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4KIP100-KVM

4K IP based KVM 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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Introduction

Overview

4KIP100-KVM is a 4K IP based KVM Extender. It could extend 4K video (with zero latency) and USB 2.0 signals over long distances, and it is a plug & play product.

Features

- IP based, 1 Gigabit network support 4K video
- Supports video resolution up to 4K@30Hz
- Supports HDCP 1.4
- Supports 7.1-channels audio
- Supports EDID limited copy
- Supports the distance up to 120m (395ft) with Cat 5e/6/6a/7 cable, with network switch, the distance will be extended unlimitedly
- Supports 3 USB 2.0 for full feature USB 2.0 applications
- Supports 4-Pin DIP switch for more sets works in a same network, up to 16 sets

Package Contents

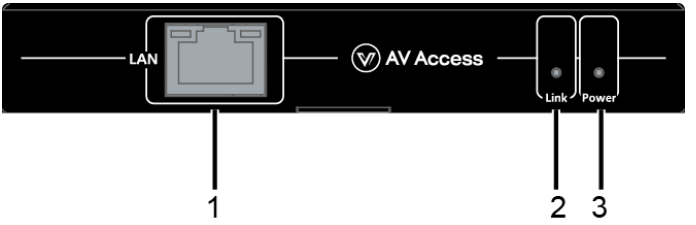
Before you start the installation of the product, please check the package contents:

- 4KIP100-KVM x1
- Power Supply (DC 12 V 1A) with US Plugs x2
- USB 2.0 Type-B to Type-A Cable (L=1.5m) x 1
- Mounting Brackets (with Mounting Screws) x4
- User Manual x1

Panel

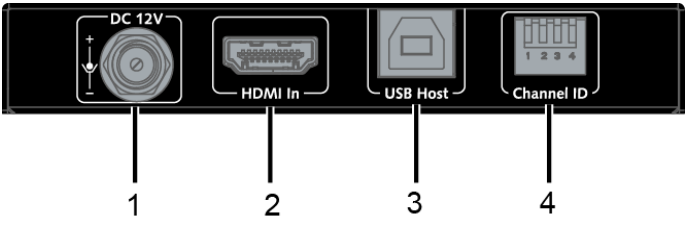
Transmitter

Front Panel



No.	Name	Description
1	LAN	Connect to a receiver or an Ethernet Switch for streaming media output.
2	Link LED	**On:** The transmitter is paired with the receiver successfully.
3	Power LED	**On:** The device is powered on. **Off:** The device is powered off.

Rear Panel

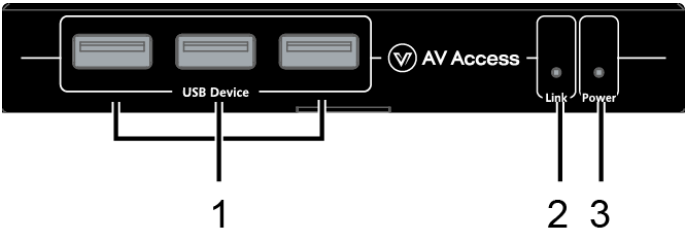


No.	Name	Description
1	DC 12V	Connect to the DC 12V 1A power adapter provided.
2	HDMI In	Connect to HDMI source such as a Blu-ray.

No.	Name	Description
3	USB Host	Connect a type A male to type B male USB cable between this port and the USB port of a desktop or a laptop. The transmitter is USB 2.0 compliant.
4	Channel ID	This DIP switch consists of four manual switches, which are used to route the transmitter to receiver based on their positions. For more information, see "**Using DIP Switch to Perform Routing**". **Note:** • By default, each individual switch is in the up position. • If you change the positions of the DIP switches on transmitter/receiver, you must restart the transmitter/receiver for the changes to take effect.

Receiver

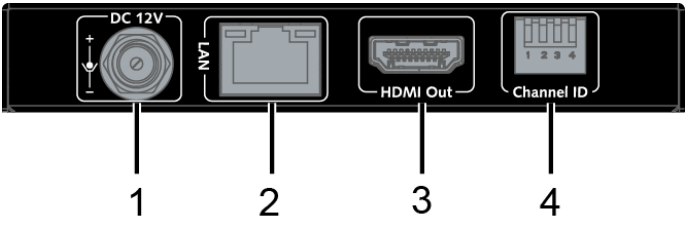
Front Panel



No.	Name	Description
1	USB Device	Connect to USB devices, e.g. keyboard, mouse and Udisk.
2	Link LED	**On:** The receiver is paired with the transmitter successfully.

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

Rear Panel



No.	Name	Description
1	DC 12V	Connect to the DC 12V 1A power adapter provided.
2	LAN	Connect to a transmitter or an Ethernet Switch for streaming media input.
3	HDMI Out	Connect to display such as TV.
4	Channel ID	This DIP switch consists of four manual switches, which are used to route the transmitter to receiver based on their positions. For more information, see "**Using DIP Switch to Perform Routing**". **Note:** • By default, each individual switch is in the up position. • If you change the positions of the DIP switches on transmitter/receiver, you must restart the transmitter/receiver for the changes to take effect.

Using DIP Switch to Perform Routing

To route the signal from a transmitter to a receiver, toggle each individual switches of the DIP Switch in receiver to the same positions as these in transmitter. If you want to link the receiver to a different transmitter, change the receiver switch settings in the same way as how the transmitter's switch is positioned.

Note:

- You must repower the transmitter and receiver for the switch setting changes to take effect.
- One transmitter can be only paired with one receiver individually in the same network, i.e. only one set DIP switch of transmitter and receiver can be set to the same position.

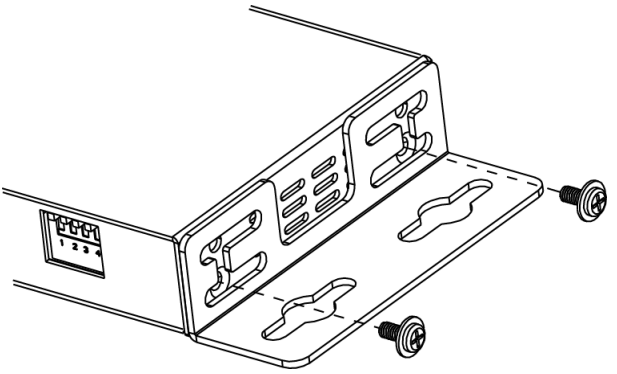
Installation and Application

Brackets Installation

Note: Before installation, please ensure 4KIP100-KVM 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.

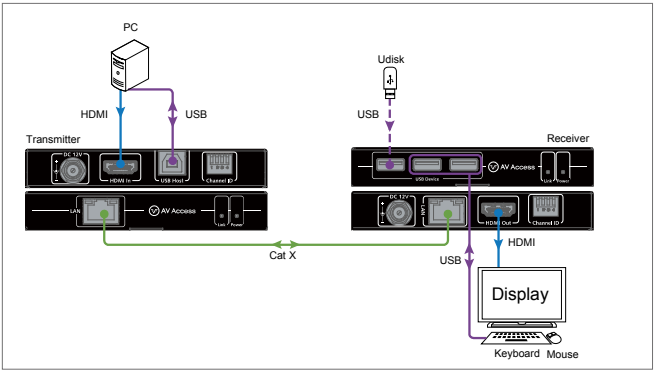


3. Repeat steps 1-2 for the other side of the unit.
4. Attach the brackets to the surface you want to hold the unit against using the screws (provided by others).
5. Repeat steps 1-4 to install the receiver.

Typical Application

Application 1 - Connect directly

4KIP100-KVM could be connected directly with a Cat 5e or above cable. As a normal extender set, it extends the HDMI and USB signals over a long distance up to 120m/395ft.

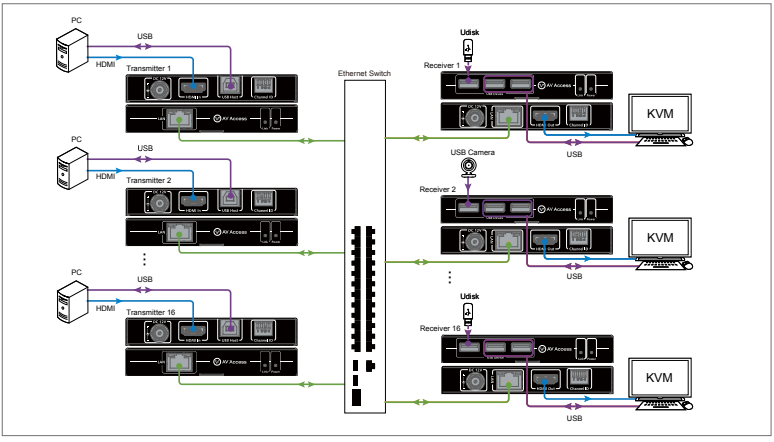


Application 2 - Connect through Ethernet Switch

4KIP100-KVM could be connected through one or more network switches. With the 4-Pin DIP switch, it could connect to 16 extender sets in a same network without the VLAN settings, extend the HDMI and USB signals to an unlimited distance.

Note：

- HDMI cables' length must be within 15m/49ft.
- One transmitter can be only paired with one receiver individually in the same network, i.e. only one set DIP switch of transmitter and receiver can be set to the same position.


PC
USB
HDMI
Transmitter 1
PC
USB
HDMI
Transmitter 2
PC
USB
HDMI
Transmitter 16
Ethernet Switch
Udisk
Receiver 1
USB Camera
Receiver 2
Udisk
Receiver 16
KVM
KVM
KVM
USB
USB
USB

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 4-Pin DIP Switch 1 x DC 12V connector with locking 1 x LAN (RJ45)
Input Signal Type	HDMI 1.4b
Input Resolution 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 5.1 ch, Dolby Digital Plus, Dolby TrueHD, DTS 5.1 ch, DTS-HD High Resolution Audio, DTS-HD Master Audio
Maximum Data Rate	9 Gbps
Maximum Pixel Clock	300 MHz
Output Signal Type	Compressed IP streams
Transmission Distance	Cat 5e or above: 120m/395ft HDMI: 15m/49ft

General	
Operating Temperature	0 to + 45°C (32 to + 113 °F), 10% to 90%, non-condensing
Storage Temperature	-20 to +70°C (-4 to +158 °F), 10% to 90%, non-condensing
ESD Protection	Human Body Model: ±8kV (air-gap discharge)/ ±4kV (contact discharge)
Power Supply	DC 12V 1A
Power Consumption	<2.5 W
Unit Dimensions (W x H x D)	112mm × 17.8mm × 65.2mm / 4.41″ × 0.70″ × 2.57″
Unit 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 4-Pin DIP Switch 1 x DC 12V connector with locking
Input/Output Signal Type	Compressed IP streams
Output Resolution 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
Output Audio Format Supported	PCM 2.0 / 2.1 / 5.1 / 7.1, Dolby Digital 5.1 ch, Dolby Digital Plus, Dolby TrueHD, DTS 5.1 ch, DTS-HD High Resolution Audio, DTS-HD Master Audio
Maximum Data Rate	9 Gbps
Maximum Pixel Clock	300 MHz
Transmission Distance	Cat 5e or above：120m/395ft HDMI: 15m/49ft
USB Consumption	Recommended no more than 0.5A per USB port
General	
Operating Temperature	0 to + 45°C (32 to + 113 °F), 10% to 90%, non-condensing
Storage Temperature	-20 to +70°C (-4 to +158 °F), 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 (without USB Consumption)
Unit Dimensions (W x H x D)	112mm × 17.8mm × 65.2mm / 4.41″ × 0.70″ × 2.57″
Unit Weight (without accessories)	0.18kg/0.40lb

Trouble Shooting

Steps of Regular Troubleshooting Routine

1 **Power:** Please make sure the source, display and 4KIP100-KVM are powered on.

2 **Indicator:** Please make sure all LED indicators of 4KIP100-KVM are normal according to user manual.

3 **Devices**: Please make sure picture can be shown normally when connecting source to display device directly.

4 **Cable**: Plug in and out HDMI/Cat X/USB cable or try another HDMI/Cat X/USB cable.

- Cat 5e or above cable is recommended.
- Please make sure Cat X cable is less than 120m/395ft when use the kit as an extender, and HDMI Cable is less than 15m/49ft.
- Please make sure the two connectors of one Cat X cable are same standard (IEEE 568B).

5 **Compatibility:** Please test other source and display devices to determine if it is a compatibility issue.

Typical questions

How to deal with cutting off when you connect USB device to receiver?

- Please make sure your USB device is working normally.
- Please insert the power adapter to receiver power port instead of transmitter since the PoE not enough to power on your USB device such as hard disk.

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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