



PU-USB2-KIT

USB 2.0 Transmitter/Receiver kit

OPERATION MANUAL

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Version 1.1

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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
v1.00	08/02/2021	Preliminary release (RDV1)

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1. INTRODUCTION

This compact and low cost USB 2.0 Extender set is designed to expand the usability and flexibility of the most prevalent interface standard used nowadays, USB. This extender provides a simple and efficient way to extend the USB 2.0 connection from a typical host, such as a PC or laptop, to up to 4 standard USB devices located as far as 50 metres away. It extends the high quality data stream over single Cat.5e (or better) cable, with full support for the entire range of USB 2.0 compliant products and data formats. The receiver can supply up to 2A of total power (500mA per port) to devices connected to the 4 USB Type-A ports.

2. APPLICATIONS

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

3. PACKAGE CONTENTS

- /// 1× USB 2.0 Extender Transmitter
- /// 1× USB 2.0 Extender Receiver
- /// 1× 5V/3A DC Power Adapter
- /// 1× Operation Manual

4. SYSTEM REQUIREMENTS

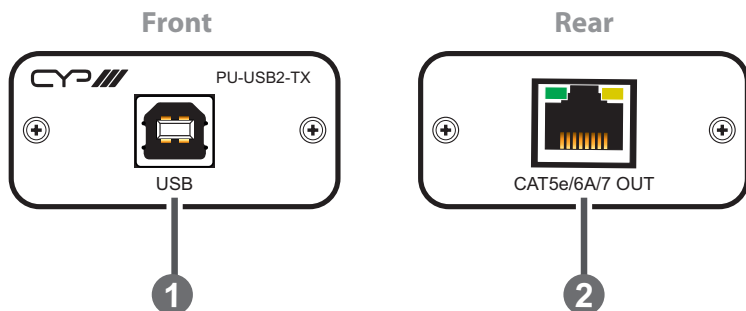
- /// The use of industry standard Cat.6, Cat.6A or Cat.7 cable is highly recommended.

5. FEATURES

- /// Convenient point-to-point USB 2.0 extension with 4 port hub
- /// 1 host port on the transmitter and 4 device ports on the receiver
- /// Supports standard USB 2.0 devices, such as a mouse and keyboard, as well as those requiring isochronous transfers such as webcams and portable storage
- /// Supplies up to 2A of power to the 4 USB ports (500mA per port)
- /// Low RF emission and robust noise immunity
- /// Simple plug-and-play operation, no drivers required

6. OPERATION CONTROLS AND FUNCTIONS

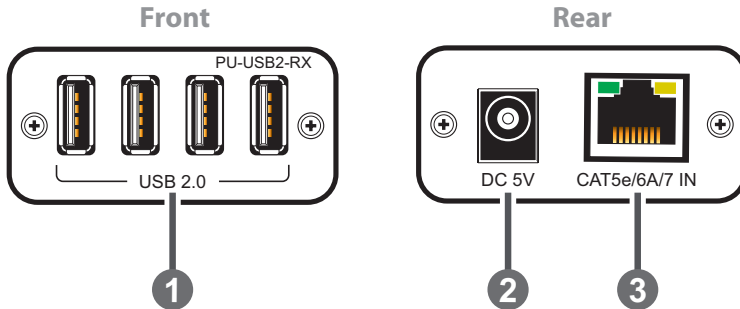
6.1 Transmitter's Front & Rear Panel



- 1 USB Port:** 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.
- 2 CAT 5e/6A/7 OUT Port:** Connect to a compatible receiver with a single cable for transmission and reception of all data signals.

Note: This unit is directly powered by the connected receiver.

6.2 Receiver's Front & Rear Panel



- ❶ **USB 2.0 Ports:** 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.

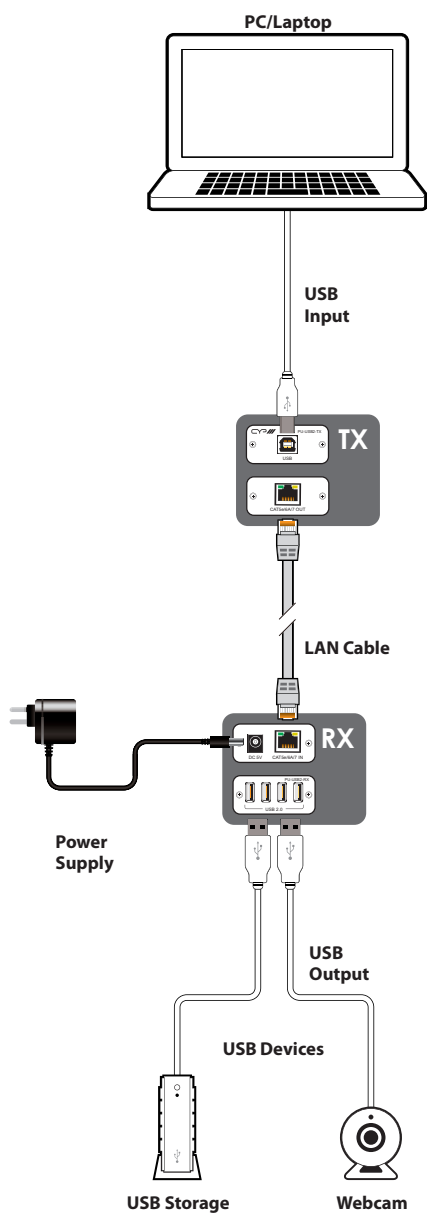
Note: Each port can provide up to 500mA power.

- ❷ **DC 5V Port:** Plug the 5V DC power adapter into this port and connect it to an AC wall outlet for power.

- ❸ **CAT 5e/6A/7 IN Port:** Connect to a compatible transmitter with a single cable for transmission and reception of all data signals.

Note: Power is also provided to the connected transmitter.

7. CONNECTION DIAGRAM



8. SPECIFICATIONS

8.1 Technical Specifications

Transmitter

USB 2.0 Bandwidth	480Mbps
Bi-directional Port	1×USB 2.0 (Type-B)
Output Port	1×Cat.5e/6/7 (RJ-45)
Power Supply	Provided via Cat.5e/6/7
ESD Protection (HBM)	±8kV (Air Discharge) ±4kV (Contact Discharge)
Dimensions (W×H×D)	50mm×25mm×52mm [Case Only]
Weight	60g
Chassis Material	Metal (Steel)
Chassis Color	Black
Operating Temperature	0°C – 40°C/32°F – 104°F
Storage Temperature	-20°C – 60°C/-4°F – 140°F
Relative Humidity	20 – 90% RH (Non-condensing)
Power Consumption	10W

Receiver

USB 2.0 Bandwidth	480Mbps
Bi-directional Ports	4×USB 2.0 (Type-A)
Input Port	1×Cat.5e/6/7 (RJ-45)
Power Supply	5V/3A DC (US/EU standards, CE/FCC/UL certified)
ESD Protection (HBM)	±8kV (Air Discharge) ±4kV (Contact Discharge)
Dimensions (W×H×D)	50mm×25mm×72mm [Case Only] 50mm×25mm×72mm [All Inclusive]
Weight	87g
Chassis Material	Metal (Steel)
Chassis Colour	Black
Operating Temperature	0°C – 40°C/32°F – 104°F
Storage Temperature	-20°C – 60°C/-4°F – 140°F
Relative Humidity	20 – 90% RH (Non-condensing)
Power Consumption	10W (Unloaded), 13.5W (Maximum)

8.2 Cable Specifications

Cable Length	USB 2.0
	480Mbps
Ethernet Cable	
Cat.5e/6	50m
Cat.6A/7	50m

9. ACRONYMS

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



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