

### In the Box

 $1 \times MX-1616$ -PP-POH-CUSTOM main unit +  $16 \times Custom$  card selections (as specified via the 'GoConfigure' Virtual Rack webtool or physical order sheet sent to your WyreStorm representative)

Printed quickstart guide (full instruction manual downloadable form wyrestorm.com)

2 x Matrix mounting brackets

- 1 x 100-240v AC power supply
- 1 x IR Extension cable
- 16 x IR TX emitters
- 16 x IR RX Receivers
- 1 x MX-1616-PP-POH-CUSTOM remote control incl. battery



Quickstart Guide

WyreStorm 16-Slot HDBaseT Modular Matrix
Chassis with 2-way IR, Routed RS232 and PoH

MX-1616-PP-POH-CUSTOM

CHDBT\* PMH HDMI\* HDCP



Attention: Open out for installation diagram.

## **Before Installation**

Do Not Hotplug! - Please insert and extract cables carefully with the power SWITCHED OFF. Connecting and disconnecting while the unit is powered can result in damage to circuitry.

We strongly recommend using the supplied mounting brackets to secure the matrix and the accompanying display receivers. Any sudden movement of these devices could lead to loss of picture and sound if connections become loose or strained, resulting in unnecessary service call backs

Remember, always switch off the matrix before unplugging any inputs or outputs – follow last on, first off protocol.

## **Basic Connection and Operation**

Attention: Due to the customizable nature of this product, we strongly suggest consulting the full instruction manual before installation.

- Based on your individual module configuration, connect multiformat sources to Inputs 1-16 of the matrix using quality cables - we recommend the use of WyreStorm Express HDMI cables.
- 2 To cascade HDMI transmission to another matrix an HDMI Passthrough module is required.
- For HDBaseT Outputs, connect a good quality, well-terminated Cat6 cable of no more than 70m/230ft from matrix HDBT OUT ports 1-16 to HDBT ports of connected display receivers.
- If connecting a remote source via an HDBaseT Input module, ensure Cat6 cable of no more than 70m/230ft is used between the HDBT transmission device and HDBT IN of the matrix module. The matrix uses PoH to remotely power PoH-enabled transmission devices so no additional mains power is required at remote source locations

NOTE: Although WyreStorm products are tested with Cat5e, we recommend Cat6 as standard due to increased bandwidth and improved capacity for handling large transmissions along a single cable.

At display locations, connect HDMI display devices to the HDMI OUT ports of receivers.

NOTE: AMP-001-010 HDBaseT digital audio amplifier receivers can be used for enhanced audio connectivity.

6 Connect the matrix to a mains power supply using the power cable included and switch on the Power at the rear of the unit.

Check the front panel LED display is lit to indicate the matrix is ready for use.

The matrix uses PoH to remotely power PoH-enabled receivers so no mains power is required at display locations.

In instances where cable quality, length or placement impacts on successful PoH delivery, or if using a non-POH enabled receiver, units can be powered locally via threaded or phoenix 12v DC power connectivity.

Check POWER, STATUS & LINK lights are illuminated on the receiver to indicate successful connection, with a lit HDCP illustrating the presence of encryption within the signal

# NOTE: STATUS and HDCP LEDs should blink, POWER and LINK are static LEDs.

Basic I/O switching is achieved via the matrix front panel. OUTPUTS are selected by pressing the LEFT and RIGHT arrow buttons to scroll forwards and backwards numerically through the displays connected to the matrix. The corresponding OUTPUT channel number will blink on the display when reached.

UP and DOWN arrow buttons scroll numerically through any INPUT sources connected to the system. When the desired OUTPUT and INPUT is reached, push the ENTER button to confirm the selection. The display will stop blinking to confirm matrix I/O has been set.

# **Basic Signal IR/RS232 Control**

- Connect IR emitters from the matrix IR TX ports to the IR receiving areas of sources, firmly attaching emitter eyes onto sources.
- For use with a control system, IR Link cables (sold separately) should be connected from the matrix IR RX ports to the controller used. For an RS232-based control system, RS232 cables should be used from matrix to control system and between receivers and display device.
- At display locations, connect IR emitters from the display receiver IR TX ports to the IR receiving areas of the display device and IR receivers from IR RX ports on/near the device with clear line of sight to the handset used to control.

NOTE: Emitter eye position on device IR receiving areas may need to be adjusted later to achieve best IR performance.

See full instruction manual for detailed instructions on connection, operation and control.

## Wiring and Connections

## **HDBaseT Wiring**

Wiring for HDBaseT follows the EIA T568B standard.



### **IMPORTANT!** Wiring Guidelines

 The use of patch panels, wall plates, cable extenders, kinks in cables, and electrical or environmental interference can have an adverse effect on HDBaseT transmission limiting performance. Steps should be taken to minimize these factors (or remove completely) during installation for best results.

Cat5e/6 Cable Performance Guide						MX-1616-PP-POH-CUSTOM				
0m	10m	20m	30m	40m	50m	60m	70m	80m	90m	100m
Oft	32ft	65ft	98ft	131ft	164ft	197ft	230ft	262ft	295ft	328ft

# **RS232 Wiring**



## **Troubleshooting**

Regardless of manufacturer or product, the majority of installation difficulties can typically be attributed to communication problems between devices or when high bandwidth transmissions are attempted with insufficient cable/connections.

We recommend referring to the full instruction manual for this product, but the following checklist offers general issues and causes that should help you shoot your way out of trouble without seeking further assistance.

### No or poor quality picture?

■ Device Connection - Are you connected and powered? Double check all HDMI, UTP and power connections are firmly inserted into correct ports and that all devices are powered.

NOTE: If receiver PoH powering issues are experienced, use a 12v local power supply at display zones.

■ Cable length – is your signal struggling to transmit signals or power the distance of your cable? You may be experiencing interference that exceeds the maximum capacity of your transmission cable distance. Make sure you are within specified cable distances for this product and check cable and connection condition and installation environment for issues.

Try a shorter cable run, an extender with a longer range or EDID management of the matrix - see full manual for EDID DIP switch settings

- Signal strength please note the use of cable joins, stranded patch panels, wall outlets and stranded patch leads as interconnects between them, can significantly reduce signal strength. Use solid core, straight through connections wherever possible.
- Resolution If you reduce the resolution of the source, do you get a picture? If so, this suggests a conflicting resolution between source and display or a bandwidth capacity issue with your cable. Check all inputs and outputs share the same resolution and make sure the signal is being successfully transmitted the full length of your cable run.
- Picture 'snow' / HD 'noise' signifies a failure to fully establish a signal and can often be caused by poorly terminated HDMI connectors or excessive cable lengths. If using an extender set with this product, ensure your cable is correctly wired to 568B standards. Try swapping in a display and receiver from a fully functioning location if the problem continues on the same output, turn off all equipment and swap your signal carrying cables at both ends.
- Cable quality and condition HDMI cable/connectors can be easily damaged and the quality of material can vary, especially in lower price brackets. Successful transmission of video, audio and control, can all be affected by cable and termination quality. Always use good quality leads and cables. Should transmission problems be experienced, try swapping cables/leads for those already working to see if this improves your image to identify cable issue as source of problem.

- Blu-Ray, 3D Make sure all your equipment has been configured and enabled to transmit and accept the signal, or is capable of passing a signal. Are resolutions between source and display compatible and cable adequate for the large bandwidth required by Blu-ray and 3D transmissions?
- 4K Are you trying to pass a 4K signal or are you combining 4K and HD sources and displays? This product does not support 4K. For full list of our 4K product range, please visit out website at wyrestorm.com

See full manual or product web page at wyrestorm.com for full specification.

### IR Control

- Check the IR receiving window of the matrix or the IR EXT receiver is unobstructed and able to receive IR signals from the remote handset used to control the matrix.
- Is your remote control powered and sending a signal? As IR is invisible to the naked eye, check your remote is transmitting a signal by viewing the remote handset sensor through a digital camera/camera phone the emitter on the handset should flash when a button on the handset is held
- IR signal dropout can be experienced due to environmental infrared radiation. Ensure the matrix IR receiving window or IR EXT receiver are away from direct sunlight, halogen lighting and plasma screens that may interfere with IR signals.

# **Safety Recommendations:**

- Do not expose this apparatus to any form of moisture, including the placement of anything containing liquids on the unit.
- To prevent risk of electric shock or fire hazard, ensure apparatus is installed in an unobstructed, well ventilated area away from any external heat sources including other electrical devices which may produce heat.
- Only use attachments / accessories specified by the manufacturer and refer all servicing to qualified service personnel.
- Failure to adhere to these recommendations may invalidate your warranty.

## **Warranty Information**



This product is covered by a 3 year limited parts and labor warranty. During this period there will be no charge for unit repair, component replacement or complete product replacement in the event of malfunction. The decision to repair or replace will be made by the manufacturer.

This limited warranty only covers defects in materials or workmanship and excludes normal wear and tear or cosmetic damage.

Visit our website for full details on this product and to download the complete user guide including technical specification, EDID settings and warranty information.

## wyrestorm.com

## **Matrix Installation Reference Log**

INPUT							
Output Number on Matrix	Input Location	Source Details	Source Resolution & Audio Settings	Cable Number			
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							

OUTPUT							
Output Number on Matrix	Output Location	Display Details	Display Resolution & Audio Settings	Cable Number			
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							