4-Input 4K HDBaseT Presentation Switcher with Matrix Outputs, USB 2.0, Multiview & Wireless Casting

SW-540-TX-W

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.
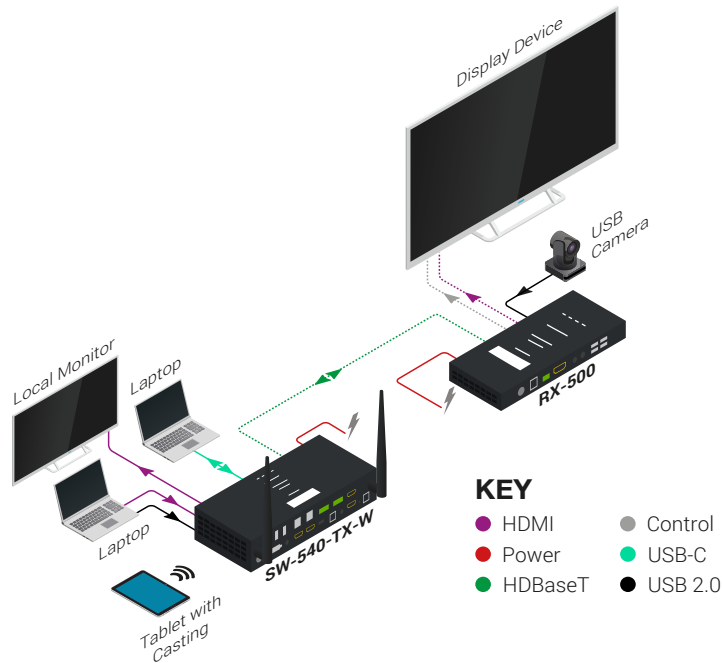
4K UHD **HDBT** **HDMI** **HDCP 2.2**

⚠️ **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-540-TX-W Transmitter
1x 12V 2A Power Supply (US/UK/EU/AU)
2x 4-pin Terminal Blocks
2x Mounting Brackets with Screws
1x Quickstart Guide (This Document)

Basic Wiring Diagram

KEY

- ● HDMI
- ● Power
- ● HDBaseT
- ● Control
- ● USB-C
- ● USB 2.0

Display Device, USB Camera, RX-500, Local Monitor, Laptop, Laptop, SW-540-TX-W, Tablet with Casting

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support@wyrestorm.com
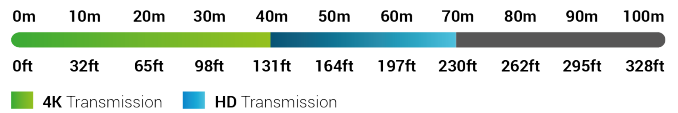
Wiring and Connections

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.

- 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** Transmission　　■ **HD** Transmission

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

Audio Connections

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

Tip:　　　Left Channel
Ring:　　 Right Channel
Sleeve:　 Ground (GND)
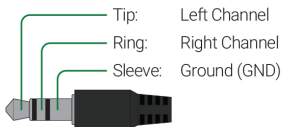
Communication Connections

RS-232 Wiring

The SW-540-TX-W 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.
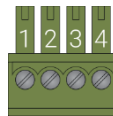
PC Connection

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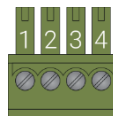
WyreStorm Connector			3rd Party Device
Pin 1	12V DC Out	No Connection	Reserved
Pin 2	TX (Transmit)	---> To --->	RX (Receive)
Pin 3	RX (Receive)	---> To --->	TX (Transmit)
Pin 4	G (Ground)	---> To --->	G (Ground)

RS-232 Control

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

Setup and Configuration

The SW-540-TX-W 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-540-TX-W 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-540-TX-W 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:	9600
Data Bits:	8bits
Parity:	None
Stop Bits:	1bit
Flow Control:	None
Default IP Address	DHCP
Telnet TCP Port	23
TLS TCP Port	24

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support@wyrestorm.com

Guide Screen

The switcher uses a Guide Screen to convey the basic connection instructions for user access.

The Guide Screen can be personalized to allow custom connection instructions on the switcher's Web UI page.

Host Name

IP Address

Wifi Password
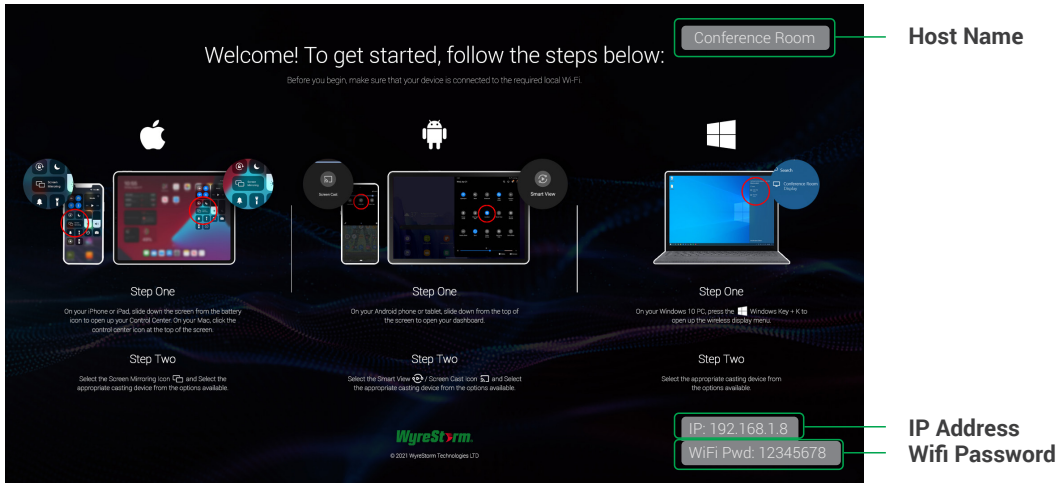
Troubleshooting

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.

Troubleshotting Tips

- WyreStorm recommends using a cable tester or connecting the cable to other devices to verify functionality.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

The distance between user and products should be no less than 20cm.

We declare that this device is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU.

Manufacturer: Shen Zhen Proitav Technology Co.,Ltd
Address: 301-401, Building 16, Hejing Industrial Park, No.87, Hexiu west Road,Heping Community, Fuhai street, Baoan District, Shenzhen, China

Accessory Manufacturer: ShenZhen Tianweixun Wireless Technology Co., Ltd
Adapter: Antenna
Address of Manufacturer: 9/F, Building 1, Guole Science and Technology Park, No. 1 Lirong Road, Dalang Street, Longhua New District, Shenzhen

Accessory Manufacturer: Dongguan NB Power Electronic Limited
Adapter: Power supply
Address of Manufacturer: No.365, South Dongkeng Road, Dongkeng Town, Dongguan City, 523443, P. R. China
The adapter shall be installed near the equipment and shall be easily accessible.

Accessory Manufacturer: Shenzhen Ohonda Technoligy Co., LTD
Adapter: Terminal block
Address of Manufacturer: Room 609, Block D, Hongtaifu Building, Zone No.34, Baoan District, Shenzhen

Operating temperature: 0°C to 45°C

Wi-Fi Operation Frequency: 2412MHz~2472MHz
Maximum Power: 16.74dBm(E.I.R.P.)

Specifications

Audio and Video			
Inputs	1x VGA In: 15-pin VGA 1x Audio In: 3.5mm (1/8in) TRS Stereo 2x HDMI In: 19-pin type A 1x USB-C Wireless Video from Airplay or Miracast Source		
Outputs	1x Mirrored HDBT Out: 8-pin RJ-45 Female 1x HDMI Out: 19-pin type A 1x HDMI Out: 19-pin type A (Output 2) 1x Audio Out: 3.5mm (1/8in) TRS Stereo		
Video Encoding	HDBaseT Class B		
Encoding Data Rate	9.2Gbps		
Mirrored Output Latency	10µs (micro seconds)		
Audio Formats	2ch Analog	PCM		

Video Resolutions (Max)	Video Resolutions	Wired Input/Output	HDBT Output Cat6/6a
	VGA & Casting: 1920x1080p @60Hz 8bit	**VGA:** 8m/26.2ft	40m/131ft (4K @30Hz)
	HDMI & USB-C: 3840x2160p @30Hz 8bit 4:4:4	**HDMI/USB-C:** 7m/22.9ft	70m/230ft (1080p @60Hz)

Supported Standards	DCI	RGB
Maximum Pixel Clock	300MHz

Communication and Control	
HDMI	HDMI	HDCP 2.2	EDID	DVI/D supported with adapter (not included)	CEC
HDBaseT	HDMI	HDCP 2.2	EDID	CEC	USB	RS-232
USB	3 x USB 2.0 Type A device ports	5v 500mA per port 2 x USB 2.0 Type B host ports (assignable) USB bandwidth over HDBaseT limited to 190Mbps
RS-232	1x RS-232 (Control): 4-pin Phoenix	Provides 12V Power 1x RS-232 (Passthrough): 4-pin Phoenix	Provides 12V Power
Ethernet	1x 8-pin RJ-45 female (API Control)
Wireless	2 x Wi-Fi Antennas	IEEE 802.11ac	Dual-band 2.4 & 5GHz

Power	
Power Supply	12V DC 2A
Max Power Consumption	24W

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
Max BTU	82 BTU/hr

Dimensions and Weight	
Rack Units/Wall Box	<1U
Height	25mm/0.98in (Antennas Excluded)	180mm/7.08in (Antennas Included)
Width	215mm/8.46in (Antennas Excluded)	215mm/8.46in (Antennas Included)
Depth	140.2mm/5.51in (Antennas Excluded)	180mm/7.08in (Antennas Included)
Weight	0.97kg/2.13lbs

Regulatory	
Safety and Emission	CE	FCC	RoHS	RCM	EAC

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.