

4K HDR 4 Input Matrix Switcher with 4 Scaling Outputs

MX-0404-HDMI

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** **HDCP 2.2** **CEC**

IMPORTANT! Installation Requirements

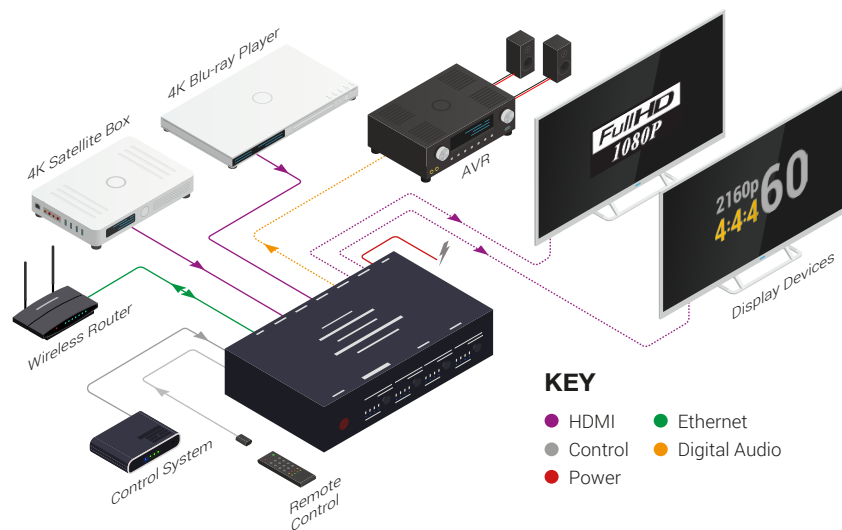
- Visit the product page to download the latest firmware, document version, additional documentation, and configuration tools.
- Read through the [Wiring and Connections](#) section for important guidelines before creating or choosing premade cables.

In The Box

- 1x MX-0404-HDMI Matrix
- 1x 12V DC 2A Power Supply (US/UK/EU/AU)
- 1x 3.5mm 3-pin Terminal Block
- 1x IR Receiver
- 1x Remote Control Handset (CR2025 Battery not Included)
- 2x Rack Mounting Brackets
- 2x Wall Mounting Brackets

 **IMPORTANT!** The MX-0404-HDMI had the previous model number of EXP-MX-0404-H2. If you would like to access previous documentation for the EXP-MX-0404-H2 [click here](#).

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 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.

HDMI Cable Performance Guide

0m	2m	4m	6m	8m	10m	12m	14m	16m	18m	20m
0ft	7ft	13ft	20ft	26ft	33ft	39ft	46ft	52ft	60ft	66ft
 HD/4K Transmission										

Installation and Operation

- Connect HDMI sources to INPUT ports 1-4 using good quality HDMI cables.
- Connect an HDMI display device to the HDMI OUT ports of the switcher.
- Turn the power on using the included remote handset, ensuring LED power indicators are fully lit on the front of the switcher. If not, check to make sure the HDMI cables are firmly connected.
- To operate the switcher, press the SWITCH buttons on the front of the unit to scroll numerically through connected sources.
- Alternatively, use the remote control handset to scroll forwards and backwards through the inputs or push buttons 1-4 corresponding to the connected sources. Furthermore, a RS-232 or LAN connection from a control system can be used to control the device.

IR EXT Port Pinout

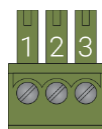
Connection for IR RX (receive) uses a 3.5mm (1/8in) stereo jack that outputs +5V DC to power the included IR receiver.



RS-232 Wiring

The MX-0404-HDMI 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.

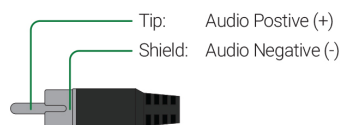
Refer to [RS-232 Mode Settings](#) for details on setting RS-232 modes.



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)

Audio Wiring

This matrix contains audio connections for Digital Audio.

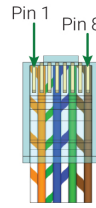


Control via IP

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 is changed to static via API command.

1. Connect the matrix to the same network as a control system.
2. Using a 3rd party network scanner, scan the network for the IP address of the matrix.
3. IP address of matrix will show up under the name **MX-0404-HDMI**

4.If no DHCP network is available and unit has not been issued an IP address yet, the default IP address is **192.168.11.143**.



Pin 1: White/Orange
Pin 2: Orange
Pin 3: White/Green
Pin 4: Blue

Pin 5: White/Blue
Pin 6: Green
Pin 7: White/Brown
Pin 8: Brown

Wire colors shown follow EIA/TIA-568B standard.

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 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 Intermittent 3rd party Device Control

- Verify that the IR, RS-232 and Ethernet cables are properly terminated following the [Wiring and Connections](#) section.

No or Poor Quality Picture (snow or noisy image)

- Verify that power is being supplied to all devices in the system and that they are powered on.
- Verify that all HDMI connections are not loose and are functioning properly.
- If transmitting 3D or 4K, verify that the HDMI cables used are 3D or 4K rated.

Troubleshooting Tips:

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

Specifications

Audio and Video		
Inputs	4x HDMI In: 19-pin type A	
Outputs	4x HDMI Out: 19-pin type A 1x IR Extension 4x S/PDIF Coaxial	
Audio Formats	HDMI: 2ch PCM Multichannel: LPCM and up to DTS-X and Dolby Atmos Coaxial: 5.1ch surround sound	
Video Resolutions (Max)	Resolution	HDMI
	1920x1080p @60Hz 12bit	15m/49ft
	1920x1080p @60Hz 16bit	7m/23ft
	3840x2160p @24Hz 10bit 4:2:0 HDR	5m/16ft
	3840x2160p @30Hz 8bit 4:4:4	7m/23ft
	3840x2160p @60Hz 10bit 4:2:0 HDR	5m/16ft
	4096x2160p @60Hz 8bit 4:2:0	7m/23ft
	4096x2160p @60Hz 8bit 4:4:4	5m/16ft
Supported Standards	DCI RGB HDR HDR10 Dolby Vision up to 30Hz HLG BT.2020 BT.2100	
Maximum Pixel Clock	600MHz	
Communication and Control		
HDMI	HDCP 2.2 DVI-D supported with adapter (not included)	
IR	1x Front Panel Sensor 1x IR Ext 3.5mm (1/8in) TRS Stereo Matrix Control	
RS-232	1x 3-Pin Terminal Block Matrix Control (Telnet commands supported)	
Ethernet	1x LAN: 8-pin RJ-45 Female 10/100 Mbps auto-negotiating IP Control Web UI	
Power		
Power Supply	5V DC 2A	
Max Power Consumption	10W	
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	17.06 BTU/hr	
Dimensions and Weight		
Rack Units/Wall Box	<1U	
Height	42mm/1.65in	
Width	215mm/8.46in	
Depth	120.2mm/4.73in	
Weight	0.88kg/1.94lbs	
Regulatory		
Safety and Emission	CE FCC RoHS EAC RCM	

Note: WyreStorm reserves the right to change product specification, appearance or dimensions of this product at any time without prior notice.