

8K60 HDMI™ Extender (50m) over Cat6



User Manual

VER 1.0

Thank you for purchasing this product

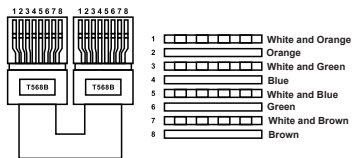
For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

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 in order to protect and extend the life of your equipment.

Caution

The network cable connection method required for this product is direct connection. Please do not cross connect.



Direct Interconnection Method

Table of Contents

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

1. Introduction

This is a high-performance, long-reach extender, which can extend HDMI™ signal and bi-directional IR signal over twisted pair copper cable. The transmission distance is up to 50m/164ft for 8K@60Hz, 4K@120Hz over CAT6 cable. The transmitter converts all input signals into the signal to be transmitted, and the receiver receives the signal and converts it back into the original signal. It can easily control the source device or display device on the remote end through CEC and bi-directional IR signal pass-through function.

It also provides exceptional quality, advanced and user-friendly operation, and flexible control.

2. Features

- ☆ Compliant with HDCP 2.3
- ☆ Video bandwidth is up to 48Gbps FRL and 18Gbps TMDS
- ☆ Video resolution is up to 8K@60 4:2:0 12bit, 4K@120Hz 4:4:4 12bit
- ☆ Transmission distance is up to 50m/164ft over CAT6 cable
- ☆ Supports all industry standard video resolutions including VGA-WUXGA and 480i-8K60
- ☆ HDMI™ re-clocking is helpful to solve HDCP compatibility and handshaking issues
- ☆ Support HDMI™ audio formats: PCM 2.0, LPCM 5.1, LPCM 7.1, (32K/44.1K/48K/88.2K/96K/176.4K/192K) (16/20/24); Dolby Digital, Dolby Digital plus, Dolby TrueHD, Dolby Atmos; DTS Surround, 96/24, ES, DTS Express, DTS-HD HRA, DTS HD Master, DTS:X
- ☆ Bi-directional PoC (Power over Cable) function to power extenders from either transmitter or receiver end
- ☆ CEC and bi-directional IR pass-through
- ☆ Support HDR10, HDR10+, Dolby Vision, HLG
- ☆ Support VRR, FVA, ALLM

3. Package Contents

- ① 1× 8K60 HDMI™ Extender (TX)
- ② 1× 8K60 HDMI™ Extender (RX)
- ③ 1× IR Blaster Cable (1.5m)
- ④ 1× IR Wideband Receiver Cable (1.5m)
- ⑤ 1× 12V/1A Multinational Power Supply
- ⑥ 4× Mounting Ear
- ⑦ 8× Machine Screw (KM3*4)
- ⑧ 1× User Manual

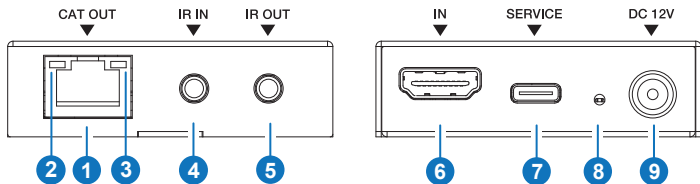
4. Specifications

Technical	
HDMI™ Compliance	HDMI™ 2.1
HDCP Compliance	HDCP 2.3
Video Bandwidth	48Gbps FRL and 18Gbps TMDS
Video Resolution (Input & Output)	640x480p60Hz, 800x600p60Hz, 1024x768p60Hz, 1280x1024p60Hz, 1360x768p60Hz, 1440x900p60Hz, 1440x1050p60Hz, 1680x1050p60Hz, 1920x1200p60Hz, 480i60Hz, 480p60Hz, 576i50Hz, 576p50Hz, 720p50Hz, 720p60Hz, 1080i50Hz, 1080i60Hz, 1920x1080p24/25/30/50/60/100/120/240Hz, 3840x2160p24/25/30/50/60/100/120/144Hz, 4096x2160p24/25/30/50/60/100/120/144Hz, 5120x2160p24/25/30/50/60/100/120Hz, 7680x4320p24/25/30/60Hz
Color Space	RGB 4:4:4, YCbCr 4:4:4, YCbCr 4:2:2, YCbCr 4:2:0
Color Depth	8/10/12-bit
Audio Formats	PCM 2.0, LPCM 5.1, LPCM 7.1, (32K/44.1K/48K/88.2K/96K/176.4K/192K) (16/20/24); Dolby Digital, Dolby Digital plus, Dolby TrueHD, Dolby Atmos; DTS Surround, 96/24, ES, DTS Express, DTS-HD HRA, DTS HD Master, DTS:X
CEC	Supported
HDR	HDR10, HDR10+, Dolby Vision, HLG
IR Level	5Vp-p
IR Frequency	Wideband 20K-60KHz

Transmission Distance	50m/164ft over CAT6 cable; 3m/9.8ft over HDMI™ cable
ESD Protection	IEC 61000-4-2: ±8kV (Air-gap discharge), ±4kV (Contact discharge)
Connection	
Transmitter	Input: 1× IN [HDMI™ Type A, 19-pin female] Output: 1× CAT OUT [RJ45] Control: 1× SERVICE [USB-C, 12-pin female, upgrade port] 1× IR IN [3.5mm audio jack] 1× IR OUT [3.5mm audio jack]
Receiver	Input: 1× CAT IN [RJ45] Output: 1× OUT [HDMI™ Type A, 19-pin female] Control: 1× SERVICE [USB-C, 12-pin female, upgrade port] 1× IR IN [3.5mm audio jack] 1× IR OUT [3.5mm audio jack]
Mechanical	
Housing	Metal Enclosure
Color	Black
Dimensions	Transmitter / Receiver: 88mm [W] × 61mm [D] × 18mm [H]
Weight	Transmitter / Receiver: 155g
Power Supply	Input: AC 100~240V 50/60Hz Output: DC 12V/1A
Power Consumption	PoC: 8.8W (Max)
Operating Temperature	0°C ~ 40°C / 32°F ~ 104°F
Storage Temperature	-20°C ~ 60°C / -4°F ~ 140°F
Operating Humidity	20%~80% relative humidity, non-condensing
Storage Humidity	10%~90% relative humidity, non-condensing

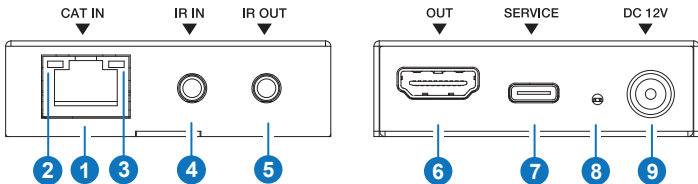
5. Operation Controls and Functions

5.1 Transmitter Panel



No.	Name	Function Description
1	CAT OUT	Connects to the CAT IN port on Receiver and transmits signal to the Receiver via CAT cable.
2	Link Status Indicator (Green)	<ul style="list-style-type: none">Light on: Transmitter and Receiver are connected normally.Light off: Transmitter and Receiver are not connected.
3	HDCP Signal Indicator (Yellow)	<ul style="list-style-type: none">Light on: HDMI signal with HDCP is detected.Light flashing: HDMI signal without HDCP is detected.Light off: There is no HDMI signal.
4	IR IN	IR signal input port, connected to the IR wideband receiver Cable.
5	IR OUT	IR signal output port, connected to the IR blaster Cable.
6	HDMI IN	HDMI signal input port, connected to a source device such as DVD or PC with HDMI cable.
7	SERVICE	USB-C port, used for firmware upgrade.
8	Power LED	The green LED will be on when Transmitter is powered on.
9	DC 12V	Connects to the 12V/1A power adapter. Note: The extender supports PoC function. It means that either Transmitter or Receiver is powered by the power adapter, the other doesn't need power supply.

5.2 Receiver Panel



No.	Name	Function Description
1	CAT IN	Connects to the CAT OUT port on Transmitter and and transmits signal to the Transmitter via CAT cable.
2	Link Status Indicator (Green)	<ul style="list-style-type: none"> Light on: Transmitter and Receiver are connected normally. Light flashing: Transmitter and Receiver are not connected.
3	HDCP Signal Indicator (Yellow)	<ul style="list-style-type: none"> Light on: HDMI signal with HDCP is detected. Light flashing: HDMI signal without HDCP is detected. Light off: There is no HDMI signal.
4	IR IN	IR signal input port, connected to the IR wideband receiver Cable.
5	IR OUT	IR signal output port, connected to the IR blaster Cable.
6	HDMI OUT	HDMI signal output port, connected to a display device such as TV or monitor via HDMI cable.
7	SERVICE	USB-C port, used for firmware upgrade.
8	Power LED	The green LED will be on when Receiver is powered on.
9	DC 12V	Connects to the 12V/1A power adapter. Note: The extender supports PoC function. It means that either Transmitter or Receiver is powered by the power adapter, the other doesn't need power supply.

EDID Logic:

1. The default EDID is 4K60 4:4:4 SDR 2CH.
2. The EDID is copied from the display device of RX.

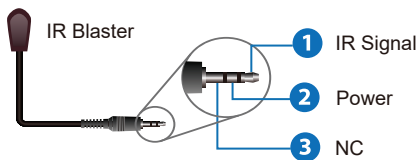
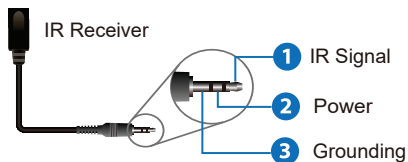
6. IR Pin Definition



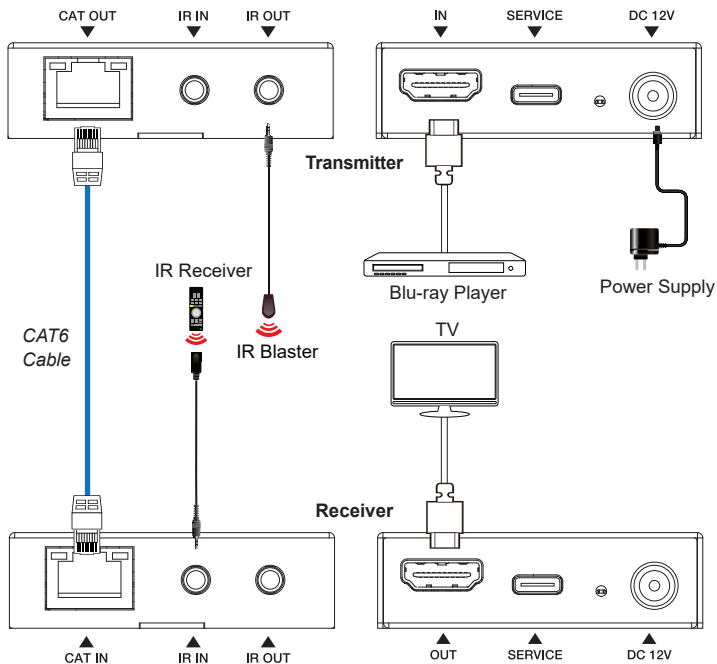
IR RECEIVER



IR BLASTER



7. Application Example



HDMI[™]
HIGH-DEFINITION MULTIMEDIA INTERFACE

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