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.
- Install the latest firmware (if available) to ensure that all features described in this document are available during and after installation.
- Read through the **Wiring and Connections** section for important wiring guidelines before creating or choosing premade cables.

**In the Box**

- 1 x MX-0404-HDBT-H2A-KIT HDBaseT Matrix Switcher
- 4 x HDBaseT PoC display receivers
- 1 x Handheld IR Remote (CR2025 Battery not Included)
- 4 x IR emitters
- 4 x IR Broadband Receiver (30KHz to 50KHz)
- 1 x IR Extension Cable
- 1 x AC Power Cord with US Plug
- 1 x AC Power Cord with UK Plug
- 1 x AC Power Cord with EU Plug
- 2 x Mounting Brackets and accessories (matrix)
- 1 x Quickstart Guide (this document)

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**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 entirety before running or terminating the wires to ensure proper operation and to avoid damaging equipment.

HDMI/HDBaseT Wiring

⚠️ 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 HDMI and Ethernet transmission limiting performance. Steps should be taken to minimize or remove these factors completely during installation for best results.
- WyreStorm recommends using high quality HDMI cables such as WyreStorm Express to ensure the highest content performance available.
- The type of category cable and length used can restrict the available video resolution. While Cat5e can be used, WyreStorm recommends using Cat6 or higher to ensure the highest content performance available. See Video Resolutions in the Specifications table before determining cable type and length.

IR TX/RX Wiring

⚠️ IMPORTANT! IR TX/RX Guidelines
- WyreStorm IR ports function differently than standard IR ports. For this reason only WyreStorm IR emitters and receivers can be used.
- WyreStorm IR emitter and receiver cables cannot be spliced as cutting into the cables will short the shield. While an extension cable may be used, WyreStorm assumes no responsibility for operation using an extension cable.
- When connecting the IR TX to an IR connecting blocks or control system with different plugs, a cable must be made following the IR TX Port Pinout diagram.
- When connecting to an IR control system use the WyreStorm CAB-IR-LINK cable. This cable compensates for differences between the WyreStorm RX and the control systems TX connection. Visit the CAB-IR-LINK product page for details.

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.
**EDID Settings**

EDIs can be configured to resolve issues with video output on displays that may not accept the maximum resolution available from the source.

- When set to Smart EDID (default) the matrix will scan all selected displays for the lowest resolution.
- When EDID Copy or a direct EDID is being used, SmartEDID is turned Off.
- Ensure that a display is connected and powered On to the selected output before copying EDIDs or the copy will fail. When this occurs, EDID will be set to 4K@30Hz 2ch.
- Power to the matrix must be cycled (Off/On) after changing dip switches in order for the setting to take effect.

**Copying EDIDs**

1. Set the EDID dipswitch to the Front Panel, Web UI or API EDID Control (all switches up).
2. Reboot the matrix.
3. Using the front navigation buttons, select the input port for the output. Example: input 2 for Output 2
4. Once the output port indicator blinks, press and hold Enter for 5 seconds. OK indicates that the copy was successful, FL-2 indicates that the copy failed.
5. Reboot the matrix

Note: EDID settings may also be configured using the Web UI. Refer to the Accessing the Web UI section.

**Accessing the Web UI**

Note: 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. 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 all devices in the system and that they are powered on.
- Verify that all source and HDBaseT connections are not loose and are functioning properly.
- Verify that the HDBaseT cable is properly terminated per the HDMI/ HDBaseT Wiring section.
- Verify that the matrix, receiving device, and display support the output resolution of the source.
- Refer to Video Resolutions in the Specifications table for the max distance based on resolution.
- 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 cable(s) is properly terminated. See IR TX/RX Wiring.
- Verify that the IR emitter is located near the IR receiver on the device.

**Troubleshooting Tips:**

- WyreStorm recommends using a cable tester or connecting the cable to other devices to verify functionality.
- Use a flashlight to locate the IR receiver behind any tinted panels on the device being control.
## Specifications

### Audio and Video

#### Inputs
- Matrix: 4x HDMI 19-pin type A female | Receiver: 1x HDBaseT 8-pin RJ-45 female

#### Outputs
- 1x HDMI In 19-pin type A female | 4x HDBaseT 8-pin RJ-45 female
- 4x S/PDIF Out RCA Digital Coax | 4x Audio Out Stereo Pairs RCA Analog Coax (Audio from Source or HDMI Output)
- Receiver: 1x HDMI 19-pin type A female

#### Audio Formats
- HDMI: LPCM and up to DTS-X and Dolby Atmos
- S/PDIF: 2ch PCM | Multichannel: Up to 5.1 DTS and Dolby Digital
- Analog: 2ch Analog

### Video Resolutions (Max)

#### Using Cat6
- 1920x1080p @60Hz 12bit (15m/50ft) | @60Hz 16bit (7m/23ft)
- 3840x2160p @30Hz 4:4:4 8bit (35m/115ft) | @24Hz 4:2:0 HDR 10bit (35m/115ft)
- 4096x2160p @60Hz 8bit 4:2:0 (7m/23ft) | @60Hz 8bit 4:4:4 (7m/23ft)

#### Using Cat6a/7
- 1920x1080p @60Hz 12bit (70m/230ft) | @60Hz 16bit (70m/230ft)
- 3840x2160p @30Hz 4:4:4 8bit (40m/131ft) | @24Hz 4:2:0 HDR 10bit (40m/131ft)
- 4096x2160p @60Hz 8bit 4:2:0 (40m/131ft)

### Color Depth
- 1080p: 16bit | 4K UHD: 8bit | HDR @24p: 10bit BT.2020

### Maximum Pixel Clock
- HDMI: 600MHz | HDBaseT: 297MHz

### Communication and Control

#### HDMI
- Matrix Only: 1x 8-pin RJ-45 female | 10/100 Mbps auto-negotiating | Built-in Web UI | IP Control

#### HDBaseT
- Matrix: HDBaseT 2ch PCM | Multichannel: LPCM and Up to DTS-X and Dolby Atmos
- S/PDIF: 2ch PCM | Multichannel: Up to 5.1 DTS and Dolby Digital
- Analog: 2ch Analog

#### Ethernet
- Matrix Only: 1x 8-pin RJ-45 female | 10/100 Mbps auto-negotiating | Built-in Web UI | IP Control

#### IR
- Matrix: 1x Front Panel IR Sensor | 1x IR Ext 3.5mm (1/8in) TRS Stereo | Matrix Control
- 4x IR TX 3.5mm (1/8in) TS Mono | 4x IR RX 3.5mm (1/8in) Stereo | Transmits via HDBaseT

#### RS-232
- Matrix Only: 1x 9-pin DB9 Female | Matrix Control (Telnet commands supported)

### Power

| Power Supply | 100~240V AC 50/60Hz |
| PoC | 12V 5W(each HDBT output) |
| Max Power Consumption | 54W |

### 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 | 184.25 BTU/hr |

### Dimensions and Weight

<table>
<thead>
<tr>
<th>Dimensions and Weight</th>
<th>Matrix</th>
<th>Receivers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rack Units/Wall Box</td>
<td>1U</td>
<td>0.34U</td>
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<tr>
<td>Height With</td>
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<td>135mm/5.32in</td>
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<tr>
<td>Depth With</td>
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<td>N/A</td>
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<tr>
<td>Without Handles</td>
<td>301.0mm/11.82in</td>
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<tr>
<td>Weight</td>
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<td>0.22kg/0.48lbs</td>
</tr>
</tbody>
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### 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.

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

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