

4K60 USB 2.0 KVM Extender over UTP (40m)

EX-40-KVM-H2

WyreStorm®

Quickstart Guide

💡 WyreStorm recommends reading through this document in its entirety to become familiar with the product's features prior to starting the installation process.

4K HDR HDMI 2.0 HDCP 2.3 PoC

⚠️ IMPORTANT! Installation Requirements

- Visit the product page to download the latest firmware, document version, additional documentation, and configuration tools.
- Read through the [Wiring and Connections](#) section for important wiring guidelines before creating or choosing premade cables.

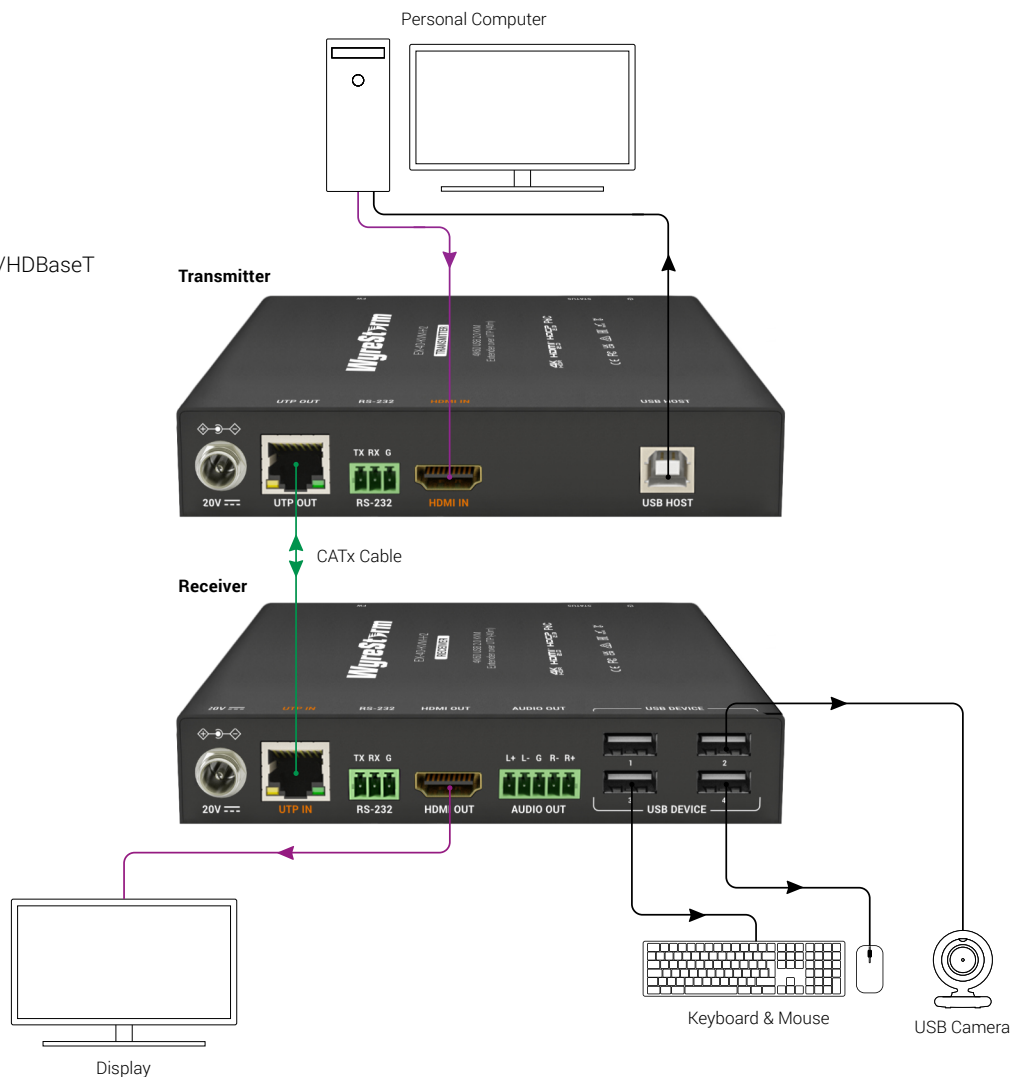
In the Box

- 1x EX-40-HVM-H2 Extender Set
- 1x 20V 2A Power Supply (multi-region plugs)
- 8x Mounting Ears
- 2x 3-Pin Phoenix connectors
- 1x 5-Pin Phoenix connector
- 1x Quickstart Guide (this document)

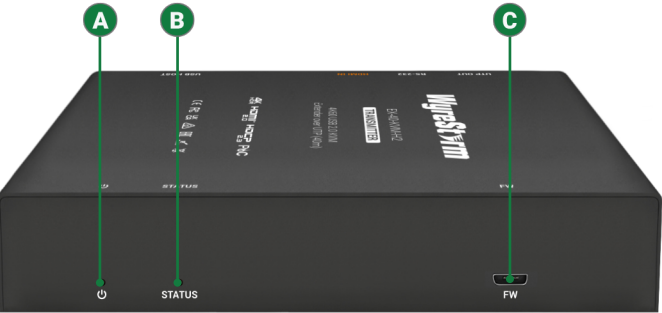
Basic Wiring Diagram

KEY

- HDMI
- USB
- Ethernet/HDBaseT

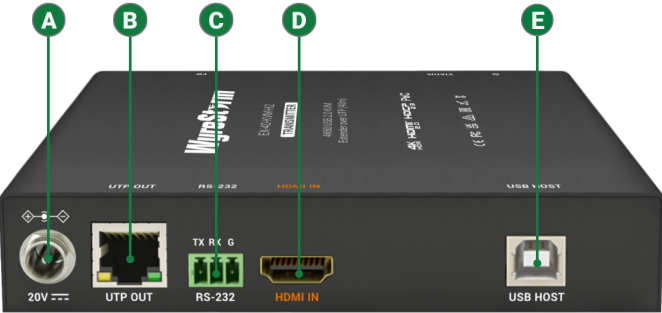


EX-40-KVM-H2 Transmitter (Front)



A	Power LED	On: The device is powered on. Off: The device is powered off.
B	Status LED	On: Valid video signal is being transmitted. Off: No valid signal is being transmitted.
C	FW	Firmware update port.

EX-40-KVM-H2 Transmitter (Rear)



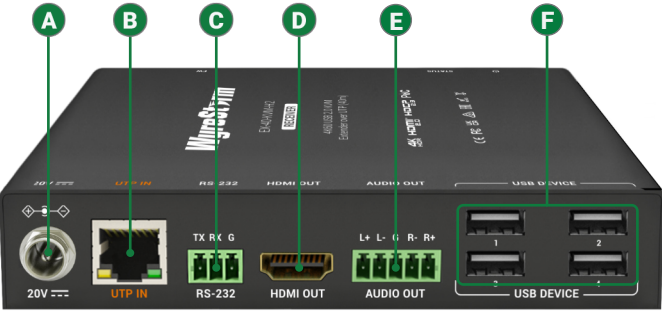
A	Power	Connect to the included power adapter. With bi-directional PoC support, one power adapter connected to either the transmitter or receiver can power both units.
B	UTP Output	Connect to the UTP IN port of the receiver via a Cat 6/6a/7 cable.
C	RS-232	Connect to a RS-232 control device such as PC for API command control.
D	HDMI IN	Connect to an HDMI source.
E	USB HOST	Connect to host computer.

EX-40-KVM-H2 Receiver (Front)



A	Power LED	On: The device is powered on. Off: The device is powered off.
B	Status LED	On: Valid video signal is being transmitted. Off: No valid signal is being transmitted.
C	FW	Firmware update port.

EX-40-KVM-H2 Receiver (Rear)



A	Power	Connect to the included power adapter. With bi-directional PoC support, one power adapter connected to either the transmitter or receiver can power both units.
B	UTP Input	RJ-45 port with LED indicators. Connect to the UTP OUT port of the transmitter via a Cat 6/6a/7 cable.
C	RS-232	Connect to a RS-232 control device such as PC for API command control.
D	HDMI OUT	Connect to an HDMI display.
E	AUDIO OUT	5-pin 3.5mm phoenix connector.
F	USB DEVICE	480Mbps USB extension supporting multiple peripherals for remote system control.

Wiring and Connections

WyreStorm recommends that all wiring for the installation is run and terminated prior to making connections to the switcher. Read through this section in its entirety before running or terminating any wires to ensure proper operation and to avoid damaging the equipment.

⚠ IMPORTANT! Wiring Guidelines

- The use of patch panels, wall plates, cable extenders, kinks in cables, and electrical or environmental interference will have an adverse effect on signal transmission which may limit performance. Steps should be taken to minimize or remove these factors completely during installation for best results.
- WyreStorm recommends the use of shielded category cable to minimize signal noise and interference.
- WyreStorm recommends using pre-terminated HDMI cables due to the complexity of these connector types. Using pre-terminated cables will ensure that these connections are accurate and will not interfere with the performance of the product.

RS-232 Wiring

The EX-40-KVM-H2 uses a 3-pin RS-232 with no hardware flow control. Most control systems and computers are DTE where pin 2 is RX, this can vary from device to device. Refer to the documentation for the connected device for pin functionally to ensure that the correct connections can be made.

Troubleshooting

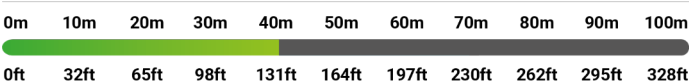
No or Poor Quality Picture (snow or noisy image)

- Verify that all HDMI connections are not loose and are functioning properly
- Verify that the output resolution of the source and display is supported by this extender
- If transmitting 3D or 4K, verify that the HDMI cables used are 3D or 4K rated.

No or Intermittent 3rd party Device Control

- Verify that the IR and RS-232 cables are properly terminated following the [Wiring and Connections](#) section.

Cat6 Cable Performance Guide



■ 4K Transmission
WyreStorm recommends the use of shielded cable to minimize signal noise and interference



WyreStorm Connector		3rd Party Device
Pin 1	TX (Transmit)	---> To ---> RX (Receive)
Pin 2	RX (Receive)	---> To ---> TX (Transmit)
Pin 3	G (Ground)	---> To ---> G (Ground)

💡 Troubleshooting Tips:

WyreStorm recommends using a cable tester or connecting the cable to other devices to verify functionality.

Specifications

Audio and Video	
Inputs	TX: 1x HDMI IN, 1x USB Host RX: 1x UTP IN
Outputs	TX: 1x UTP OUT RX: 1x HDMI OUT, 4x USB Device, 1x Audio Out
Video Standard	HDMI 2.0
Max Resolution	4K@60Hz 4:4:4
Audio Formats	TX: Up to DTS-X and Dolby Atmos RX: PCM / Dolby / DTS formats
Audio De-Embed	RX: PCM 2.0 via Phoenix
HDR	HDR10
Transmission Distance	40m (131 ft) over Cat6/6a/7
USB Extension	TX: USB 2.0 Host RX: 4x USB Device (480Mbps)
Communication and Control	
RS-232	Pass-through
EDID	Copy
HDCP	HDCP 2.3
Firmware Update	Micro-USB
Power	
Power	Bidirectional POC
Environmental	
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)
Dimensions	
Height	145mm/5.71"
Width	25mm/0.98"
Depth	90.2mm/3.55"
Weight	0.35kg/0.77lbs per unit
Regulatory	
Safety and Emission	CE FCC RoHS RCM EAC UKCA

Note: WyreStorm reserves the right to change product specification, appearance or dimensions of this product at any time without prior notice.

Warranty Information

WyreStorm Technologies ProAV Corporation warrants that its products to be free from defects in material and workmanship under normal use for a period of five (5) years from the date of purchase. Refer to the Product Warranty page on wyrestorm.com for more details on our limited product warranty.

