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4KEX70-eARC

HDMI 2.0 eARC Extender

User Manual

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Important Safety Instructions

- Do not expose this device to rain, moisture, dripping or splashing. No objects filled with liquids, such as vases, shall be placed on the device.
- Do not install or place this unit in a bookcase, built-in cabinet, or in another confined space. Ensure the unit is well ventilated.
- To prevent risk of electric shock or fire hazard due to overheating, do not obstruct the unit's ventilation openings with newspapers, tablecloths, curtains, or similar items.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other device (including amplifiers) that produce heat.
- Do not place sources of naked flames, such as lighted candles, on the unit.
- Clean this device only with dry cloth.
- Unplug this device during lightning storms or when unused for long periods of time.
- Protect the power cord from being walked on or pinched, particularly at plugs.
- Only use attachments / accessories specified by the manufacturer.
- Refer all servicing to qualified service personnel

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Introduction

Overview

This HDMI2.0 eARC extender kit supports full eARC function up to Dolby Atmos and is backward compatible with ARC up to 5.1CH. It also supports both static and dynamic HDR formats up to 4K@60Hz, including Dolby Vision.

On the other hand, it features bi-directional IR, with one-way PoC built-in from the eARC transmitter to receiver, only one power adapter is needed to be connected to the transmitter to power up the extender kit.

Features

- HDMI 2.0b supported up to 4K@60Hz 4:4:4 and HDCP 2.3 compliant.
- Supports HDR capabilities:
  a. For Static HDR like HDR10, it supports resolution up to 4K@60Hz;
  b. For dynamic HDR like Dolby Vision, it supports resolution up to 4K@60Hz in low latency mode.
- Support eARC and ARC capabilities:
  a. Supports full eARC audio return formats, include PCM up to 7.1CH 192KHz sampling and Dolby Atmos;
  b. Supports full ARC audio return formats, include PCM up to 2CH 48Khz sampling and Dolby 5.1CH.
- Supports one-way PoC from the transmitter to the receiver.
- Supports bi-directional IR pass-through.

Package Contents

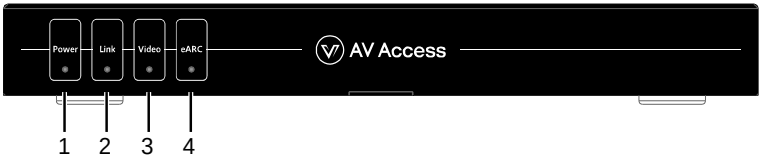
Before you start the installation of the product, please check the package contents:

- Transmitter x 1
- Receiver x 1
- Power Adapter (DC 12V, 3A) x 1
- AC Power Cord with US Pins x 1
- AC Power Cord with UK Pins x 1
- AC Power Cord with EU Pins x 1
- IR Emitter x 1
- Broadband IR Receiver (30-50kHz) x 1
- Mounting Brackets (with Screws) x 4
- User Manual x 1

Panel

Transmitter

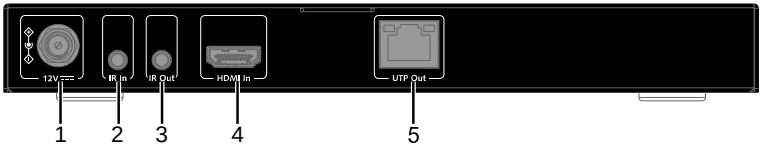
Front Panel



No.	Name	Description
1	Power LED	• **On:** The device is powered on. • **Off:** The device is powered off.
2	Link LED	• **On:** Link is normal. • **Off:** No link or link error.
3	Video LED	• **On:** A stable input signal is detected.

No.	Name	Description
		• **Off:** No input signal is detected.
4	eARC LED	• **On:** The eARC audio is being transmitted. • **Blinking:** The ARC audio is being transmitted. • **Off:** No eARC/ARC audio are being transmitted.

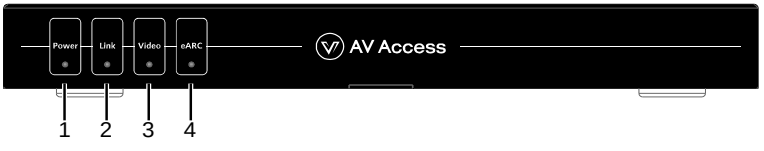
Rear Panel



No.	Name	Description
1	DC 12V	Connect to the DC 12V power adapter provided. **Note:** With one-way PoC from transmitter to receiver supported, power adapter is only needed to connect to the transmitter to power both units.
2	IR In	Connect to IR receiver provided.
3	IR Out	Connect to IR emitter provided.
4	HDMI In	Connect to an HDMI source device.
5	UTP Out	Connect to the UTP In port of the receiver.

Receiver

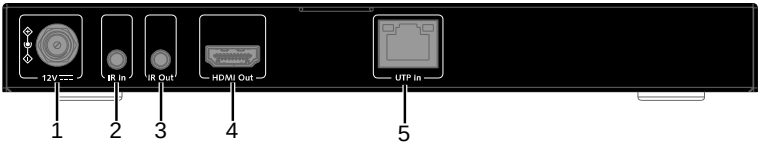
Front Panel



No.	Name	Description
1	Power LED	• **On:** The device is powered on. • **Off:** The device is powered off.

No.	Name	Description
2	Link LED	• **On:** Link is normal. • **Off:** No link or link error.
3	Video LED	• **On:** A stable video signal is output. • **Off:** No video signal is output.
4	eARC LED	• **On:** The eARC audio is being transmitted. • **Blinking:** The ARC audio is being transmitted. • **Off:** No eARC/ARC audio are being transmitted.

Rear Panel



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1	DC 12V	Connect to the DC 12V power adapter provided. **Note:** With one-way PoC from transmitter to receiver supported, power adapter is only needed to connect to the transmitter to power both units.
2	IR In	Connect to IR receiver provided.
3	IR Out	Connect to IR emitter provided.
4	HDMI Out	Connect to an HDMI display device.
5	UTP In	Connect to the UTP Out port of the transmitter.

Installation and Application

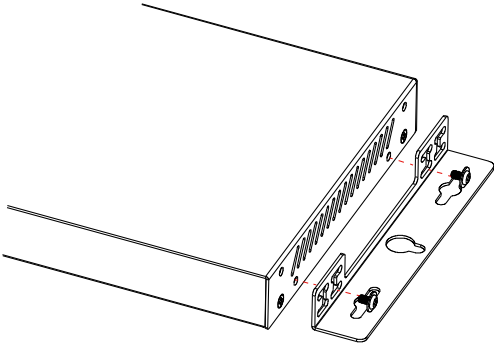
Installation

Warnings:

- Before wiring, disconnect the power from the device.
- During wiring, connect and disconnect the cables gently.

Steps to install the device:

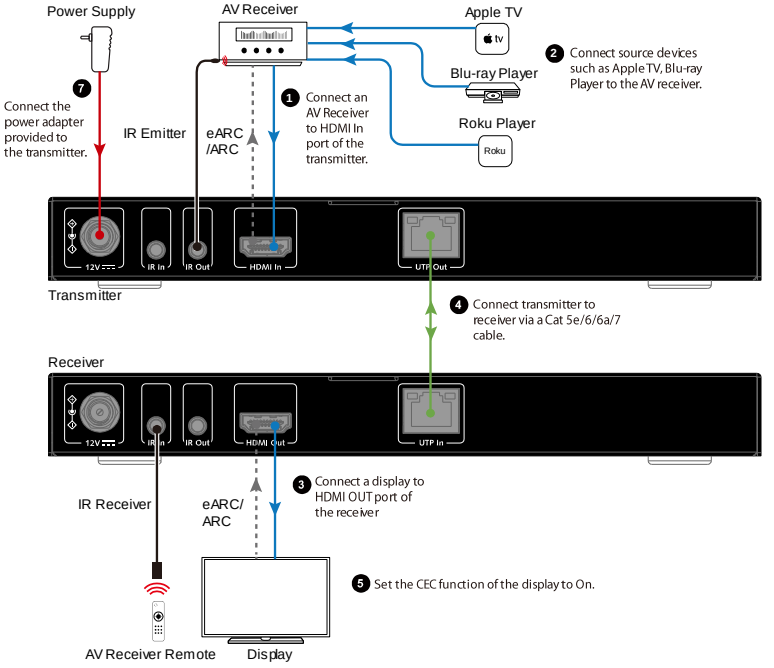
1. Attach the installation bracket to the enclosure using the screws provided in the package separately.
2. The bracket is attached to the enclosure as shown.



3. Repeat the steps from 1 to 2 for the other side of the unit.
4. Attach the brackets to the surface you want to hold the unit against using the screws (provided by others).
5. Repeat the steps from 1 to 4 to install the receiver.

Application

Note: When you want to configure eARC/ARC channel feed by TV: Ensure the connected AV receiver and TV support eARC/ARC function (connect to the eARC/ARC port of TV) and its CEC function should be set to enable.



Switch the AV receiver to eARC/ARC channel, and power on all attached devices. The audio signal of TV through HDMI Out port will be transmitted to the AV receiver connected to HDMI In Port of transmitter.

For additional wiring:

Bi-directional IR pass-through: Connect the provided IR receiver to IR In port of the transmitter/receiver, and connect the provided IR emitter to IR Out port of the receiver/transmitter. You can control the AV Receiver at receiver side or control the display at transmitter side.

Specifications

Technical	
Input/Output Port	Transmitter: 1 x HDMI In, 1 x UTP Out, 1 x IR In, 1 x IR Out, 1 x DC 12V In Receiver: 1 x HDMI Out, 1 x UTP In, 1 x IR In, 1 x IR Out, 1 x DC 12V In
Input/Output Signal Type	HDMI with 4K@60Hz 4:4:4 8bit, HDCP 2.3 compliant
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 **Note:** The extender kit supports resolution up to 4K@60Hz in Dolby Vision low latency mode. For Dolby Vision standard mode, it supports resolution up to 4K@30Hz.
HDR	HDR 10, HDR 10+, HLG
Maximum Data Rate	18 Gbps
Maximum Pixel Clock	600 MHz
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 5.1-ch compressed audio (such as Dolby Digital, DTS 5.1, and Dolby Digital Plus), and 2.0-ch uncompressed PCM audio; **eARC mode:** Up to 8-ch L-PCM of 192kHz audio; Supports encoded audio formats, such as 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 12V 3A
Power Consumption (Maximum)	21.8W
Device Dimension (W x H x D)	215mm x 25mm x 140.2mm/ 8.46" x 0.98'' x 5.52'' each for TX/RX
Product Weight	0.58kg/1.28lb for TX, 0.59kg/1.30lb for RX

Transmission Distance

Note: T568B straight-through Category cable is recommended.

Cable Type	Range	Supported Video
Cat 5e/6/6a/7	70m/230ft	4K@60Hz 4:4:4 24bpp 4K@60Hz 4:2:2 4K@60Hz 4:2:0 30/36bpp 4K@30Hz 4:4:4 30/36bpp
HDMI	Input/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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