

3-Input In-wall HDBaseT™ Transmitter with USB Host & CEC Trigger. 2-gang US/UK Back-box

SW-130-TX-US | SW-130-TX-UK



Quickstart Guide

! WyreStorm recommends reading through this document in its entirety to become familiar with the product's features prior to starting the installation process.



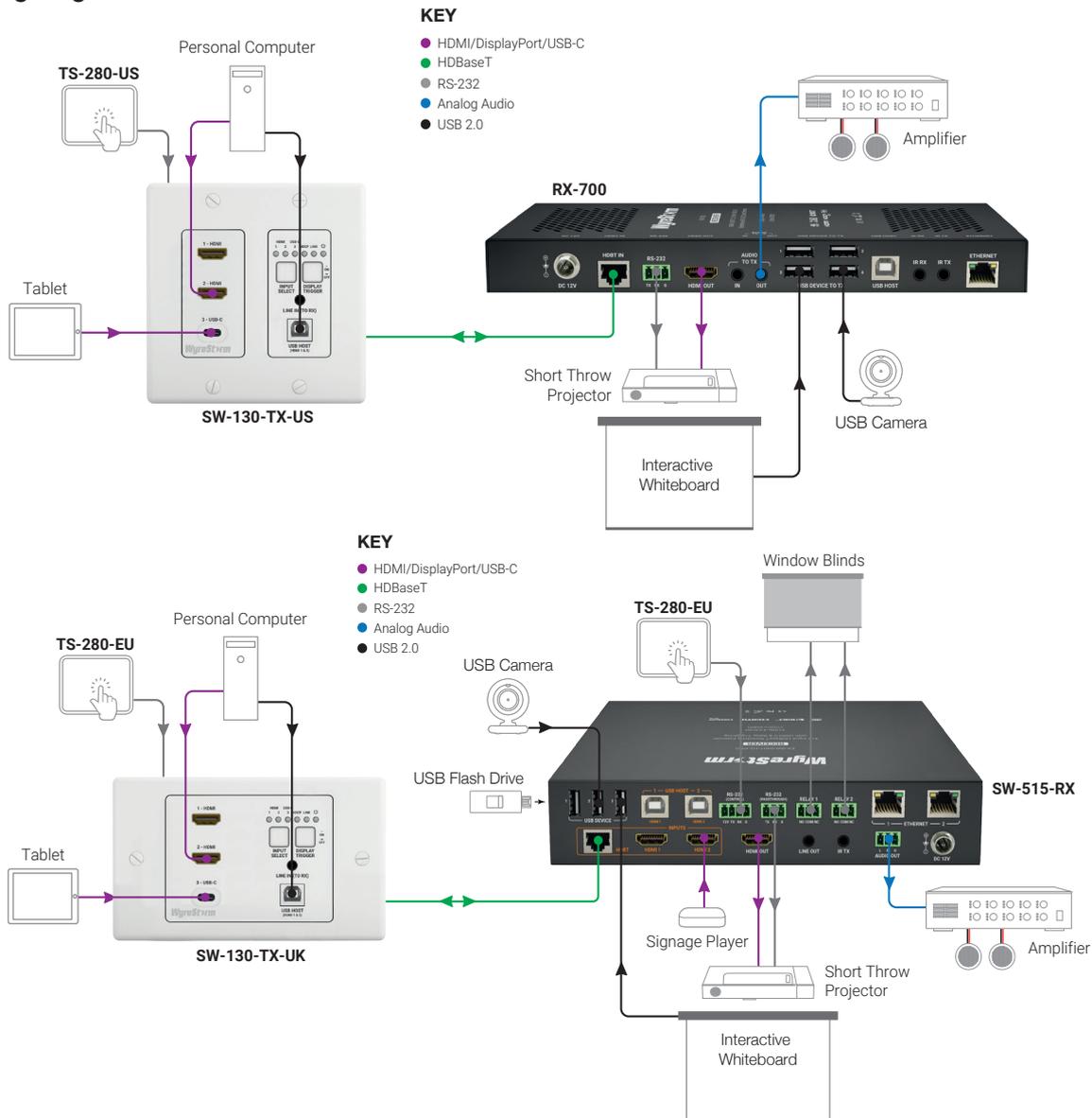
! IMPORTANT! Installation Requirements

- Visit the product page to download the latest firmware, document version, additional documentation, and configuration tools.
- Read through the [Wiring and Connections](#) section for important wiring guidelines before creating or choosing premade cables.
- The height of installation should not exceed 2 meters from the ground.
- While this product supports CEC, WyreStorm cannot guarantee compatibility with all forms of CEC communication.

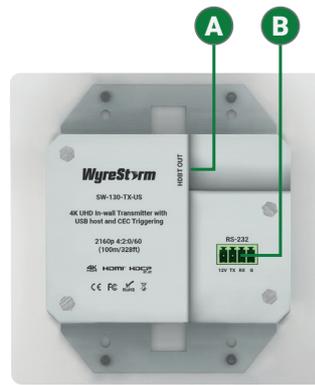
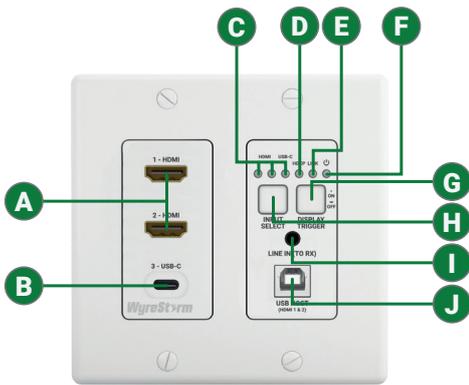
In the Box

- 1x 4-pin Phoenix Male Connector
- 1x USB host cable (Type A-B)
- 1x Decora face plate (SW-130-TX-US)
- 4x Retaining screws (SW-130-TX-US)
- 1x Quickstart guide (This Document)

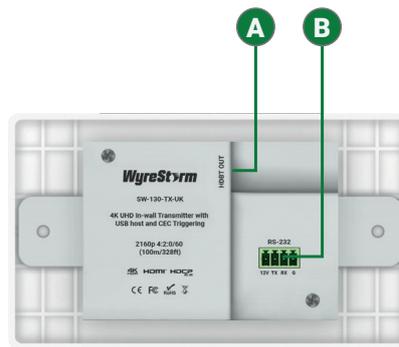
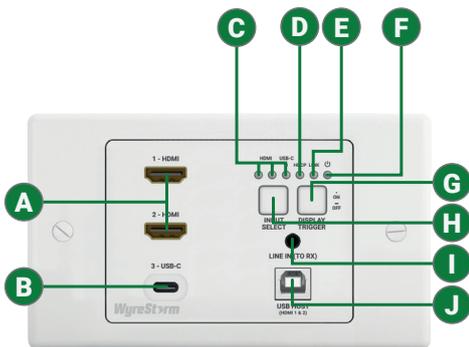
Basic Wiring Diagram



SW-130-TX-US (Front/Rear)



SW-130-TX-UK (Front/Rear)



A	HDMI Inputs	19-pin type A HDMI female Supports HDMI and DVI/D with adapter
B	USB-C Input	USB3.1C port Supports alt-mode and device charging
C	Source LED	On: Indicates the selected source
D	HDCP LED	On: Indicates encrypted source content Off: Indicates non-encrypted source content
E	Link LED	On: Indicates link established with receiving device Off: No link with receiver or receiver powered off
F	Power LED	Solid: The unit is powered On Off: The unit is powered Off
G	Display Trigger	Short Press: Send power on trigger Long Press: Send power off trigger
H	Input Select	Press to manually change input
I	Audio Line In	3.5mm jack: 2ch analog audio input
J	USB Host	USB Type A female Connection of USB Host device

A	HDBT Out	8-pin RJ-45 female Connect the transmitter's HDBT OUT to receiver's HDBT IN .
B	RS-232	4-pin phoenix: Serial input for API control and 12v DC input

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 the wires to ensure proper operation and to avoid damaging equipment.

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 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 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

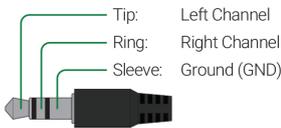
 4K/HD Transmission

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

Audio Connections

Audio In

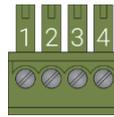
The audio connections use a 3.5mm (1/8in) TRS Stereo Jack.



RS-232 Wiring

The SW-130-TX-Ux uses a 4-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.

Refer to [RS-232 Mode Settings](#) for details on setting RS-232 modes.



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

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, USB 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 extender.
- 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 RS-232 cables are properly terminated following the [Wiring and Connections](#) section.

Troubleshooting Tips:

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

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

Warranty Information

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Specifications

Transmission				
Transmission Encoding	HDBaseT Class C PAM16 Encoding			
End to End Latency	10µs			
Maximum Transmission Bit Rate	10.2Gbps			
Video				
HDMI	v2.0b TMDS 340MHz Maximum			
Inputs	2x HDMI In: 19-pin type A 1x USB-C In: USB 3.1c Audio/Video (4.5Gbps)			
Outputs	1x HDBT out: 8-pin RJ45			
Maximum Pixel Clock	HDMI & HDBaseT: 340MHz			
Video Resolutions (Max)	Video Resolution	HDMI	Cat6	Cat6a/7
	1920x1200p @60Hz	70m/230ft	70m/230ft	100m/328ft
	2560x1440p @60Hz	15m/49ft	100m/328ft	100m/328ft
	3840x2160p @30Hz 8bit 4:4:4	7m/23ft	70m/230ft	100m/328ft
	3840x2160p @30Hz 10bit 4:2:0 HDR	5m/16ft	70m/230ft	100m/328ft
	3840x2160p @30Hz 12bit 4:2:2 HDR	5m/16ft	70m/230ft	100m/328ft
Note: WyreStorm recommends the use of shielded category cable to minimize signal noise and interference.				
Supported Standards	DCI RGB HDR HDR10 Dolby Vision up to 30Hz HLG BT.2020 BT.2100			
Audio				
Inputs	1 x Audio In: 3.5mm (1/8in) TRS Stereo 2ch audio over HDBaseT 1-way to RX			
Audio Formats	2ch PCM Multichannel up to DTS-X and Dolby Atmos			
Maximum Sampling Rate	192KHz			
Maximum Audio Channels	32			
Audio Return Channel (ARC)	Not Supported			
Communication and Control				
USB Host (HDMI Inputs)	1x Type B host Maximum data throughput: 190Mbps			
USB 3.1c	Alt-mode Supported A/V and USB data from RX			
RS-232	1x RS-232: 4-pin Phoenix Shared with 12v DC input Compatible with WyreStorm TS-280 touchscreen via 4-pin phoenix port (only when using PoH)			
HDCP	Pass-through, 2.3 Supported			
EDID	Pass-through, from RX			
Consumer Electronics Control (CEC)	One-way display trigger to RX			
Auto Low Latency Mode (ALLM)	Supported			
Variable Refresh Rate (VRR)	Supported			
Power				
Power Supply	12V DC 1A (not included)			
Max Power Consumption	7.8W			
Power-over-HDBaseT (PoH)	Supported, 1-way from RX			
Local Power Supply Input	4-pin phoenix			
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	2.29 BTU/hr			
Dimensions and Weight				
	SW-130-TX-UK		SW-130-TX-US	
Installation	In-wall, 2-gang		In-wall, 2-gang	
Height	86mm/3.38in		105mm/4.13in	
Width	146mm/5.74in		89mm/3.5in	
Depth	38mm/1.55in		38mm/1.55in	
Weight	0.27Kg/0.60lbs		0.3Kg/0.66lbs	
Regulatory				
Safety and Emission	CE FCC RoHS RCM EAC			

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

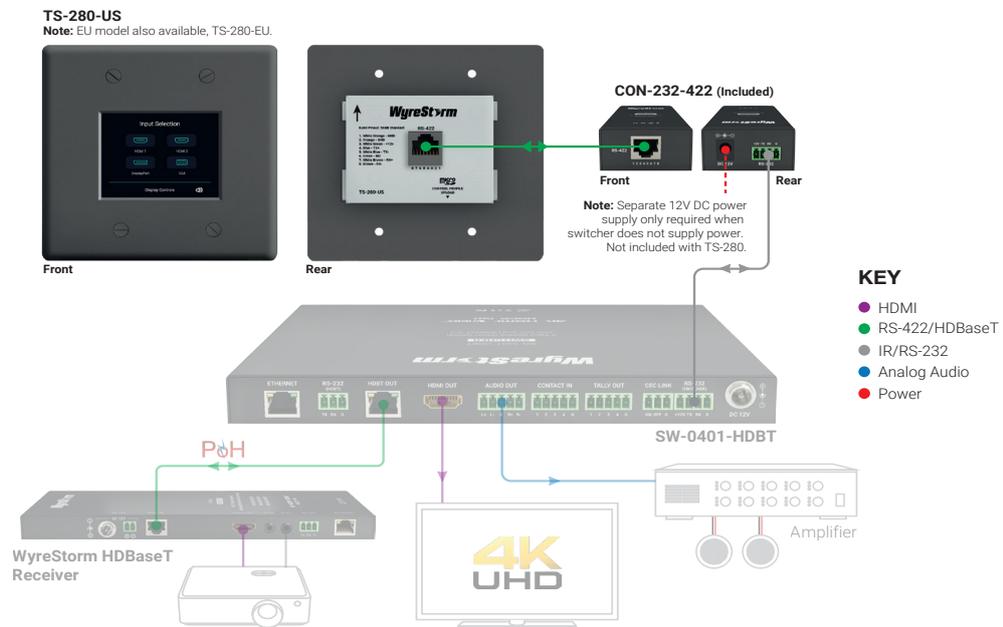
IMPORTANT! Installation Requirements

- Visit the product page to download the latest firmware, document version, additional documentation, and configuration tools.
- Read through the Wiring and Connections section for important wiring guidelines before creating or choosing premade cables.

In the Box

- 1x TS-280-EU or TS-280-US
- 1x 4-pin Phoenix Terminal Block
- 1x CON-232-422 Touchscreen Interface Module
- 2x Mounting Brackets for interface module
- 1x MicroSD Card
- 1x MicroSD USB Adaptor
- 1x Quickstart Guide (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 extenders, 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.

Touchscreen Interface Module RS-232 Wiring

The touchscreen uses a separate component that connects to a WyreStorm switcher for RS-232 communication. This signal is converted to RS-422 for the touchscreen itself. Connection on the CON-232-422 is a 4-pin phoenix which not only contains the pins for communication, it also contains a pin for power from some of the currently available switchers. This can be used to power the converter from the switcher eliminating the need for a separate PSU. In the case of 3-pin connections on switchers, a separate PSU will be required.

Switchers with 4-pin RS-232 Connection



Touchscreen Interface		---> To --->	Switcher with 4-pin	
Pin 1	12V DC In	---> To --->	Pin 1	12V DC Out
Pin 2	TX (Transmit)	---> To --->	Pin 3	RX (Receive)
Pin 3	RX (Receive)	---> To --->	Pin 2	TX (Transmit)
Pin 4	G (Ground)	---> To --->	Pin 4	G (Ground)

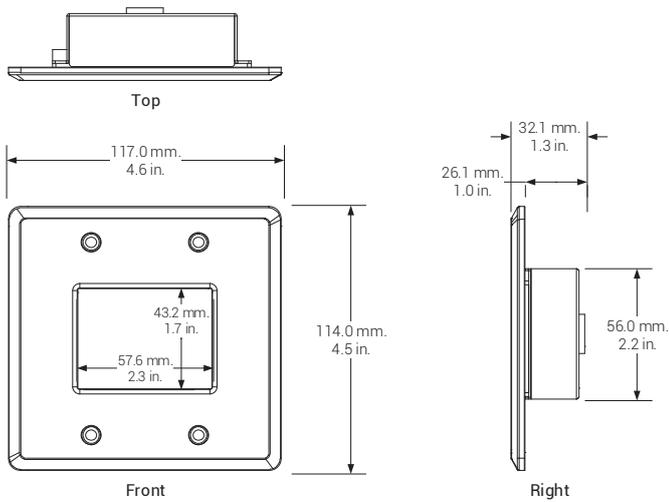
Switchers with 3-pin RS-232 Connection



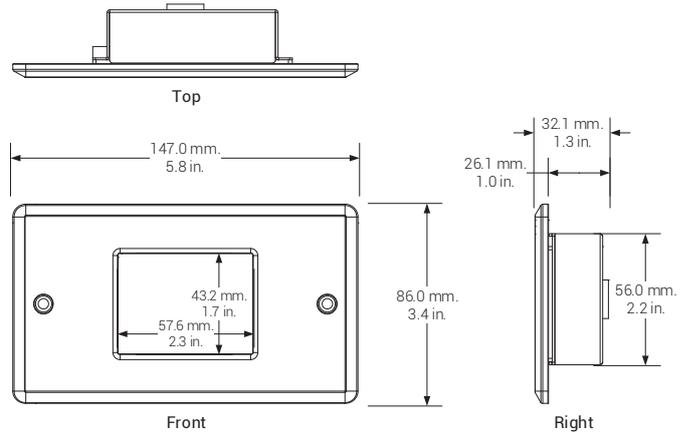
Touchscreen Interface		---> To --->	Switcher with 3-pin	
Pin 1	12V DC In	---> To --->	No Connection	
Pin 2	TX (Transmit)	---> To --->	Pin 2	RX (Receive)
Pin 3	RX (Receive)	---> To --->	Pin 1	TX (Transmit)
Pin 4	G (Ground)	---> To --->	Pin 3	G (Ground)

Product Dimensions

TS-280-US Dimensions



TS-280-EU Dimensions



Setup and Configuration

1. In any browser Go to wyrestorm.com and navigate to the TS-280 product page
2. Scroll down and click on **User Interfaces** under Downloads.
3. Select the appropriate UI file for the product being installed and download the file.
4. Once downloaded, unzip the contents to ensure they are available for the next steps.
5. Insert the microSD card into the USB reader and connect to a PC or Mac.
6. Select the appropriate xxxx.tft file based on the actions required for the installation and copy to the MicroSD card drive.
7. Once the file has downloaded, eject the MicroSD card from the PC/Mac and remove from the reader.
8. Insert the MicroSD card into the card slot located on the rear of the touchscreen.
9. Connect the CON-232-422 to the switcher or a PSU. If connecting to a switcher, power on the switcher.
10. Connect the touchscreen to the CON-232-422. Once connected the download will begin.
11. The screen will show the progress and indicate when it is complete. Once completed and verified, disconnect the screen from the CON-232-422 and/or the PSU from the CON-232-422 and ensure the MicroSD card is removed.
12. The touchscreen is now ready to be installed and used with the switcher.

Troubleshooting

Touchscreen not Powering On

- Verify that power is being supplied to the CON-232-422 either via power from the switcher on the RS-232 connection or a separate 12V DC PSU (not included).
- Verify that the category cable between the CON-232-422 is properly terminated following EIA568B standard.
- Verify that the cable between the switcher and the CON-232-422 is properly terminated following the [Wiring and Connections](#) section.

File Fails to Upload

- Ensure the .tft file is loaded to the root folder of the MicroSD card.
- Other folders may be stored to the MicroSD card but only the .tft UI file can exist in the root folder.

Touchscreen not Controlling Switcher

- Verify that the category cable between the CON-232-422 is properly terminated following EIA568B standard.
- Verify that the cable between the switcher and the CON-232-422 is properly terminated following the [Wiring and Connections](#) section.
- Verify that the appropriate UI file for the switcher was downloaded and installed on the touchscreen.

Troubleshooting Tips

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

Specifications

	Touchscreen	Touchscreen Interface Module	
Audio and Video			
Switcher Control	1x RS-422: 8-pin RJ-45 Female	1x RS-232: 4-pin Phoenix	
Max Communication Distance	100m/328ft Interface to Touchscreen	15.24m/50ft Switcher to Interface	
Power			
Power Supply	12VDC from Touchscreen Interface Module	12V DC from switcher or separate PSU (not included)	
Max Power Consumption	0.84W	0.36W	
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	Transmitter: 24 BTU/hr Receiver: 58 BTU/hr		
Dimensions and Weight			
	TS-280-US	TS-280-EU	
Rack Units/Wall Box	2 Gang	2 Gang	<1U
Height With Without Feet	114mm/4.49in	86mm/3.39in	25mm/0.99in
Width With Without Brackets	117mm/4.61in	147mm/5.79in	80.2mm/3.16in
Depth With Without Handles	32.1mm/1.27in	32.1mm/1.27in	50mm/1.97in
Weight	0.30kg/0.66lbs	0.28kg/0.62lbs	0.14kg/0.30lbs
Regulatory			
Safety and Emission	CE FCC RoHS		

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Warranty Information

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4K HDR 4:2:0 60Hz HDBaseT2.0 Receiver with USB Device Inputs, Ethernet & PoH (4K: 35m/115ft)

RX-500



Quickstart Guide

WyreStorm recommends reading through this document in its entirety to become familiar with the product's features prior to starting the installation process.



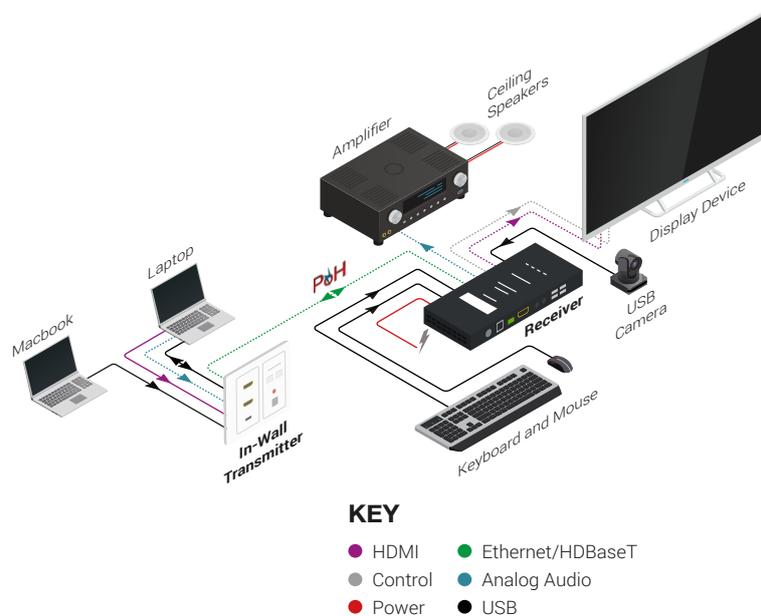
IMPORTANT! Installation Requirements

- Visit the product page to download the latest firmware, document versions, additional documentation, and configuration tools.
- 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.

In the Box

- 1x RX-500 Receiver
- 1x 12V DC 2A Power Supply (US/UK/EU/AU)
- 2x Mounting Brackets with Screws
- 1x 3-pin Terminal Block
- 1x Quickstart Guide (This Document)

Basic Wiring Diagram



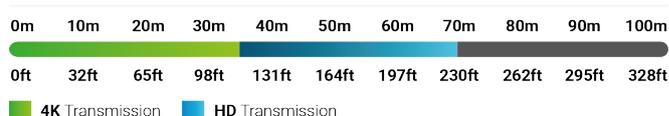
Wiring and Connections

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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 signal transmission which may limit performance. Steps should be taken to minimize or remove these factors completely during installation for best results.
- WyreStorm recommends the use of shielded category cable to minimize signal noise and interference.
- WyreStorm recommends using pre-terminated HDMI 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.

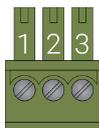
Cat6 Cable Performance Guide



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

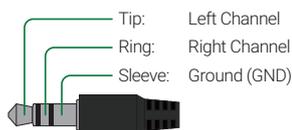
RS-232 Wiring

The RX-500 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.



WyreStorm Connector		3rd Party Device
Pin 1	TX (Transmit) ---> To --->	RX (Receive)
Pin 2	RX (Receive) ---> To --->	TX (Transmit)
Pin 3	G (Ground) ---> To --->	G (Ground)

Audio Connections



Troubleshooting

No or Poor Quality Picture (snow or noisy image)

- Verify that power is being supplied to the receiver.
- 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 receiver.
- If transmitting 4K, verify that the HDMI cables used are 4K rated.
- Verify that all source and HDBaseT connections are not loose and are functioning properly

No or Intermittent 3rd party Device Control

- Verify that the IR and RS-232 cables are properly terminated following the [Wiring and Connections](#) section.
- Verify that RS-232 modes are properly selected for the desired operation. Refer to [RS-232 Mode Settings](#) for details.

Troubleshooting Tips:

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

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Specifications

Audio and Video				
Inputs	1x HDBT In: 8-pin RJ-45 Female 4x USB Type A (Device)			
Outputs	1x HDMI Out: 19-pin type A 2x Audio Out/De-embed: 3.5mm (1/8in) TRS Stereo			
Output Video Encoding	HDBaseT Class B			
Encoding Data Rate	10.2Gbps			
End to End Latency	10µs (micro seconds)			
Audio Formats	HDMI Out: 2ch Analog/PCM Multichannel: LPCM up to DTS-X and Dolby Atmos Audio Out/De-embed: 2ch Analog/PCM			
Video Resolutions (Max)	Video Resolution	HDMI	Cat6	Cat6a/7
	1920x1080p @60Hz 12bit	15m/49ft	70m/230ft	70m/230ft
	3840x2160p @30Hz 8bit 4:4:4	7m/49ft	35m/115ft	35m/115ft
	3840x2160p @60Hz 8bit 4:2:0	7m/49ft	35m/115ft	35m/115ft
	Note: WyreStorm recommends the use of shielded category cable to minimize signal noise and interference.			
Supported Standards	DCI RGB HDR HDR10 Dolby Vision up to 30Hz HLG BT.2020 BT.2100			
Maximum Pixel Clock	297MHz			
Communication and Control				
HDMI	HDMI HDCP 2.2 EDID CEC Pass-through DVI/D supported with adapter (not included)			
HDBaseT	HDMI USB HDCP 2.2 EDID 1-way PoH (RX powers TX) Bidirectional RS-232 CEC			
RS-232	1x RS-232: 3-pin Phoenix			
USB	4x Type A (device) USB hub compatible Maximum: 7 devices, 23 endpoints Maximum uplink speed: 190Mbps			
Power				
Power Supply	12V DC 2A			
Avg. Power Consumption	8W			
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			
Avg. BTU	27 BTU/hr			
Dimensions and Weight				
Rack Units Wall Box	<1U			
Height	25mm/0.98in			
Width	210mm/8.26in			
Depth	90.2mm/3.55in			
Weight	0.46kg/1.01lbs			
Regulatory				
Safety and Emission	CE FCC RCM EAC RoHS			

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