

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

RXV-35-4K v1



## 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.



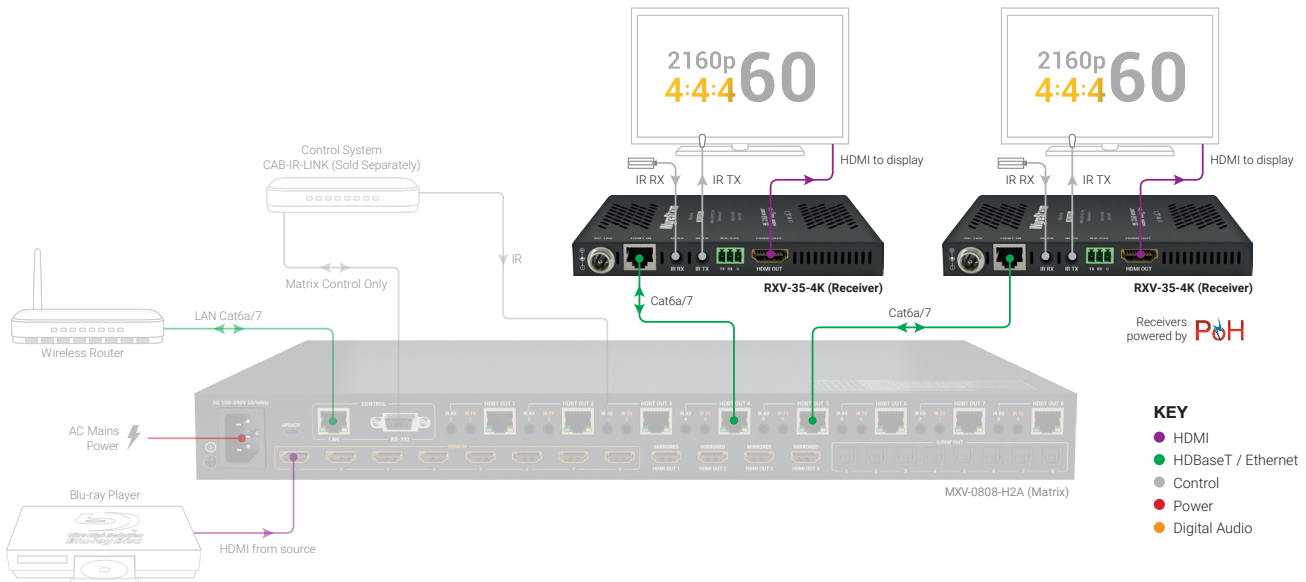
### ⚠ IMPORTANT! Installation Requirements

- 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.
- While this product supports CEC, WyreStorm cannot guarantee compatibility with all forms of CEC communication.

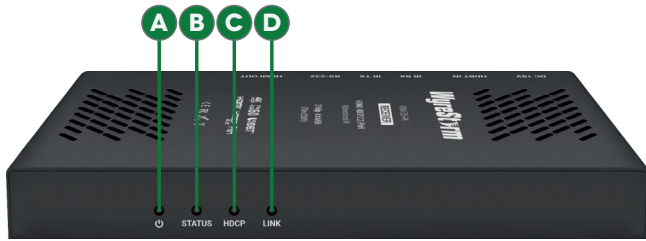
### In the Box

- 1x RXV-35-4K Receiver
- 1x IR Emitter
- 1x IR Receiver
- 2x Mounting Brackets
- 1x 3-pin Terminal Block
- 1x Quickstart Guide (this document)

### Basic Wiring Diagram

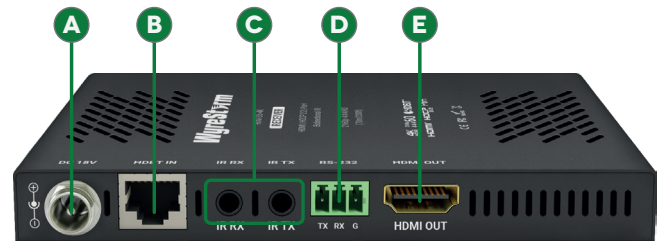


## Front Panel



<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 HDBT Out	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 Terminal Block
<b>E</b> HDMI In 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 its 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 by the NetworkHD system. 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.

### Cat6 Cable Performance Guide



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

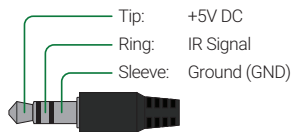
### IR TX Port Pinout

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



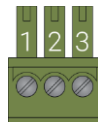
### IR RX Port Pinout

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



### RS-232 Wiring

The RXV-35-4K 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.



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

### 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 HDBaseT connections are not loose and are functioning properly
- 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 matrix and receiver.
- 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.

### **💡 Troubleshooting Tips:**

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

## 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 B																																
<b>Encoding Data Rate</b>	9.2Gbps																																
<b>End to End Latency (Max)</b>	10µs (micro seconds)																																
<b>Audio Formats</b>	Analog: 2ch Analog S/PDIF: 2ch LPCM   Dolby Digital/DTS up to 5.1ch HDMI: 2ch LPCM   Multichannel up to Dolby Atmos and DTS-X																																
<b>Video Resolutions (Max)</b>	<table border="1"> <thead> <tr> <th>Video Resolution</th> <th>HDMI</th> <th>Cat6</th> <th>Cat6a/7</th> </tr> </thead> <tbody> <tr> <td>1920x1080p @60Hz 12bit</td> <td>15m/49ft</td> <td>60m/197ft</td> <td>70m/230ft</td> </tr> <tr> <td>1920x1080p @60Hz 16bit</td> <td>7m/23ft</td> <td>60m/115ft</td> <td>70m/131ft</td> </tr> <tr> <td>3840x2160p @24Hz 10bit 4:2:0 HDR</td> <td>3m/10ft</td> <td>35m/115ft</td> <td>40m/131ft</td> </tr> <tr> <td>3840x2160p @30Hz 8bit 4:4:4</td> <td>7m/23ft Input 15m/49ft Output</td> <td>35m/115ft</td> <td>40m/131ft</td> </tr> <tr> <td>3840x2160p @60Hz 10bit 4:2:0 HDR</td> <td>3m/10ft</td> <td>35m/115ft</td> <td>40m/131ft</td> </tr> <tr> <td>4096x2160p @60Hz 8bit 4:2:0</td> <td>7m/23ft</td> <td>35m/115ft</td> <td>40m/131ft</td> </tr> <tr> <td>4096x2160p @60Hz 8bit 4:4:4</td> <td>3m/10ft</td> <td>35m/115ft</td> <td>40m/131ft</td> </tr> </tbody> </table>	Video Resolution	HDMI	Cat6	Cat6a/7	1920x1080p @60Hz 12bit	15m/49ft	60m/197ft	70m/230ft	1920x1080p @60Hz 16bit	7m/23ft	60m/115ft	70m/131ft	3840x2160p @24Hz 10bit 4:2:0 HDR	3m/10ft	35m/115ft	40m/131ft	3840x2160p @30Hz 8bit 4:4:4	7m/23ft Input 15m/49ft Output	35m/115ft	40m/131ft	3840x2160p @60Hz 10bit 4:2:0 HDR	3m/10ft	35m/115ft	40m/131ft	4096x2160p @60Hz 8bit 4:2:0	7m/23ft	35m/115ft	40m/131ft	4096x2160p @60Hz 8bit 4:4:4	3m/10ft	35m/115ft	40m/131ft
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<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 to +45°C (32 to +113 °F), 10% to 90%, non-condensing																																
<b>Storage Temperature</b>	-20 to +70°C (-4 to +158 °F), 10% to 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

WyreStorm Technologies LLC 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](http://wyrestorm.com) for more details on our limited product warranty.

