



# 4K60 HDMI KVM Extender Over CATx 120m

[ HDMI 2.0b, 2-Way IR, USB 1.1, PoC, 120m ]



**User Manual**

VER 1.0



## Thank You For Purchasing This Product

For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

## Surge Protection Device Recommended

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lighting strikes, etc. Use of surge protection systems is highly recommended to protect and extend the life of your equipment.

## Table of Contents

1.	Introduction .....	3
2.	Features .....	3
3.	Package Contents .....	4
4.	Specifications .....	4
5.	Operation Controls and Functions .....	6
5.1.	Transmitter Panel.....	6
5.2.	Receiver Panel.....	7
5.3.	IR Pin Definition.....	9
6.	Application Example .....	10



## 1. Introduction

This 18Gbps HDBaseT KVM Extender extends HDMI signals, bi-directional IR control signals, and USB KVM signals up to 120m (394 feet) for 4K60 signal, and 150m (492 feet) for 1080P signal, using a single CAT6 cable. The device converts HDMI signals to standard HDBaseT signals for transmission over LAN cable. Through the bi-directional IR signal pass-through function, users can easily control signal source device or display device remotely. It supports video resolutions up to 4K@60Hz YUV 4:4:4, USB KVM, and Power Over Cable (PoC) function.

The Extender is versatile and finds applications in video conference systems, multimedia signal broadcasting, PC and HDMI signal extension, and more.

## 2. Features

- ☆ HDMI 2.0b, HDCP 2.2 and USB 1.1 compliant
- ☆ Supports 18Gbps video bandwidth
- ☆ Supports video resolutions up to 4K@60Hz YUV 4:4:4
- ☆ Transmission distance can be extended up to 492ft / 150m at a resolution of 1080P@60Hz, or 394ft / 120m at 4K@60Hz 4:4:4 via a single CAT6 cable
- ☆ Supports bi-directional IR signal and USB 1.1 KVM signal pass-through
- ☆ Supports bi-directional PoC (Power over Cable) functionality
- ☆ Compact design for easy and flexible installation

### 3. Package Contents

- ① 1 x 18Gbps HDBaseT Extender (Transmitter)
- ② 1 x 18Gbps HDBaseT Extender (Receiver)
- ③ 1 x IR Blaster cable (1.5 meters)
- ④ 1 x IR Receiver cable (1.5 meters)
- ⑤ 1 x USB cable (1.5 meters)
- ⑥ 4 x Mounting Ears
- ⑦ 8 x Machine Screws (KM3\*4)
- ⑧ 1 x 24V/1A Locking Power Supply
- ⑨ 1 x User Manual

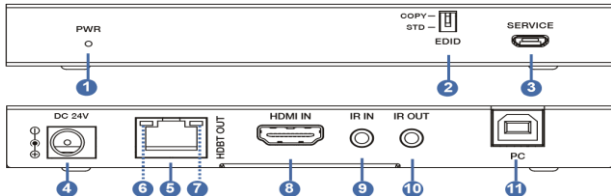
### 4. Specifications

Technical	
HDMI Compliance	HDMI 2.0b
HDCP Compliance	HDCP 2.2
Video Bandwidth	18Gbps
Video Resolution	Up to 4K@60Hz YUV 4:4:4
USB Compliance	USB 1.1
IR Level	5Vp-p
IR Frequency	Wideband 20K - 60KHz
Transmission Distance	1080P@60 – 150m, 4K60 – 120m
Color Space	RGB, YCbCr_4:4:4, YCbCr_4:2:2
Color Depth	8-bit, 10-bit, 12-bit (1080P@60Hz) 8-bit (4K@60Hz YUV4:4:4) 8-bit, 10-bit, 12-bit (4K@30Hz)
HDR	HDR, HDR10, HDR10+, Dolby Vision, HLG

Audio Format	LPCM 7.1CH, Dolby TrueHD, and DTS-HD Master
ESD Protection	Human body model — ±8kV (air-gap discharge) & ±4kV (contact discharge)
<b>Connections</b>	
Transmitter	Input: 1 × HDMI IN [Type A, 19-pin female] 1 × IR IN [3.5mm Stereo Mini-jack] 1 × SERVICE [Micro-USB jack] 1 × USB [USB-B, 4-pin female]  Output: 1 × IR OUT [3.5mm Stereo Mini-jack]  Network: 1 × HDBT OUT [RJ-45]
Receiver	Input: 1 × IR IN [3.5mm Stereo Mini-jack] 1 × SERVICE [Micro-USB jack]  Output: 1 × HDMI OUT [Type A, 19-pin female] 1 × IR OUT [3.5mm Stereo Mini-jack] 2 × USB [USB-A, 4-pin female]  Network: 1 × HDBT IN [RJ-45 with light]
<b>Mechanical &amp; Environmental</b>	
Housing	Metal Enclosure
Color	Black
Dimensions	Transmitter / Receiver: 140mm (W) × 65mm (D) × 18mm (H)
Weight	Transmitter: 246g, Receiver: 246g
Power Supply	DC 24V/1A Supports PoC functionality
Power Consumption	10W
Operating Temperature	0°C ~ 40°C / 32°F ~ 104°F
Storage Temperature	-20°C ~ 60°C / -4°F ~ 140°F
Relative Humidity	20 ~ 90% RH (non-condensing)

## 5. Operation Controls and Functions

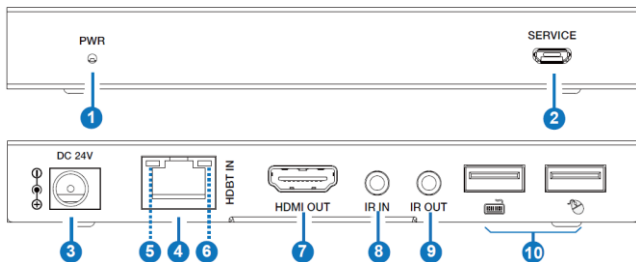
### 5.1. Transmitter Panel



No	Name	Function Description
1	PWR LED	The red LED is on when the Transmitter is powered on.
2	EDID DIP switch	Used for EDID setting (set to COPY by default). <b>COPY:</b> Copy the EDID of the HDMI OUT port of Receiver. <b>STD:</b> Default 1080P 2CH
3	SERVICE	Firmware update port.
4	DC 24V	DC 24V/1A power input port. Note that the extender supports PoC function. Either the Transmitter or Receiver needs to connect to 24V/1A power supply, and the other does not need the power supply.
5	HDBT OUT	HDBT output port. Connects to the HDBT IN port of the Receiver with CAT6 cable.
6	Link Signal Indicator (Green)	<ul style="list-style-type: none"> <li>● <b>Illuminating:</b> Transmitter and Receiver are in good connection status.</li> <li>● <b>Flashing:</b> Transmitter and Receiver are in poor connection status.</li> <li>● <b>Dark:</b> Transmitter and Receiver are not connected.</li> </ul>
7	Data Signal Indicator (Yellow)	<ul style="list-style-type: none"> <li>● <b>Illuminating:</b> HDMI signal with HDCP</li> <li>● <b>Flashing:</b> HDMI signal without HDCP</li> <li>● <b>Dark:</b> No HDMI signal</li> </ul>
8	HDMI IN	HDMI signal input port. Connects to HDMI source device such as PC, DVD player or Set Top Box.

9	IR IN	Connects to IR Receiver cable. The IR received signal will be sent to the IR OUT port of the Receiver.
10	IR OUT	Connects to IR Blaster cable. The IR emit signal is from the IR IN port of the Receiver.
11	PC	USB-B port. Connects to PC's USB 1.1 Port.

## 5.2. Receiver Panel



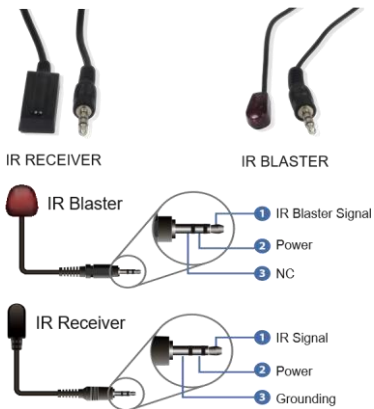
No	Name	Function Description
1	PWR LED	The power LED is on when the Receiver is powered on.
2	SERVICE	Firmware update port.
3	DC 24V	DC 24V/1A power input port. Note that the extender supports PoC function. Either the Transmitter or Receiver needs to connect to 24V/1A power supply, and the other does not need the power supply.
4	HDBT IN	HDBT input port. Connects to the HDBT OUT port of the Transmitter with CAT6 cable.
5	Link Signal Indicator (Green)	<ul style="list-style-type: none"> <li>• <b>Illuminating:</b> Transmitter and Receiver are in good connection status.</li> <li>• <b>Flashing:</b> Transmitter and Receiver are in poor connection status.</li> <li>• <b>Dark:</b> Transmitter and Receiver are not connected.</li> </ul>

6	Data Signal Indicator (Yellow)	<ul style="list-style-type: none"><li>• <b>Illuminating:</b> HDMI signal with HDCP</li><li>• <b>Flashing:</b> HDMI signal without HDCP</li><li>• <b>Dark:</b> No HDMI signal</li></ul>
7	HDMI OUT	• HDMI signal output port. Connects to HDMI display such as TV or monitor.
8	IR IN	Connects to IR Receiver cable. The IR received signal will be sent to the IR OUT port of the Transmitter.
9	IR OUT	Connects to IR Blaster cable. The IR emit signal is from the IR IN port of the Transmitter.
10	USB ports	Two USB-A ports. Connect to keyboard and mouse.



### 5.3. IR Pin Definition

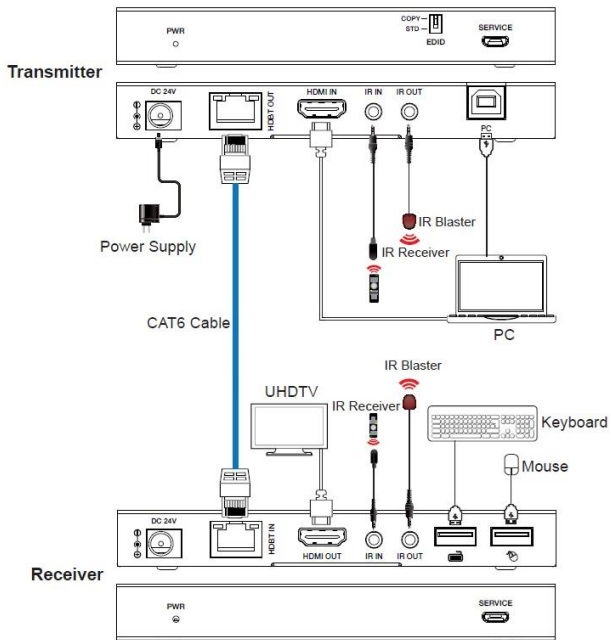
IR Receiver and Blaster pin's definition is as below:



Note:

- When the angle between the IR Receiver and the Remote Control is  $\pm 45^\circ$ , the transmission distance is 0 ~ 5 meters.
- When the angle between the IR Receiver and the Remote Control is  $\pm 90^\circ$ , the transmission distance is 0 ~ 8 meters.

## 6. Application Example



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HIGH-DEFINITION MULTIMEDIA INTERFACE

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