



# PU-USB3-KIT

USB 3.2 data extender kit

**OPERATION MANUAL**



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## SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply. Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.
- Please completely disconnect the power when the unit is not in use to avoid wasting electricity.

## VERSION HISTORY

REV.	DATE	SUMMARY OF CHANGE
<b>v1.00</b>	12/12/2024	Preliminary release

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## 1. INTRODUCTION

The PU-USB3-KIT is a USB 3.2 Gen1 extender set designed to extend signal from one USB host to multiple USB devices for up to 100 meters (328 feet).

This transmitter enables the extension from the USB-C host to a local USB device and across CAT cabling to the USB devices on the receiver. The transmitter can be powered by a connected host device such as a computer or laptop, without the need for an external power adaptor. Type-A port can provide up to 5V/900mA (4.5W) power when unit is active.

The receiver enables users to extend up to 4 USB 3.2 devices remotely, such as flash drives, keyboards and USB cameras. With an adapter, USB-C port supports 5V/3A power and USB-A ports provides 5V/0.9A power to USB devices. The KIT also supports a hotkey for convenient firmware update (from the transmitter side for both TX and RX).

## 2. APPLICATIONS

- /// Remote USB extension
- /// Security and monitoring
- /// Industrial control
- /// Conference room and boardroom KVM Extension

## 3. PACKAGE CONTENTS

- /// 1× USB 3.2 over Category Cable Transmitter
- /// 1× USB 3.2 over Category Cable Receiver
- /// 1× 12V/3A DC Power Adapter
- /// 1× Operation Manual

## 4. SYSTEM REQUIREMENTS

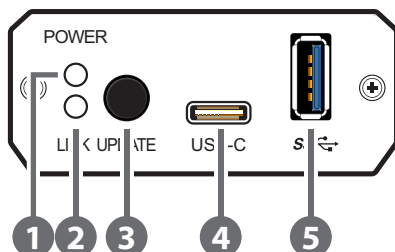
- /// The use of industry standard Cat.6, Cat.6A or Cat.7 cable is highly recommended.

## 5. FEATURES

- /// Support USB 3.2 Gen1 with 1 USB-C host port and 1 USB-A device port
- /// Support Point-to-Point transmission via CAT cabling
- /// Transmission up to 100 meters (328 feet)
- /// The transmitter can be powered by a connected host such as a computer or laptop
- /// The host can control multiple USB devices on transmitter side and receiver side
- /// Firmware update with hotkey from the transmitter, enabling remote firmware updates to the receiver
- /// Backward compatible with USB 2.0
- /// Receiver supports 4 USB 3.2 Gen1 device ports

## 6. OPERATION CONTROLS AND FUNCTIONS

### 6.1 Transmitter Front Panel



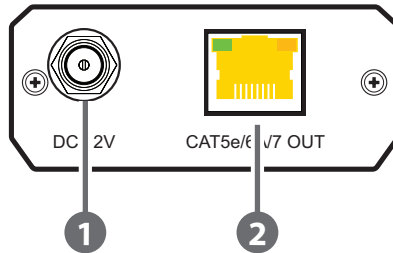
- 1 POWER LED:** This LED will illuminate to indicate the unit is on and receiving power.
- 2 LINK LED:** This LED will illuminate solidly when a live connection with a compatible receiver is active.
- 3 UPDATE Button:** Reserved for manufacturer use only.
- 4 USB 3.2 Host Port (Type-C):** Connect directly to a USB host such as a PC or laptop to extend their USB functionality to devices connected to the USB ports on the currently connected receiver.

*Note: If the unit is connected to a USB-C port that provides power then no power adapter is required to power the unit.*

- 5 USB 3.2 Device Port (Type-A):** Connect directly to a standard USB device such as a mouse, keyboard or flash drive to extend their USB functionality to the host currently connected to the transmitter's USB port.

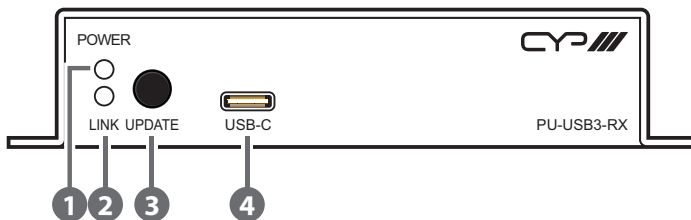
*Note: Type-A port can provide up to 5V/900mA (4.5W) power.*

## 6.2 Transmitter Rear Panel



- 1 **DC 12V Port:** Plug the 12V DC power adapter into this port and connect it to an AC wall outlet for power. TX normally powered via USB-C host connection so this PSU is not supplied. Order Code: PSU-12V1.25A-L if required.
- 2 **CAT 5e/6A/7 OUT Port:** Connect to a compatible receiver with a single cable for transmission and reception of all data signals.

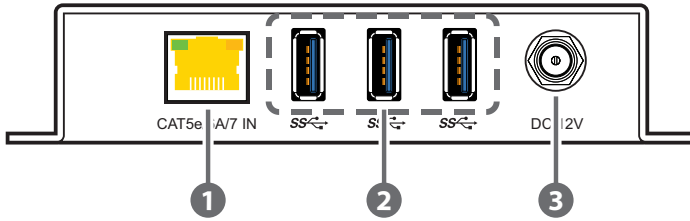
## 6.1 Receiver Front Panel



- 1 **POWER LED:** This LED will illuminate to indicate the unit is on and receiving power.
- 2 **LINK LED:** This LED will illuminate solidly when a live connection with a compatible transmitter is active.
- 3 **UPDATE Button:** Reserved for manufacturer use only.
- 4 **USB 3.2 Device Port (Type-C):** Connect directly to a standard USB device such as a mouse, keyboard or flash drive to extend their USB functionality to the host currently connected to the transmitter's USB port.

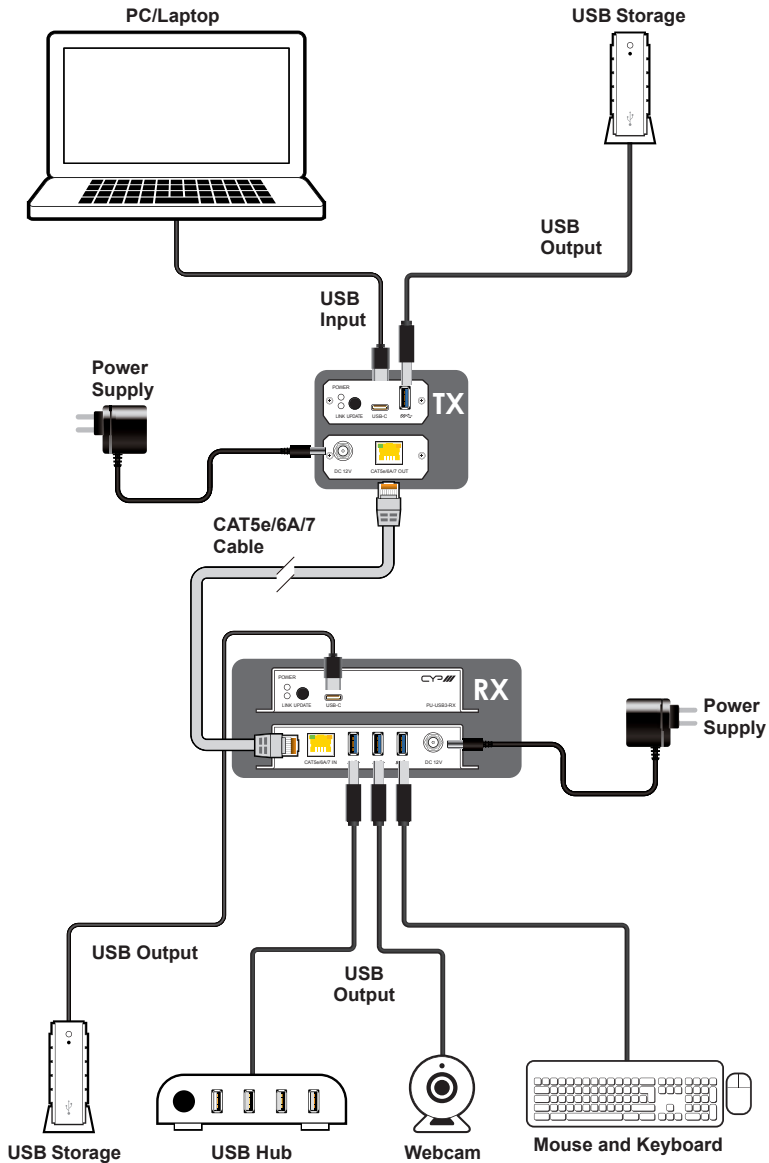
*Note: Type-C port can provide up to 5V/3A (15W) power.*

## 6.2 Receiver Rear Panel



- 1 CAT 5e/6A/7 IN Port:** Connect to a compatible transmitter with a single cable for transmission and reception of all data signals.
- 2 USB 3.2 Device Port (Type-A):** Connect directly to standard USB devices such as a mouse, keyboard or flash drive to extend their USB functionality to the host currently connected to the transmitter's USB port.  
*Note: Type-A port can provide up to 5V/900mA (4.5W) power.*
- 3 DC 12V Port:** Plug the 12V DC power adapter into this port and connect it to an AC wall outlet for power.

## 7. CONNECTION DIAGRAM



## 8. SPECIFICATIONS

### 8.1 Technical Specifications

<b>USB-C Bandwidth</b>	5Gbps
<b>HDBaseT Bandwidth</b>	6Gbps
<b>Input Ports</b>	[TX] 1×USB 3.2 (Type-C) [RX] 1×Cat.5e/6A/7 (RJ-45)
<b>Output Ports</b>	[TX] 1×USB 3.2 (Type-A), 1×Cat.5e/6A/7 (RJ-45) [RX] 1×USB 3.2 (Type-C), 3×USB 3.2 (Type-A)
<b>Power Supply</b>	12V/3A DC (US/EU standards, CE/FCC/UL certified)
<b>ESD Protection (HBM)</b>	±8kV (Air Discharge) ±4kV (Contact Discharge)
<b>Dimensions (W×H×D)</b>	[TX] 95mm×24.75mm×60mm [Case Only] 103.5mm×24.75mm×60mm [All Inclusive] [RX] 128mm×25mm×75mm [Case Only] 128mm×25mm×83.5mm [All Inclusive]
<b>Weight</b>	[TX] 155g [RX] 275g
<b>Chassis Material</b>	Metal (Aluminum)
<b>Chassis Colour</b>	Black
<b>Operating Temperature</b>	0°C – 40°C/32°F – 104°F
<b>Storage Temperature</b>	-20°C – 60°C/-4°F – 140°F
<b>Relative Humidity</b>	20 – 90% RH (Non-condensing)
<b>Power Consumption</b>	[TX] 8.34W(full load) [RX] 39.173W(full load)

## 8.2 Cable Specifications

Cable Length	USB 3.2
	5Gbps
<b>Ethernet Cable</b>	
<b>Cat.5e/6</b>	70m
<b>Cat.6A/7</b>	100m

## 8.3 HDBaseT Features

HDBaseT Feature Set	Transmitter
<b>Video &amp; Audio Extension</b>	Unsupported
<b>LAN Extension</b>	Unsupported
<b>Send power to Receiver</b>	Unsupported
<b>Accept power from Receiver</b>	Unsupported
<b>IR Extension</b>	Unsupported
<b>RS-232 Extension</b>	Unsupported
<b>USB 3.2 Extension</b>	Supported

## 9. ACRONYMS

ACRONYM	COMPLETE TERM
<b>Cat.5e</b>	Enhanced Category 5 cable
<b>Cat.6</b>	Category 6 cable
<b>Cat.6A</b>	Augmented Category 6 cable
<b>Cat.7</b>	Category 7 cable
<b>Mbps</b>	Megabits per second
<b>Gbps</b>	Gigabits per second
<b>PD</b>	Powered Device
<b>PSE</b>	Power Sourcing Equipment
<b>UAC</b>	USB Audio Class
<b>USB</b>	Universal Serial Bus
<b>UVC</b>	USB Video Class





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