



LINK EXT50-4KUHD

50m 4K60 HDMI Extender

User Manual

Version: V1.0.0



Thank you for purchasing this product

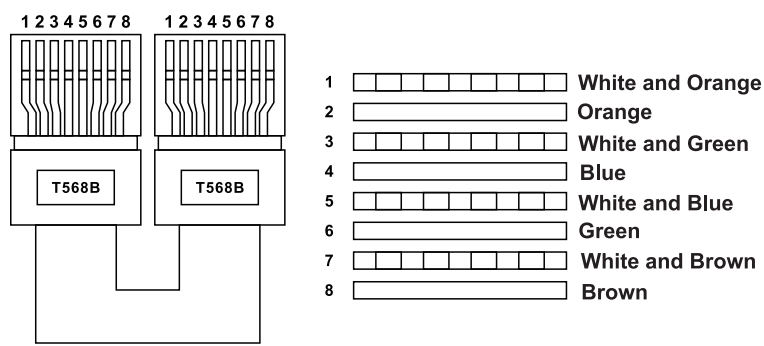
For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

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 product requires the use of UTP connectors. Please connect in direct interconnection method and do not cross connect.



Direct Interconnection Method

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Introduction

Overview

This 4K60 HDMI Extender can extend HDMI high-definition signal and bi-directional IR control signal up to 50m/164ft over CAT6/6a cable, achieving zero-delay, long-distance transmission between the transmitter and the receiver. Video resolution is up to 4K@60Hz. It supports EDID copy pass-through function between the source device and display device. Bi-directional PoC function and IR pass-through are also supported. This multi-functional product can be widely applied in multimedia conference hall, TV teaching and large-screen display.

Features

- Compliant with HDCP 2.2
- Video bandwidth is 18Gbps
- Video resolution is up to 4K@60Hz RGB/YCBCR 4:4:4
- Transmission distance can be up to 50m/164ft over CAT6/6a cable
- Support bi-directional PoC (Power over Cable) function
- Support bi-directional IR pass-through
- Audio formats is up to LPCM 7.1, Dolby True HD, DTS HD Master
- Support HDR, HDR10, HDR10+, Dolby Vision, HLG
- Advanced EDID management
- Compact design for easy and flexible installation

Package Contents

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

Specifications

Technical	
HDMI Compliance	HDMI 2.0b
HDCP Compliance	HDCP 2.2
Video Bandwidth	18Gbps
Video Resolution	Up to 4K@60Hz *All available resolutions are shown on page 4.
Color Space	RGB 4:4:4, YCbCr 4:4:4, YCbCr 4:2:2, YCbCr 4:2:0
Color Depth	8/10/12-bit; 8-bit (4K60 444)
Audio Formats	HDMI Audio: LPCM 2.0 -7.1, Dolby Digital, Dolby Digital Plus ,Dolby TrueHD, Dolby Atmos, DTS, DTS-HD Master, DTS:X 3.5mm Analog Audio de-embedding: LPCM 2.0CH (sample rate 32~192kHz)
HDR	HDR, HDR10, Dolby Vision, HLG
IR Level	5Vp-p
IR Frequency	Wideband 20K-60KHz
Transmission Distance	50m/164ft for 4K2K@60Hz over CAT6/6a cable 40M @ 4K w/ CAT5e, 40M @1080p 50M @ 4K w/ CAT6/6a, 50M @1080p
ESD Protection	IEC 61000-4-2: ±8kV (Air-gap discharge), ±4kV (Contact discharge)
Connection	
Transmitter	Input: 1× HDMI IN [Type A, 19-pin female] 1× IR IN [3.5mm audio jack] Output: 1× HDMI OUT [Type A, 19-pin female] 1× IR OUT [3.5mm audio jack] 1× CAT OUT [RJ45] Control: 1× SERVICE [USB-C, 12-pin female, upgrade port]
Receiver	Input: 1× CAT IN [RJ45] 1× IR IN [3.5mm audio jack] Output: 1× HDMI OUT [Type A, 19-pin female] 1× AUDIO OUT [3.5mm audio jack] 1× IR OUT [3.5mm audio jack] Control: 1× SERVICE [USB-C, 12-pin female, upgrade port]

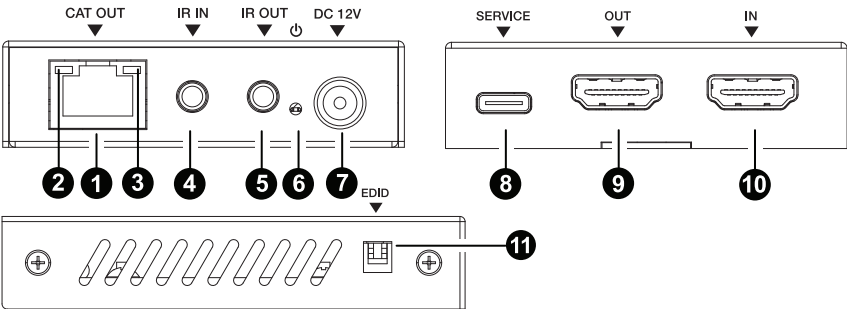
Mechanical	
Housing	Metal Enclosure
Color	Black
Dimensions	Transmitter / Receiver: 90mm [W] × 68mm [D] × 18mm [H]
Weight	Transmitter / Receiver: 175g
Power Supply	DC 12V/1A
Power Consumption	5.4W (Max)
Operating Temperature	0°C ~ 40°C / 32°F ~ 104°F
Storage Temperature	-20°C ~ 60°C / -4°F ~ 140°F
Operating Humidity	20%~80% relative humidity, non-condensing
Storage Humidity	10%~90% relative humidity, non-condensing

***All available input/output resolutions:**

640x480p60Hz, 800x600p60Hz, 1024x768p60Hz,
1280x1024p60Hz, 1360x768p60Hz, 1440x900p60Hz,
1440x1050p60Hz, 1600x1200p60Hz, 720x480i59.94Hz(480i59),
720x480p59.94Hz(480p59), 720x576i50Hz(576i50),
720x576p50Hz(576p50), 280x720p50Hz(720p50),
1280x720p59.94Hz(720p59), 1280x720p60Hz(720p60),
1920x1080i50Hz(1080i50), 1920x1080i59.94Hz(1080i59),
1920x1080i60Hz(1080i60), 1920x1080p23.98Hz(1080p23),
1920x1080p24Hz(1080p24), 1920x1080p25Hz(1080p25),
1920x1080p29.97Hz(1080p29), 1920x1080p30Hz(1080p30),
1920x1080p50Hz(1080p50), 1920x1080p59.94Hz(1080p59),
1920x1080p60Hz(1080p60), 3840x2160p23.98Hz(2160p23),
3840x2160p24Hz(2160p24), 3840x2160p25Hz(2160p25),
3840x2160p29.97Hz(2160p29), 3840x2160p30Hz(2160p30),
3840x2160p50Hz(2160p50), 3840x2160p59.94Hz(2160p59),
3840x2160p60Hz(2160p60)

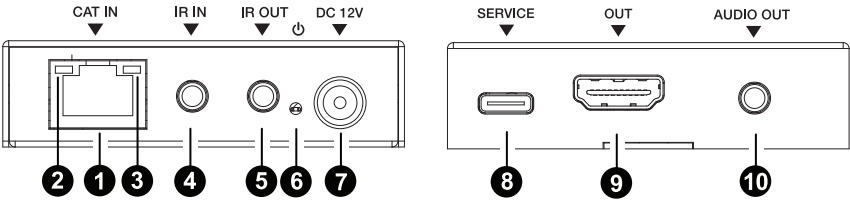
Operation Controls and Functions

Transmitter Panel



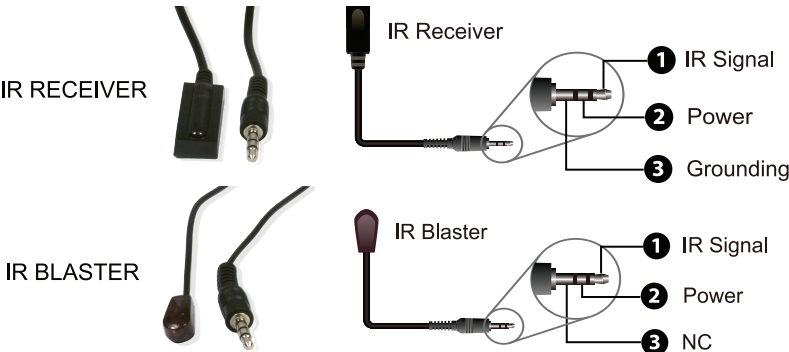
No.	Name	Function Description
1	CAT OUT	Connects to the CAT IN port on Receiver with CAT cable, and outputs TMDs signal.
2	Link Status Indicator (Green)	<ul style="list-style-type: none">▪ Light on: Transmitter and Receiver are connected normally.▪ Light off: Transmitter and Receiver are not connected.
3	HDCP Signal Indicator (Yellow)	<ul style="list-style-type: none">▪ Light on: HDMI signal with HDCP.▪ Light flashing: HDMI signal without HDCP.▪ Light off: No HDMI signal.
4	IR IN	IR signal input port, connected to 5V IR wideband receiver.
5	IR OUT	IR signal output port, connected to 5V IR blaster.
6	Power LED	The green LED will be on when Transmitter is powered on.
7	DC 12V	DC 12V/1A power input port.
8	SERVICE	USB-C port, used for firmware upgrade.
9	HDMI OUT	HDMI signal loop output port, connected to HDMI display device such as TV or monitor with HDMI cable.
10	HDMI IN	HDMI signal input port, connected to HDMI source device such as DVD or computer host with HDMI cable.
11	EDID DIP switch	Used for EDID setting. Up is 1 and down is 0 [DIP]=11: Copy Receiver HDMI output Sink EDID(as factory default) [DIP]=10: 4K60(4:4:4)_SDR, 2.0CH [DIP]=01: 1080p(4:4:4)_SDR, 2.0CH [DIP]=00: Copy Transmitter HDMI loop out Sink EDID.

Receiver Panel

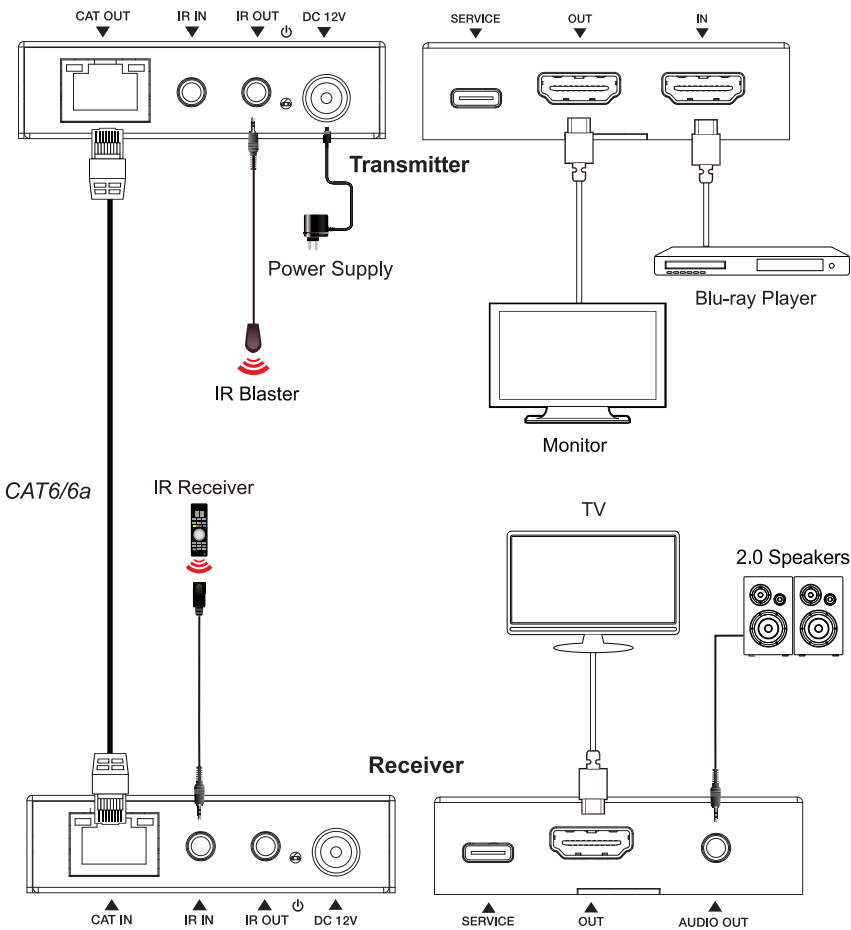


No.	Name	Function Description
1	CAT IN	Connects to the CAT OUT port on Transmitter with CAT cable, and outputs TMDS signal.
2	Link Status Indicator (Green)	<ul style="list-style-type: none"> Light on: Transmitter and Receiver are connected normally. Light flashing: Transmitter and Receiver are not connected.
3	HDCP Signal Indicator (Yellow)	<ul style="list-style-type: none"> Light on: There is HDMI signal with HDCP is detected. Light flashing: There is HDMI signal without HDCP is detected. Light off: There is no HDMI signal.
4	IR IN	IR signal input port, connected to IR wideband receiver.
5	IR OUT	IR signal output port, connected to IR blaster.
6	Power LED	The green LED will be on when Receiver is powered on.
7	DC 12V	DC 12V/1A power input port.
8	SERVICE	USB-C port, used for firmware upgrade.
9	HDMI OUT	HDMI signal output port, connected to an HDMI display device such as TV or monitor with HDMI cable.
10	AUDIO OUT	Analog audio output port, connected to a speaker.

IR Pin Definition



Application Example



Warrenty

All LINK products come with a 2-year limited liability warranty. This warranty includes parts and labor repairs on all components found to be defective in material or workmanship under normal conditions of use. This warranty shall not apply to products which have been abused, modified, or disassembled. Warranty items only by authorized resellers. Warranty not eligible for products purchased through non-authorized online sellers.

A product that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for 90 days from the date of reshipment to the buyer. If the unit is delivered by mail, customers agree to insure the unit or assume the risk of loss or damage in transit. Under no circumstances will a unit be accepted without a return authorization number. The warranty is in lieu of all other warranties expressed or implied, including without limitations, any other implied warranty or fitness or merchantability for any particular purpose, all of which are expressly disclaimed. Proof of sale may be required in order to claim warranty.

