

4K HDR HDMI-Over-OM3 Fiber with HDCP 2.2

RXF-300-4K



Quickstart Guide

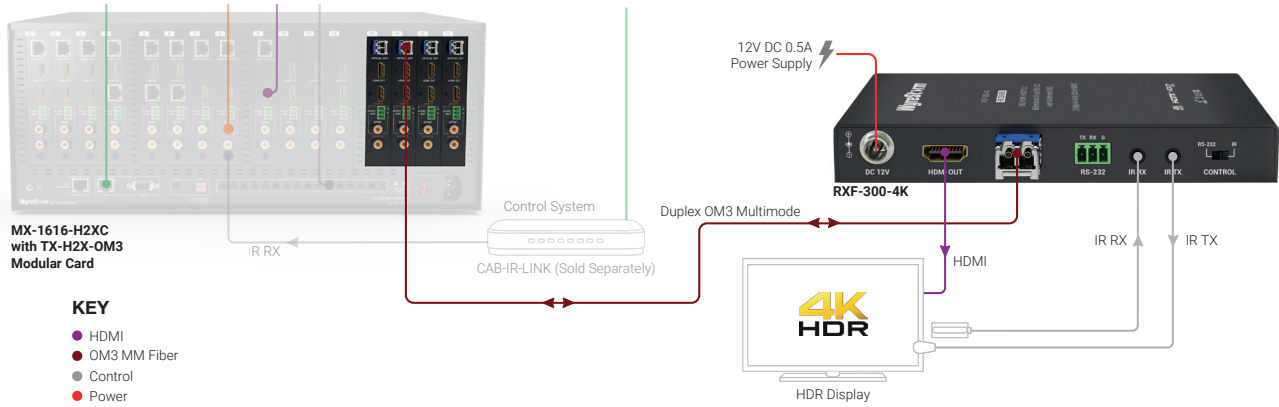
WyreStorm recommends reading through this document in its entirety to become familiar with the product's features before beginning the installation process.



In the Box

- 1x RXF-300-4K Receiver
- 1x Dual USB-A to Locking DC Power Plug
- 1x Wide-band IR Emitter
- 1x Wide-band IR Receiver (30KHz ~ 50KHz)
- 2x 3-pin Phoenix Connector
- 4x Mounting Brackets
- 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.

OM3 Fiber SFP+ Guidelines

The RXF-300-4K is designed to work with duplex OM3 Multimode fiber cables providing a distance of 300m/984ft for all resolutions. This operation can be affected by how the cables are terminated and routed within an installation. Care should be taken when terminating and routing based on the following guidelines.

- Fiber cable has a bend radius of 6.0cm/2.4in, when routing never exceed this radius as damage to the fiber core can occur.
- Fiber core ends should be inspected for damage prior to terminating. Any scratches or blemishes can affect the performance of the connection.
- Never touch the end of the fiber core with bare hands so that any oils or dirt can be transferred to the surface of the core.
- Refer to the guidelines and connection parameters from the fiber cable manufacturer for more specific information regarding the cable being used.

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 RXF-300-4K 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.

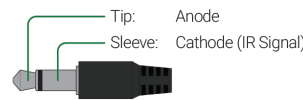
OM3 Cable Performance Guide

0m	30m	60m	90m	120m	150m	180m	210m	240m	270m	300m
0ft	98ft	196ft	295ft	394ft	492ft	590ft	689ft	787ft	886ft	984ft

 4K Transmission

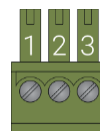
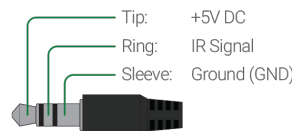
IR TX Port Pinout

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.



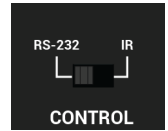
WyreStorm Connector		3rd Party Device
Pin 1	TX (Transmit)	---> To ---> RX (Receive)
Pin 2	RX (Receive)	---> To ---> TX (Transmit)
Pin 3	G (Ground)	---> To ---> G (Ground)

Setup and Configuration

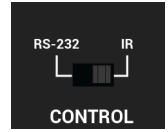
RS-232/IR Over Fiber

The RXF-300-4K can transmit RS-232 or IR over fiber bidirectionally, however it can only send one or the other. The following settings must be made on both the TX and RX for the type of signal that will be sent within the installation.

Send and Receive RS-232



Send and Receive IR



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 fiber 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			
Inputs	1x OM3 In: SFP+		
Outputs	1x HDMI Out: 19-pin type A		
Output Video Encoding	TMDS over fiber		
Encoding Data Rate	10Gbps		
Audio Formats	2ch PCM Multichannel: LPCM and Up to DTS-X and Dolby Atmos		
Video Resolutions (Max)	Resoluton	HDMI	MM OM3
	1920x1080p @60Hz 12bit	15m/49ft	300m/984ft
	1920x1080p @60Hz 16bit	7m/23ft	300m/984ft
	3840x2160p @24Hz 10bit 4:2:0 HDR	3m/10ft	300m/984ft
	3840x2160p @30Hz 8bit 4:4:4	7m/23ft	300m/984ft
	3840x2160p @60Hz 10bit 4:2:0 HDR	3m/10ft	300m/984ft
	4096x2160p @60Hz 8bit 4:2:0	7m/23ft	300m/984ft
4096x2160p @60Hz 8bit 4:4:4	7m/23ft	300m/984ft	
Supported Standards	DCI RGB HDR HDR10 Dolby Vision HLG BT.2020 BT.2100		
Maximum Pixel Clock	600MHz		
Communication and Control			
HDMI	HDMI HDCP 2.2 EDID DVI/D supported with adapter (not included)		
Fiber Multimode	HDMI HDCP 2.2 EDID Bidirectional IR/RS-232		
IR	1x RS-232: 3-pin Phoenix Bidirectional over OM3		
RS-232	1x IR RX 3.5mm (1/8in) TRS Stereo 1x IR TX: 3.5mm (1/8in) TS Mono Bidirectional over OM3		
Power			
Power Supply	12V DC 0.5A		
Max Power Consumption	3.5W		
Environmental			
Operating Temperature	0 ~ +45°C (32 ~ +113 °F) 10% ~ 90% non-condensing		
Storage Temperature	-20 ~ +70°C (-4 ~ +158 °F) 10% ~ 90% non-condensing		
Maximum BTU	11.94 BTU/hr		
Dimensions and Weight			
Rack Units Wall Box	<1U		
Height With Without Feet	20mm/0.79in		
Width With Without Brackets	150mm/5.91in		
Depth With Without Handles	74.4mm/2.93in		
Weight	0.3kg/0.66lbs		
Regulatory			
Safety and Emission	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 for more details on our limited product warranty.

