

# 4K HDR HDMI-Over-HDBaseT Receiver with HDCP 2.2 and PoH RXV-70-4K



## Quickstart Guide

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



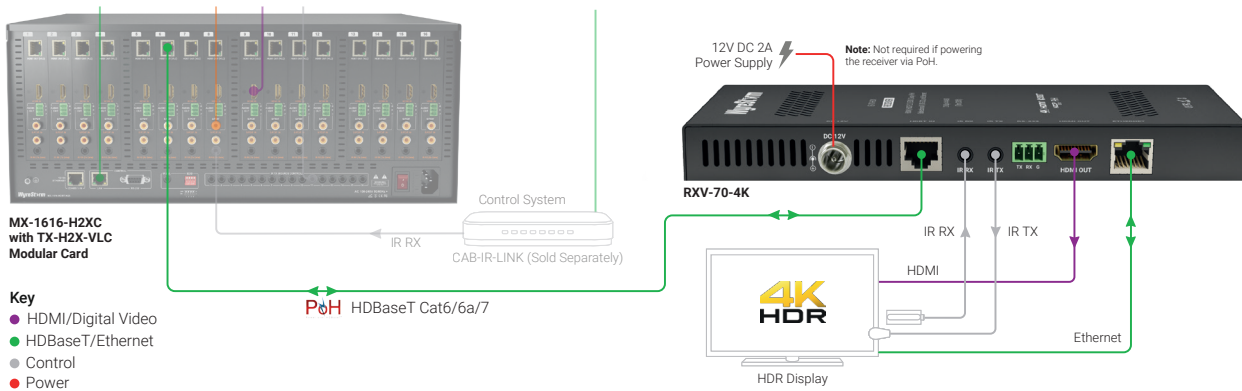
### **!** IMPORTANT! Installation Requirements

- Visit the product page to download the latest firmware, document 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-70-4K Receiver
- 1x IR Emitter
- 1x IR Receiver
- 2x Mounting Brackets
- 1x 3-pin Phoenix Connector
- 1x Quickstart Guide (this document)

### Basic Wiring Diagram



## 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 using pre-terminated HDMI and DP 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.

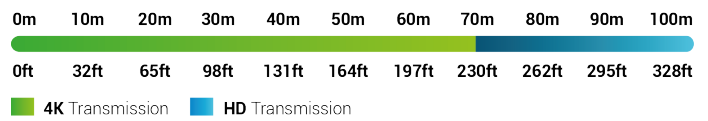
### IR TX/RX Guidelines

- 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 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.

Cat6 Cable Performance Guide



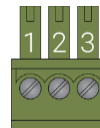
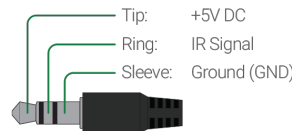
### IR TX Port Pinout

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.



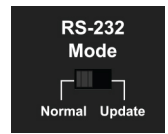
WyreStorm Connector			3rd Party Device
Pin 1	TX (Transmit)	---> To --->	RX (Receive)
Pin 2	RX (Receive)	---> To --->	TX (Transmit)
Pin 3	G (Ground)	---> To --->	G (Ground)

## Setup and Configuration

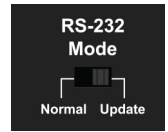
### RS-232 Mode Settings

The RS-232 connector is used to transmit RS-232 over HDBaseT to the remote location and for firmware updates. Ensure that the RS-232 Mode switch in the proper position for the operation being performed. This connection is only available on version 1 of this product.

Set the mode switch to **Normal** to transmit RS-232 signals from the TX to the RX for controlling devices in the remote location.



Set the mode switch to the **Update** position to install a firmware update in either the TX or RX.



### EDID Configuration

This receiver uses EDID pass-through from the display to the source. No configuration is required for EDID settings.

### Troubleshooting

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

- Verify that power is being supplied to the transmitter and receiver.
- Verify that the fiber cable is properly terminated.
- 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.

#### 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>Input Video Encoding</b>	HDBaseT Class A			
<b>Encoding Data Rate</b>	9.2Gbps			
<b>End to End Latency</b>	10µs (micro seconds)			
<b>Audio Formats</b>	2ch PCM   Multichannel: LPCM and Up to DTS-X and Dolby Atmos			
<b>Video Resolutions (Max)</b>	Resolution	HDMI	Cat6	Cat6a/7
	1920x1080p @60Hz 12bit	15m/49ft	100m/328ft	100m/328ft
	1920x1080p @60Hz 16bit	7m/23ft	70m/230ft	100m/328ft
	3840x2160p @24Hz 10bit 4:2:0 HDR	3m/10ft	70m/230ft	100m/328ft
	3840x2160p @30Hz 8bit 4:4:4	7m/23ft	70m/230ft	100m/328ft
	3840x2160p @60Hz 10bit 4:2:0 HDR	3m/10ft	70m/230ft	100m/328ft
	4096x2160p @60Hz 8bit 4:2:0	7m/23ft	70m/230ft	100m/328ft
4096x2160p @60Hz 8bit 4:4:4	7m/23ft	70m/230ft	100m/328ft	
<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>	HDCP 2.2   EDID   CEC   DVI-D supported with adapter (not included)			
<b>HDBaseT</b>	HDMI   HDCP 2.2   EDID   CEC   1-way PoH to Receiver   Bidirectional IR			
<b>CEC</b>	CEC Pass-through – Requires CEC compatibility between source and display			
<b>Ethernet</b>	1x Ethernet: 8-pin RJ-45 Female   Bidirectional over HDBaseT			
<b>IR</b>	1x IR RX 3.5mm (1/8in) TRS Stereo   1x IR TX: 3.5mm (1/8in) TS Mono   Bidirectional over HDBaseT			
<b>RS-232</b>	1x RS-232: 3-pin Phoenix   Bidirectional over HDBT			
Power				
<b>Power Supply</b>	12V DC 2A			
<b>PoH</b>	48V 15.4W			
<b>Max Power Consumption</b>	8.68W			
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</b>	29.6 BTU/hr			
Dimensions and Weight				
<b>Rack Units   Wall Box</b>	<1U			
<b>Height With   Without Feet</b>	20.5mm/0.81in   20mm/0.79in			
<b>Width With   Without Brackets</b>	193mm/7.6in   150mm/5.91in			
<b>Depth With   Without Handles</b>	74.4mm/2.93in   74.4mm/2.93in			
<b>Weight</b>	0.4kg/0.88lbs			
Regulatory				
<b>Safety and Emission</b>	CE   FCC   RoHS			

**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.

