

100m USB 3.2&3.0 Extender



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Introduction

Overview

This product is a new generation of USB 3.2 & USB 3.0 extender. It supports USB 3.2 Gen 1 standard with up to 5Gbit/s USB data transmission rate, and is backward compatible with USB 3.0, USB 2.0 and USB1.1 specifications.

This USB extender can extend the USB 3.2 & USB 3.0 data up to 100m/330ft via a single Cat 6a/7 F/FTP or U/FTP cable. It has a built-in 4-port USB hub in the receiver, which can be connected with multiple USB devices. Pure hardware architecture is compatible with Control / Bulk / Interrupt / Isochronous transmission protocols. For multiple USB device scenarios, this extender can also be used with an external USB 3.2 & 3.0 hub.

With two-way PoH + function, the extender can only need one power supply to be connected to the transmitter or receiver to power both units, which is especially suitable for scenarios where the receiver can't be connected to a power supply (such as in outdoor monitoring scenario).

Features

- Supports USB 3.2 Gen 1 standard, and backward compatible with USB 3.0, USB 2.0, and USB 1.1 standards.
- Supports up to 5Gbit/s data transmission rate.
- Supports transmitting USB signal up to 100m/330ft via a signal Cat 6a/7 F/FTP or U/FTP cable.
- Pure hardware architecture is compatible with Control / Bulk / Interrupt / Isochronous transmission protocols.
- Provides four USB 3.2 & 3.0 device ports on the receiver, includes one 1.5A port for connecting high-power USB devices.
- Occupies two USB hub tiers and supports connecting additional USB hub devices.
- Supports RS232 and FSYNC GPIO pass-through for industrial camera control.
- Plug and play, no driver is required, and compatible with multiple operating systems.
- Support firmware upgrading via micro-USB port.
- Built-in PoH + module, only one power adapter is needed to be connected to either side.

Panel Description

Transmitter

Front Panel



No.	Name	Description
1	USB HOST	Connect to a host device such as a PC.
2	RS232 & FSYNC (IN)	RS232 pass through. FSYNC GPIO input, 3.3V.

Rear Panel



No.	Name	Description
1	20V	Connect to the power adapter provided. With two-way PoH, one power adapter is needed to be connected to the transmitter or receiver to power both units.
2	POWER LED	On: The device is powered on. Off: The device is powered off.
3	LINK LED	On: The HDBT link is normal. Blinking/Off: No HDBT link or link error.
4	USB3-LINK	Connect to the USB3-LINK port of the receiver.
5	DATA LED	On: The USB data is being transmitted. Off: There's no USB data being transmitted.
6	UPDATE	Micro-USB port, for firmware upgrade.

Receiver

Front Panel



No.	Name	Description
1	USB 3.0	Connect to USB devices. Note: One 1.5A USB port can be used to connect with high-power USB devices such as USB camera.
2	RS232 & FSYNC (OUT)	RS232 pass-through. FSYNC GPIO output, 3.3V.

Rear Panel



No.	Name	Description
1	20V	Connect to the power adapter provided. With two-way PoH, one power adapter is needed to be connected to the transmitter or receiver to power both units.
2	POWER LED	On: The device is powered on. Off: The device is powered off.
3	LINK LED	On: The HDBT link is normal. Blinking/Off: No HDBT link or link error.
4	USB3-LINK	Connect to the USB3-LINK port of the transmitter.
5	DATA LED	On: The USB data is being transmitted. Off: There's no USB data being transmitted.
6	UPDATE	Micro-USB port, for firmware upgrade.

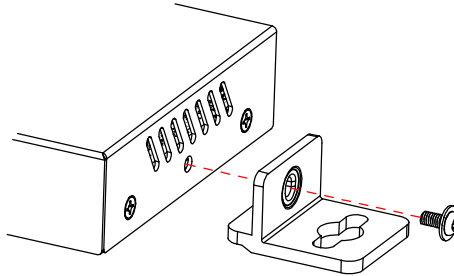
Installation and Wiring

Installation

Note: Before installation, please ensure the device is disconnected from the power source.

Steps to install the device:

1. Attach the installation bracket to the enclosure using the screws provided in the package separately.
2. The bracket is attached to the enclosure as shown.

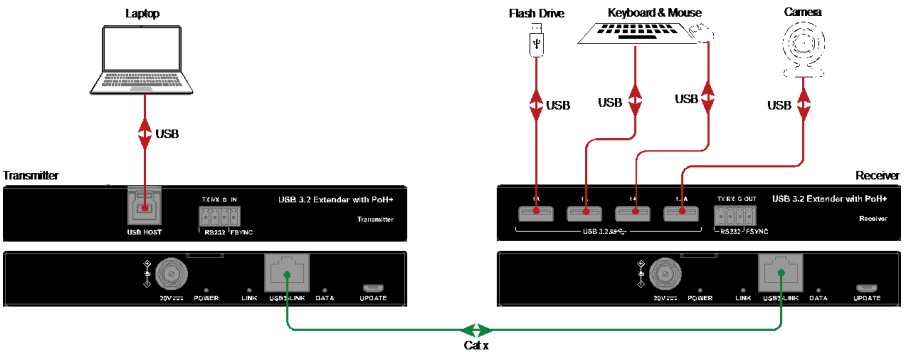


3. Repeat the steps from 1 to 2 for the other side of the unit.
4. Attach the brackets to the surface you want to hold the unit against using the screws (provided by others).
5. Repeat the steps from 1 to 4 to install the receiver.

Wiring

Warnings:

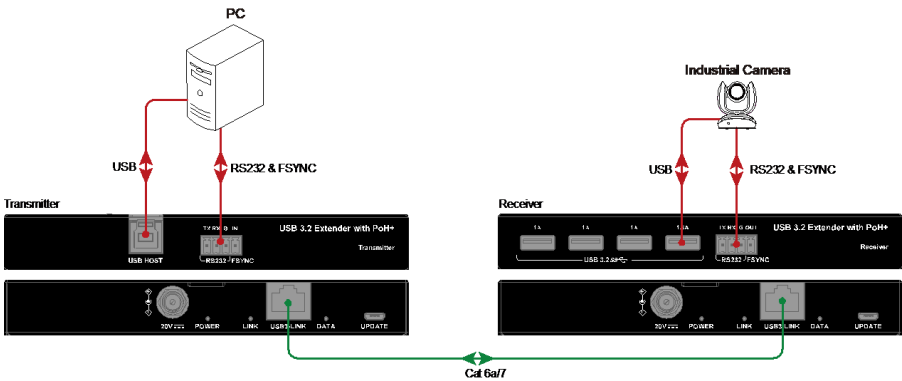
- Before wiring, disconnect the power from all devices.
- During wiring, connect and disconnect the cables gently.



RS232 & FSYNC

The transmitter and receiver feature a RS232 & FSYNC (IN) port and a RS232 & FSYNC (OUT) port respectively, which are used for industrial camera control.

- **RS232 & FSYNC (IN):** FSYNC (IN), GPIO digital in port, supports 3.3V voltage input. Connect to a PC.
- **RS232 & FSYNC (OUT):** FSYNC (OUT), GPIO digital out port, supply for 3.3V voltage output. Connect to an industrial camera.



Transmission Distance

Note:

- T568B straight-through category cable is recommended.
- Please use F/FTP or U/FTP cable, and don't use UTP, F/UTP, or U/UTP cables.

Cable Type	Range
Cat 6a/7 (F/FTP or U/FTP) Cable	100m/330ft

Specifications

Technical		
Input/Output Port	Transmitter	1 x USB HOST (USB Type-B)
		1 x RS232 & FSYNC (3.5mm, 4-Pin Phoenix Connector)
		1 X USB3-LINK (RJ45)
		1 x POWER
		1 x FW (Micro-USB)
	Receiver	4 x USB DEVICE (USB Type-A)
		1 x RS232 & FSYNC (3.5mm, 4-Pin Phoenix Connector)
		1 X USB3-LINK (RJ45)
		1 x POWER
		1 x FW (Micro-USB)
USB Standard	USB 3.2 Gen1, and backward compatible with USB 3.0, USB 2.0, and USB 1.1 standards	
Data Rate	Up to 5Gbit/s	
Operating Temperature	0°C to 45°C (32°F to 113°F)	
Storage Temperature	-20°C to 70°C (-4°F to 158°F)	
Humidity	10% to 90%, non-condensing	
ESD Protection	Human-body Model: ±8kV (Air-gap discharge)/ ±4kV (Contact discharge)	
Power Supply	20V/3A	
Power Consumption (Max)	31.28W (Pair, USB fully loaded)	
Device Dimension (W x H x D)	Transmitter/Receiver: 150mm x 20.5mm x 100mm / 5.9" x 0.81" x 3.94"	
Product Weight	Transmitter: 0.35kg/0.77lb Receiver: 0.34kg/0.75lb	