

# 4K HDR HDMI-Over-HDBaseT Receiver with HDCP 2.2 and PoH

RXV-70-4K-G2 v1



## Quickstart Guide

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



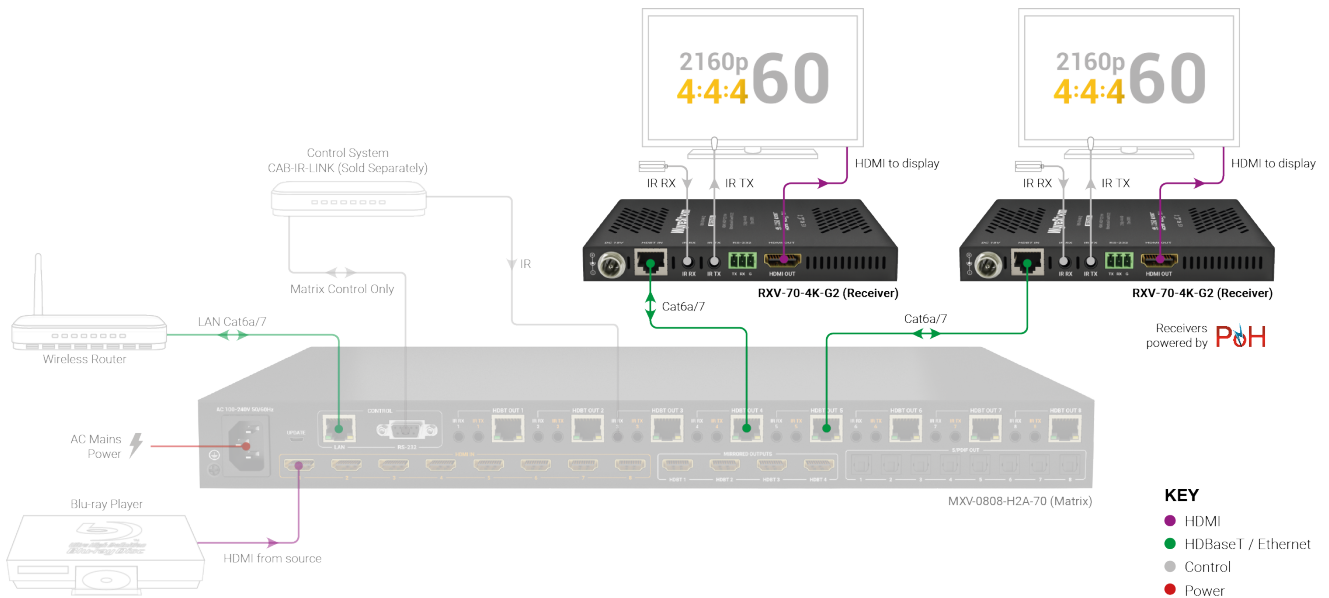
### IMPORTANT! Installation Requirements

- Visit the product page to download the latest firmware, document versions, additional documentation, and configuration tools.
- Read through the [Wiring and Connections](#) section for important wiring guidelines before creating or choosing premade cables.
- While this product supports CEC, WyreStorm cannot guarantee compatibility with all forms of CEC communication.

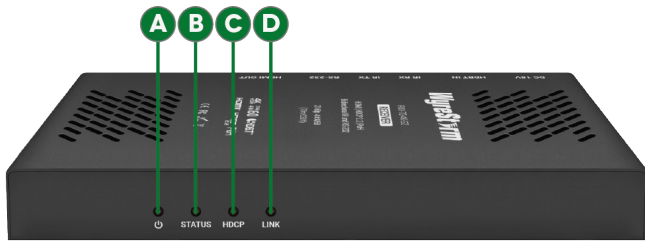
### In the Box

- 1x RXV-70-4K-G2 Receiver
- 1x Wide-band IR Emitter
- 1x Wide-band IR Receiver (30-50KHz)
- 2x Mounting Brackets
- 1x 3-pin Terminal Block
- 1x Quickstart Guide (this document)

### Basic Wiring Diagram

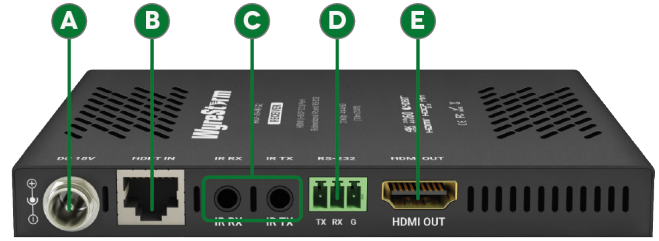


## Front Panel



<b>A</b> Power LED	<b>Solid:</b> The receiver is powered On <b>Off:</b> The receiver is powered Off
<b>B</b> Status LED	<b>Flashing:</b> The receiver is operating normally. <b>Off:</b> The receiver is Not operating normally.
<b>C</b> HDCP LED	<b>Solid:</b> HDCP content is present. <b>Flashing:</b> HDCP content is not present. <b>Off:</b> No signal.
<b>D</b> LINK LED	<b>Solid:</b> Link to receiver has been established. <b>Flashing:</b> Link to receiver has not been established.

## Rear Panel



<b>A</b> Power Input	5.5mm Screw Down Barrel Jack Connect to the included 18V DC 1A power supply to the transmitter or receiver. A power supply is not required on the other end as it will be powered using PoH.
<b>B</b> HDBT In	8-pin RJ-45 female Connect the matrix <b>HDBT Out</b> to receivers <b>HDBT In</b> .
<b>C</b> IR TX IR RX	<b>IR TX</b> - 3.5mm (1/8in) Mono Jack: Connect to the supplied IR emitter to control a local device from the remote display location via HDBaseT <b>IR RX</b> - 3.5mm (1/8in) Stereo Jack: Connect to the supplied IR receiver to send IR to the remote display location via HDBaseT. See <a href="#">IR TX/RX Guidelines</a> for more information.
<b>D</b> RS-232	1x RS-232: 3-pin Phoenix
<b>E</b> HDMI Out	19-pin type A HDMI female Supports HDMI and DVI/D with adapter

## 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.

### IR TX/RX Guidelines

- Using WyreStorm infrared emitters and receivers is the best way to ensure that most IR coding formats are transmitted and received 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 a NetworkHD system 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.

### RS-232 Wiring

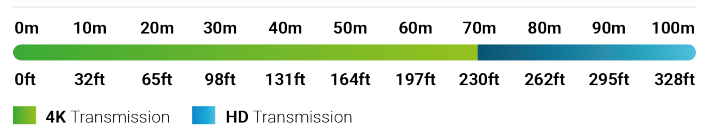
The RXV-70-4K-G2 uses a 3-pin RS-232 with no hardware flow control. Most control systems and computers are DTE where pin 2 is RX, this can vary from device to device. Refer to the documentation for the connected device for pin functionality to ensure that the correct connections can be made.

### Troubleshooting

#### No or Poor Quality Picture (snow or noisy image)

- Verify that power is being supplied to the transmitter and receiver.
- Verify that the HDBaseT 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.
- Verify that all source and HDBaseT connections are not loose and are functioning properly.

#### Cat6 Cable Performance Guide



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

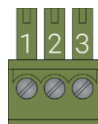
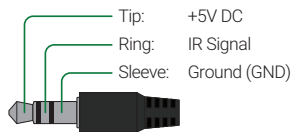
#### IR TX Port Pinout

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



#### IR RX 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.



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)

#### No or Intermittent 3rd party Device Control

- Verify that the RS-232/Ethernet cables are properly terminated.
- Verify that emitters/receivers are compatible with WyreStorm IR.
- If using an IR control system, verify that it is connected using the CAB-IR-LINK cable.

## Specifications

Audio and Video				
<b>Inputs</b>	1x HDBT In: 8-pin RJ-45 Female			
<b>Outputs</b>	1x HDMI Out: 19-pin type A			
<b>Output Video Encoding</b>	HDBaseT Class A			
<b>Encoding Data Rate</b>	9.2Gbps			
<b>End to End Latency (Max)</b>	10µs (micro seconds)			
<b>Audio Formats</b>	HDMI: 2ch LPCM   Multichannel up to Dolby Atmos and DTS-X			
Video Resolutions (Max)	Video Resolution	HDMI	Cat6	Cat6a/7
	1920x1080p @60Hz 12bit	15m/49ft	100m/328ft	100m/328ft
	1920x1080p @120Hz 12bit	7m/22ft	70m/230ft	100m/328ft
	3840x2160p @24Hz 10bit 4:2:0 HDR	15m/49ft	100m/328ft	100m/328ft
	3840x2160p @30Hz 8bit 4:4:4	7m/22ft	70m/230ft	100m/328ft
	3840x2160p @60Hz 10bit 4:2:0 HDR	5m/16ft	70m/230ft	100m/328ft
	3840x2160p @60Hz 12bit 4:2:2 HDR	5m/16ft	70m/230ft	100m/328ft
	4096x2160p @60Hz 8bit 4:2:0	7m/22ft	70m/230ft	100m/328ft
	Note: WyreStorm recommends the use of shielded category cable to minimize signal noise and interference			
<b>Supported Standards</b>	DCI   RGB   HDR   HDR10   Dolby Vision up to 30Hz   HLG   BT.2020   BT.2100			
<b>Maximum Pixel Clock</b>	HDMI: 600MHz   HDBaseT: 297MHz			
Communication and Control				
<b>HDMI</b>	HDMI 2.0   HDCP 2.2   EDID   CEC   DVI/D supported with adapter (not included)			
<b>HDBaseT</b>	HDMI 2.0   HDCP 2.2   EDID   CEC   1-way PoH   Bidirectional IR			
<b>CEC</b>	CEC power triggering for connected screens – Requires CEC compatibility			
<b>IR</b>	1x IR TX: 3.5mm (1/8in) TS Mono   1x IR RX: 3.5mm (1/8in) TRS Stereo   Bidirectional over HDBaseT			
<b>RS-232</b>	1x RS-232: 3-pin Terminal Block - 3.5mm			
Power				
<b>Power Supply</b>	18V DC (Optional)			
<b>PoH</b>	1-way Matrix to Receiver			
<b>Max Power Consumption</b>	12.42W			
Environmental				
<b>Operating Temperature</b>	0 ~ +45°C (32 ~ +113 °F), 10% ~ 90%, non-condensing			
<b>Storage Temperature</b>	-20 ~ +70°C (-4 ~ +158 °F), 10% ~ 90%, non-condensing			
<b>Maximum BTU/hr</b>	43 BTU/hr			
Dimensions and Weight				
<b>Rack Units/Wall Box</b>	<1U			
<b>Height</b>	15.2mm/0.6in			
<b>Width</b>	136.4mm/5.38in			
<b>Depth</b>	74.2mm/2.93in			
<b>Weight</b>	0.24kg/0.53lbs			
Regulatory				
<b>Safety and Emission</b>	CE   FCC   RoHS   RCM			

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

## Warranty Information

This product is covered by a 5-year limited parts and labor warranty. During this period there will be no charge for unit repair, component replacement or complete product replacement in the event of malfunction. The decision to repair or replace will be made by the manufacturer. This limited warranty only covers defects in materials or workmanship and excludes normal wear and tear or cosmetic damage.

Visit the product page located at [wyrestorm.com](http://wyrestorm.com) for additional information on this product including important technical information not provided in this document and warranty terms & conditions.

