Professional Audio / Video Solutions Provider

User Manual Version 1.0





100m USB 3.2 Extender Device Side With DisplayLink

ZT-516 RX | ZT-U3EXW-DKIT

Zenty ®

9807 Emily Lane

Stafford, TX 77477

(844) 200-1945

support@zenty.com

Scan the QR code below to or visit

https://zenty.com/products/usb-3-2-hdbaset-wallplate-extender-kit-with-displaylink.

to view and access detailed digital resources regarding this unit

ZT-516 INFO

To explore similar products, click the link below

https://zenty.com/collections/extender.

Safety Instructions:

Before using this product, please carefully read the following safety instructions to ensure its proper use and keep this manual for future reference:

- To prevent electric shock, do not attempt to open the product.
- Only qualified personnel should perform any repairs or maintenance.
- Always place the product on a stable, flat surface to prevent it from falling.
- Do not expose the product to water, moisture, or high-humidity environments to avoid the risk of damage.
- To prevent damage from direct sunlight or high temperatures, do not expose the product to such environments.
- Do no place the product near heat sources like radiators, heat registers, stove, or other heat-producing apparatus.
- Do not place any objects on top of the product to avoid damage.
- Use only the attachments and accessories specified by the manufacturer.
- During lightning storms or prolonged periods of disuse, unplug the power supply to prevent damage.

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1. Product Introduction

Overview

This product is a USB 3.2 extender Device Side that supports DisplayLink technology. It is a multifunctional KVM extender designed for small video conferencing or work-from-home (WFH). It can be used with any USB Host of ProITAV product to achieve long-distance transmission of dual 4K@60Hz video, USB 3.2 data, audio, 1G network, RS232 control and power. Supports 100m transmission via a single Cat 6A/7 F/FTP or U/FTP cable.
The product supports DisplayLink technology and has a built-in DisplayLink driver. Easy installation without network download. After installing the driver, regardless of whether the connected computer supports video output capability, the MST dual video output function can be achieved through the legacy USB-A port or the latest USB-C port. Using this extender can also solve the problem that the Macbook with an M series chip does not support MST output.
This device has a built-in bidirectional PoH+ function, which can be used with different Host ends to achieve different interface and application requirements.

Features

- Multi-function USB 3.2 extender device side with DisplayLink.
- Cooperate with any USB 3.2 extender Host Side to realize 4K video, USB, Ethernet, audio, RS232 and power long distance transmission.
- Built-in DisplayLink technology, it allows any computer to get video output capability through a normal USB-A/USB-C interface.
- Supports 100m/330ft transmission distance via a signal Cat 6A/7 F/FTP or U/FTP cable.
- Supports TWO 4K@60Hz HDMI video output.
- Supports USB 3.2 Gen 1 standard, 5Gbit/s data rate, and backward compatible with USB 3.0, USB 2.0, and USB 1.1 standards.
- Provides 1G network connection for connected laptops.
- Provides 2x USB-A and 1x USB-C device ports for video conferencing applications or connecting USB peripherals.
- Supports RS232 and FSYNC GPIO pass-through for industrial camera control.
- Support firmware upgrading via micro-USB port
- Built-in a USB flash to store DisplayLink driver, and no need to download from the website.
- Built-in two-way PoH+ modules, it can draw power from the Host side that supports PoH+, or provide power to the Host side.

Package Contents

- 1 x Device Side
- 1 x Power Adapter (DC 20V, 3A) with US Cable
- 1 x Phoenix Male Connector (3.5mm, 3-Pin)
- 1 x Phoenix Male Connector (3.5mm, 5-Pin)

- 4 x Mounting Bracket (with Screws)

Specifications

Technical	
Input Port	1x USB3-LINK (RJ45)
Output Port	2x HDMI outs, 3x USB DEVICE (2 USB Type-A + 1 USB Type-C); 1 x RS232 & FSYNC (3.5mm, 4-Pin Phoenix Connector); 1 x LAN; 1 x AUDIO OUT (3.5mm, 5-Pin Phoenix Connector); 2 x HDMI OUT; 1 x POWER; 1 x UPDATE (Micro-USB)
Video Output Resolution	HDMI 2.0, up to 4K@60Hz 4:4:4 8bit.
USB Standard	USB 3.2 Gen1, and backward compatible with USB 3.0, USB 2.0, and USB 1.1 standards
USB Data Rate	Up to 5Gbit/s
Ethernet	1G
Audio Output	PCM 2.0

General	
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)	TBD
Device Dimension (W x H x D)	200mm x 25mm x 120.2mm / 7.87” x 0.98” x 4.73”
Product Weight	0.66kg/1.46lbs

Transmission Distance
Note:

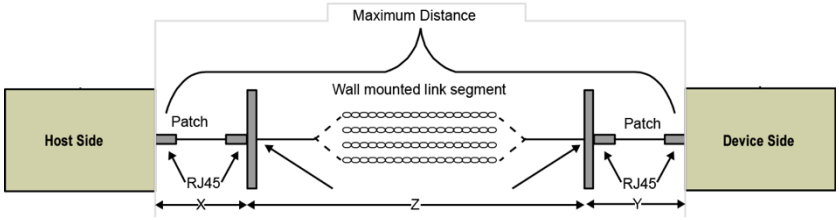
- Straight-through category cable wired to T568B standard is recommended.
- For max HDMI 2.0 performance, recommended cable is: Cat 6A U/FTP or F/FTP.

Cable Type	Range
Cat 6A (U/FTP / F/FTP)	100m/330ft

Use Patches
Note:

Patches may be used in the installation, and the patches will obviously affect the transmission distance. Limits and distances are as follows:

- Support up to 2 patch cables, each not exceeding 5m.
- Patches must be installed on both ends of the device, refer to the following pictures:



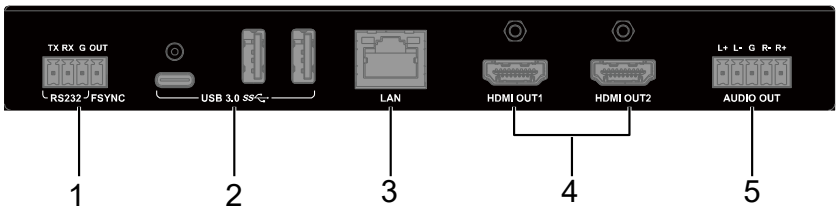
The standard specifies the following lengths for the three-segment cable installation:

- X = Left-side patch cable length ≤ 5 [meter]
- Y = Right-side patch cable length ≤ 5 [meter]
- Z = Wall segment ≤ Maximum Distance – X – Y [meter]

Cable Type	Range
Cat 6A (U/FTP / F/FTP)	90m/295ft (80m+5m+5m)

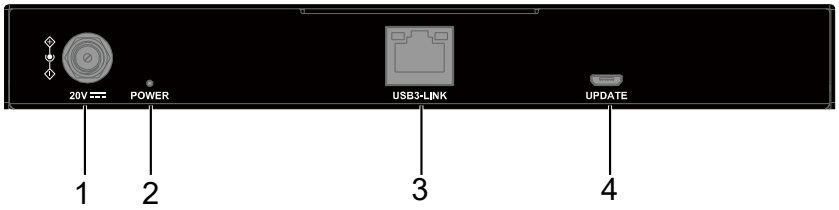
Panel Description

Front Panel



ID	Name	Description
1	RS232 & FSYNC	RS232 pass-through. FSYNC GPIO output, 3.3V.
2	USB DEVICE	Two USB 3.2 type-A ports and one USB 3.2 type-C device port. Note: Each USB device port supports 1.5A current output.
3	LAN	Connect to local network for USB 3.0 to LAN pass-through.
4	HDMI OUT 1 & 2	Connect to HDMI displays.
5	AUDIO OUT	Connect to audio receiver. For outputting audio from the laptop connected to the host device.

Rear Panel



No.	Name	Description
1	DC 20V	Connect to the DC 20V/3A power adapter provided. With two-way PoH+, one power adapter is needed to be connected to the Host side.
2	POWER LED	On: The device is powered on. Off: The device is powered off.
3	USB3-LINK	Connect to the USB3-LINK of the host side.
4	UPDATE	Micro USB port, for firmware upgrade.

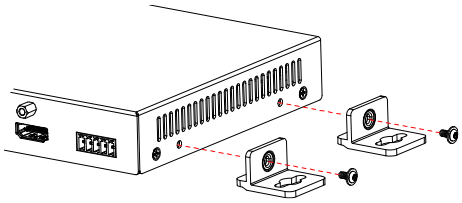
Installation and Wiring

Installation

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

Steps to install the host side/device side:

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.

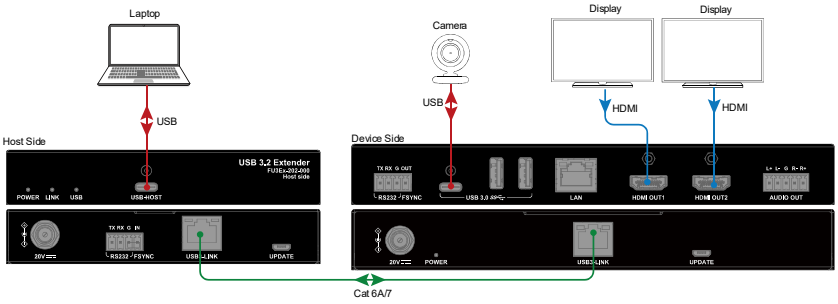


3. Repeat the steps from 1 to 2 for the other side of the unit.
4. Attach the brackets to the surface you want to hold the unit against using the screws (not included).

Wiring

Warnings:

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



Install DisplayLink Driver

DisplayLink technology requires installing the driver on the computer.

This product already has a built-in Displaylink driver. When the host side is connected to the laptop, the laptop will automatically recognize the device as a USB flash drive (name: DL-DRIVERS). Users click the pop-up window to open the USB flash drive and double-click the application to install it.

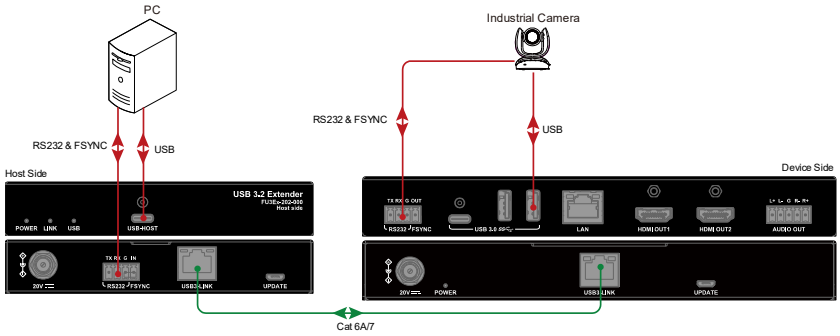
If this USB flash drive is not displayed automatically, select it from Windows file manager or macOS finder.

It is still possible to download the latest drivers from DisplayLink's official website: *https://www.synaptics.com/products/displaylink-graphics/downloads*

RS232 & FSYNC

The host side (such as FU3EX-200 / 202 / 206W-000) and device side 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.



4. Specifications

Technical	
Input/Output Ports	1 x USB-C HOST; 1 X USB3-LINK (RJ45); 1 x RS232+FSYNC, 1 x POWER; 1 x UPDATE (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

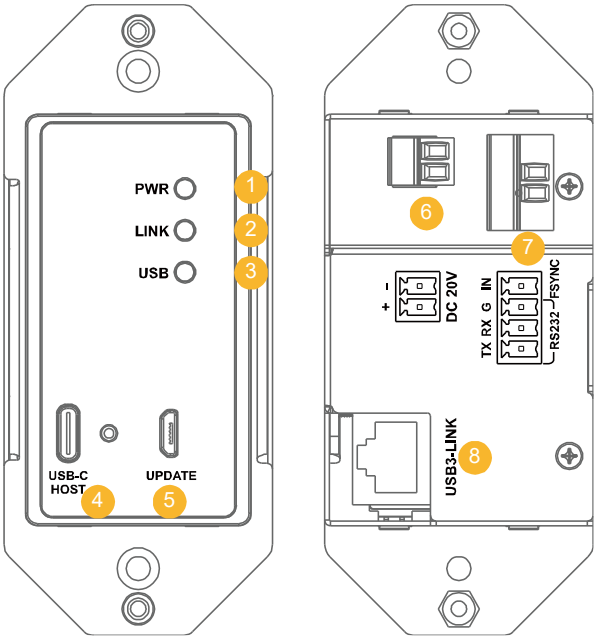
General	
Operating Temperature	0°C to 45°C (32°F to 113°F)
Storage Temperature	-20°C to 70°C (-4°F to 158°F)
Humidity	10% to 90%, non-condensing
ESD Protection	Human-body Model: ±8kV (Air-gap discharge)/ ±4kV (Contact discharge)
Power Supply	20V/3A
Power Consumption (Max)	2.97W
Device Dimension (W x H x D)	45mm x 105.6mm x 66.3mm / 1.77” x 4.16” x 2.61”
Product Weight	0.16kg/0.35lb

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

5.Panel Description



No.	Name	Description
1	PWR LED	**On:** The device is powered on. **Off:** The device is powered off.
2	LINK LED	**On:** USB3-LINK is normal. **Blinking/Off:** No USB3-LINK link or link error.
3	USB LED	**On:** The USB data is being transmitted. **Off:** There's no USB data being transmitted.
4	USB-C HOST	USB 3.2 type-C port. Connect to USB-C host device such as laptop. The port supports USB 3.2 Gen 1x1 standard, and the data rate can up to 5Gbit/s. It also backward compatible to USB 3.0, USB 2.0 and USB 1.1 standard. It is recommended to use the following cable: USB Type-C to Type-C cable (USB 3.2 Gen 1x1 or above).
5	UPDATE	Micro-USB port. For firmware upgrade.
6	DC 20V	Connect to DC 20V/3A power adapter.
7	RS232 & FSYNC (IN)	RS232 pass through. FSYNC GPIO input, 3.3V.
8	USB3-LINK	Connect to the USB3-LINK port of the device side.

6. RS232 & FSYNC

The host side features a RS232 & FSYNC (IN) port, it can be used with the device side (such as FU3EX-203-000) which is built in a RS232 & FSYNC (OUT) port for RS232 & FSYNC pass-through from the host side to the device side.

RS232 & FSYNC (IN): FSYNC (IN), GPIO digital in port, supports 3.3V voltage input. Connect to a PC.

Maintenance

Clean this unit with a soft, dry cloth. Never use alcohol, paint thinner, or benzine to clean.

Warranty

If your product does not work properly because of a defect in materials of workmanship, our company (referred to as “the warrantor”) will, for the length of the period indicated as below, “Parts and Labor (5) Years”, which starts with the date of original purchase (“Limited Warranty period”), at its option either (a) repair your product with new or refurbished parts, or (b) replace it with a new or a refurbished product. The decision to repair or replace will be made by the warrantor.

During the “Labor” limited warranty period, there will be no charge for labor. During the “Parts” warranty period, there will be no charge for parts. You must mail-in your product during the warranty period. This Limited Warranty is extended only to the original purchaser and only covers products purchased as new. A purchase receipt or other proof of original purchase date is required for Limited Warranty service.

Mail-In Service

When shipping the unit, carefully pack and send it prepaid, adequately insured, and preferably in the original carton. Include a letter detailing the complaint and provide a daytime phone and/or email address where you can be reached phone and/or email address where you can be reached.

Limited Warranty Limits and Exclusions

This Limited Warranty ONLY COVERS failures due to defects in material or workmanship and DOES NOT COVER normal wear and tear or cosmetic damage. The Limited Warranty ALSO DOES NOT COVER damages which occurred in shipment, or failures which are caused by

products not supplied by warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, set-up adjustments, mis-adjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, or service by anyone other than a Factory Service center or other Authorized Servicer, or damage that is attributed to acts of God.

There are no express warranties except as listed under “Limited Warranty Coverage”. The warrantor is not liable for incidental or consequential damages resulting from the use of this product or arising out of any breach of this warranty. (As examples, this excludes damages for lost time, cost of having someone remove or re-install an installed unit if applicable, travel to and

from the service, loss of or damage to media or images, data or other recorded content. The items listed are not exclusive but are for illustration only). Parts and service, which are not covered by this limited warranty, are your responsibility.



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WWW.ZENTY.COM

9807 Emily Lane

Stafford, TX 77477

(844) 200-1945

SUPPORT@ZENTY.COM

SALES@ZENTY.COM