AV Access

Simplify your life

4KEX100-L

100M HDMI HDBase-T Extender



User Manual

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Contact Us

Business inquiry: **services@avaccess.com**
Technical problems: **support@avaccess.com**

Important Safety Instructions

- Do not expose this apparatus to rain, moisture, dripping or splashing. No objects filled with liquids, such as vases, shall be placed on the apparatus.
- 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 apparatus (including amplifiers) that produce heat.
- Do not place sources of naked flames, such as lighted candles, on the unit.
- Clean this apparatus only with dry cloth.
- Unplug this apparatus 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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Instructions

Overview

4KEX100-L is a 100m low-cost 4K Full HDBase-T Extender with PoE and offers the distribution of uncompressed 4K@60Hz UHD video, HD audio, Ethernet, power, RS232, and two-way IR up to 100m/330ft along a single CatX cable.

It features the transmission of uncompressed 4K@60Hz UHD video, HDCP 2.2 compatibility, power, Ethernet, bi-directional RS232 and IR control.

Its bi-directional PoE technology ensures only one power adapter is needed at either TX or RX side to power both units. Each unit provides LED indicators for power supply and signal status to show established connection between connected devices.

- Via Cat 6a/7 cables, 4K@60Hz output up to 100m, 1080P output up to 100m
- Via Cat 5e/6 cables, 4K@60Hz output up to 70m, 1080P output up to 100m
- HDMI 1.4 with 4k@60Hz (Chroma sub-sampling 4:2:0 8-bit only) and HDCP 2.2 compliance
- Bi-directional PoE, only one power adapter is needed at either TX or RX side
- Bi-directional RS232 and IR pass-through over HDBaseT
- Automatic EDID management
- All connectors on one side for easy cabling

Package Contents

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

- 4KEX100-L TX x 1
- 4KEX100-L RX x 1
- Power Supply (DC 18V 1A) x 1
- IR Emitter x 1
- Wide-band IR Receiver (30KHz~50KHz) x 1
- Mounting Brackets with Screws (Pair) x 2
- Phoenix Connectors (3 Pin) x 2
- User Manual x 1

Panel

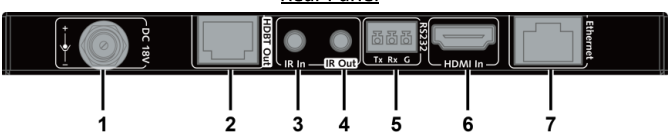
Transmitter

Front Panel



ID	Name	Description
1	Power	**ON:** The transmitter is powered on. **OFF:** The transmitter is powered off.
2	Link	**ON**: Transmitter and Receiver are linked. **Blinking**: Connection exception **OFF**: No link

Rear Panel



ID	Name	Description
1	Power	Connects to a power supply If transmitter is connected to power, receiver is adapter free.
2	HDBT OUT	Connects to HDBT IN port of HDBT receiver
3	IR IN	Connects to IR receiver

ID	Name	Description
4	IR OUT	Connects to IR emitter
5	RS232	Connects to a device with RS232 port
6	HDMI IN	Connects to HDMI source
7	Ethernet	Connects to a device with Ethernet port

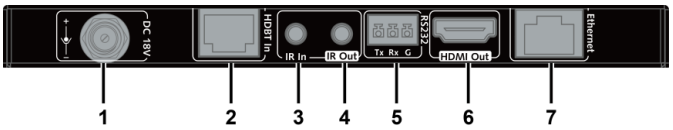
Receiver

Front Panel



ID	Name	Description
1	Power	**ON:** The receiver is powered on. **OFF:** The receiver is powered off.
2	Link	**ON**: Transmitter and Receiver are linked. **Blinking**: Connection exception **OFF**: No link

Rear Panel



ID	Name	Description
1	Power	Connects to a power supply If transmitter is connected to power, receiver is adapter free
2	HDBT IN	Connects to HDBT OUT port of HDBT transmitter
3	IR IN	Connects to IR receiver
4	IR OUT	Connects to IR emitter
5	RS232	Connects to a device with RS232 port
6	HDMI OUT	Connects to HDMI display device
7	Ethernet	Connects to a device with Ethernet port

Installation and Application

Brackets Installation

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

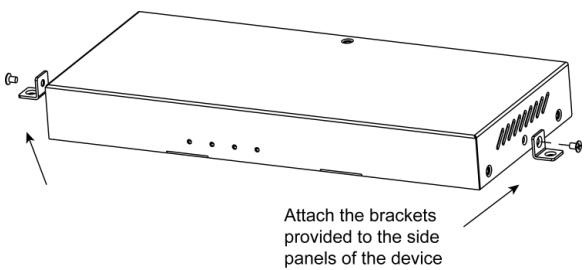
In order to keep elegant appearance, we design to share screws with the product chassis, please refer to the below steps to install.

Steps to install the device in a suitable location:

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

To install the presentation switcher on a solid surface:

1. Position and install the mounting brackets of the transmitter with the two mounting screws provided.



2. Repeat step 1 for the receiver.
3. Mount and secure the transmitter and receiver to a surface or a suitable location respectively with mounting screws.

IR Cable Operation

Cable Type

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

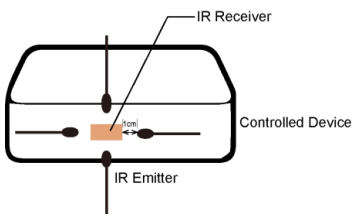


- Broadband IR Receiver (30-50 KHz): connect to the "IR In" port of the device.

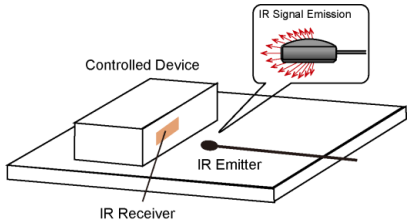


Using the IR Emitter

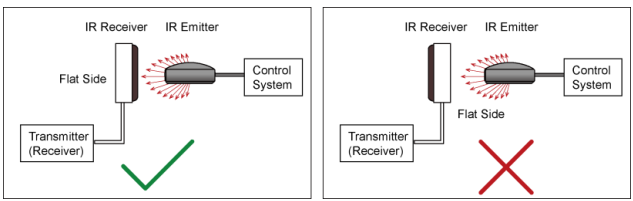
1. Insert the IR emitter plug into the “IR Out” jack located on the transmitter or receiver.
2. Example 1: Attach the IR emitter head directly with the adhesive tape provided near the IR receiver window (e.g. at the distance of 1cm) on the device you want to control.



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

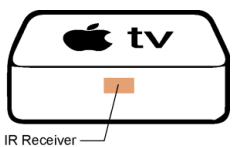


Example 3: When connected to control system, ensure the IR emitter is over against the IR receiver's front side instead of its flat side (see below picture):



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

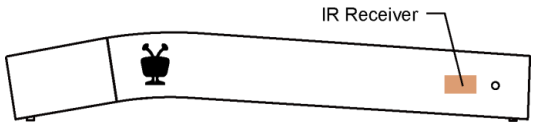
For example, the IR receiver for Apple TV/Amazon Fire TV/TIVO BOLT is shown as below:



Apple TV (3rd/4th generation)



Amazon Fire TV



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	NVDIA 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**

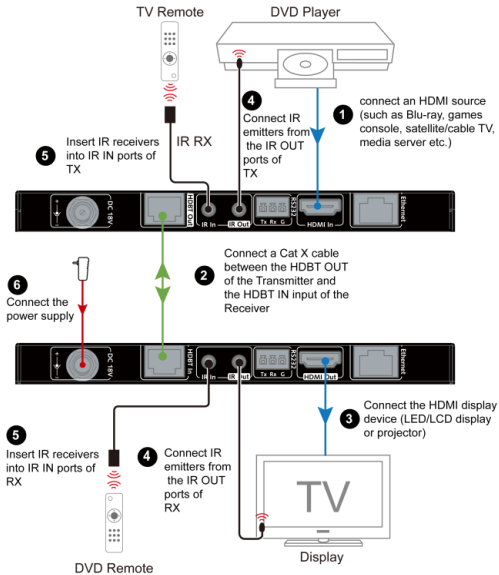
Application

Note:

- Firmly attach the IR emitter eye directly over the infrared receiving sensors of the source and display device to be controlled. Location of the emitter

eye on each device may need to be adjusted later to achieve best IR performance.

- Position the IR receiver eye on or near the display or source device, ensuring a clear line of sight to the remote handset used to control it.



Specification

Transmitter

Technical	
Input	1 x HDMI IN
Input Signal Type	HDMI: HDMI1.4 with 4K@60Hz 4:2:0 8bit, HDCP 2.2
Output	1 x HDBT OUT
Output Signal Type	HDBase-T
Input/Output Resolution Support	4096 x 2160@60/50/30/25/24Hz, 3840 x 2160@60/50/30/25/24Hz, 1080p@2@60/50/30/25/24Hz, 1080i, 720p, 576p, 576i, 480p, 480i
Audio Supported Formats	Stereo, LPCM 5.1, LPCM 7.1; Dolby True HD, DTS-HD Master Audio
Maximum Data Rate	10.2Gbps
Control Method	1 x IR TX, 1 x IR RX, 1 x RS232, 1x Ethernet
General	
Operating Temperature	0°C to 45°C (32°F to 113 °F)
Storage Temperature	-20°C to70°C (-4°F to 158 °F)
Humidity	10% to 90%, non-condensing
Power Supply	DC 18V 1A
Power Consumption	11W (Pair)
ESD Protection	Human-body Model: ±8kV(Air-gap discharge)/ ±4kV(Contact discharge)
Device Dimensions	162mm x 15mm x 74.2mm/

(W x H x D)	6.38" x 0.59" x 2.92"
Product Weight	0.25kg/0.55lb

Receiver

Video	
Input	1 x HDBT IN
Input Signal Type	HDBase-T
Output	1 x HDMI OUT
Output Signal Type	HDMI: HDMI1.4 with 4K@60Hz 4:2:0 8bit, HDCP 2.2 pass through
Input/Output Resolution Support	4096 x 2160@60/50/30/25/24Hz, 3840 x 2160@60/50/30/25/24Hz, 1080p@2@60/50/30/25/24Hz, 1080i, 720p, 576p, 576i, 480p, 480i
Audio Supported Formats	Stereo, LPCM 5.1, LPCM 7.1; Dolby True HD, DTS-HD Master Audio
Maximum Data Rate	10.2Gbps
Control Method	1 x IR TX, 1 x IR RX, 1 x RS232, 1x Ethernet
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Device Dimensions (W x H x D)	162mm x 15mm x 74.2mm/ 6.38" x 0.59" x 2.92"
Product Weight	0.25kg/0.55lb

Transmission Distance

Cable Type	Range	Supported Video
Cat 5e/6	70m/230ft	4K@60Hz 4:2:0
	100m/328ft	1080P@60Hz
Cat 6a/7	100m/328ft	4K@60Hz 4:2:0 1080P@60Hz

Warranty

Products are backed by a limited 3-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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