18Gbps 4K HDR OM3 Multi-Mode Fiber Extender With HDCP 2.2 and Bidirectional IR or RS-232

EXF-300-H2

WyreStorm

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.

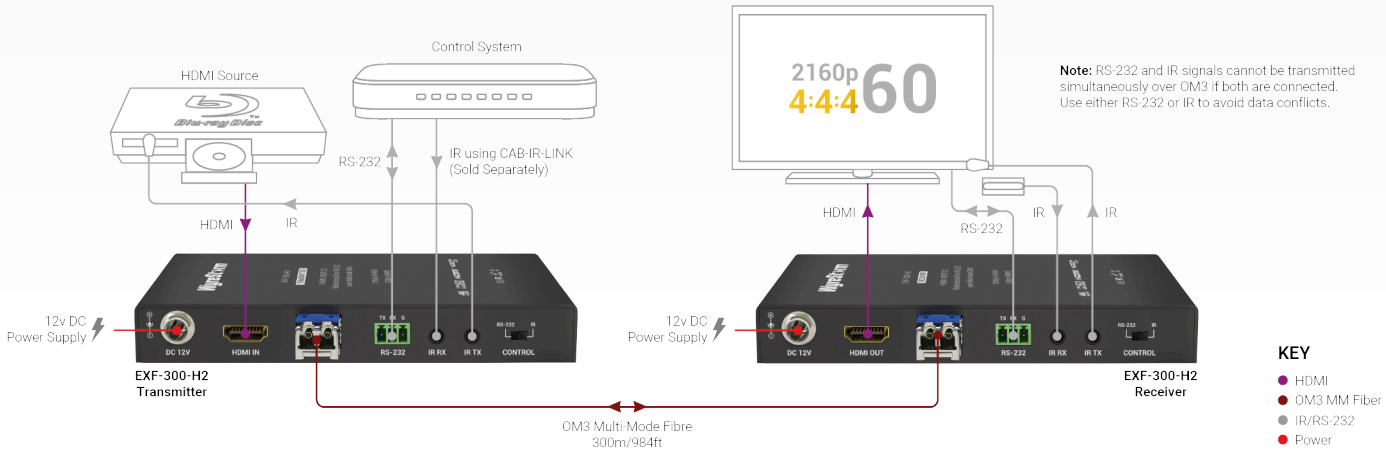
IMPORTANT! Installation

- 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.

In the Box

1x EXF-300-H2 Transmitter
1x EXF-300-H2 Receiver
2x 12v DC Power Supplies
1x IR Emitter
1x IR Receiver
2x 3-Pin Screw Down Phoenix Connectors
4x Mounting Brackets (2x for TX | 2x for RX)
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 any wires to ensure proper operation and to avoid damaging the 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 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

OM3 Fiber SFP+ Guidelines

The EXF-300-H2 is designed to work with SFP+ OM3 MM 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.

- Connector type is fiber LC duplex to be used with OM3 Multimode fiber cables
- 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

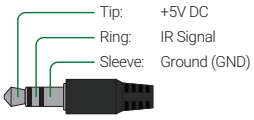
- Using WyreStorm infrared emitters and receivers is the best way to ensure that most IR coding formats are transmitted and received by the system. Other 3rd party emitters and receivers can be used; however, these devices must operate in the same manner as the WyreStorm devices.
- Due to differences 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.

IR TX Port Pinout

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

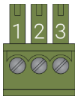
IR RX Port Pinout

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 EX-100-H2-EARC 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 functionally to ensure that the correct connections can be made.
Refer to RS-232 Mode Settings for details on setting RS-232 modes.

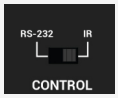


WyreStorm Connector			3rd Party Device
Pin 1	TX (Transmit)	---> To --->	RX (Receive)
Pin 2	RX (Receive)	---> To --->	TX (Transmit)
Pin 3	G (Ground)	---> To --->	G (Ground)

Setup and Configuration

RS-232/IR Over Fiber

The EXF-300-H2 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 extender 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.

Warranty Information

WyreStorm Technologies ProAV Corporation 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.