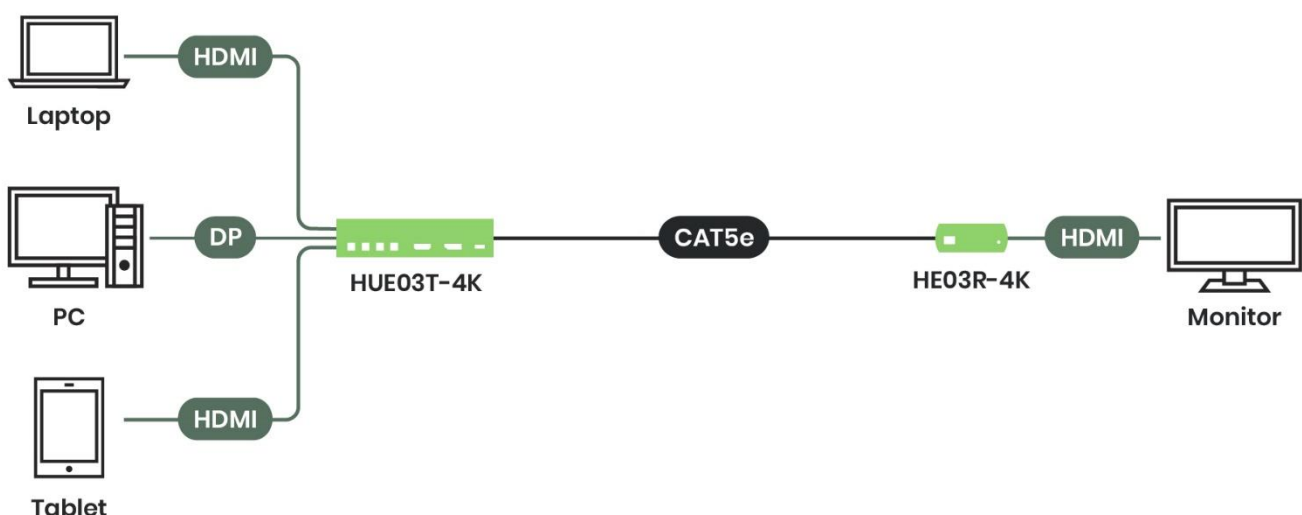
Additionally, HUE03T-4K could be integrated with external control keypads by I/O and RS232 signals which offers easy and intuitive control methods.
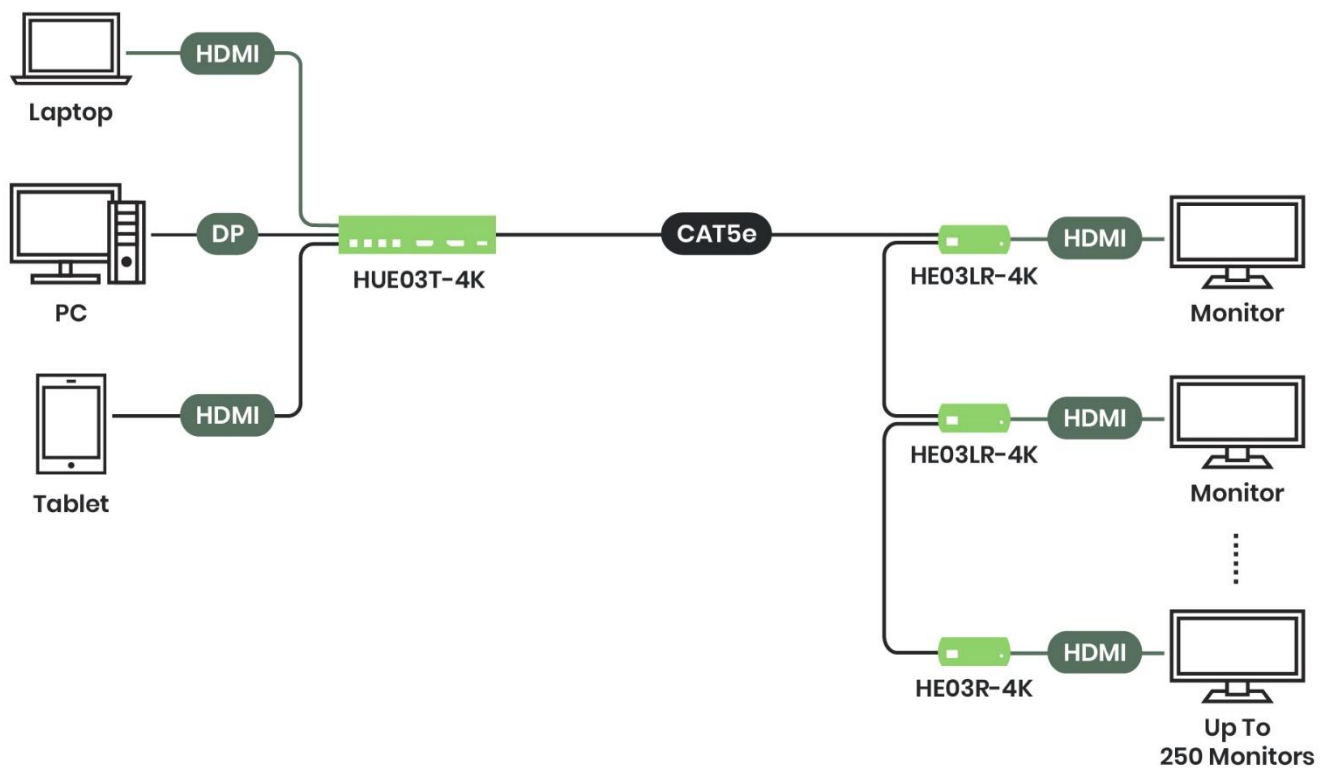
Features

- Resolution up to 4K@30Hz 4:4:4.
- Signal extension up to 150M over CAT5e cable.
- Supports DP-ALT Mode, providing up to 15W/39W power for a USB-C device.
- Supports automatic or manual switching.
- Supports one-button-click EDID management.
- Supports I/O trigger for external control keypad.
- Managed via panel buttons, console, and external control keypad.
- Works with HE03LR-4K (a chainable HDMI receiver) to split one HDMI source to up to 250 HDMI displays.
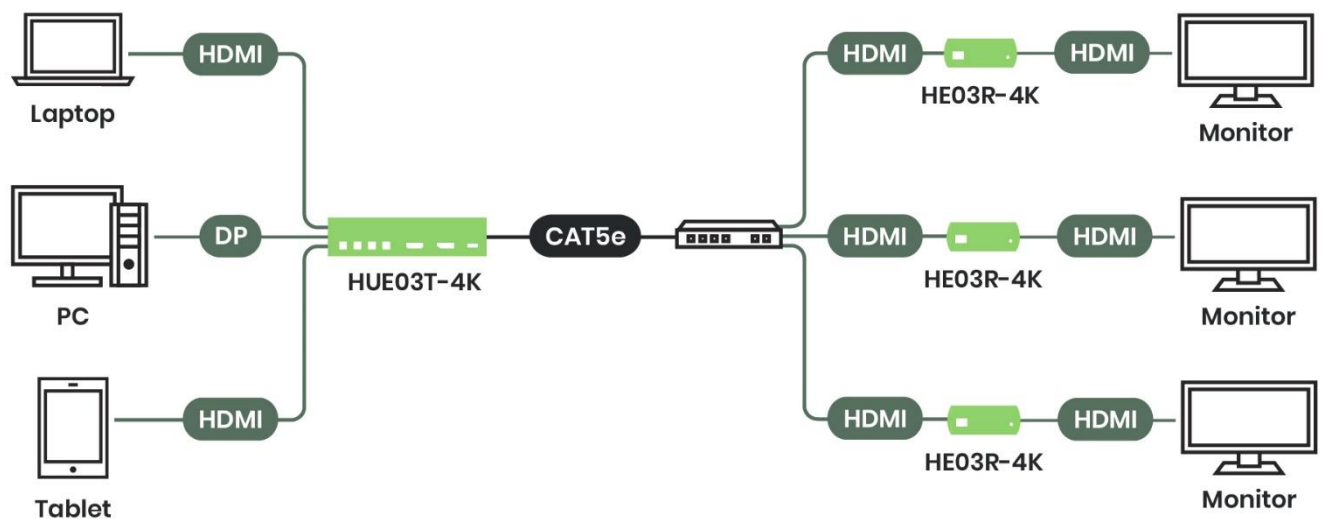
Installation View

Extends one of HDMI/DP/USB-C signals to one display

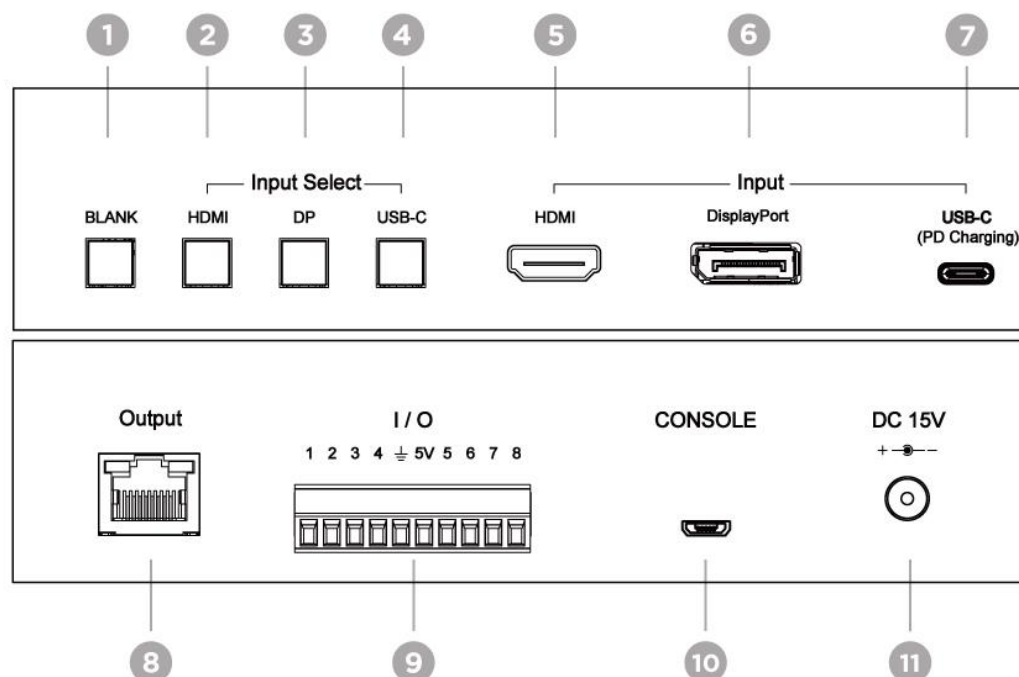## Extends one of HDMI/DP/USB-C signals to multiple displays

Extends one of HDMI/DP/USB-C signals to multiple displays through Gigabit Ethernet Switch

* EEE(Energy-Efficient Ethernet) function must be turned off, when connect to Gigabit Ethernet Switch.

Panel View

HUE03T-4K

No.	Interface	Function
1	BLANK Button	Press to send or cut off video and audio signals to receiver. (LED light intermittently when cutting off the signals.) Press to set on/off of Auto-detection mode. (Refer to Auto-detection Mode)
2	HDMI Button	Press to select the video and audio from HDMI input.
3	DP Button	Press to select the video and audio from DisplayPort input.
4	USB-C Button	Press to select the video and audio from USB-C input.
5	HDMI Input	Connects to HDMI source with HDMI cable.
6	DisplayPort Input	Connects to DisplayPort source with HDMI cable.
7	USB-C Input	Connects to USB-C source with certified USB-C cable. (Refer to Description1,2)
8	Output	Connect to HDMI receiver for displaying input source by Ethernet cable. (Refer to Description 3)
9	I/O port	Connect 10-pin captive screw terminal connector to external control key pad. (Refer to Dry Contact Instruction)
10	Console	Connect micro-USB cable for control or firmware update. (Refer to RS232 command chart)
11	Power Input	Connects to DC15V 3.5A adapter with cable lock. (Refer to Description 4)

Description

1. USB-C input port support 15W/39W power output and DP-Alt mode (video/audio transmission) only. USB data transmission is not supported.
2. USB-C cable must support DP-Alt mode or with E-mark, or the general USB-C cable would only support charging function.
3. Power input lower than DC15V 3.5A, HUE03T-4K may not charge the device or work functionally.

Auto-detection Mode

HUE03T-4K automatically detects the connection of HDMI/ DisplayPort/ USB-C input and automatically switches the input to the connected source.
When a source is disconnected for 6 seconds, HUE03T-4K will automatically switch input to another connected source. (The auto detecting sequence: HDMI>DP>USB-C)

Enable/Disable (ON/OFF) Auto-detection Mode

There are two ways to turn on/off auto-detection mode
1. Front panel button: Press BLANK button for 3 seconds. (The same method for both turning on/off)
2. USB to COM port command: Refer to the RS232 command chart.

Identify the on/off status of Auto-detection

There are two ways to check the on/off status of auto-detection mode.
1. Re-plug the power cord and check the LED status of HDMI& DisplayPort& USB-C buttons
    ON: All HDMI/ DisplayPort/ USB-C LEDs flash at the same time for six cycles.
    OFF: HDMI/ DisplayPort/ USB-C LED lights one after another for two cycles.
2. RS232 command: Refer to RS232 command chart
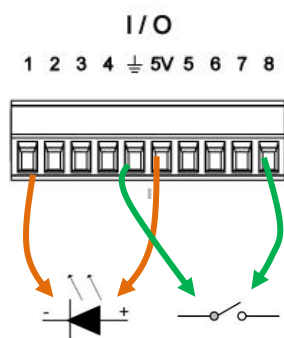
Contact Closure

I / O

1 2 3 4 ⏚ 5V 5 6 7 8

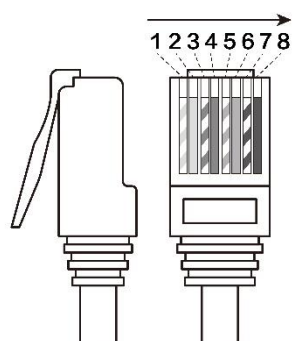| No.	Interface	Function
1	LED 01	Indicates Blank Button status.
2	LED 02	Indicates HDMI Button status.
3	LED 03	Indicates DisplayPort Button status.
4	LED 04	Indicates HDMI Button status.
⏚	GND	Ground
5V	DC5V	Provides 5V power
5	Blank Port	Connects cable to external keypad for selecting Blank function
6	HDMI Port	Connects cable to external keypad for selecting HDMI Input
7	DisplayPort Port	Connects cable to external keypad for selecting DisplayPort Input
8	USB-C Port	Connects cable to external keypad for selecting USB-C Input

Contact Closure Connection

※ Please check the positive and negative of LED before connect the cable. Otherwise, it might damage the device or lead no reaction.

RJ45 Pinout

(PIN TIA/EIA-568B)

(PIN TIA/EIA-568B)	
PIN	Wire Color
1	Orange-white
2	Orange
3	Green-white
4	Blue
5	Blue-white
6	Green
7	Brown-white
8	Brown

Transmission Distance

Distance	4K/1080p
HDMI IN/OUT	5M
DisplayPort IN	3M
USB-C IN	2M
CAT5e	150M

Cable Recommendation

1. The transmission distance test report below is by means of using the COMMSCOPE 57535-2 (CAT5e 24AWG) cables
2. It's recommended to use high quality cable, such as Premium Certified HDMI cable, DisplayPort 1.3 Cable, USB-C cable with E-mark or USB3.2 standard cable).

RS232 Settings

Terminal setting: [152000bps (8-N-1)]

RS232 Command Table

Entering the Command: Command+ △ (space)+Parameter+ Enter

Command	Description	Parameter
POWER△ 1/0	Power ON/OFF	1: ON; 0: OFF
POWER△ ?	Get Power status	
PORT△1/2/3	Switch between HDMI/DP/USB-C Input Port	1: HDMI
		2: DP
		3: USB Type-C
PORT△ ?	Get Port status	
RUN_RESET	Reset Device	
VERSION	Display firmware version	
AUTO_MODE△1/0	Auto Mode ON/OFF	1: ON; 0: OFF
AUTO_MODE△?	Get Auto Mode status	
DEFAULT	Restore to Factory Default	
HELP	Show all commands	
?		

※ When the command place correctly, system would response "OK" and execute.

※ When the command place incorrectly, system would response "NG"

Resolution

	Resolution	Refresh Rate (Hz)		
	4096 × 2160p DCI	24	25	30
	3840 × 2160p UHD	24	25	30
UHD/HD/SD	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		

* Not all of devices' 480i resolution are supported under HUE03-4K transmission due to the compatibility issue.

	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		
VESA	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

Optional Model

WUSBC-2M Thunderbolt 3 USB-C Cable 2M (USB-C to USB-C)
HE03LR-4K 4K HDMI CAT5e/6 Distribution 1 x 3 Chainable Receiver

Package Contents

1 x HUE03T-4K
1 x HE03R-4K
1 x DC15V 3.5A power supply
1 x DC5V 2A power supply
2 x Mounting brackets
12 x Mounting screws
4 x Screw hole plugs
4 x Rubber Cushion

Specification

ITEM NO.	HUE03T-4K	HE03R-4K	HE03LR-4K
Support			
Compliance	HDCP1.4, HDR 10, DP-ALT Mode		
Max. Video Resolution	4K@30Hz 4:4:4 12bit		
Max. Transmission Distance	120M over CAT5e, 140M over CAT6 cable		
Audio Format	LPCM 7.1@192KHz, Dolby True HD, Dolby Atmos, DTS-HD MA, DTS:X		
Interfaces & Ports			
Video Input	1 x HDMI Type A, 1 x DisplayPort, 1 x USB-C	1 x RJ45	1 x RJ45
Video Output	1 x RJ45	1 x HDMI Type A	1 x HDMI Type A, 2 x RJ45
Dry Contact	10-pin captive screw terminal		
Console	Micro USB-B		
Power			
Power Supply	DC15V 2.6A (39W) DC5V 3A(15W)	DC 5V 2A	DC 5V 2A
Power Consumption	460mA (Max)	960mA (Max)	1400mA (Max)
Ambient Temperature			
Operation	0 to 70℃	0 to 55℃	0 to 55℃
Storage	0 to 55℃	0 to 55℃	-20 to 85℃
Humidity	Up to 95%	Up to 95%	Up to 95%
Physical Characteristics			
Dimension	165 × 95 × 40 mm	88 x 110 x 30mm	88 x 145 x 30mm
Weight	440g	230g	300g

RoHS CE