HDMI 2.0 eARC Extender

4KEX40-eARC



User Manual

AV Access

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Introduction

Overview

4KEX40-eARC is an HDMI 2.0 eARC Extender. It supports 4K@60Hz 4:4:4 with HDR and HDCP 2.3 compliant, and offers the distribution of uncompressed UHD video, audio, power, and IR together up to 40m/131ft over a single Cat 6 or above cable. It also supports full eARC function and is backward compatible with 5.1CH ARC, which enable the kit to configure the eARC/ARC channel feed by TV (with eARC/ARC supported). With bi-directional IR pass-through supported, users can control the display at transmitter side or control the source at receiver side. It supports both static and dynamic HDR formats up to 4K@60Hz, including HDR 10, HDR 10+, Dolby Vision and HLG. Its proprietary two-way PoC technology enables one power adapter to be connected to the transmitter or receiver to power both units.

Features

- HDMI 2.0 with uncompressed 4K@60Hz 4:4:4.
- Via a single Cat 6 or above cable, transmit 4K@60Hz 4:4:4 signal up to 40m/131ft.
- HDCP 2.3 and backward compatible.
- Supports HDR formats up to 4K@60Hz, including HLG, HDR10, HDR10+, and Dolby Vision.
- Supports eARC and ARC audio return.
    - If both source and sink TV support eARC, it would transmit eARC audio.
    - If both source and sink TV support ARC, or one supports ARC and the other supports eARC, it would transmit ARC audio.
    - If either of source or sink TV doesn't support ARC, it would not transmit returned audio.
- Supports bi-directional IR pass-through.
- Supports bi-directional PoC, only one power adapter is needed to be connected to the transmitter or receiver to power both units.
- Plug and play, and no driver is needed.
- Supports firmware upgrade through Micro USB port.

Package Contents

Before you start the installation of the product, please check the package contents:

- Transmitter x 1
- Receiver x 1
- Power Adapter (DC 12V 2A) x 1
- IR Emitter x 1
- IR Receiver (30 KHz ~ 50 KHz) x 1
- Mounting Brackets (with Screws) x 8
- User Manual x 1

Panel

Front Panel

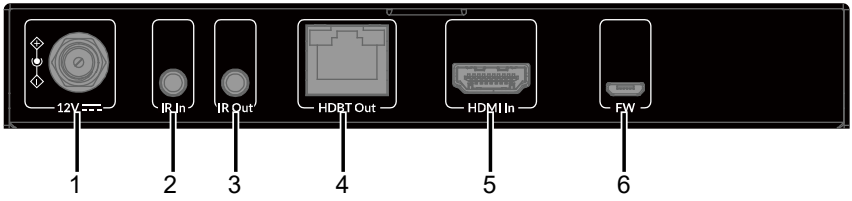
Transmitter & Receiver



No.	Name	Description
1	Power LED	**On:** The device is powered on. **Off:** The device is powered off.
2	Link LED	**On**: HDBT link is normal. **Off:** No HDBT link or link error.
3	HDCP LED	**On:** HDCP content is being transmitted. **Blinking:** Non-HDCP content is being transmitted. **Off:** No HDMI signal.
4	eARC LED	**On:** The eARC audio is being transmitted. **Off:** No eARC audio is being transmitted.

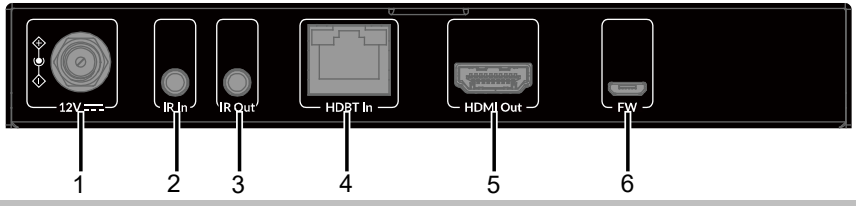
Rear Panel

Transmitter



No.	Name	Description
1	12V	Connect to the provided power adapter. With bi-directional PoC function supported, one power adapter is needed to be connected to the transmitter or receiver to power both units.
2	IR In	Connect to the IR receiver cable provided.
3	IR Out	Connect to the IR emitter cable provided.
4	HDBT Out	Connect to HDBT In port of the receiver.
5	HDMI In	Connect to an HDMI source.
6	FW	Micro-USB port. Connect to a PC for firmware upgrade.

Receiver



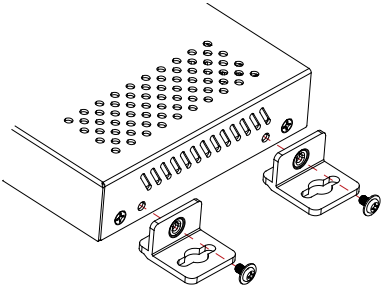
No.	Name	Description
1	12V	Connect to the provided power adapter. With bi-directional PoC function supported, one power adapter is needed to be connected to the transmitter or receiver to power both units.
2	IR In	Connect to the IR receiver cable provided.
3	IR Out	Connect to the IR emitter cable provided.
4	HDBT In	Connect to HDBT Out port of the transmitter.
5	HDMI Out	Connect to an HDMI display.
6	FW	Micro-USB port. Connect to a PC for firmware upgrade.

Installation and Application

Brackets Installation

Note: Before installation, please ensure the device is disconnected from the power source.

1. Attach the installation bracket to the enclosure using the screws provided. The bracket is attached to the enclosure as shown.



2. Repeat step 1 for the other side of the device.
3. Attach the brackets to the surface you want to hold the device against using the screws (not included).

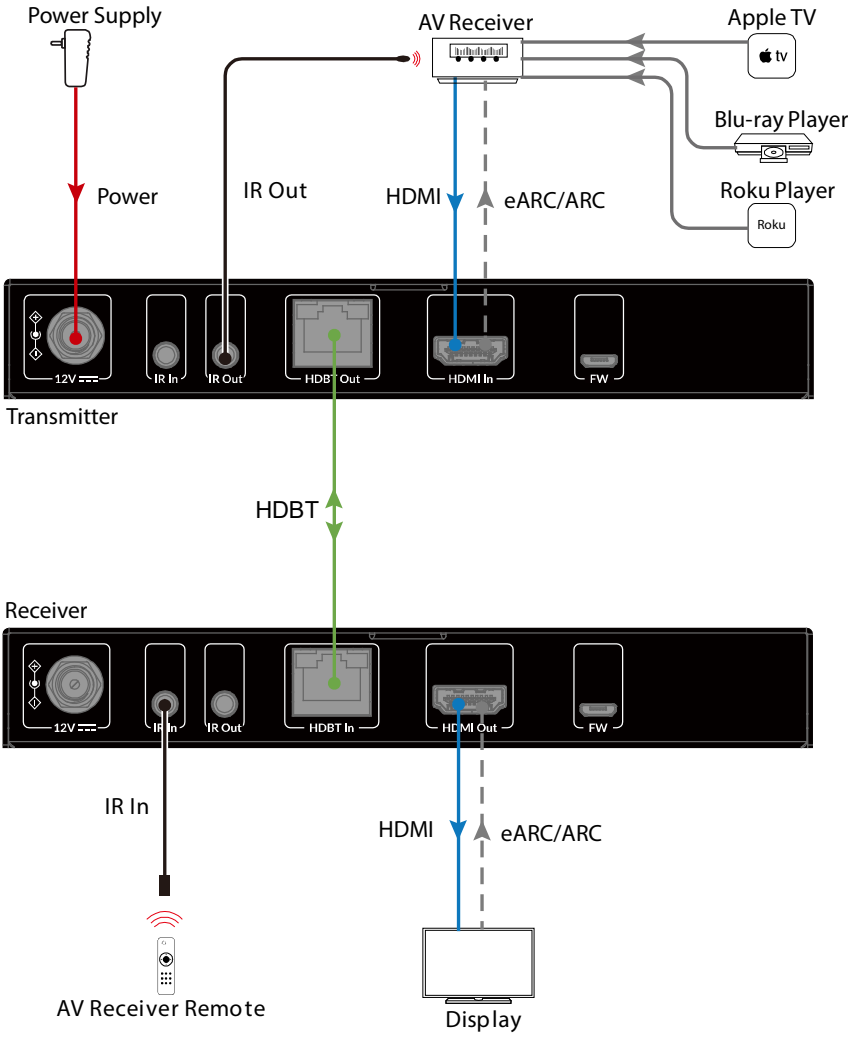
Application

Note: When you want to configure eARC/ARC channel feed by TV:
Ensure AV System and TV support eARC/ARC function and CEC should be set to enable.

1. Connect eARC/ARC- enabled HDMI Ports of AV System and TV to HDMI In port of the transmitter and HDMI Out port of the receiver respectively.
2. Connect the transmitter and receiver.
3. Set CEC function of TV to on.
4. Switch the AV System to eARC/ARC channel.
5. The audio signal of TV through HDMI OUT port will be transmitted to the AV System connected to HDMI IN Port of transmitter.

IR Pass-through Connection:

1. Connect the IR emitter cable provided to IR Out port of the transmitter.
2. Connect the IR receiver cable provided to IR In port of the receiver.
3. Users can control the source at the receiver side using source remote.


Power Supply
AV Receiver
Apple TV
Blu-ray Player
Roku Player
Power
IR Out
HDMI
eARC/ARC
12V
IR In
IR Out
HDBT Out
HDMI In
FW
Transmitter
HDBT
Receiver
12V
IR In
IR Out
HDBT In
HDMI Out
FW
IR In
HDMI
eARC/ARC
AV Receiver Remote
Display

Specification

Technical	
Input/Output ports	Transmitter: 1 x HDMI In, 1 x HDBT Out, 1 x IR In, 1 x IR Out, 1 x DC 12V In, 1 x FW (Micro-USB) Receiver: 1 x HDMI Out, 1 x HDBT In, 1 x IR In, 1 x IR Out, 1 x DC 12V In, 1 x FW (Micro-USB)
Input Signal Type	HDMI 2.0 with 4K@60Hz 4:4:4 8bit, HDCP 2.3
Input/Output Resolution Supported	**VESA:** 800 x 600[8], 1024 x 768[8], 1280 x 768[8], 1280 x 800[8], 1280 x 960[8], 1280 x 1024[8], 1360 x 768[8], 1366 x 768[8], 1440 x 900[8], 1600 x 900[8], 1600 x 1200[8], 1680 x 1050[8], 1920 x 1200[8], 2048 x 1152[8] **SMPTE:** 1280 x 720P[6,7,8], 1920 x 1080P[6,7,8], 3840 x 2160[2,3,5,6,8], 4096 x 2160[2,3,5,6,8] 1 = at 23.98 Hz, 2 = at 24 Hz, 3 = at 25 Hz, 4 = at 29.97 Hz, 5 = at 30 Hz, 6 = at 50 Hz, 7 = at 59.94 Hz, 8 = at 60 Hz
HDR	HDR 10, HDR 10+, Dolby Vision, HLG
Audio Format Supported	**HDMI:** Supports all HDMI 2.0 formats including multi-channel PCM, Dolby True-HD and DTS-HD master audio **ARC Mode:** Supports 5.1CH compressed audio (such as Dolby Digital, DTS 5.1, and Dolby Digital Plus), and 2.0CH uncompressed PCM audio **eARC mode:** Up to 8CH L-PCM of 192kHz audio; Supports encoded audio formats, such as Dolby Atmos and DTS-X
Maximum Data Rate	18Gbps

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	±8kV (Air-gap discharge)/ ±4kV (Contact discharge)
Power Supply	DC 12V 2A
Power Consumption (Max)	9.29W
Device Dimension (W x H x D)	Transmitter/Receiver: 170mm x 25mm x 105mm/6.69" x 0.98'' x 4.13"
Product Weight	Transmitter/Receiver: 0.4kg/0.88lb

Transmission Distance

Note: We recommend the use of T568B straight-through category cables.

Cable Type	Range	Supported Video
Cat 6	60m/197ft	4K@30Hz 4:4:4 24bpp
	40m/131ft	4K@60Hz 4:4:4 24bpp
Cat 6a/7	70m/230ft	4K@30Hz 4:4:4 24bpp
	40m/131ft	4K@60Hz 4:4:4 24bpp
HDMI	Input: 10m/33ft Output: 15m/50ft	1080P@60Hz 4K@30Hz 4:4:4 24bpp
	Input/Output: 5m/16ft	4K@60Hz 4:4:4 24bpp

Warranty

Products are backed by a limited 1-year parts and labor warranty. For the following cases AV Access Technology Limited shall charge for the service(s) claimed for the product if the product is still remediable and the warranty card becomes unenforceable or inapplicable.

1. The original serial number (specified by AV Access Technology Limited) 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 an AV Access Technology Limited 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. AV Access Technology Limited preserves the right for interpretation of these cases above and to make changes to them at any time without notice.

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If you have any question, please contact us via the following emails:
General Enquiry: info@avaccess.com
Customer/Technical Support: support@avaccess.com



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