WyreStorm recommends reading through this document in its entirety to become familiar with the product’s features before beginning the installation process.

**IMPORTANT! Installation Requirements**
- Read through the Wiring and Connections section for important wiring guidelines before creating or choosing premade cables.
- While this product supports CEC, WyreStorm cannot guarantee compatibility with all forms of CEC communication.
- Visit the product page to download the latest firmware, document version, additional documentation, and configuration tools.

**Information and Parts Required for Installation**
This transmitter requires connection via RS-232 or Ethernet in order to configure functions such as EDID. Ensure that the following items are on hand before proceeding with the installation.
- PC or Mac
- Telnet and Terminal software such as PuTTY
- USB COM Port Adapter (Not Included)
- WyreStorm Part: CAB-USB-3PIN
- Network router and/or switch if using IP telnet for configuration.
- Latest version of the SW-510-TX API for advanced configuration not covered in this document.

**Basic Wiring Diagram**

**In the Box**
1x SW-510-TX Transmitter  
1x 12V DC Power Supply (US/UK/EU)  
1x IR Receiver  
2x Mounting Brackets  
1x 3-pin Screw Down Phoenix Connector  
1x 4-pin Screw Down Phoenix Connector  
1x Quickstart Guide (This Document)
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 any wires to ensure proper operation and to avoid damaging the equipment.

⚠️ IMPORTANT! Wiring Guidelines

- The use of patch panels, wall plates, cable transmitters, 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 VGA, HDMI, DP and USB 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.

Audio Connections

Audio In

The audio connections use a 3.5mm (1/8in) TRS Stereo Jack.

Communication Connections

RS-232 Wiring

The SW-510-TX 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.

PC Connection

Connection to a PC uses the RS-232 Control connection and requires the use of a USB to 3-pin Port Adapter cable (CAB-USB-3PIN) in order for a port to be provided on the PC. Note that this adaptor can be used on both v1 and v2 versions.

RS-232 Passthrough

<table>
<thead>
<tr>
<th>WyreStorm Connector</th>
<th>3rd Party Device</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pin 1 TX (Transmit)</td>
<td>RX (Receive)</td>
</tr>
<tr>
<td>Pin 2 RX (Receive)</td>
<td>TX (Transmit)</td>
</tr>
<tr>
<td>Pin 3 G (Ground)</td>
<td>G (Ground)</td>
</tr>
</tbody>
</table>

RS-232 Control

<table>
<thead>
<tr>
<th>WyreStorm Connector</th>
<th>3rd Party Device</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pin 1 12V DC Out</td>
<td>No Connection</td>
</tr>
<tr>
<td>Pin 2 TX (Transmit)</td>
<td>RX (Receive)</td>
</tr>
<tr>
<td>Pin 3 RX (Receive)</td>
<td>TX (Transmit)</td>
</tr>
<tr>
<td>Pin 4 G (Ground)</td>
<td>G (Ground)</td>
</tr>
</tbody>
</table>

Troubleshooting

No or Poor Quality Picture (snow or noisy image)

- 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 transmitter.
- Configure EDID Settings to a lower 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, RS-232, and Ethernet cables are properly terminated following the Wiring and Connections section.

Relays Not Functioning

- Verify polarity of the relay connections.

⚠️ Troubleshooting Tips

- WyreStorm recommends using a cable tester or connecting the cable to other devices to verify functionality.
Setup and Configuration
The SW-510-TX is configured using RS-232 commands for Output Resolution, and EDID. Follow these steps to properly configure the transmitter based on the system requirement.

Note: The steps and information provided in this QSG are for basic operation of the transmitter out of the box. Refer to the SW-510-TX API for full configuration settings.

1. Assign a Static IP Address to ensure proper communication on an IP Network.
2. Set EDIDs to be used at each input of the device. See Configuring Input EDIDs

Communication Settings
The commands listed below can be sent by connecting to either the TX or RX for RS-232 and the RX only for Ethernet. Each device must be connected together via HDBaseT in order to send a command from one device to the other. The only exception is Configuring a Static IP Address which requires connection to the RX.

The SW-510-TX contains a web UI that can be accessed by connecting to a network and entering the IP address. We recommend that the IP address is changed from default before accessing the web UI for the first time.

RS-232 and IP Settings
| Baud rate | 115200 |
| Data Bits | 8bits |
| Parity | None |
| Stop Bits | 1bit |
| Flow Control | None |
| Default IP Address | 192.168.11.43 |
| Default IP Port | 23 |

Configuring Input EDIDs
By default, all inputs are set to an EDID or 1920x1080@60Hz 2CH. However, this can be configured to suit the installation.

<table>
<thead>
<tr>
<th>Input</th>
<th>VGA EDID</th>
<th>HDMI/USB-C EDIDs</th>
</tr>
</thead>
<tbody>
<tr>
<td>VGA EDID</td>
<td>1024x768@60Hz 2CH</td>
<td>1024x768@60Hz 2CH</td>
</tr>
<tr>
<td></td>
<td>1280x768@60Hz</td>
<td>1280x720@60Hz</td>
</tr>
<tr>
<td></td>
<td>1360x768@60Hz</td>
<td>1360x768@60Hz</td>
</tr>
<tr>
<td></td>
<td>1440x900@60Hz</td>
<td>1440x900@60Hz</td>
</tr>
<tr>
<td></td>
<td>1600x900@60Hz</td>
<td>1600x900@60Hz</td>
</tr>
<tr>
<td></td>
<td>1680x1050@60Hz</td>
<td>1680x1050@60Hz</td>
</tr>
<tr>
<td></td>
<td>1920x1080@60Hz</td>
<td>1920x1080@60Hz</td>
</tr>
<tr>
<td></td>
<td>1920x1200@60Hz</td>
<td>3840x2160@30Hz</td>
</tr>
</tbody>
</table>

Set Input EDID
SET EDID [Input] [Resolution] [Device]<CR><LF>
Example: SET EDID in1 1 tx<CR><LF>
Response: EDID SET in1 1 tx<CR><LF>

Query Input EDID
GET EDID [Input] [Device]<CR><LF>
Example: GET EDID in1 tx<CR><LF>
Response: EDID GET in1 1 tx<CR><LF>
Specifications

### Audio and Video

**Inputs**
- 1x VGA In: 15-pin VGA
- 1x Display Port In: DisplayPort 1.3
- 1x HDMI In: 19-pin type A
- 1x Audio In: 3.5mm (1/8in) TRS Stereo
- 1x Line In: 3.5mm (1/8in) TRS Stereo

**Outputs**
- 1x HDMI Out: 19-pin type A
- 1x HDBT Out: 8-pin RJ-45 Female

**Video Encoding**
- HDBaseT Class C

**Encoding Data Rate**
- 9.2Gbps

**End to End Latency**
- 10μs (micro seconds)

**Audio Formats**
- 2ch Analog/PCM | Multichannel: LPCM

### Video Resolutions (Max)

<table>
<thead>
<tr>
<th>Video Resolution</th>
<th>HDMI</th>
<th>Cat6</th>
<th>Cat6a/7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1920x1200p @60Hz 8bit</td>
<td>15m/49ft</td>
<td>15m/49ft</td>
<td>150m/492ft</td>
</tr>
<tr>
<td>1920x1080p @60Hz 8bit</td>
<td>15m/49ft</td>
<td>15m/49ft</td>
<td>150m/492ft</td>
</tr>
<tr>
<td>3840x2160p @30Hz 8bit 4:4:4</td>
<td>7m/23ft</td>
<td>100m/328ft</td>
<td>100m/328ft</td>
</tr>
<tr>
<td>4096x2160p @60Hz 8bit 4:2:0</td>
<td>7m/23ft</td>
<td>100m/328ft</td>
<td>100m/328ft</td>
</tr>
</tbody>
</table>

### Supported Standards
- DCI | RGB

### Communication and Control

**HDMI**
- HDMI | HDCP 2.2 | EDID | DVI/D supported with adapter (not included)

**HDBaseT**
- HDMI | HDCP 2.2 | EDID | CEC | 2ch audio | USB

**Ethernet**
- 2x 8-pin RJ-45 female | Bidirectional over HDBaseT

**RS-232**
- 1x RS-232 (Control): 3-pin Phoenix | 1x RS-232 (Passthrough): 3-pin Phoenix

**IR**
- 1x IR RX: 3.5mm (1/8in) TS Mono

**USB**
- 1x USB-C: USB 3.1 Audio/Video | 2x USB Host: USB-B | 3x USB Device: USB-A

### Power

- **Power Supply**
  - DC 2A

- **Max Power Consumption**
  - 14.02W

### 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**
  - 56.3BTU/hr

### Dimensions and Weight

- **Rack Units/Wall Box**
  - <1U

- **Height With | Without Feet**
  - 44.5mm/1.76in | 42mm/1.66in

- **Width With | Without Brackets**
  - 263mm/10.36in | 220mm/8.67in

- **Depth With | Without Handles**
  - 148.7mm/5.86in | 148.7mm/5.86in

- **Weight**
  - 0.97kg/2.13lbs

### Regulatory

- **Safety and Emission**
  - CE | FCC | RoHS

### Warranty Information

WyreStorm Technologies LLC warrants that its products are 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.

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