4K HDMI USB 2.0 KVM Extender

4KEX120-KVM



User Manual

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Introduction

Overview

This product is a 4K IP-based KVM Extender set. It extends 4K video and USB 2.0 signals over long distances, either through a direct Cat 5e or above cable connection or through a Gigabit Ethernet network switch. It delivers zero-latency transmission and is ideal for professional A/V applications requiring UHD video and real-time USB interaction.

Features

- IP-based extension supporting transmission through a 1 Gigabit Ethernet network.
- Transmits 4K video and USB 2.0 signals up to 120m (394ft) through a Cat 5e or above cable.
- Supports connection through one or more Gigabit Ethernet switches for extending the transmission distance beyond 120m (394ft).
- Supports video resolutions up to 4K@30Hz.
- Zero latency.
- Supports HDCP 1.4.
- Built-in USB 2.0 hub.
- Supports limited EDID copy.
- Supports multichannel audio up to PCM 7.1ch, DTS-HD Master and Dolby TrueHD.
- Plug-and-play with zero configuration.

Package Contents

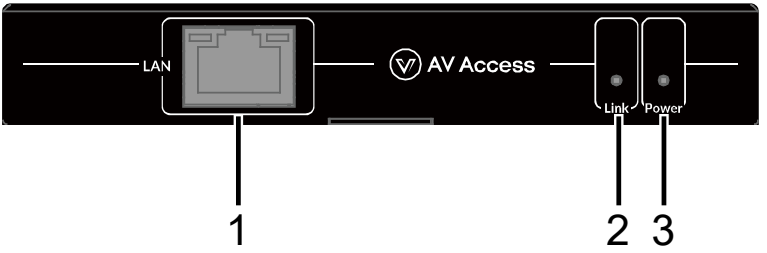
Before you start the installation of the product, please check the package contents:

- Transmitter x 1
- Receiver x 1
- Power Supply (DC 12 V 1A) x 2
- USB 2.0 Type-A to Type-B Cable (1.5m) x 1
- Mounting Brackets (with Mounting Screws) x 4
- User Manual x 1

Panel

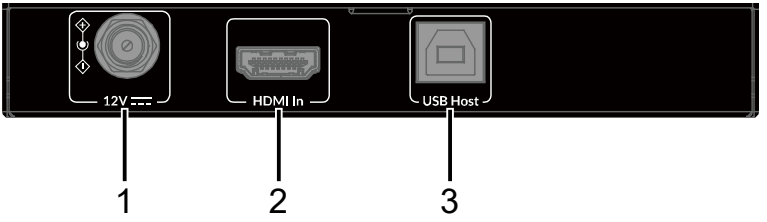
Transmitter

Front Panel



#	Name	Description
1	LAN	Connect directly to the receiver or connect to a Gigabit Ethernet switch for transmitting compressed IP streams to the receiver.
2	Link LED	• **On**: The transmitter is paired with a receiver successfully. • **Off**: The transmitter is not paired with a receiver.
3	Power LED	• **On:** The transmitter is powered on. • **Off:** The transmitter is powered off.

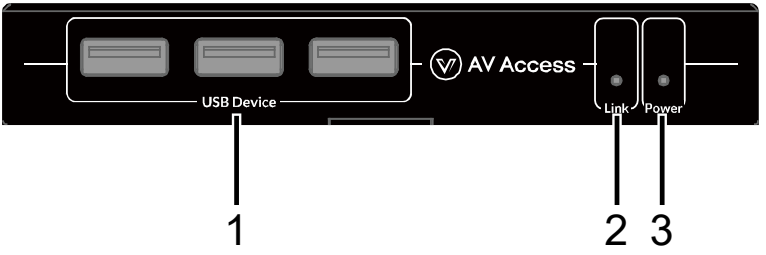
Rear Panel



#	Name	Description
1	12V	Connect to the DC 12V 1A power adapter provided.
2	HDMI In	Connect to an HDMI source.
3	USB Host	Connect the type-A to type-B USB cable between this port and the USB port of a desktop or a laptop. This port is USB 2.0 compliant.

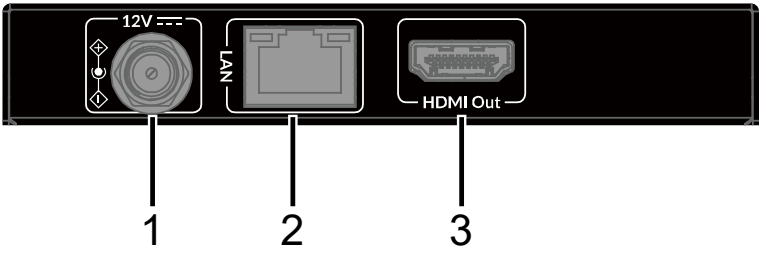
Receiver

Front Panel



#	Name	Description
1	USB Device	Connect to USB peripherals (e.g. a keyboard, a mouse and a USB flash drive, etc.).
2	Link LED	• **On**: The receiver is paired with a transmitter successfully. • **Off**: The receiver is not paired with a transmitter.
3	Power LED	• **On**: The receiver is powered on. • **Off**: The receiver is powered off.

Rear Panel



#	Name	Description
1	12V	Connect to the DC 12V 1A power adapter provided.
2	LAN	Connect directly to the transmitter or connect to a Gigabit Ethernet switch for receiving compressed IP streams from the transmitter.
3	HDMI Out	Connect to an HDMI display.

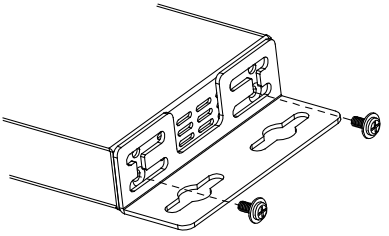
Installation and Application

Installation

Note:

- Ensure both devices are disconnected from the power source before installation
- Recommended installation height is not more than 2m from the ground.

1. Attach the mounting brackets to the panels of both sides using the screws (2 pcs for each side) provided in the package.

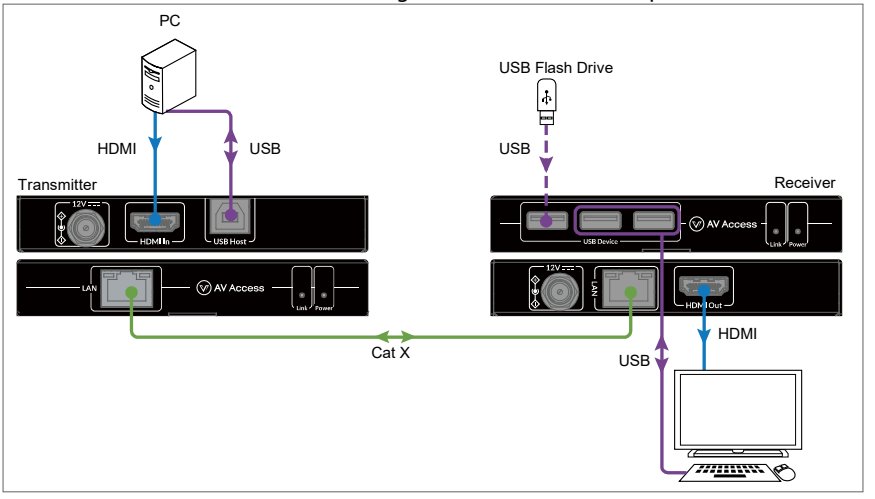


2. Screw the brackets to the position as required (screws in this step are not included in the package).

Application

Application 1 – Direct Connection

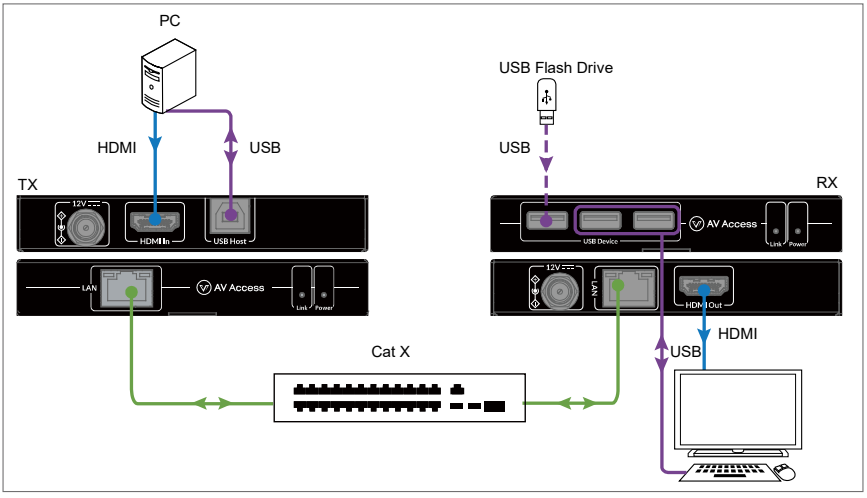
Connect the transmitter directly to the receiver using a Cat 5e or above cable. The extender transmits HDMI and USB 2.0 signals over a distance of up to 120m (394ft).



Application 2 – Connection Through a Gigabit Ethernet Switch

Connect the transmitter and receiver through one or more Gigabit Ethernet switches. This allows HDMI and USB 2.0 signals to be transmitted over an IP network and extends the transmission distance beyond the 120m (394ft) limit of a direct cable connection.

No configuration is required when one transmitter and one receiver are connected through a compatible Gigabit Ethernet network.



Note:

- Only one transmitter and one receiver pair may operate in the same local network.
- This product does not support multiple extender pairs operating simultaneously in the same local network.
- Do not connect more than one transmitter or more than one receiver to the same network.
- Use Gigabit Ethernet switches and CAT5e or above cables.

Specification

Transmitter

Technical	
Input/Output	1 x HDMI IN (19-pin female HDMI Type-A), 1 x USB HOST (female USB Type-B), 1 x DC 12V connector, 1 x LAN (RJ45)
Input Signal Type	HDMI 1.4b
Output Signal Type	IP streams
Input Resolutions Supported	640x480[8], 800x600[8,10], 1024x768[8,10], 1280x720[6,7,8,9,10], 1280x768[8,10], 1280x800[8,10], 1280x960[8,10], 1280x1024[8,10], 1360x768[8], 1366x768[8], 1440x900[8,10], 1600x900[8], 1600x1200[8], 1680x1050[8,10], 1920x1080[1,2,3,4,5,6,7,8,9,10], 1920x1200[8], 3840x2160P[2,3,5], 4096x2160P[2,3,5] 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, 9 = at 100 Hz, 10 = at 120 Hz
Input Audio Format Supported	PCM 2.0/2.1/5.1/7.1, Dolby Digital 5.1ch, Dolby Digital Plus, Dolby TrueHD, DTS 5.1ch, DTS-HD High Resolution Audio, DTS-HD Master Audio
Network Connection	Direct connection or connection through one or more Gigabit Ethernet switches
Transmission Distance	CAT5e or above:120m/394ft; HDMI: Up to 15m/49ft

General	
Operating Temperature	0 to 45°C (32 to 113°F)
Storage Temperature	-20 to 70°C (-4 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 1A
Power Consumption	< 2.5W
Unit Dimensions (W x H x D)	112mm × 17.8mm × 65.2mm / 4.41'' × 0.70'' × 2.57''
Unit Net Weight (without accessories)	0.18kg/0.40lb

Receiver

Technical	
Input/Output	1 x LAN (RJ45), 1 x HDMI OUT (19-pin female HDMI Type-A), 3 x USB DEVICE (female USB Type-A), 1 x DC 12V connector
Input Signal Type	IP streams
Output Signal Type	HDMI 1.4b
Output Resolutions Supported	640x480[8], 800x600[8,10], 1024x768[8,10], 1280x720[6,7,8,9,10], 1280x768[8,10], 1280x800[8,10], 1280x960[8,10], 1280x1024[8,10], 1360x768[8], 1366x768[8], 1440x900[8,10], 1600x900[8], 1600x1200[8],1680x1050[8,10], 1920x1080[1,2,3,4,5,6,7,8,9,10], 1920x1200[8], 3840x2160P[2,3,5], 4096x2160P[2,3,5] 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, 9 = at 100 Hz, 10 = at 120 Hz

Technical	
Output Audio Format Supported	PCM 2.0/2.1/5.1/7.1, Dolby Digital 5.1ch, Dolby Digital Plus, Dolby TrueHD, DTS 5.1ch, DTS-HD High Resolution Audio, DTS-HD Master Audio
Network Connection	Direct connection or connection through one or more Gigabit Ethernet switches
Transmission Distance	• Direct Cat 5e or above connection: Up to 120m/394ft • Through Gigabit Ethernet switch(es): Extendable according to the network topology; each cable segment must not exceed 120m/394ft • HDMI: Up to 15m/49ft
USB Current	Not more than 0.5A per USB port is recommended

General	
Operating Temperature	0 to 45°C (32 to 113°F)
Storage Temperature	-20 to 70°C (-4 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 1A
Power Consumption	< 4W (USB Consumption not included)
Unit Dimensions	112mm × 17.8mm × 65.2mm / 4.41'' × 0.70'' × 2.57'' (W x H x D)
Net Weight	0.18kg/0.40lb

Warranty

Products are backed by a limited 1-year parts and labor warranty. For the following cases AV Access 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) 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 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 preserves the right for interpretation of these cases above and to make changes to them at any time without notice.

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Customer/Technical Support: support@avaccess.com



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