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AV Access

4KEX100-H2

4K@60 444 HDR HDBaseT Extender



User Manual

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Technical problems: support@avaccess.com

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

4KEX100-H2 is a slim HDBT transmitter receiver set with HDCP 2.2 compatibility. It supports resolutions up to 4K@60Hz 4:4:4 8bit, extending 4K signal up to 70m/230ft and 1080P signal up to 100m/330ft over a Cat 5e/6 cable. It features bi-directional PoC. It also supports bi-directional IR and RS232 pass-through.

Features

- Supports resolutions up to 4K@60Hz 4:4:4 8bit and HDCP 2.2.
- Supports HDR (High Dynamic Range), including HDR 10 and Dolby Vision*.
- Over a Cat 6a/7 cable, HDBT transmits 4K@60Hz 4:4:4 8bit up to 100m/330ft and 1080P up to 100m/330ft.
- Over a Cat 5e/6 cable, HDBT transmits 4K@60Hz 4:4:4 8bit up to 70m/230ft and 1080P up to 100m/330ft.
- Bi-directional PoC, one power adapter at either transmitter or receiver side can power both units.
- Supports bi-directional IR and RS232 pass-through.
- Slim profile, space saving and easy-to-install.

***Note:** 4KEX100-H2 supports Dolby Vision only if the data rate is less than or equal to 10.2Gbps.

Package Contents

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

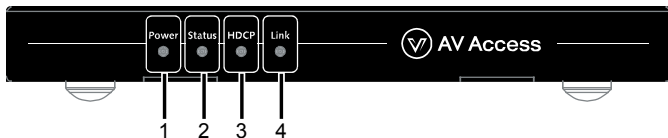
- Transmitter x 1

- Receiver x1
- Power Adapter (DC 18V 1A) with US Pins x1
- IR Emitter x1
- Broadband IR Receiver (30 KHz ~ 50 KHz) x1
- Phoenix Male Connector (3.5mm, 3 Pins) x 2
- Mounting Brackets (with Screws) x 4
- User Manual x 1

Panel

Front Panel

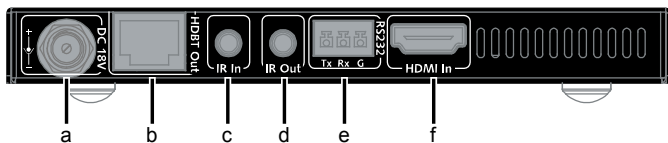
Transmitter/Receiver



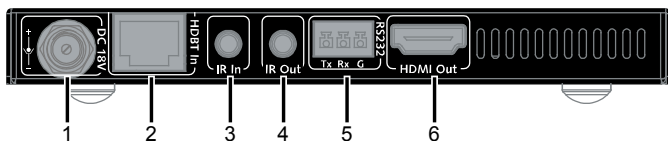
No.	Name	Description
1	Power LED	On/Off: The device is powered on/off.
2	Status LED	Blinking: The device is working properly. Off: The device is not working properly.
3	HDCP LED	On: HDCP protected content is being transmitted. Blinking: Non-HDCP protected content is being transmitted. Off: No content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

Rear Panel

Transmitter



Receiver



No.	Name	Description
a&1	DC 18V	Connect to the DC 18V power adapter provided.
b	HDBT Out	Connect to HDBT In of the receiver via a Cat 5e/6/7 cable.
2	HDBT In	Connect to HDBT Out of the transmitter 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.
6	HDMI Out	Connect to an HDMI display device.

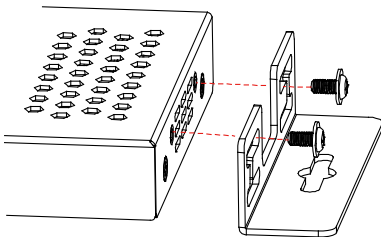
Installation and Application

Brackets Installation

Note: Before installation, please ensure HDEX40-L is disconnected from the power source.

Steps to install the device in a suitable location

1. Attach the installation bracket to the enclosure using the screws that were provided in the package separately. The bracket height can be adjusted up/down or bracket face up or down.
2. The bracket is attached to the enclosure as shown.



3. Repeat steps 1-2 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 steps 1-4 to install the receiver.

IR Cable Operation

Cable Type

- IR Emitter: Connect to the "IR Out" port of the device.

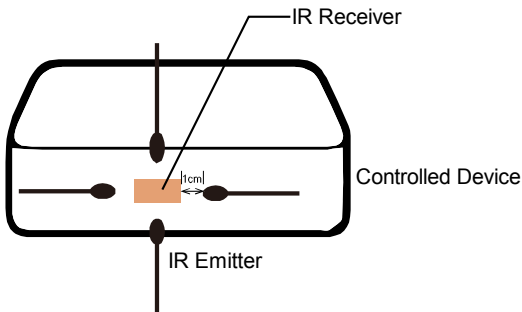


- Broadband IR Receiver (30-50 KHz): connect to the "IR In" port of the device.



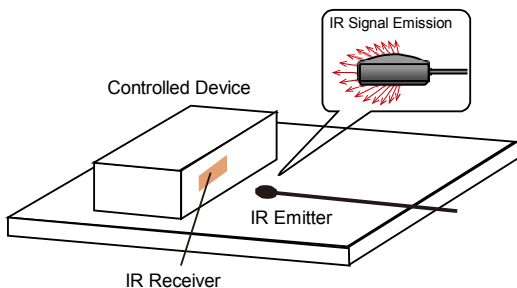
Using the IR Emitter

1. Insert the IR emitter plug into the "IR Out" jack located on the transmitter or receiver.
2. Example 1: Attach the IR emitter head directly with the adhesive tape provided near the IR receiver window (e.g. at the distance of 1cm) on the device you want to control.

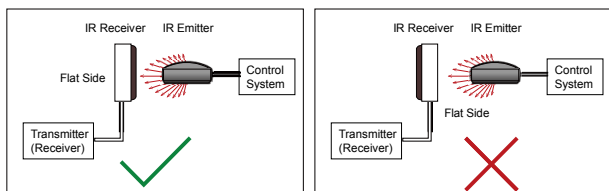


Example 2: You can also place the IR emitter in front of the IR receiver window on the controlled device.

Installation and Application

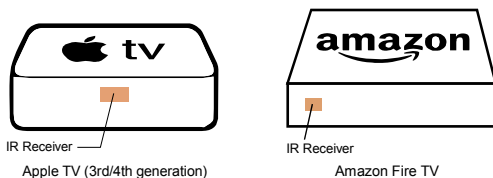


Example 3: When connected to control system, ensure the IR emitter is over against the IR receiver's front side instead of its flat side (see below picture):



Please refer to your device's user guide to find out where the IR receiver is on your connected device.

For example, the IR receiver for Apple TV/Amazon Fire TV/TIVO BOLT is shown as below:



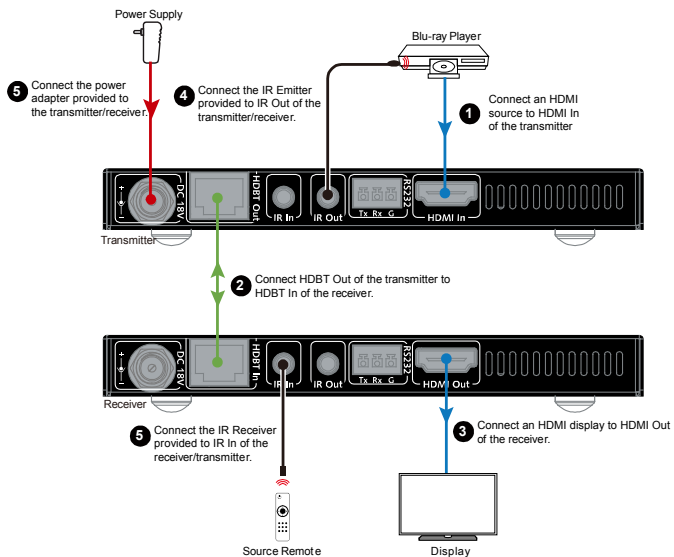


TIVO BOLT

Note: Products from AV Access do not support Bluetooth control, the introduction above applies to device with IR control capability only. Here is a list about different devices' control method.

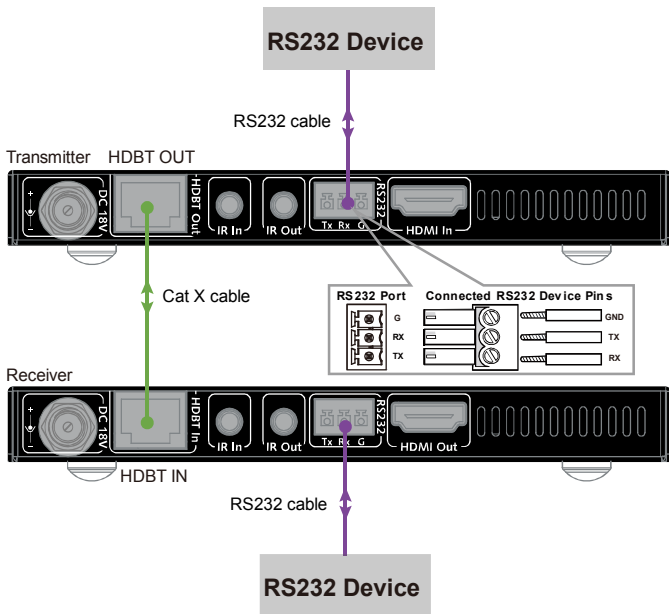
No.	Device	Control Method
1	NVIDIA 2571 Player	Bluetooth/USB
2	Amazon Fire TV with UHD HDR	Bluetooth
3	Amazon Fire TV	IR
4	ROKU Ultra Player	Bluetooth
5	Apple TV 3rd	IR
6	Apple TV 4th	IR
7	Apple 4K TV 5th	Bluetooth
8	Xbox one S	Bluetooth/USB
9	Xbox one X	Bluetooth/USB
10	TIVO BOLT	IR
11	NINTENDO SWITCH HAC-001 Game Console	Bluetooth/USB
12	PS4 Pro	Bluetooth/USB
13	Blu-ray Player	IR

Application



RS232 Operation

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



Specifications

Technical	
Video Signal Type	HDMI with 4K@60Hz 4:4:4, HDCP 2.2, HDR, 3D
Input/Output Resolution Support	Up to 4096x2160@60Hz, including 4K@60Hz/4K@30Hz/1080P/1080i/720P
Audio Format Supported	Fully supports audio formats in HDMI 2.0 specification, including PCM, Dolby TrueHD, Dolby Atmos, DTS-HD Master Audio, DTS:X
Max Data Rate	18 Gbps
General	
Operating Temperature	0°C to + 45°C (32 to + 113 °F)
Storage Temperature	-20 to +70°C (-4 to + 158 °F)
Humidity	20% to 90%, non-condensing
Power Consumption (Maximum)	13W (pair, PoC)
Device Dimensions (W x H x D)	136.40 mm x 15.2 mm x 74.2 mm/ 5.37" x 0.60" x 2.92" each for TX/RX (without Mounting Brackets)
Product Weight	Transmitter/Receiver: 0.24kg/0.53lb

Transmission Distance

Note: T568B straight-through Category cable is recommended.

Cable Type	Range	Supported Video
Cat 5e/6	100m/330ft	1080P@60Hz
	70m/230ft	4K
Cat 6a/7	100m/330ft	
HDMI	Input/Output: 15m/50ft	1080P@60Hz
	Input/Output: 10m/33ft	4K@60Hz 4:2:0
	Input: 3m/10ft	4K@60Hz 4:4:4
	Output: 5m/16ft	

Trouble Shooting

1. No Power

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

2. No Picture or Video Flash

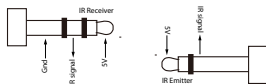
- Ensure all devices are on, and all cables are qualified and connected properly. Ensure all the cables' length are within the maximum distance (refer to Specification table).
- Ensure all the LED indicators are normal.
- When connecting source to display directly, ensure them can work properly.
- Ensure 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

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.
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