


4-input Desk-mounted 4K/60 HDBaseT Presentation Switcher with DSC Compression, Scaling & USB Host

SW-740-TX

WyreStorm®

Quickstart Guide

 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.

In the Box

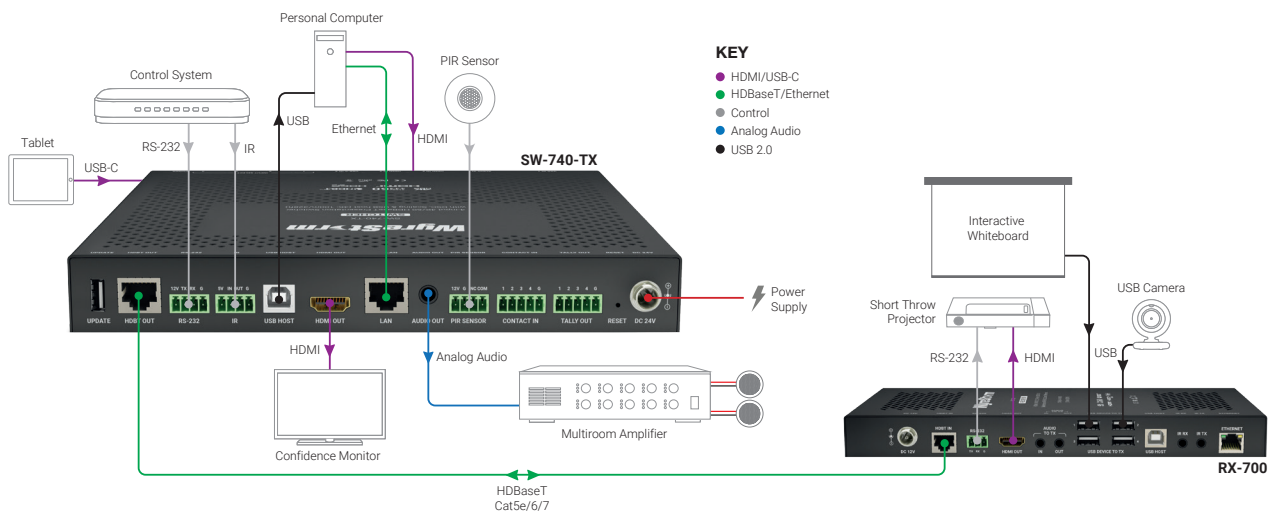
- 1x SW-740-TX Presentation Switcher
- 2x 5-pin Terminal Block
- 3x 4-pin Terminal Block
- 1x 24V DC 6.66A Power Supply (US/UK/EU/AU)
- 2x Mounting Brackets
- 1x Quickstart Guide (This Document)

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-740-TX API](#) for advanced configuration not covered in this document.

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 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 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.

- This product contains a USB-C connection that can be used as an audio/video input. When using this connection verify that the USB-C cable used supports audio/video functionality as not all USB-C cables support this requirement.

Cat6 Cable Performance Guide

| 0m | 10m | 20m | 30m | 40m | 50m | 60m | 70m | 80m | 90m | 100m |
|-----|------|------|------|-------|-------|-------|-------|-------|-------|-------|
| 0ft | 32ft | 65ft | 98ft | 131ft | 164ft | 197ft | 230ft | 262ft | 295ft | 328ft |

■ 4K/HD Transmission

WyreStorm recommends the use of shielded cable to minimize signal noise and interference

Audio Connections

Audio In

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



Audio Out

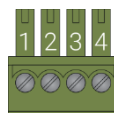
The audio connections use a 3.5mm (1/8in) TRS Stereo Jack.



Control Communication

RS-232 Wiring

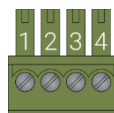
The SW-740-TX uses a 4-pin RS-232 with no hardware flow control. Most control systems and computers are DTE where pin 3 is RX, this can vary from device to device. Refer to the documentation for the connected device for pin functionality to ensure that the correct connections can be made.



| WyreStorm Connector | | 3rd Party Device |
|---------------------|---------------|----------------------------|
| Pin 1 | 12V DC Out | No Connection |
| Pin 2 | TX (Transmit) | ---> To ---> RX (Receive) |
| Pin 3 | RX (Receive) | ---> To ---> TX (Transmit) |
| Pin 4 | G (Ground) | ---> To ---> G (Ground) |

IR Wiring

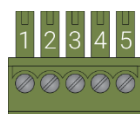
The 4-pin IR connector can be used to either transmit or receive IR signals, based on the type of cable and pin out you use. The IR emitter or receiver being used must support 5v for proper operation.



| WyreStorm Connector | | 3rd Party Device |
|---------------------|---------------|----------------------------|
| Pin 1 | 5V DC Out | No Connection |
| Pin 2 | IR (Receive) | ---> To ---> IR (Transmit) |
| Pin 3 | IR (Transmit) | ---> To ---> IR (Receive) |
| Pin 4 | G (Ground) | ---> To ---> G (Ground) |

Contact In/Tally Out

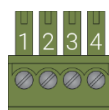
Contact connections are provided to allow for switching sources and feedback to a contact closure button on a desk or wall plate.



| WyreStorm Connector | | 3rd Party Device |
|---------------------|------------|-------------------------|
| Pin 1 | VGA IN 1 | ---> To ---> Source 1 |
| Pin 2 | HDMI IN 2 | ---> To ---> Source 2 |
| Pin 3 | HDMI IN 3 | ---> To ---> Source 3 |
| Pin 4 | USB-C IN 4 | ---> To ---> Source 4 |
| Pin 5 | G (Ground) | ---> To ---> G (Ground) |

PIR Sensor

Contact connections are provided to allow for automatic triggering of input switching or display power.



| WyreStorm Connector | | 3rd Party Sensor |
|---------------------|--------------|----------------------------|
| Pin 1 | 12V DC Out | ---> To ---> 12v of Sensor |
| Pin 2 | G (Ground) | ---> To ---> G (Ground) |
| Pin 3 | NC | ---> To ---> NC of Sensor |
| Pin 4 | COM (Common) | ---> To ---> COM (Common) |

Setup and Configuration

The SW-740-TX is configured using RS-232 or IP 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-740-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 SW-740-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 | DHCP |
| Default IP Port | 23 |

Configuring Input EDIDs

| | | |
|--|--|-------------------------|
| Set Input EDID SET EDID [Input] [Prm] Example: SET EDID in1 1 Response: EDID SET in1 1 | [Input]= in1 ~ in4 [Prm]={Below tables based on connection} | |
| Query Input EDID GET EDID [Input] Example: GET EDID in1 Response: EDID in1 1 | VGA EDID | HDMI/USB-C EDIDs |
| | 8: 1024x768@60Hz 2CH | 8: 1600x900@60Hz 2CH |
| | 7: 1280x768@60Hz 2CH | 7: 1600x1200@60Hz 2CH |
| | 6: 1360x768@60Hz 2CH | 6: 1680x1050@60Hz 2CH |
| | 5: 1440x900@60Hz 2CH | 5: 1920x1200@60Hz 2CH |
| | 4: 1600x900@60Hz 2CH | 4: 1280x720@60Hz 2CH |
| | 3: 1680x1050@60Hz 2CH | 3: 1920x1080@60Hz 2CH |
| | 2: 1920x1080@60Hz 2CH | 2: 3840x2160@30Hz 2CH |
| | 1: 1920x1200@60Hz 2CH | 1: 3840x2160@60Hz 2CH |

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.

Specifications

| Audio and Video | | | | |
|---------------------------|---|----------|------------|------------|
| Inputs | 1x VGA In: 15-pin VGA | | | |
| | 1x USB-C | | | |
| | 2x HDMI In: 19-pin type A | | | |
| | 1x Audio In: 3.5mm (1/8in) TRS Stereo | | | |
| Outputs | 1x HDMI Out: 19-pin type A | | | |
| | 1x Audio Out: 3.5mm (1/8in) TRS Stereo | | | |
| | 1x HDBT Out: 8-pin RJ-45 Female | | | |
| Output Video Encoding | HDBaseT Class C | | | |
| Encoding Data Rate | 9.2Gbps | | | |
| End to End Latency (Max) | 10μs (micro seconds) | | | |
| Audio Formats | 2ch and multi-channel LPCM | | | |
| Video Resolutions (Max) | Video Resolution | HDMI | Cat6 | Cat6a/7 |
| | 1920x1080p @60Hz 8bit | 15m/49ft | 100m/328ft | 100m/328ft |
| | 1920x1080p @60Hz 16bit | 7m/22ft | 100m/328ft | 100m/328ft |
| | 3840x2160p @60Hz 8bit 4:4:4 | 7m/22ft | 100m/328ft | 100m/328ft |
| | 4096x2160p @60Hz 8bit 4:4:4 | 3m/10ft | 100m/328ft | 100m/328ft |
| | Note: WyreStorm recommends the use of shielded category cable to minimize signal noise and interference | | | |
| Supported Standards | DCI RGB | | | |
| Maximum Pixel Clock | 600MHz | | | |
| Communication and Control | | | | |
| HDMI | HDMI HDCP 2.2 EDID CEC DVI/D supported with adapter (not included) | | | |
| HDBaseT | HDMI HDCP 2.2 EDID CEC 2ch audio USB Serial | | | |
| RS-232 | 1x 4-pin Phoenix (Control) | | | |
| Ethernet | 1x 8-pin RJ-45 female Bidirectional over HDBaseT | | | |
| IR | 1x 4-pin Phoenix (Pass-through) | | | |
| USB | 1x USB-C: USB 3.1 1x USB Host: USB-B Data Rate: 190Mbps | | | |
| CEC | Auto, Manual Display Power through HDMI & HDBT Output | | | |
| Other | PIR Sensor: 1 x 4-pin Phoenix Contact Input: 1 x 5-pin Phoenix Tally Output: 1 x 5-pin Phoenix | | | |
| Power | | | | |
| Power Supply | 24V DC 6.66A | | | |
| Max Power Consumption | Standard: 45W With USB Charging: 110W | | | |
| USB-C | Up to 20v device charging (65w) | | | |
| Environmental | | | | |
| Operating Temperature | 0 ~ +45°C (32 ~ +113 °F), 10% ~ 90%, non-condensing | | | |
| Storage Temperature | -20 ~ +70°C (-4 ~ +158 °F), 10% ~ 90%, non-condensing | | | |
| Maximum BTU/hr | Standard: 153.5 With USB Charging: 375.3 | | | |
| Dimensions and Weight | | | | |
| Rack Units/Wall Box | <1U | | | |
| Height | 30mm/1.18in | | | |
| Width | 240mm/9.44in | | | |
| Depth | 200.2mm/7.88in | | | |
| Weight | 1.34kg/2.96lbs | | | |
| 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.

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.

