8x8 4K HDR HDBaseT Matrix Kit with 8x Receivers

MXV-0808-H2A-KIT

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.

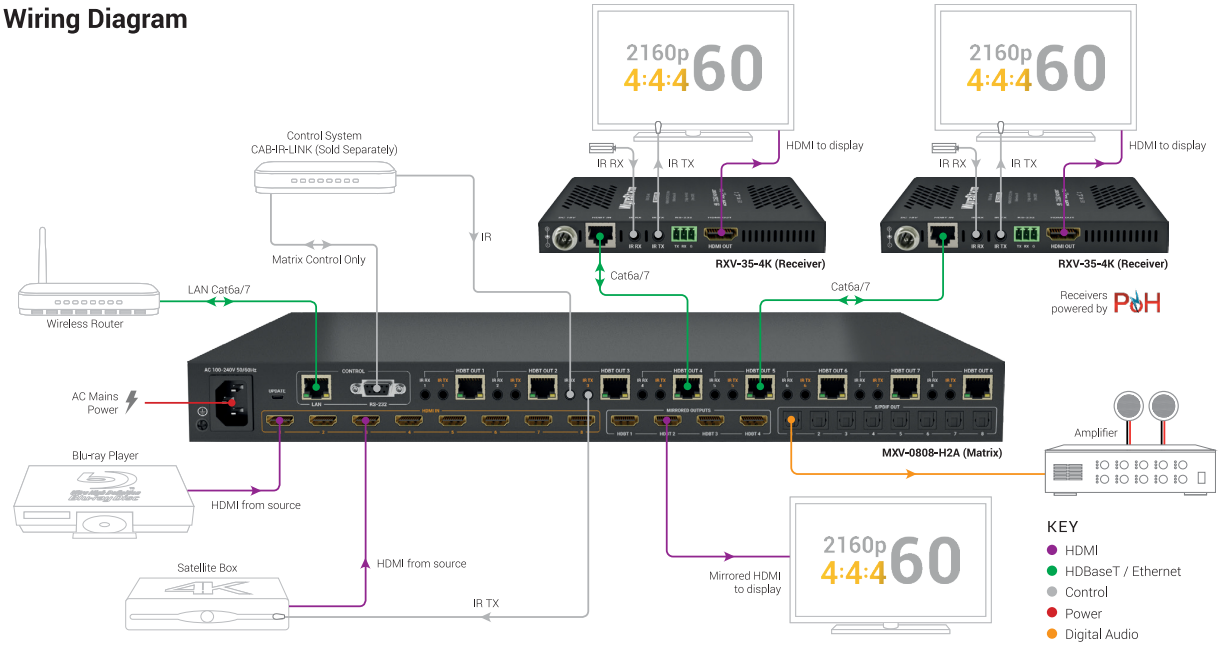
IMPORTANT! Installation Requirements

- 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 for the HDMI outputs, WyreStorm cannot guarantee compatibility with all forms of CEC communication.

In the Box

1x MXV-0808-H2A v3 Matrix
6x RXV-35-4K Receivers
2x RXV-35-SCL Receivers
1x AC Power Cord with US Pins
1x AC Power Cord with EU Pins
1x AC Power Cord with UK Pins
1x AC Power Cord with AU Pins
1x IR Remote
8x IR Emitters
8x Broadband IR Receivers (30-50KHz)
8x Phoenix Male Connector (3.5mm 3-Pin)
2x Mounting Brackets for Matrix (1U, with Screws)
16x Mounting Brackets for Receivers (with Screws)
1x Quickstart Guide

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 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

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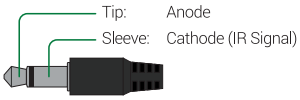
IR TX/RX Guidelines

- 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.

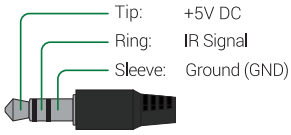
IR TX Port Pinout

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.



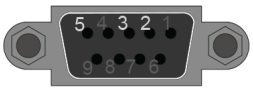
IR Code Settings

This matrix has 2 different IR code sets to help alleviate interference with devices that may contain a similar IR code. These various code sets can be set within the units web UI should the need arise to change them. We recommend that the IR code set be left to default unless absolutely required to resolve a code sharing issue.

1. Access the Web UI. Refer to Accessing the Web UI.
2. Navigate to the Settings tab within the Admin section of the Web UI. Default password is admin.
3. Under IR Code select one of the available IR code sets. Mode 1 (0x00) is the default setting.

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.



WyreStorm Connector			3rd Party Devic
Pin 2	TX (Transmit)	--> To -->	RX (Receive)
Pin 3	RX (Receive)	--> To -->	TX (Transmit)
Pin 5	GND	--> To -->	GND

Note: Pins not shown in table have no connection.

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 uses an Auto IP method to generate the initial IP address based on the network connections. By default the IP address is set to DHCP and will pull the IP address from a connected DHCP server. Should the network not contain a DHCP server the IP address will be generated based on the units mac address. The above operation will occur unless the IP Address setting in the web UI is set to static.

1. Connect the matrix to the same network as a PC.
2. Using a 3rd party network scanner, scan the network for the IP address of the matrix.
3. Open a web browser and enter the IP Address of the matrix.
4. Enter the password for the matrix. Default Password: admin

IP Address Notes

- The IP address of the unit can be displayed by pressing and holding the **UP** and **Down** buttons on the front panel for 3 seconds. The IP address will be displayed on the front panel.
- 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.

Low Power Mode (Standby)

This matrix contains a Low Power Mode that will place the unit into Standby using less power than normal operating mode. While in this mode the Front Panel display and LEDs will be Off and outputs will be powered down. Once a command is sent via the Front Panel buttons, IR remote/control system, or RS-232/IP control system the unit will wake from Standby and be fully operational. The unit can be placed back into standby via the Web UI or by sending an API command as described in the following sections.

Enabling Low Power Mode via Web UI

1. Access the Web UI. Refer to Accessing the Web UI.
2. Navigate to the Settings tab within the Admin section of the Web UI. Default password is admin.
3. Under Low Power Mode, select On to enable.

Enabling via RS-232/IP

Refer to the products API document for information on Com port and IP addressing settings.

- To place the unit into Standby send the command STANDBY<CR><LF>.
- To remove the unit from Standby send the command WAKE<CR><LF>.
- To query the current Standby state send the command GET STANDBY<CR><LF>.

Troubleshooting

No or Poor Quality Picture (snow or noisy image)

- Verify that A/V mute is not enabled. Check Web UI for status on the selected output
- Verify that the matrix is not in Standby. Refer to Low Power Mode (Standby) for details
- 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.
- Change the matrix IR code set in order to avoid interference with other devices. Refer to IR Code Settings.

Troubleshooting Tips:

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

Specifications – MXV-0808-H2A v3 Matrix

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	18Gbps
End to End Latency (Max)	10µs (micro seconds)
Audio Formats	**S/PDIF:** 2ch LPCM | Dolby Digital and DTS up to 5.1ch **HDMI:** 2ch LPCM | Multichannel up to Dolby Atmos and DTS-X
Video Resolutions (Max)	1920x1080p @120Hz 12bit 3840x2160p @60Hz 10bit 4:2:0 HDR 4096x2160p @60Hz 8bit 4:4:4
Supported Standards	DCI | RGB | HDR | HDR10 | Dolby Vision(DVLL) up to 60Hz | HLG | BT.2020 | BT.2100
Maximum Pixel Clock	HDMI: 600MHz | HDBaseT: 297MHz
Communication and Control	
HDMI	HDMI 2.0 | HDCP 2.2 | EDID
HDBaseT	HDMI 2.0 | HDCP 2.2 | EDID | CEC | 1-way PoH | Bidirectional IR
CEC	CEC power triggering via API | Requires CEC compatibility
IR	8x IR RX: 3.5mm (1/8in) TRS Stereo | 8x IR TX: 3.5mm (1/8in) TS Mono
RS-232	1x RS-232: 9-pin DB9 Female | Matrix Control | Telnet commands supported
Ethernet	1x LAN: 8-pin RJ-45 Female | Web UI | Matrix Control
Power	
Power Supply	100~240V AC 50/60Hz
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 x Width x Depth	43.5mm/1.72in x 440mm/17.33in x 300mm/11.82in
Depth	120mm/4.72in
Weight	5.34kg/11.75lbs
Regulatory	
Safety and Emission	CE | FCC | RoHS | RCM | EAC | UKCA

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Specifications – RXV-35-4K Receiver

Power	
Power Supply	18V DC (Optional)
PoH	1-way Matrix to Receiver
Power Consumption	12.42W
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	43 BTU/hr
Dimensions and Weight	
Rack Units/Wall Box	<1U
Height With | Without Feet	15.2mm/0.6in
Width With | Without Brackets	136mm/5.38in
Depth With | Without Handles	74.2mm/2.93in
Weight	0.24kg/0.53lbs
Regulatory	
Safety and Emission	CE | FCC | RoHS | RCM | EAC | UKCA

Specifications – RXV-35-SCL Receiver

Power	
Power Supply	12V DC 1A (Optional)
PoH	1-way Matrix to Receiver
Power Consumption	12.42W
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	43 BTU/hr
Dimensions and Weight	
Rack Units/Wall Box	<1U
Height With | Without Feet	18mm/0.7in
Width With | Without Brackets	180mm/7.08in
Depth With | Without Handles	80mm/3.14in
Weight	0.36kg/0.79lbs
Regulatory	
Safety and Emission	CE | FCC | RoHS | RCM | EAC | UKCA

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 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.