

18Gbps HDMI-over-UTP Extender with IR and PoC EXP-EX-35-G2

WyreStorm Essentials 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 2160p 4:4:4 60 HDMI HDCP 2.2 PoC

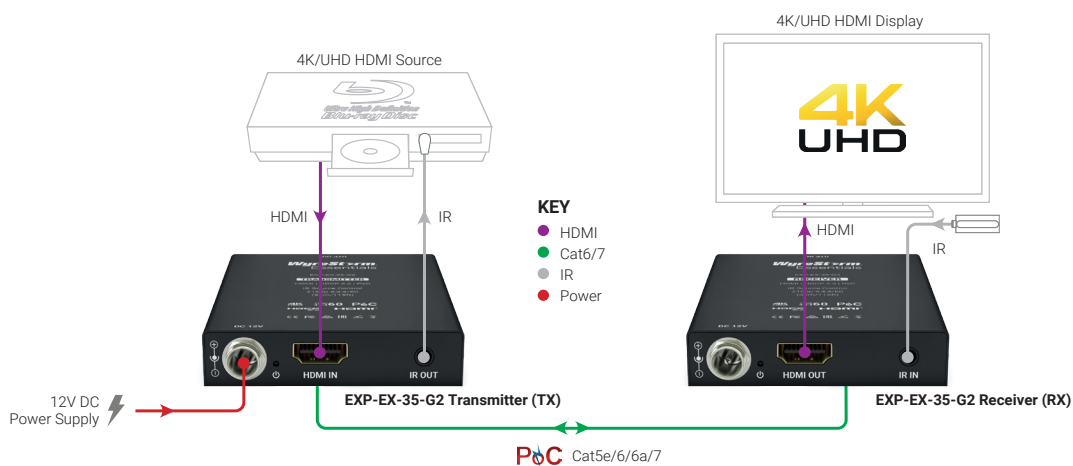
⚠ IMPORTANT! Installation Requirements

- 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.

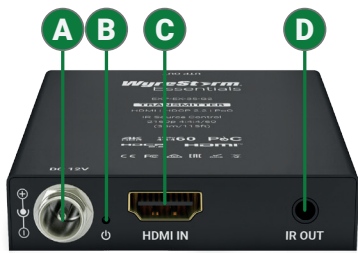
In the Box

- 1x EXP-EX-35-G2 Transmitter
- 1x EXP-EX-35-G2 Receiver
- 1x IR Emitter
- 1x IR Receiver
- 1x 12V DC 1A Power Supply (US/UK/EU/AU)
- 4x Mounting Brackets

Basic Wiring Diagram

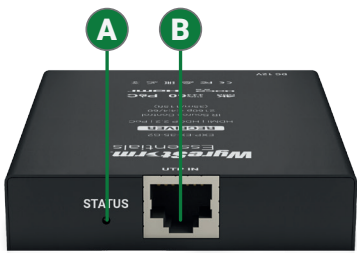


Front Panel (TX/RX)



A	Power In	5.5mm Screw Down Barrel Jack Connect to the included 12V DC 1A power supply to the transmitter. A power supply is not required on the other end as it will be powered using PoC.
B	Power LED	Solid: The unit is powered On Off: The unit is powered Off
C	HDMI In HDMI Out	19-pin type A HDMI female Supports HDMI and DVI/D with adapter
D	IR OUT IR IN	IR OUT - 3.5mm (1/8in) Mono Jack: Connect to the supplied IR emitter to control a local device from the remote display location via HDBaseT. IR IN - 3.5mm (1/8in) Stereo Jack: Connect to the supplied IR receiver to send IR to the remote display location via HDBaseT. See IR TX/RX Guidelines for more information.

Rear Panel (TX/RX)



A	Status LED	Flashing: The receiver is operating normally. Off: The receiver is Not operating normally.
B	UTP In UTP Out	8-pin RJ-45 female Connect the transmitters UTP OUT to receivers UTP IN .

Wiring and Connections

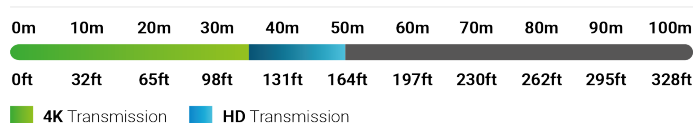
WyreStorm recommends that all wiring for the installation is run and terminated prior to making connections to the switcher. Read through this section in it's entirety before running or terminating the wires to ensure proper operation and to avoid damaging equipment.



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.

Cat6 Cable Performance Guide



WyreStorm recommends the use of shielded cable to minimize signal noise and interference

IR OUT/IN Guidelines

- Using WyreStorm infrared emitters and receivers is the best way to ensure that most IR coding formats are transmitted and received by the Extender. Other 3rd party emitters and receivers can be used; however, these devices must operate in the same manner as the WyreStorm devices.
- Due to differences in IR across 3rd party control systems their IR ports should never be connected directly to the Extender as an incompatibility may exist. WyreStorm offers a cable that compensates for voltage differences as well adjusts for differences in the pins used within the port. Refer to the [CAB-IR-LINK](#) product page for more information.

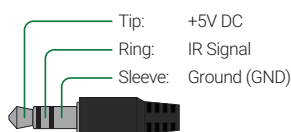
IR Out Port Pinout

Connection for IR TX (transmit) uses a 3.5mm (1/8in) mono plug.



IR IN Port Pinout

Connection for IR RX (receive) uses a 3.5mm (1/8in) stereo jack that outputs +5V DC to power the included IR receiver.



Troubleshooting

No or Poor Quality Picture (snow or noisy image)

- Verify that power is being supplied to the transmitter and receiving device
- Verify that all HDMI and UTP connections are not loose and are functioning properly
- Verify that the UTP cable is properly terminated following EIA568B standard
- 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 cables are properly terminated following the [Wiring and Connections](#) section.



Troubleshooting Tips:

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

Specifications

	Transmitter	Receiver		
Audio and Video				
Inputs	1x HDMI In: 19-pin type A		1x UTP In: 8-pin RJ-45 Female	
Outputs	1x UTP Out: 8-pin RJ-45 Female		1x HDMI Out: 19-pin type A	
Output Video Encoding	UTP			
Encoding Data Rate	9.2Gbps			
End to End Latency (Max)	10µs (micro seconds)			
Audio Formats	2ch PCM Multichannel up to DTS-X and Dolby Atmos			
Video Resolutions (Max)	Video Resolution	HDMI	Cat6	Cat6a/7
	1920x1080p @60Hz 16bit	15m/49ft	50m/164ft	50m/164ft
	3840x2160p @24Hz 10bit 4:2:0 HDR	7m/23ft	35m/115ft	35m/115ft
	3840x2160p @30Hz 8bit 4:4:4	7m/23ft	35m/115ft	35m/115ft
	3840x2160p @60Hz 10bit 4:2:0 HDR	3m/10ft	35m/115ft	35m/115ft
	4096x2160p @60Hz 8bit 4:2:0	7m/23ft	35m/115ft	35m/115ft
	4096x2160p @60Hz 8bit 4:4:4	3m/10ft	35m/115ft	35m/115ft
	Note: WyreStorm recommends the use of shielded category cable to minimize signal noise and interference			
Supported Standards	DCI RGB HLG HDR-10 (Dolby Vision not supported)			
Maximum Pixel Clock	HDMI: 600MHz UTP: 297MHz			
Communication and Control				
HDMI	HDMI HDCP 2.2 EDID DVI/D supported with adapter (not included)			
UTP	HDMI HDCP 2.2 EDID 2-way PoC IR Source Control			
IR	1x IR TX: 3.5mm (1/8in) TS Mono 1x IR RX: 3.5mm (1/8in) TRS Stereo			
Power				
Power Supply	12V DC 1A			
PoC	IEEE 802.3af 48V 15.4W Max 2-way			
Max Power Consumption	6.48W (Pair, PoC)			
Environmental				
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			
Maximum BTU	22.11 BTU/hr			
Dimensions and Weight				
Rack Units/Wall Box	<1U			
Height	15.2mm/0.6in			
Width	70mm/2.75in			
Depth	90mm/3.54in			
Weight	0.15Kg/0.33lb			
Regulatory				
Safety and Emission	CE FCC RoHS RCM EAC			

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 LLC warrants that its products to be free from defects in material and workmanship under normal use for a period of two (2) years from the date of purchase. Refer to the Product Warranty page on [wyrestorm.com](https://www.wyrestorm.com) for more details on our limited product warranty.

