

AV Access

4KEX100-KVM

4K HDBaseT Extender 100m with USB2.0



User Manual

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Contact Us

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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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Overview

4KEX100-KVM is a 100m 4K HDBaseT 2.0 Extender which offers the distribution of uncompressed 4K@60Hz UHD video, Analog Stereo, power, RS232 and USB 2.0 up to 100m/330ft over a single Cat6 or above cable.

With USB 2.0 pass-through and USB Host connector in TX, and USB Device connectors in RX, it provides remote source PC control with keyboard and mouse, interactive display operation, data transmission and USB streaming over distances up to 100m. Additional features include Bi-directional 3.5mm stereo pass through.

With 48V PoH integrated inside, the extender needs only one power supply connected to TX to power both units. Its 12V power supply is secured with a screw-on connector to prevent the power from being accidentally disconnected. It has LED indicators for visual power supply to units and signal status to show established connection between connected devices.

- Via Cat 6/6a/7 cables, 4Kx2K@60Hz output up to 100m, 1080P@60Hz up to 100m
- Via Cat 5e cable, 4Kx2K@60Hz output up to 90m, 1080P@60Hz up to 100m
- HDMI 1.4 with 4k@60Hz (chroma sub-sampling 4:2:0 8-bit only) and HDBT 2.0 compliance
- One way POH, TX (PSE) with PSU to power both TX and RX (PD)
- USB 2.0 pass through, USB-Host connector built in TX and 4 x USB-Device connector built in RX



- High-speed USB 2.0, up to 480Mbps, pass through over HDBaseT up to 100m
- Bi-directional Analog Stereo, and RS232 pass-through over HDBaseT
- Independent DIP switch for EDID management
- Does not support HDCP



Package Contents

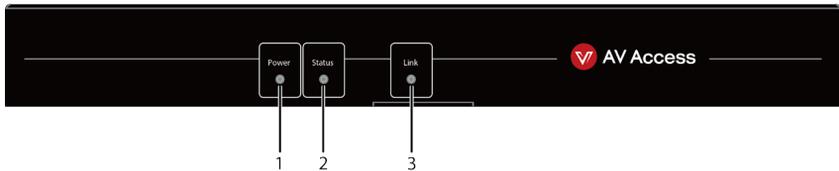
Before you start the installation of the product, please check the package contents:

- 1 x Transmitter 4KEX100-KVM
- 1 x Receiver 4KEX100-KVM
- 1x 12 VDC 2A Power Supply
- 2 x Phoenix Male Connector (3.5 mm, 3 pins)
- 2 x Mounting Brackets (Pair)
- 1 x User Manual

Panel

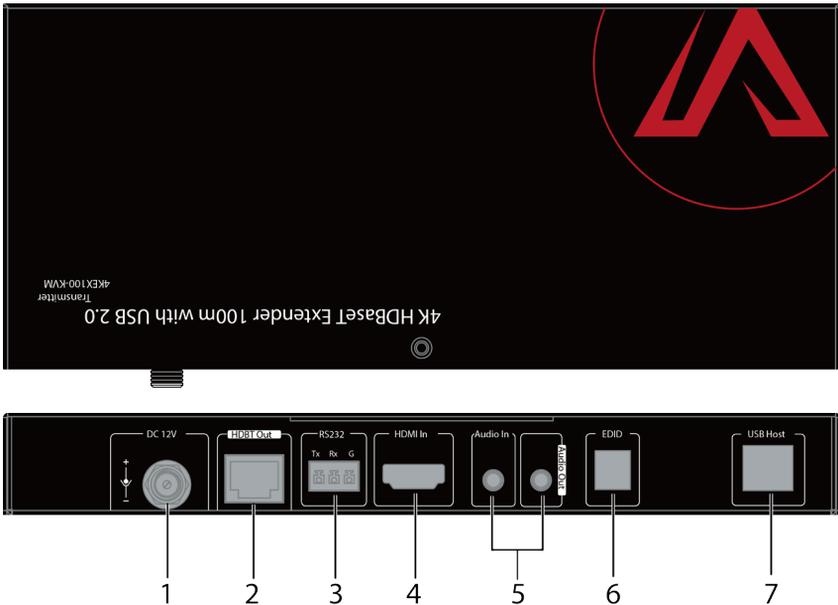
Transmitter

Front Panel



No.	Name	Description
1	Power LED	ON: The transmitter is powered on. OFF: The transmitter is powered off.
2	Status LED	Flashing Slowly: The transmitter is working properly. OFF: The transmitter is not working properly.
3	Link LED	ON: HDBT Link is normal OFF: No HDBT Link

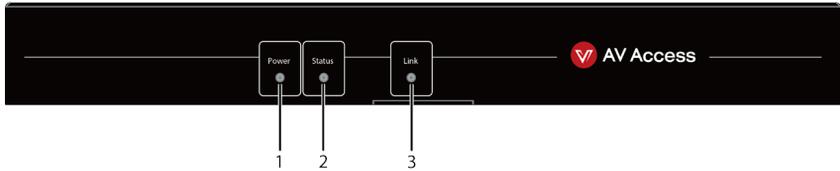
Rear Panel



No.	Name	Description
1	DC 12V	12V DC power input, threaded port for standard or locking connection
2	HDBT OUT	Connects to HDBT IN port of receiver
3	RS232	RS232 pass through
4	HDMI IN	Connects to an HDMI source
5	AUDIO	Input: connects to audio devices Output: connects to audio devices
6	EDID	DIP Switch for EDID Management
7	USB HOST	Connects to USB-HOST device, such as PC

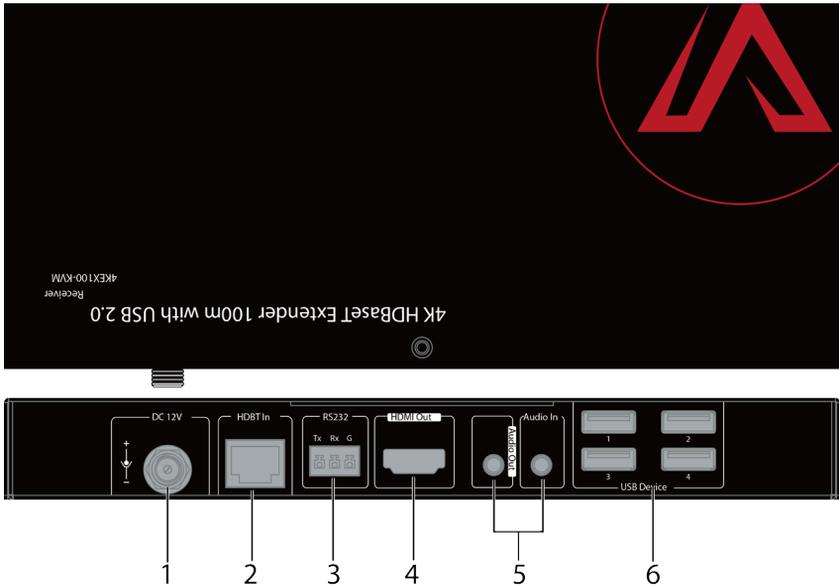
Receiver

Front Panel



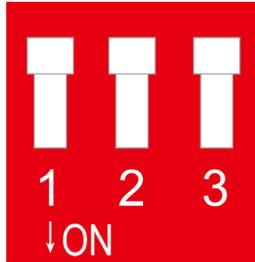
No.	Name	Description
1	Power LED	ON: The transmitter is powered on. OFF: The transmitter is powered off.
2	Status LED	Flashing Slowly: The transmitter is working properly. OFF: The transmitter is not working properly.
3	Link LED	ON: HDBT Link is normal OFF: No HDBT Link

Rear Panel



No.	Name	Description
1	DC 12V	12V DC power input, threaded port for standard or locking connection
2	HDBT IN	Connects to HDBT OUT port of transmitter
3	RS232	RS232 pass through
4	HDMI OUT	Connects to an HDMI Sink
5	AUDIO	Input: connects to audio devices Output: connects to audio devices
6	USB DEVICE	Connects to USB device such as keyboard, mouse, USB camera

EDID Management



Please use the DIP Switch for EDID management:

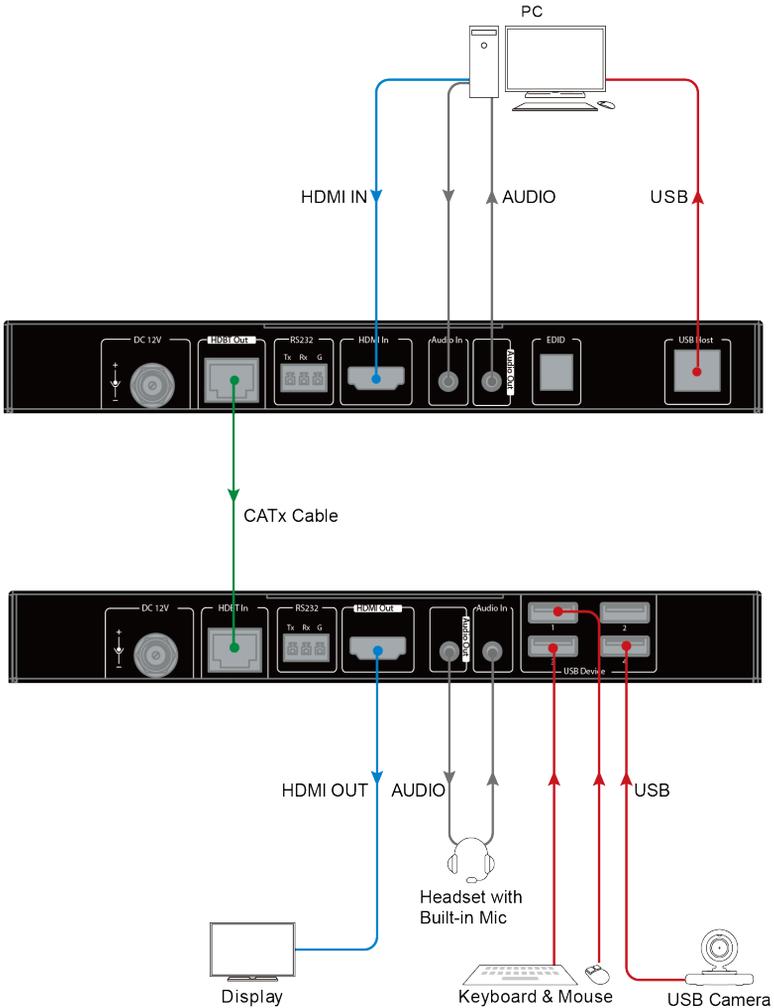
DIP Switch	Position 1	Position 2	Position 3
EDID Copy (Default)	DOWN	DOWN	RESERVED
3840 x 2160P@30Hz 2CH	DOWN	UP	
1920 x 1080P@60Hz 2CH	UP	DOWN	
1920 x 1200@60Hz 2CH	UP	UP	

Note: If EDID copy failed, it will use 1080p/2ch as EDID for input.

Installation Instructions

Note:

- Disconnect all power supplies of all devices before installation.
- During the installation, connect or disconnect the cables gently.



Specification

Transmitter

Video	
Input	1 x HDMI
Input Signal Type	HDMI 1.4 with 4K
Input Resolution Support	4096x2160@24/25/30/50/60Hz, 3840x2160@24/25/30/50/60Hz, 1080P, 1080I, 720P, 576p, 576i, 480p
Input Video Level	0.5-1.0 V p-p
Input DDC Signal	5V p-p
Maximum Pixel Clock	297MHz
Output	1 x HDBT
Output Signal Type	HDBT 2.0
Output Resolution Support	4096x2160@24/25/30/50/60Hz, 3840x2160@24/25/30/50/60Hz, 1080P, 1080I, 720P, 576p, 576i, 480p
Video Impedance	100 Ω
Transmission distance	Cat 5e: 3840x2160: max. 90m; 1080P: max. 100m Cat 6/6a/7: 3840x2160: max. 100m; 1080P: max. 100m
Audio	
Audio input	3.5mm Mini jack, stereo
Audio output	3.5mm Mini jack, stereo
Control	
Control method	1x RS232, 1x USB-Host;

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)
Surge Protection	Voltage: ±1 kV (Ten times respectively for the positive and negative voltage)
Electrical Fast Transient/Burst	Data communication cord: 1 kV Power cord : 2 kV
Power Supply	DC 12V 2A
Power Consumption (Maximum)	≤12 W (pair)
Device Dimensions (W x H x D)	210mm x 25mm x 90.2mm / 8.27" x 0.98" x 3.55"
Product Weight	0.44kg
Certification	CE, FCC, RoHS

Receiver

Video	
Input	1 x HDBT
Input Signal Type	HDBT 2.0
Input Resolution Support	4096x2160@24/25/30/50/60Hz, 3840x2160@24/25/30/50/60Hz, 1080P, 1080I, 720P, 576p, 576i, 480p
Input Video Level	0.5-1.0 V p-p
Input DDC Signal	5V p-p
Maximum Pixel Clock	297MHz

Video	
Output	1 x HDMI
Output Signal Type	HDMI 1.4 with 4K
Output Resolution Support	4096x2160@24/25/30/50/60Hz, 3840x2160@24/25/30/50/60Hz, 1080P, 1080I, 720P, 576p, 576i, 480p
Video Impedance	100 Ω
Audio	
Audio input	3.5mm Mini jack, stereo
Audio output	3.5mm Mini jack, stereo
Control	
Control method	1x RS232, 4x USB Device
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: $\pm 8\text{kV}$ (Air-gap discharge)/ $\pm 4\text{kV}$ (Contact discharge)
Surge Protection	Voltage: $\pm 1\text{ kV}$ (Ten times respectively for the positive and negative voltage)
Electrical Fast Transient/Burst	Data communication cord: 1 kV Power cord : 2 kV
Power Supply	DC 12V 2A
Power Consumption (Maximum)	$\leq 12\text{ W}$ (pair)
Device Dimensions (W x H x D)	210mm x 25mm x 90.2mm / 8.27" x 0.98" x 3.55"

General	
Product Weight	0.46kg
Certification	CE, FCC, RoHS

Cable Specifications

Note: AV Access recommends use of straight-through Category cables wired to T568B standard.

Cable Type	Range	Supported Video
Cat5e	100m	Up to 1080p@60Hz, 36bit (data rates lower than 5.3 Gbps or below 225 MHz TMDS clock)
	90m	1080p@60Hz, 48bit
Cat6/Cat6a/Cat7	100m	1080p@60Hz 3D 4K2K/30Hz/4:4:4 and 4K2K/60Hz/4:2:0 video formats

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 reserves the right for interpretation of these cases above and to make changes to them at any time without notice.

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V1.0.2