8x8 4K HDR HDBaseT Matrix with 4 Mirrored HDMI outputs and audio breakout

MXV-0808-H2A

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.

4K HDR **2160p 4:4:4 60** **⊙HDBT™** **HDMI®** **HDCP 2.2** **PoH**

⚠ **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 MXV-0808-H2A Matrix
1 x AC Power Cord with EU pins
1 x AC Power Cord with US pins
1 x AC Power Cord with UK pins
1 x AC Power Cord with AU pins
1x IR Remote
8x IR Emitter
8x IR Receiver
2x Matrix Mounting Brackets with screws
1x Quickstart Guide (this document)

Basic Wiring Diagram

KEY
- HDMI
- HDBaseT / Ethernet
- Control
- Power
- Digital Audio
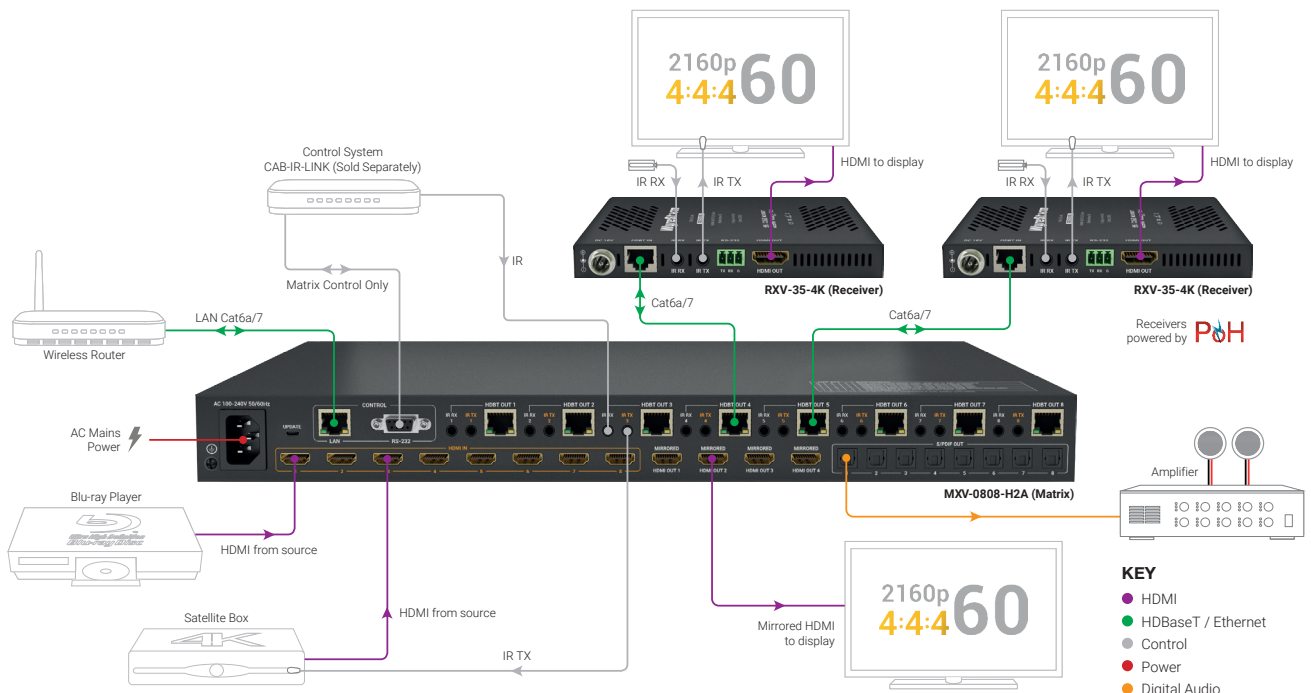
Wiring and Connections

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.

Cat6 Cable Performance Guide

0m	10m	20m	30m	40m	50m	60m	70m	80m	90m	100m

0ft	32ft	65ft	98ft	131ft	164ft	197ft	230ft	262ft	295ft	328ft

🟩 **4K** Transmission   🟦 **HD** Transmission

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

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.

IR TX Port Pinout

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


Tip: Anode
Sleeve: Cathode (IR Signal)

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.

Tip: +5V DC
Ring: IR Signal
Sleeve: Ground (GND)

RS-232 Wiring

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.
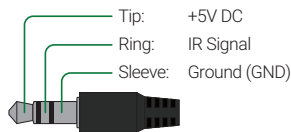
Matrix RS-232 Port
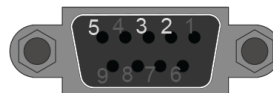
WyreStorm Connector			3rd Party Device
Pin 2	TX (Transmit)	---> To --->	RX (Receive)
Pin 3	RX (Receive)	---> To --->	TX (Transmit)
Pin 5	G (Ground)	---> To --->	G (Ground)

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Setup and Configuration

Setup for this matrix including EDID is performed within the Web UI. Refer to Accessing the Web UI for details.

Accessing the Web UI

This matrix is set to a default static IP Address (192.168.11.143). In order to communicate with it initially the PC must be set to a 192.168.11.xxx address with a subnet of 255.255.0.0. This can be changed back once a static IP is set within a different range.

1. Connect the matrix to the same network as a PC.
2. Open a web browser and enter the IP Address of the matrix.
   Default: 192.168.11.143 | Password: admin

Note: The installer password and general password are the same by default. WyreStorm recommends changing the password for installer login to avoid any unwanted changes being made to the matrix configuration.

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 recevier.
- 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	
Inputs	8x HDMI In: 19-pin type A
Outputs	8x HDBT Out: 8-pin RJ-45 Female 8x S/PDIF Out: TOSLINK (Digital Optical) 4x HDMI Out: 19-pin type A
Output Video Encoding	HDBaseT Class B
Encoding Data Rate	9.2Gbps
End to End Latency (Max)	10μs (micro seconds)
Audio Formats	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

	Video Resolution	HDMI	Cat6	Cat6a/7
Video Resolutions (Max)	1920x1080p @60Hz 12bit	15m/49ft	60m/197ft	70m/230ft
	1920x1080p @60Hz 16bit	7m/23ft	35m/115ft	40m/131ft
	3840x2160p @24Hz 10bit 4:2:0 HDR	3m/10ft	35m/115ft	40m/131ft
	3840x2160p @30Hz 8bit 4:4:4	7m/23ft	35m/115ft	35m/115ft
	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	7m/23ft	35m/115ft	40m/131ft
	Note: WyreStorm recommends the use of shielded category cable to minimize signal noise and interference			

Supported Standards	DCI | RGB | HDR | HDR10 | Dolby Vision up to 30Hz | HLG | BT.2020 | BT.2100
Maximum Pixel Clock	HDMI: 600MHz | HDBaseT: 297MHz
Communication and Control	
HDMI	HDMI 2.0 | HDCP 2.2 | EDID | CEC | DVI/D supported with adapter (not included)
HDBaseT	HDMI 2.0 | HDCP 2.2 | EDID | CEC | 1-way PoH | Bidirectional IR
CEC	CEC power triggering | Requires CEC compatibility | HDMI outputs only
IR	8x IR RX: 3.5mm (1/8in) TRS Stereo | 8x IR TX: 3.5mm (1/8in) TS Mono | Bidirectional over HDBaseT
RS-232	1x RS-232: 9-pin DB9 Female
Ethernet	1x LAN: 8-pin RJ-45 Female
Power	
Power Supply	100~240V AC 50/60Hz
Max Power Consumption	168W
Environmental	
Operating Temperature	0 to + 45°C (32 to + 113 °F), 10% to 90%, non-condensing
Storage Temperature	-20 to +70°C (-4 to + 158 °F), 10% to 90%, non-condensing
Maximum BTU	574 BTU/hr
Dimensions and Weight	
Rack Units/Wall Box	1U
Height	43.5mm/1.72in
Width	440mm/17.33in
Depth	300mm/11.82in
Weight	4.95kg/10.89lbs
Regulatory	
Safety and Emission	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 for more details on our limited product warranty.