

# LINK



## LINK EXT40-4K 40M HDBaseT 4K @ 60Hz 4:2:0 HDMI Extender

## User Manual

Version: V1.0.0





# Important Safety Instructions



**1.** Do not expose this apparatus to rain, moisture, dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.



**6.** Clean this apparatus only with dry cloth.



**2.** Do not install or place this unit in a bookcase, built-in cabinet or in another confined space. Ensure the unit is well ventilated.



**7.** Unplug this apparatus during lightning storms or when unused for long periods of time.



**3.** To prevent risk of electric shock or fire hazard due to overheating, do not obstruct the unit's ventilation openings with newspapers, tablecloths, curtains, and similar items.



**8.** Protect the power cord from being walked on or pinched particularly at plugs.



**4.** Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.



**9.** Only use attachments / accessories specified by the manufacturer.



**5.** Do not place sources of naked flames, such as lighted candles, on the unit.



**10.** Refer all servicing to qualified service personnel.

## Warnings of FCC

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

# Table of Contents

Introduction .....	2
Features .....	2
Package Contents .....	2
Specifications.....	3
Panel Description .....	4
Application Diagram.....	6
RS232 Operation .....	7
Troubleshooting .....	8
Warranty Terms and Conditions .....	9

# Introduction

Thank you for purchasing this product. For proper installation and optimum performance, please read the instructions in this manual carefully.

LINK EXT40-4K is a slim transmitter receiver pair, which can extend HDMI 1080P@60Hz signals up to 70m/230ft and 4K@60Hz (chroma sub-sampling 4:2:0 8-bit only) signals up to 40m/130ft via a single Cat 6a/7 cable. It features bi-directional PoC. It also supports bi-directional IR and RS232 pass-through.

## Features

- Supports resolutions up to 4K@60Hz 4:2:0 8bit and HDCP 2.2.
- Over a Cat 6a/7 cable, extends 4K@60Hz 4:2:0 8bit up to 40m/130ft and 1080P up to 70m/230ft.
- Over a Cat 5e/6 cable, extends 4K@60Hz 4:2:0 8bit up to 35m/115ft and 1080P up to 60m/200ft.
- Bi-directional PoC, one power adapter at either transmitter or receiver side can power both units.
- Supports bi-directional IR and RS232 pass-through.

## Package Contents

- 1 x EXT40-4K Extender Set
- 1 x Power Adapter (DC 18V 1A)
- 1 x IR Emitter
- 1 x Broadband IR Receiver (30-50 KHz)
- 1 x IR-AC IR Coupler Cable
- 2 x 3.5mm 3-Pin Phoenix Connector
- 4 x Mounting Brackets (with Screws)
- 1 x User Manual

# Specifications

Technical	
Input/Output Signal Type	HDMI with 4K@60Hz 4:2:0, HDCP 2.2
Input/Output Resolution Supported	Up to 4096x2160@60Hz, including 4K@60Hz/4K@30Hz/1080P/1080i/720P <b>Note:</b> 4096x2160/3840x2160@50/60Hz is based on chroma sub-sampling 4:2:0 8-bit only.
Deep color	4K: 8/10/12 bit 1080P: up to 16 bit
Maximum Data Rate	10.2 Gbps
Maximum Pixel Clock	340MHz
Audio Format Supported	Supports multichannel audio up to PCM 7.1, Dolby True HD, DTS HD Master Audio, Dolby Atmos and DTS:X

General	
Operating Temperature	0°C to 45°C (32°F to 113°F)
Storage Temperature	-20°C to 70°C (-4°F to 158°F)
Humidity	10% to 90%, non-condensing
ESD Protection	Human-body Model: ±8kV (Air-gap discharge)/ ±4kV (Contact discharge)
Power Supply	DC 18V 1A
Power Consumption (Maximum)	8.88W (Pair, PoC)
Device Dimension (W x H x D)	108.8mm x 15mm x 64.2mm/ 4.3" x 0.6" x 2.5" each for TX/RX
Product Weight	0.18kg/0.4lb each for TX/RX

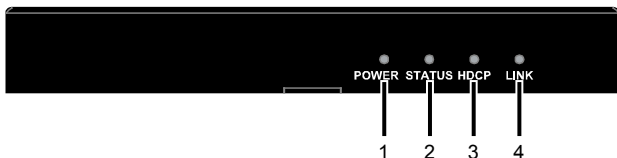
## Transmission Distance:

**Note:** T568B straight-through Category cable is recommended.

Cable Type	Range	Supported Video
HDMI	Input/Output: 15m/50ft	1080P@60Hz
	Input/Output: 10m/33ft	4K@60Hz 4:2:0
Cat 5e/6	60m/200ft	1080P@60Hz
	35m/115ft	4K@60Hz 4:2:0
Cat 6a/7	70m/230ft	1080P@60Hz
	40m/130ft	4K@60Hz 4:2:0

## Panel Description

### Front Panel

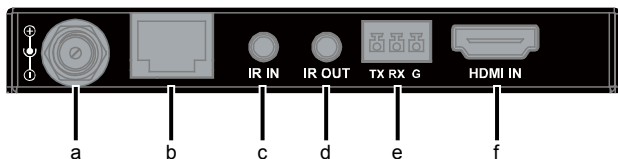


No.	Name	Description
1	Power LED	<b>On/Off:</b> The device is powered on/off.
2	Status LED	<b>On:</b> The device is working properly. <b>Off:</b> The device is not working properly.
3	HDCP LED	<b>On:</b> HDCP protected content is being transmitted. <b>Blinking:</b> Non-HDCP protected content is being transmitted. <b>Off:</b> No content is being transmitted.
4	Link LED	<b>On:</b> HDBT link is normal. <b>Blinking/Off:</b> No HDBT link or link error.

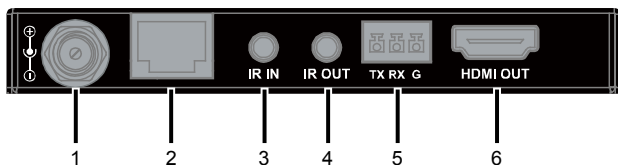


## Rear Panel

### Transmitter

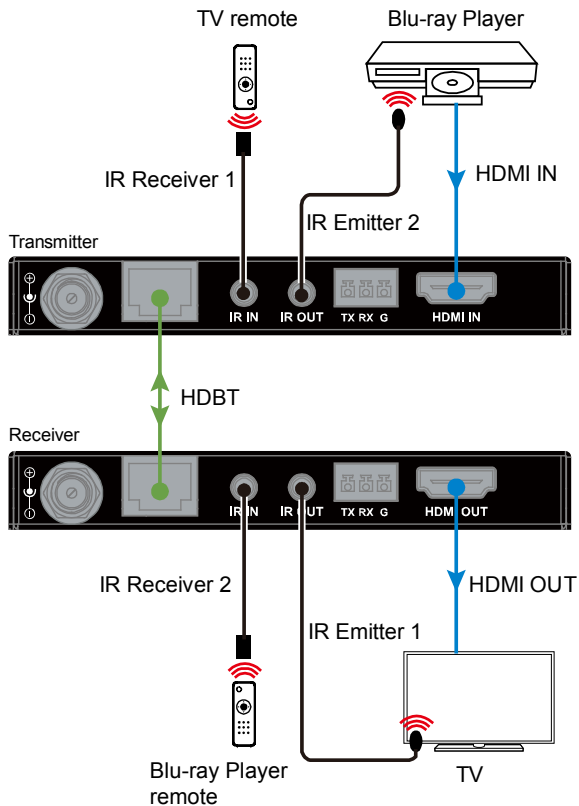


### Receiver



No.	Name	Description
a & 1	DC 18V	Connect to the power adapter.
b	HDBT OUT	Connect to the receiver via a Cat 5e/6/7 cable.
c & 3	IR IN	Connect to the IR receiver provided.
d & 4	IR OUT	Connect to the IR emitter provided.
e & 5	RS232	For RS232 pass-through.
f	HDMI IN	Connect to an HDMI source device.
2	HDBT IN	Connect to the transmitter via a Cat 5e/6/7 cable.
6	HDMI OUT	Connect to an HDMI display device.

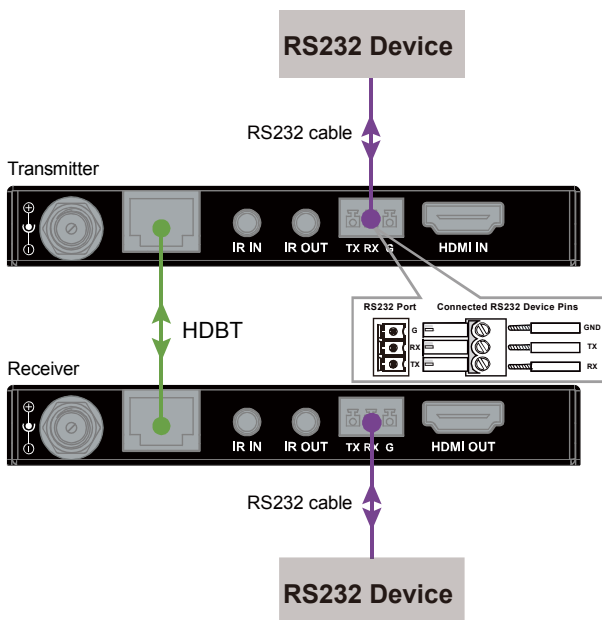
# Application Diagram



**Note:** Connect the broadband IR receiver to IR IN and the IR emitter to IR OUT.

# RS232 Operation

RS232 ports can be used for bi-directional RS232 signal pass-through between the transmitter and receiver.



# Troubleshooting

## 1. No Power

- Ensure the power is on.
- Ensure you use the power adapter provided in the package.

## 2. No Picture or Video Flash

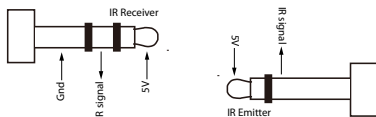
- Ensure all devices are on, and all cables are qualified and connected properly. Ensure all the cables' length are within the maximum distance (refer to **Specification** table).
- Ensure all the LED indicators are normal.
- When connecting source to display directly, ensure them can work properly.
- Ensure the input resolution is supported by the device.
- Ensure the input resolution is within 4K@30Hz when Dolby vision signal is input.

## 3. Weak or Not Working IR Signal

- Ensure the devices support IR control (not Bluetooth/WIFI).
- Ensure you use the IR cables provided in the package, and install them correctly according to the Application Diagram.
- Pay attention to the control angle and distance.

IR Cable	IR Emitter	IR Receiver
Suggested Angle	0°	0°
Distance (Max)	30cm	8m

- When work with the third-party device, ensure it follows the pin definition below.



## Warranty Terms and Conditions

For the following cases LINK shall charge for the service(s) claimed for the products if the product is still remediable and the warranty card becomes unenforceable or inapplicable.

1. The original serial number (specified by LINK) labeled on the product has been removed, erased, replaced, defaced or is illegible.
2. The warranty has expired.
3. The defects are caused by the fact that the product is repaired, dismantled or altered by anyone that is not from a LINK authorized service partner. The defects are caused by the fact that the product is used or handled improperly, roughly or not as instructed in the applicable User Guide.
4. The defects are caused by any force majeure including but not limited to accidents, fire, earthquake, lightning, tsunami and war.
5. The service, configuration and gifts promised by salesman only but not covered by normal contract.
6. LINK preserves the right for interpretation of these cases above and to make changes to them at any time without notice.





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