



HDMI USB KVM CAT5e/6 Extender 4K - 100m User's Guide



Part Number:

KVMHDExt4K (Kit)

KVMHDExt4K-RX (RX)

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Important Safety Notices

Please read safety instructions carefully before installation and operation.

- Please pay close attention to all warnings and hints for this device
- Do not expose this unit to rain, heavy moisture, or liquid
- Do not repair the device or open the enclosure without professional guidance to avoid electric shocks. Doing so may void your warranty
- Keep the product in a well-ventilated location to avoid damage from overheating
- Shut off power and make sure environment is safe before installation
- Do not plug the HDMI cables in/out when the device is in use to avoid cable damage. Make sure they are plugged into the correct ports
- Use the included DC5V power adapters only. Make sure the specification matches if using 3rd-party DC power adapters

Introduction

The HDMI USB KVM CAT5e/6 Extender 4K - 100m extends HDMI and USB signals up to 100 meters (328ft) over a single CAT6 cable (80 meters with CAT5e).

Features

- Supports 4K@30Hz with nearly zero latency
- Extends HDMI signals up to 328ft (100m)
- KVM extension with 2 USB ports to control the source device, such as a PC, at the receiver(s) side
- Transmitter (TX) is equipped with an HDMI output for a local HDMI display
- Works over dedicated IP networks, additional Receiver units (part# KVMHDExt4K-RX) sold separately

Package Contents

- Transmitter (TX) unit (1pc)
- Receiver (RX) unit (1pc)
- Power adapters (2pcs)
- USB Type-A to Type-B cable (1pc)
- User's guide (1pc)

Product Layout

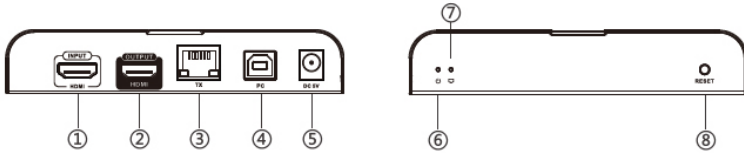


Figure 1: Transmitter (TX)

1	HDMI IN	Connects to the PC's HDMI output
2	HDMI Out	Connects to an HDMI display
3	RJ45 Out	Connects to the Receiver's RJ45 In connector using a CAT cable
4	USB Port	Connects to the computer's USB port using the included USB cable
5	Power Jack	Connects to the included power adapter
6	Power LED	On when the Transmitter (TX) is powered up
7	Connection LED	On when the Transmitter (TX) and Receiver (RX) are properly linked
8	Reset Button	Press to reset the Transmitter (TX) unit

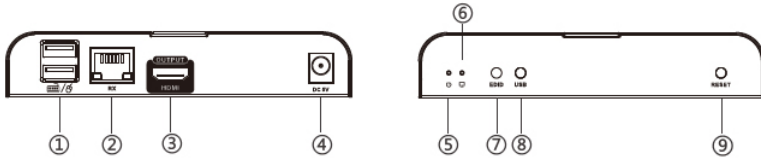


Figure 2: Receiver (RX)

1	USB Ports (x2)	Connects to keyboard or mouse
2	RJ45 In	Connects to the Transmitter's RJ45 port using a CAT cable
3	HDMI Out	Connects to an HDMI display
4	Power Jack	Connects to the included power adapter
5	Power LED	On when the Receiver (RX) is powered on
6	Link LED	On when the Transmitter (TX) and Receiver (RX) are properly linked
7	EDID Sync	Press to detect the EDID of the connected display, use this feature when changing/replacing displays
8	USB Control	One-to-One connection: Press to save the EDID setting One-to-Many connection: Press to set the Receiver as the controller of the keyboard and mouse
9	Reset Button	Press to reset the Receiver (RX) unit

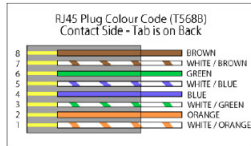
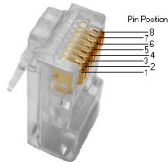
Hardware Installation

1. Power off all devices including your HDMI source and HDMI display(s).
2. Connect your PC's HDMI output connector to the Transmitter's HDMI In connector with an HDMI cable (HDMI cable not included).
3. Connect the Transmitter's USB port to the PC's USB port using the included USB Type-A to Type-B cable.
4. Optional: Connect an HDMI display to the Transmitter's HDMI out connector with an HDMI cable (HDMI cable not included) for local monitoring of the HDMI signal.
5. Plug your CAT5e/6 cable between the Transmitter's RJ45 Output and Receiver's RJ45 Input, if needed, connect the Transmitter and Receiver(s) to a dedicated Gigabit network switch using CAT cables.
6. Connect your HDMI display to the Receiver's HDMI out connector with an HDMI cable (HDMI cable not included).
7. Plug your keyboard and mouse into the USB ports of the Receiver (RX) unit(s). Optional: For One-to-Many connection, plug a keyboard and mouse into each receiver unit.
8. Plug the included power adapters into the Transmitter's power jack and Receiver's power jack, then plug the power adapters into a reliable power source.
9. Power on all connected devices.
10. The KVM extender is ready for use.

CAT Cable Wiring

We suggest both RJ-45 connectors be wired identically following T568B wiring standard for the best performance and compatibility

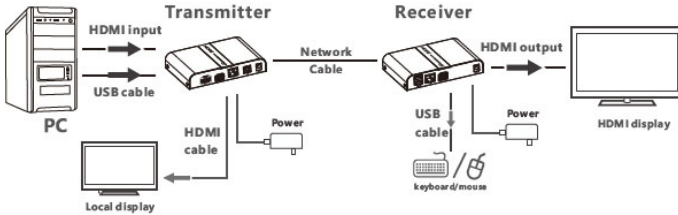
Both connectors must be wired identically, to T568B standard.



Note: You may use cat5e, cat6 UTP (cat6 preferred) in conjunction with the HDBiT output; however for best performance use cat6a or cat7 (particularly in electrically noisy environments). The maximum distances & transmission performance for HDMI and HDBT may be compromised by cable quality, patch panels, poor termination, wall plates, cable kinks and electrical interferences. Generally ensure the cat cable is solid copper core of 23AWG (avoid CCA type), in one straight run (avoid/minimise patches) and avoid close proximity to any noisy electrical sources.

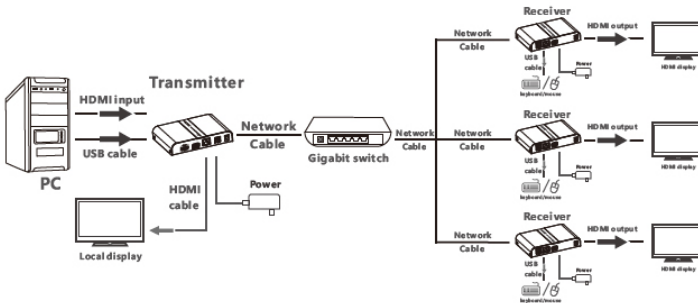
Application Diagram

On-to-One Connection



One-to-Many Connection

Requires dedicated Gigabit Ethernet Switch. Additional receiver units (part# KVMHDExt4K-RX) sold separately.



Keyboard and Mouse Device Control

One-to-Many Configuration

Press the USB Control button on the receiver unit to take control of the keyboard and mouse functions.

FAQ & Solutions

Q: There is no video output or video is not normal:

A: 1) Check power adapter and all cable connections.
2) Press reset button on the Transmitter and Receiver units.

Q: The power indicator is on but the connection indicator is off:

A: 1) Make sure the network cable follows the IEEE-T568B wiring standard.
2) Check the network cable connection between the TX & RX.
3) Press the reset button on both TX & RX.

Q: The image is unclear or unstable:

A: 1) Please check the cable lengths below:
- HDMI cables: Up to 3 meters
- Network cables CAT6: Up to 100m; CAT5e: Up to 80 meters
2) Press the reset button on the TX/RX and reconnect.

Q: Receiver's Link LED is on but there is no image:

A: 1) Press the Receiver's reset button to reset the unit.
2) Make sure the HDMI cable is firmly connected to the display.
3) Use a higher quality network cable.

Q: The keyboard/mouse are not responding:

A: 1) Make sure the keyboard/mouse are properly connected to the Receiver's USB port.
2) Press the USB Control button on the Receiver unit.
3) Press the reset button on the Receiver.
4) Power Off /On the Receiver and reconnect the keyboard and mouse.

Specifications

Item	Specifications
Compliance	HDMI 1.4 & HDCP 2.2
HDMI Bandwidth	10.2Gbps
Resolution	800x600@60Hz, 1024x768@60Hz, 1280x720@60Hz, 1280x800@60Hz, 1280x1024@60Hz, 1440x900@60Hz, 1680x1050@60Hz, 1920x1080@60Hz, 2560x1080@60Hz, 3840x2160@30Hz, 4096x2160@30Hz
Audio Support	PCM, LPCM, Dolby, DTS
TMDS Signal (Input & Output)	0.7 - 1.2Vp-p
DDC Signal (Input & Output)	5Vp-p(TTL)
HDMI Cable Length	5 meters Input & Output (max)
Transmission Distance	CAT6: 100 meters CAT5e: 80 meters
Operating Temperature	32° - 140° F (0° - 60° C)
Power Adapter	Output: 5VDC/1A
Power Consumption	TX: 3W / RX: <2W
Product Dimensions	5.21" (L) x 3.53" (W) x 0.98" (H)
Weight	TX: 0.71 lbs / RX: 0.68 lbs
Color	Black

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