

18Gbps HDMI Extender with Audio de-embedded & Scaling

UHD70LA



User Manual

VER 1.0

**PLEASE READ THIS PRODUCT MANUAL CAREFULLY
BEFORE USING THIS PRODUCT.**

This manual is only for operational instruction only, and is not to be used in a maintenance capacity. The functions described in this version are current as at June 2022. Any changes of functions and operational parameters will be updated in future manual versions. Please refer to your dealer for the latest product details.

Version 1.0 13/12/23

SAFETY OPERATION GUIDE

In order to guarantee the reliable operation of the equipment and safety of the user, please abide by the following procedures during installation, use and maintenance:

1. The system must be earthed properly. Please do not use two blade plugs and ensure the AC power supply ranges from 100v to 240v and from 50Hz to 60Hz.
2. Do not install the units in an environment where they will be exposed to extreme hot or cold temperatures.
3. These units will generate heat during operation, please ensure that you allow adequate ventilation to ensure reliable operation.
4. Please disconnect the units from mains power if they will be left unused for a long time.
5. Please DO NOT try to open the casing of the equipment, DO NOT attempt to repair the unit. Opening the unit will void the warranty. There are high voltage components in the unit and attempting to repair the unit could result in serious injury.
6. Do not allow the unit to come into contact with any liquid as that could result in personal injury and product failure.



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1. Introduction

UHD70LA is an 18Gbps HDMI Extender can extend HDMI HD signal and IR control signal to a distance up to 230ft / 70m via a single CAT6/6a cable, which can achieve zero-delay, uncompressed long-distance transmission between the transmitter and receiver. Video resolution is up to 4K2K@60Hz. It supports EDID copy pass-through function between the source device and display device. It supports PoC function.

This Extender can be widely used in multi-media conference halls, TV teaching and large-screen displays.

2. Features

- ☆ HDCP 2.2 compliant
- ☆ Support 18Gbps video bandwidth and video resolution up to 4K2K@60Hz RGB/YCBCR 4:4:4, as specified in HDMI 2.0
- ☆ The transmission distance can be extended up to 230ft / 70m via a single CAT6/6a cable
- ☆ The receiver supports auto downscaler function (the 4K input can be automatically downscaled to 1080P output on receiver)
- ☆ Support HDR, HDR10, HDR10+, Dolby Vision, HLG
- ☆ Support bi-directional IR control signal pass-through
- ☆ Audio formats: LPCM 7.1, Dolby True HD, DTS HD Master
- ☆ EDID copy pass-through function between the source device and display device
- ☆ Support audio de-embedding
- ☆ Support bi-directional PoC function
- ☆ Compact design for easy and flexible installation

3. Package Contents

- ① 1 x UHD70LA-T (Transmitter)
- ② 1 x UHD70LA-R (Receiver)
- ③ 1 x IR Blaster Cable (1.5 meters)
- ④ 1 x IR Wideband Receiver cable (1.5 meters)
- ⑤ 4 x Mounting Brackets
- ⑥ 8 x Screws (KM3*4)
- ⑦ 1 x 12V/1A Locking Power Adapter
- ⑧ 1x User Manual

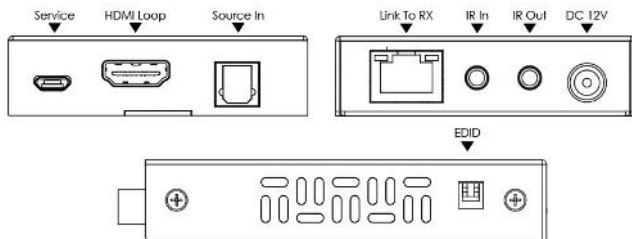
4. Specifications

Technical	
HDMI Compliance	HDMI 2.0
HDCP Compliance	HDCP 2.2
Video Bandwidth	18Gbps
Video Resolution	Up to 4K2K@60Hz RGB/YCBCR 4:4:4
IR Level	5Vp-p
IR Frequency	Wideband 20K-60KHz
Transmission Distance	4K2K@60Hz 4:4:4--70m, 1080P--70m (CAT6/6a cable)
Color Space	RGB 4:4:4, YCbCr 4:4:4, YCbCr 4:2:2, YCbCr 4:2:0
Color Depth	8/10/12bit
HDR	HDR, HDR10, HDR10+, Dolby Vision, HLG
Audio Formats	HDMI: LPCM 7.1CH, Dolby True HD, DTS-HD Master Optical: Dolby 5.1, DTS 5.1, PCM 2.0

Connection	
Transmitter	Input: 1×Source [Type A, 19-pin female] Output: 1×HDMI Loop [RJ45] 1×Link To RX [RJ45] Control: 1×Service [Micro-USB jack] 1×IR In [3.5mm Stereo Mini-jack] 1×IR Out [3.5mm Stereo Mini-jack]
Receiver	Input: 1×Link To TX [RJ45] Output: 1×To Display [Type A, 19-pin female] 1×Toslink Control: 1×Service [Micro-USB jack] 1×IR In [3.5mm Stereo Mini-jack] 1×IR Out [3.5mm Stereo Mini-jack]
Mechanical	
Housing	Metal Enclosure
Color	Black
Dimensions	Transmitter / Receiver: 90mm (W)×68mm (D)×18mm (H)
Weight	Transmitter: 160g, Receiver: 155g
Power Supply	DC 12V/1A; Support bi-directional PoC function
Power Consumption	3.36 W (max)
Operating Temperature	0°C ~ 40°C / 32°F ~ 104°
Storage Temperature	-20°C ~ 60°C / -4°F ~ 140°F
Relative Humidity	20~90% RH (non-condensing)

5. Operation Controls and Functions

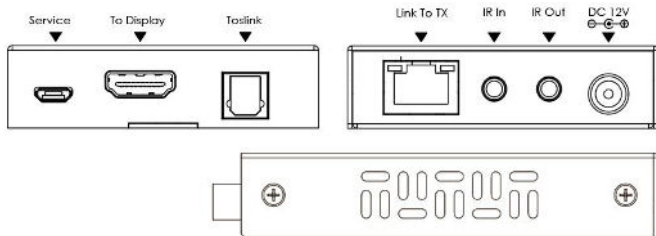
5.1 Transmitter Panel



No.	Name	Function Description
1	Service	Firmware update port.
2	HDMI Loop	HDMI signal loop output port. Connect to HDMI display devices with HDMI cable.
3	Source In	HDMI signal input port. Connect to HDMI source device with HDMI cable.
4	Link To RX	RJ45 connector for connecting the Link To TX port of the Receiver with CAT6/6a cable.
5	Link Signal Indicator (Green)	<ul style="list-style-type: none"> ▪ Illuminating: Transmitter and Receiver are in good connection status. ▪ Flashing: Transmitter and Receiver are in poor connection status. ▪ Dark: Transmitter and Receiver are not connected.
6	Data Signal Indicator (Orange)	<ul style="list-style-type: none"> ▪ Illuminating: HDMI signal with HDCP. ▪ Flashing: HDMI signal without HDCP. ▪ Dark: No HDMI signal.
7	IR In	Connect to IR receiver cable, the IR receive signal will emit to the IR Out port of the Receiver.
8	IR Out	Connect to IR blaster cable, the IR emit signal is from the IR In port of the Receiver.

No.	Name	Function Description
9	DC 12V	DC 12V/1A power input port. <i>Note that the extender supports PoC function, it means that either Transmitter or Receiver is connected to 12V/1A power supply, the other doesn't need power supply.</i>
10	EDID DIP switch	Use the DIP switch to set EDID. (Switching to the upper end indicates 1; switching to the lower end indicates 0.) 11 - EDID information is copied from the display at the RX. 10 - EDID is preset to 4K@60Hz Stereo 01 - EDID is preset to 1080p Stereo 00 - EDID information is copied from the HDMI OUT at the TX.

5.2 Receiver Panel

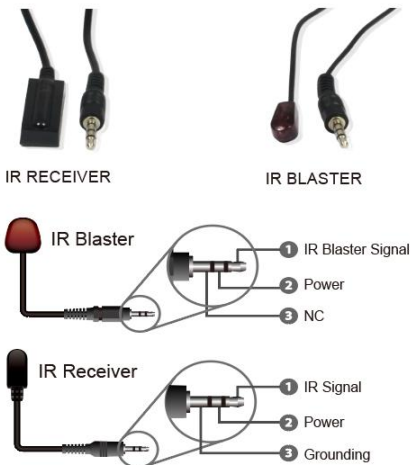


No.	Name	Function Description
1	Service	Firmware update port.
2	To Display	HDMI signal output port. Connect to HDMI display devices with HDMI cable.
3	Toslink	Optical fiber audio output port. Connect to amplifier with optical cable.
4	Link To TX	RJ45 connector for connecting the Link To RX port of the Transmitter with CAT6/6a cable.

No.	Name	Function Description
5	Link Signal Indicator (Green)	<ul style="list-style-type: none">▪ Illuminating: Transmitter and Receiver are in good connection status.▪ Flashing: Transmitter and Receiver are in poor connection status.▪ Dark: Transmitter and Receiver are not connected.
6	Data Signal Indicator (Orange)	<ul style="list-style-type: none">▪ Illuminating: HDMI signal with HDCP.▪ Flashing: HDMI signal without HDCP.▪ Dark: No HDMI signal.
7	IR In	Connect to the IR receiver cable. The IR signal will send to the IR Out port of the Transmitter.
8	IR Out	Connect to the IR blaster cable, the IR signal is from IR IN port of the Transmitter.
9	DC 12V	DC 12V/1A power input port. <i>Note that the extender supports POC function, it means that either Transmitter or Receiver is connected to 12V/1A power supply, the other doesn't need power supply.</i>

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

