2160p 4:4:4/60 In-Line HDMI Scaler with Audio Breakout

CON-H2-SCL

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.

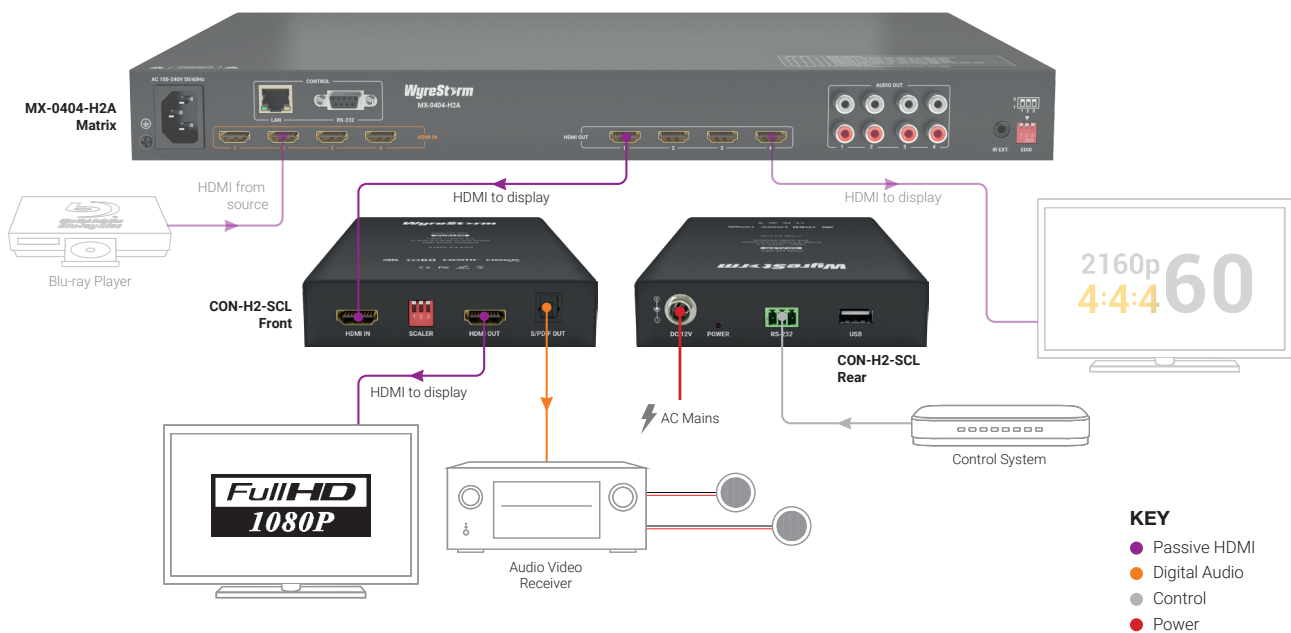**4K UHD** · **2160p 4:4:4 60** · **HDMI** · **HDCP 2.2**

⚠ **IMPORTANT! Installation Requirements**

- Advanced configuration of this product requires the use of the use of the WyreStorm Management Suite v1.6 or higher configuration tool. Download the latest version from the product page before continuing with the installation.
- 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.

In the Box

1x CON-H2-SCL
1x DC 12V 2A Power Supply (US/UK/EU/AU)
3x 3-Pin Terminal Block
2x Mounting Brackets
1x Quickstart Guide (This Document)

Basic Wiring Diagram

MX-0404-H2A Matrix

Blu-ray Player

HDMI from source

HDMI to display

HDMI to display

CON-H2-SCL Front

HDMI IN · SCALER · HDMI OUT · S/PDIF OUT

DC 12V · POWER · RS-232 · USB

CON-H2-SCL Rear

AC Mains

Control System

HDMI to display

2160p 60 4:4:4

FullHD 1080P

Audio Video Receiver

KEY
- Passive HDMI
- Digital Audio
- Control
- Power

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.
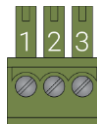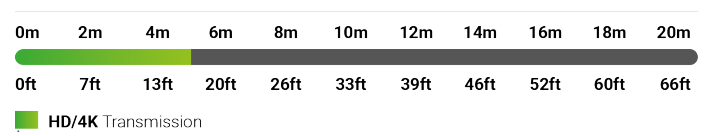
⚠ **IMPORTANT! Wiring Guidelines**

- 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 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

RS-232 Guidelines

This product 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.

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)

Troubleshooting

No or Poor Quality Picture (snow or noisy image)

- Verify that the output resolution of the source and display is supported by this product.
- If transmitting 3D or 4K, verify that the HDMI cables used are 3D or 4K rated.
- Verify that all source and display connections are not loose and are functioning properly.

No or Intermittent 3rd party Device Control

- Verify that the RS-232 and Relay cables are properly terminated. Refer to RS-232 Guidelines and/or Relay Wiring sections for pinout information.

Setup and Configuration

Scaler Settings

This device can be set to scale the video output when required by the system using the dip switches on the front of the device.

Auto Scaling (Default)		1920x1080@60Hz	
1024x768@60Hz		1920x1200@60Hz	
1280x720@60Hz		3840x2160@30Hz	
1280x800@60Hz		3840x2160@60Hz	

Advanced Configuration

The following steps require the use of the use of the WyreStorm Management Suite v1.6 or higher. Download the latest version from the product page before continuing with the installation.

Initial Configuration Tool Setup

1. Connect the converter to a PC using the RS-232 port. Refer to RS-232 Guidelines for pinout.
2. Open the WyreStorm Management Suite and select the CON-H2-xxxx Configuration Tool from the menu.
3. Under RS-232 Port Configuration select the COM port for the PC and set the baud rate to 57600.
4. Select the Connect button to connect the PC to the converter.

EDID Write from a File

If an EDID file is available it can be uploaded into the converter for setting the desired EDID.

1. Under RS-232 Port Configuration select the COM port for the PC and set the baud rate to 57600.
2. Under EDID Write select Choose File to select the file to upload.
3. Once the selection dialog closes, select Import to upload the file to the converter.

Specifications

Audio and Video	
Inputs	1x HDMI In: 19-pin type A
Outputs	1x HDMI Out: 19-pin type A 1x S/PDIF Out: TOSLINK (Digital Optical)
Audio Formats	HDMI Pass-through: 2ch PCM S/PDIF Out: De-Embed: 2ch PCM

	Video Resolution	**HDMI**
Video Resolutions (Max)	1920x1080p @60Hz 12bit	15m/49ft
	3840x2160p @24Hz 10bit 4:2:0 HDR	7m/23ft
	3840x2160p @30Hz 8bit 4:4:4	7m/23ft
	3840x2160p @60Hz 10bit 4:2:0 HDR	5m/16ft
	3840x2160p @60Hz 12bit 4:2:2 HDR	3m/10ft
	4096x2160p @60Hz 8bit 4:2:0	7m/23ft
	4096x2160p @60Hz 8bit 4:4:4	3m/10ft

Supported Standards	DCI	RGB	HDR	HDR10	Dolby Vision	HLG	BT.2020	BT.2100
Maximum Pixel Clock	600MHz

Communication and Control	
HDMI	HDMI 2.0	HDCP 2.2	EDID Inputs supports DVI/D and DisplayPort Dual-Mode (DP++) v1.3 with adapter (not included)
RS-232	1x RS-232: 3-pin Terminal Block - 3.5mm
USB	1x USB: USB-A	Firmware Updates Only

Power	
Power Supply	12V DC 2A
Max Power Consumption	8.38W

Environmental	
Operating Temperature	32°F ~ 113°F (0°C ~ 45°C)	10% ~ 90%, non-condensing
Storage Temperature	-4°F to ~ 158°F (-20°C ~ +70°C)	10% ~ 90%, non-condensing
Maximum BTU	29 BTU/hr

Dimensions and Weight	
**Rack Units	Wall Box**	<1U
**Height With	Without Feet**	25mm/0.99in
**Width With	Without Brackets**	110mm/4.34in
**Depth With	Without Handles**	150.1mm/5.91in
Weight	0.476kg/1.05lbs

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.