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WyreStorm SW-120-TX3 Synergy 2 Input 4K60Hz HDBaseT 3.0 Switching Transmitter User Guide

Contents

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Product Specifications

- **Model:** SW-120-TX3

- **Input:** 2
- **Resolution:** 4K @ 60Hz
- **Interface:** HDBaseT 3.0, USB-C, Audio Input/Output, CEC Trigger
- **Charging:** USB-C Charging

Product Usage Instructions

Basic Setup and Installation

1. Read through the user manual completely before beginning installation.
2. Ensure all necessary components are included in the package.
3. Connect the SW-120-TX3 to power using the provided PSU (Power Supply Unit).
4. Connect your devices to the transmitter using the appropriate cables and connectors.

Connecting Devices

1. Use the provided USB-C cable to connect compatible devices for charging or data transfer.
2. Connect audio input/output devices using the available ports on the transmitter.

Using the DIP Switch Control

1. Locate the DIP switch on the transmitter.
2. Adjust the position of Pin 2 based on the desired function (RS-232 Control or Firmware Upgrade).
3. Ensure other pins are in their default positions unless specified by advanced configurations.

Wiring and Connections

1. Run and terminate all wiring before connecting to the switcher to avoid equipment damage.
2. Follow the RS-232 wiring instructions for proper connection to control systems and computers.

Frequently Asked Questions (FAQ)

- **What is the purpose of the USB-C port on the transmitter?**
  The USB-C port is used for charging compatible devices and can also support data transfer.
- **How can I upgrade the firmware of the receiver using RS-232 control?**
  Adjust the DIP switch on the transmitter to enable RS-232 Control mode and follow the provided instructions for firmware upgrade.
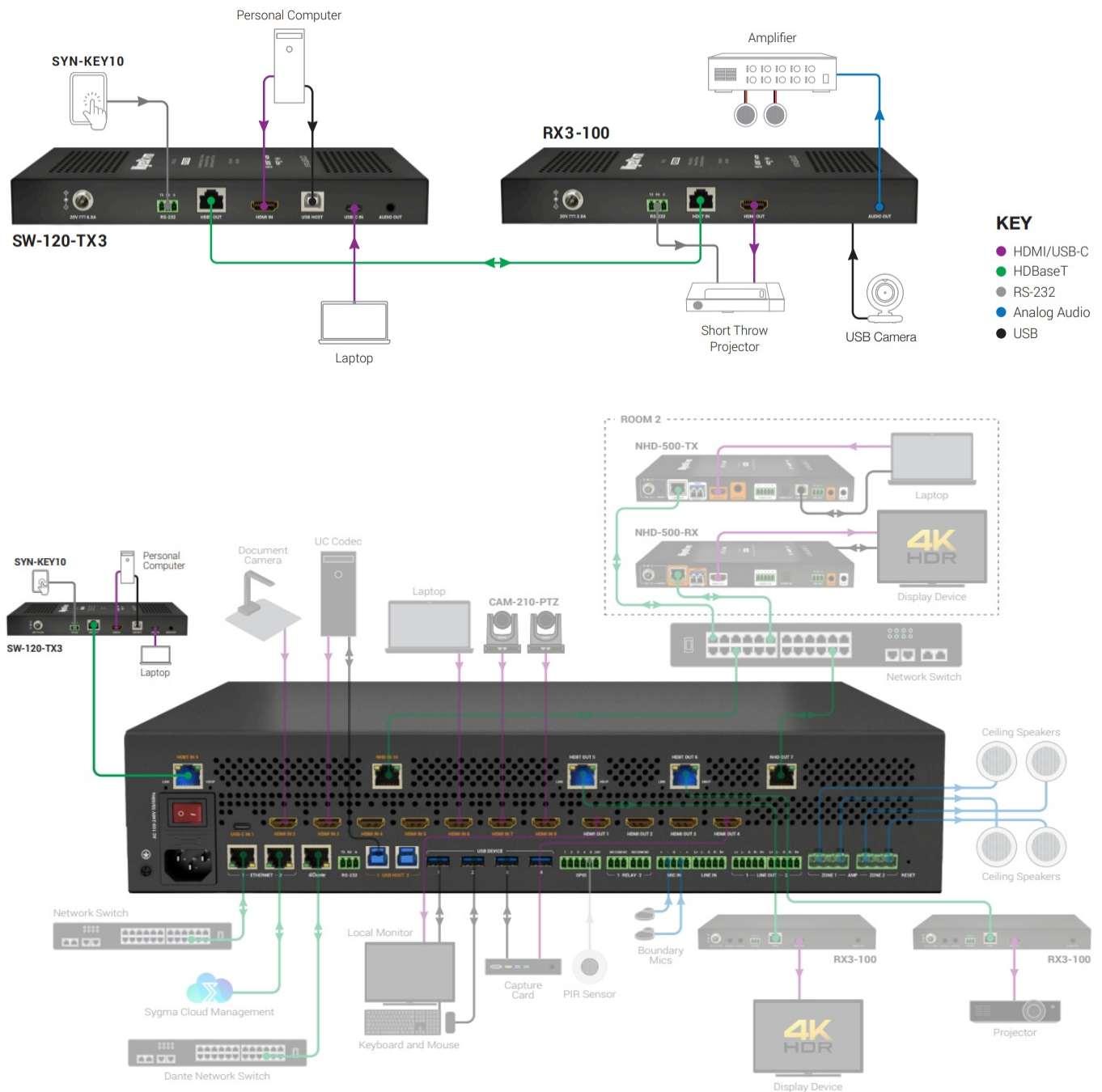
IMPORTANT! Installation Requirements

- 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.

- While this product supports CEC, WyreStorm cannot guarantee compatibility with all forms of CEC communication.
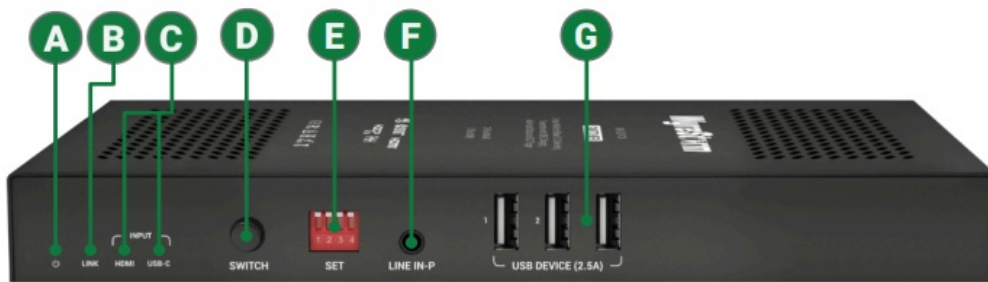
In the Box

- 1x SW-120-TX3 HDBaseT 3.0 Transmitter
- 1x 3-pin Terminal Block
- 1x 2m USB-C to USB-C Cable with Locking Connector (5Gbps)
- 4x Wall Mounting Brackets
- 4x Mounting Screws
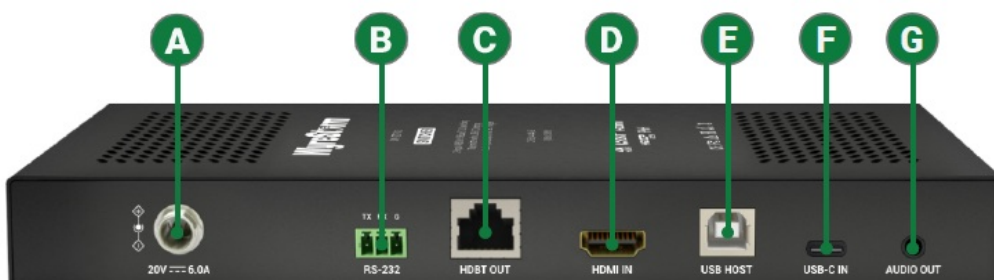- 1x Quickstart Guide (This Document)
  *20v 6A PSU Sold Separately

Basic Wiring Diagram

SW-120-TX3 (Front/Rear)

- **A Power LED**
    - **Solid:** The unit is powered On
    - **Off:** The unit is powered Off
- **B Link LED**
    - **On:** Indicates link with receiving device
    - **Off:** No link with receiver/powered off
- **C Source LED**
    - **On:** Indicates the video output
    - **Off:** No video output
- **D Input** Select Press to manually change input
- **E SET Dip** Switches Adjust RS-232 Function
- **F Audio Line** In 3.5mm jack: 2ch analog audio input
- **G USB Device**
    - USB Type A female
    - Connection of USB device peripherals

- **A Power Input** 20V 6A Screw Down Jack
- **B RS-232**
    - 3-pin Phoenix: Serial input for API control and
    - 20v input
- **C HDBT Output**
    - 8-pin RJ-45 female
    - Connect the transmitter's HDBT OUT to receiver's HDBT IN.
- **D HDMI**
    - Input 19-pin type A HDMI female
    - Supports HDMI and DVI/D with adapter
- **E USB Host**

- USB Type B female
- Connection of USB Host device
- **F USB-C Input**
  - USB3.1C port
  - Supports alt-mode and device charging
- **G Audio Output** 3.5mm jack: 2ch analog audio input

DIP Switch Control

The four-pin DIP switch can be used to adjust RS-232 function.

- Pin 2 is set to the "Up" position, RS-232 Control mode. RS-232 port is used to control the receiver and remote transmitter. In this mode, users can upgrade the receivers MCU firmware.

- Pin 2 is set to the "Down" position, RS-232 HDBaseT Firmware Upgrade. Users can upgrade firmware in this mode.

Pin 1, Pin 3 and Pin 4 are reserved. The positions of these two pins will not affect IR and RS-232 function

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 it's entirety before running or terminating the wires to ensure proper operation and to avoid damaging equipment.
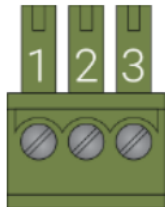**IMPORTANT!** Wiring Guidelines

- 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.

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

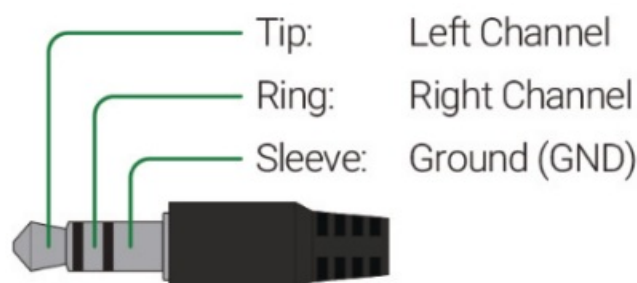| WyreStorm Connector			3rd Party Device
Pin 1	TX (Transmit)	---> To --->	RX (Receive)
Pin 2	RX (Receive)	---> To --->	TX (Transmit)
Pin 3	G (Ground)	---> To --->	G (Ground)

RS-232 Wiring

The SW-120-TX3-Ux 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.

- **Baud Rate:** 115200
- **Byte:** 8bits
- **Pairty:** No
- **Stop Bit:** 1

  Note: The RS-232 port is software driven which allows the SW-120-TX3-Ux to distinguish between a self-switching command or whether a routed, device control command is being sent over HDBaseT

Audio Connections

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

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

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 4K, verify that the HDMI cables used are 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.
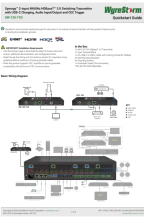
Warranty Information

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.

ABOUT COMPANY

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Documents / Resources

	WyreStorm SW-120-TX3 Synergy 2 Input 4K60Hz HDBaseT 3.0 Switching Transmitter [pdf] User Guide SW-120-TX3, SYN-KEY10, SW-120-TX3 Synergy 2 Input 4K60Hz HDBaseT 3.0 Switching Transmitter, Synergy 2 Input 4K60Hz HDBaseT 3.0 Switching Transmitter, 2 Input 4K60Hz HDBaseT 3.0 Switching Transmitter, 4K60Hz HDBaseT 3.0 Switching Transmitter, HDBaseT 3.0 Switching Transmitter, Switching Transmitter, Transmitter

References

- ⚡ **WyreStorm - Professional Audio Visual Solution Provider**
- **User Manual**