4K@60Hz Dual Monitor KVM Extender 100m with USB 3.0

4KEX100D-DM



User Manual

AV Access

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Introduction

Overview

This product is a 100m dual-monitor 4K@60Hz KVM extender designed for extending computer workstations in environments such as home offices, server rooms, and control centers. This extender supports dual 4K@60Hz video, USB 3.2 data, and power transmission, all through a single Cat 6A/7 F/FTP or U/FTP cable. It ensures smooth USB 3.2 Gen 1 data transfer at speeds of up to 5Gbps, while remaining backward compatible with USB 3.0, 2.0, and 1.1 devices.

By installing the DisplayLink driver from the official website, users can enable dual-display output through either the USB-A or USB-C connection, including on MacBooks equipped with Apple M-series chips.

It also features one-way PoC function, one power adapter is needed to be connected to the receiver to power both units.

Features

- One USB C transmitter and dual monitor receiver set.
- Supports transmitting dual 4K video, USB 3.0, audio, and power signals over a single Cat 6A/7 F/FTP or U/FTP cable up to 100m (330ft).
- Supports USB 3.2 Gen 1x1 standard with up to 5Gpbs data transfer rate, and backward compatible with USB 3.0, USB 2.0, and USB 1.1.
- Supports multiple peripheral connections on the receiver: 2x USB-A and 1x USB C device ports (each USB device port supports 1.5A current output) for connecting USB peripherals.
- Plug and play, and compatible with multiple operating systems.
- Support firmware upgrading via micro-USB port.
- Supports one-way PoC function, one power source is needed to be connected to the receiver side to power both units.

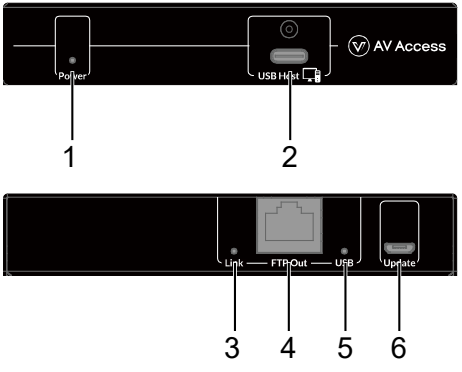
Package Contents

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

- 4KEX100D-DM (Transmitter) x 1
- 4KEX100D-DM (Receiver) x 1
- Power Adapter (DC 20V/3A) x 1
- USB 3.2 Type-A to Type-C Cable (L = 1.8m) x 1
- Mounting Brackets (with Screws) x 6
- User Manual x 1

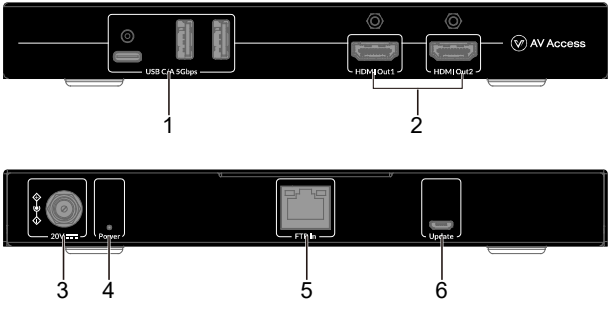
Panel

Transmitter



#	Name	Description
1	Power LED	• On: The device is powered on. • Off: The device is powered off.
2	USB Host	USB 3.2 type-C port. Connect to a computer. The port supports data transmission with data transfer rate up to 5Gbps. The following cable is recommended: USB 3.2 Type-A to Type-C Cable (USB 3.2 or above).
3	Link LED	• On: The HDBT link is normal. • Blinking/Off: No HDBT link or link error.
4	FTP Out	Connect to FTP In port of the receiver.
5	USB LED	• On: The USB data is being transmitted. • Off: There's no USB data being transmitted.
6	Update	USB 2.0 Micro-USB port. Connect to a PC for upgrading Valens. When upgrade Valens firmware, please note that: • Valens firmware can be upgraded on both Transmitter and receiver; • The "VAIUE" tool is required to perform the Valens firmware upgrade.

Receiver



#	Name	Description
1	USB Device	Two USB 3.2 type-A ports and one USB 3.2 type-C device port.

#	Name	Description
		Note: Each USB device port supports 1.5A current output.
2	HDMI Out 1 & 2	Connect to HDMI displays.
3	20V	Connect to the power adapter provided. With one-way PoC, connect the provided power adapter to the receiver can supply power for both units.
4	Power LED	• On: The device is powered on. • Off: The device is powered off.
5	FTP In	Connect to FTP Out port of the transmitter.
6	Update	USB 2.0 Micro-USB port. Connect to a PC for upgrading Valens. When upgrade Valens firmware, please note that: • Valens firmware can be upgraded on both Transmitter and receiver; • The "VAIUE" tool is required to perform the Valens firmware upgrade.

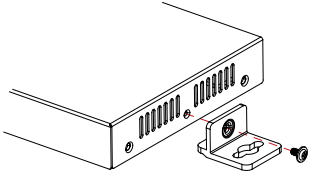
Installation

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

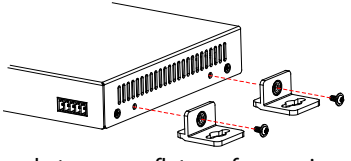
Steps to install the device on a flat surface:

1. Attach mounting brackets to each side of the device using the screws provided in the package.

   Transmitter:

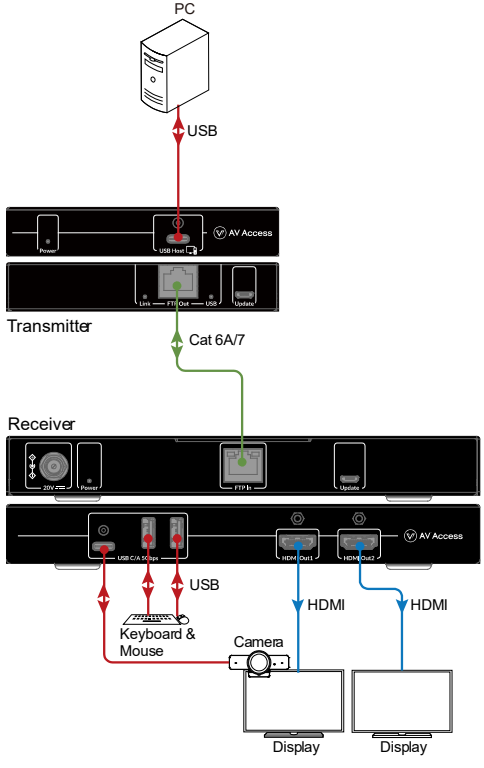


   Receiver:



2. Install the brackets on a flat surface using screws (not included).

Application



Note: DisplayLink driver installation is required for monitor expansion.

Please download the DisplayLink Driver from the official website before connecting the device to the PC via USB Host port.

Official website:

https://www.synaptics.com/products/displaylink-graphics/downloads

After installation, dual-display output is supported through the computer's USB-A or USB C connections, even on computers that do not natively support video output, including MacBooks with M-series chips.

Specifications

Technical	
Input	USB Host: USB 3.2 type-C port, supports USB data transmission up to 5Gbps
Output	HDMI 2.0, 4K@60Hz 4:4:4 8bit
USB Standard	USB 3.2 Gen1, and backward compatible with USB 3.0, USB 2.0, and USB 1.1 standards
Data Rate	USB C Host: 5Gbps (per lane) HDMI: 18Gbps USB Device: 5Gbps
Audio Output	HDMI Out: Up to 7.1ch, including PCM 2.0/5.1/7.1ch, Dolby Digital, Dolby Digital Plus, Dolby TrueHD, Dolby Atmos, DTS 5.1, DTS-HD Master Audio and DTS:X.

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)
Power Supply	20V/3A (One-way PoC, transmitter receives power from the recevier)
Power Consumption	33W (max)
Device Dimensions (W x H x D)	Transmitter: 115mmx20.5mmx100mm / 4.53" x 0.81" x 3.94" Receiver: 200mmx25mmx120.2mm / 7.87" x 0.98" x 4.73"
Product Weight	Transmitter: 0.25kg / 0.55lb; Receiver: 0.66kg / 1.46lbs

Transmission Distance

Note:

- Straight-through category cable wired to T568B standard is recommended.
- For max HDMI 2.0 performance, recommended cable is: Cat 6A U/FTP or F/FTP.

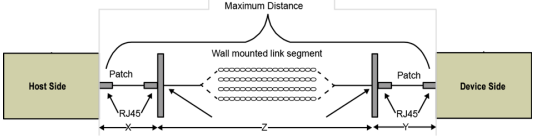
Cable Type	Range
Cat 6A (U/FTP / F/FTP)	100m/330ft

Use Patches

Note:

Patches may be used in the installation, and the patches will obviously affect the transmission distance. Limits and distances are as follows:

- Support up to 2 patch cables, each not exceeding 5m.
- Patches must be installed on both ends of the device, refer to the following pictures:



The standard specifies the following lengths for the three-segment cable installation:

- X = Left-side patch cable length ≤ 5 [meter]
- Y = Right-side patch cable length ≤ 5 [meter]
- Z = Wall segment ≤ Maximum Distance – X – Y [meter]

Cable Type	Range
Cat 6A (U/FTP / F/FTP)	90m/295ft (80m+5m+5m)

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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