



# USB 3.2 Gen1 4-Port Extender Kit, 100m

## User Manual

### 500530



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## 1 Safety Precautions

To ensure the best performance from the product, please read all instructions carefully before using the device. Save this manual for future reference.

- Follow basic safety precautions to reduce the risk of fire, electrical shock, and injury.
- Do not dismantle the housing or modify the module. It may result in electrical shock or burns.
- Do not open or remove the housing of the device as you may be exposed to dangerous voltage or other hazards.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture and do not install this product near water. Keep the product away from liquids.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on the housing, unplug the module immediately.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- Using supplies or parts not meeting the product specifications may cause damage, deterioration or malfunction.
- Refer all servicing to qualified service personnel.
- Install the device in a place with adequate ventilation to avoid damage caused by overheat.
- Unplug the power when left unused for a long period of time.
- Information on disposal of devices: do not burn or mix with general household waste, please treat them as normal electrical waste.

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## 2 Introduction

The USB 3.2 Gen1 4-Port Extender Kit, 100m (model: 500530) enables USB 3.2 Gen1 connectivity at data rates up to 5Gbps & extends true USB up to 100m (328ft) over standard Cat6a UTP. Transmitter features with one USB 3.2 Gen1 Type B input, one FSYSNC GPIO input and one RS-232 pass-through. Receiver features with four USB 3.2 Gen1 Type A outputs, one FSYSNC GPIO output and one RS-232 pass-through. The device also supports 24V Bi-directional PoC.

The USB 3.2 Gen1 4-Port Extender Kit, 100m is true plug and play, requires no additional software drivers, and is compatible with all major operating systems. The unit supports a wide variety of USB extension applications including security, industrial control, digital signage, scientific data acquisition and other implementations of USB standards.

## 3 Features

- Extension of USB 3.0 up to 100m/328 ft over CAT6a cable
- USB 3.2 Gen1 connectivity with data transfer rate up to 5Gbps
- Backwards compatible with USB 2.0 and USB 1.1
- Hardware acceleration for isochronous and bulk transfer
- USB-A port 1 and 2 support 5VDC/1.5A, port 3 and 4 support 5VDC/1A on the Receiver
- Support RS-232 pass-through and FSYNC GPIO pass-through (for industry camera use)
- Support bi-directional 24VDC PoC
- Simple plug and play, no driver and setting installation required.

## 4 Package Contents

- One (1) USB 3.0 Extender (Transmitter)
- One (1) USB 3.0 Extender (Receiver)
- One (1) 24VDC/2A Locking Power Supply
- Two (2) 4pin-3.5mm Phoenix Connector (Male)
- Four (4) Mounting Ear
- Eight (8) Screw (KM3\*4)
- One (1) User manual (available via download)

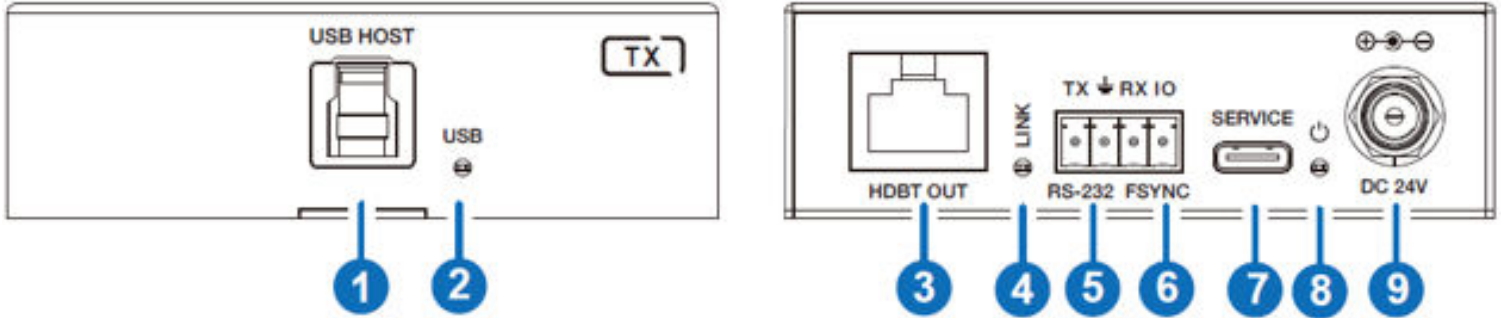
**Notes:** Confirm that the product and accessories are all included. If not, please contact the supplier from which you purchased the unit.

## 5 Specifications

Technical	
USB Protocol	USB 3.2 Gen1
Transmission Rate	Up to 5Gbps
Network Bandwidth	10G
Transmission Distance	100m/328ft over CAT6a (F/FTP) cable
ESD Protection	IEC 61000-4-2: ±8kV (Air-gap discharge), ±4kV (Contact discharge)
Connection	
Transmitter	Input: 1 × USB HOST [USB-B, 9pin Female] Output: 1 × HDBT OUT [RJ45, Female] Control: 1 × RS-232 [3pin-3.5mm Phoenix Connector] 1 × FSYNC [1pin-3.5mm Phoenix Connector] 1 × SERVICE [USB-C, Update Port]
Receiver	Input: 1 × HDBT IN [RJ45, Female] Output: 4 × USB Devices [USB-A, 9pin Female] Control: 1 × RS-232 [3pin-3.5mm Phoenix Connector] 1 × FSYNC [1pin-3.5mm Phoenix Connector] 1 × SERVICE [USB-C, Update Port]
Mechanical	
Housing	Metal Enclosure
Color	Black
Dimensions	Transmitter / Receiver: 85mm [W] × 100mm [D] × 25.5mm [H]
Weight	Transmitter: 253g, Receiver: 260g
Power Supply	Input: 100~240VAC 50/60Hz Output: 24VDC/2A
Power Consumption	PoC Power Supply: 40W (Max)
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)
Generic Specification	
Warranty	2 years
Order Information	500530 USB 3.2 Gen1 4-Port Extender Kit, 100m (UPC: 627699005309)

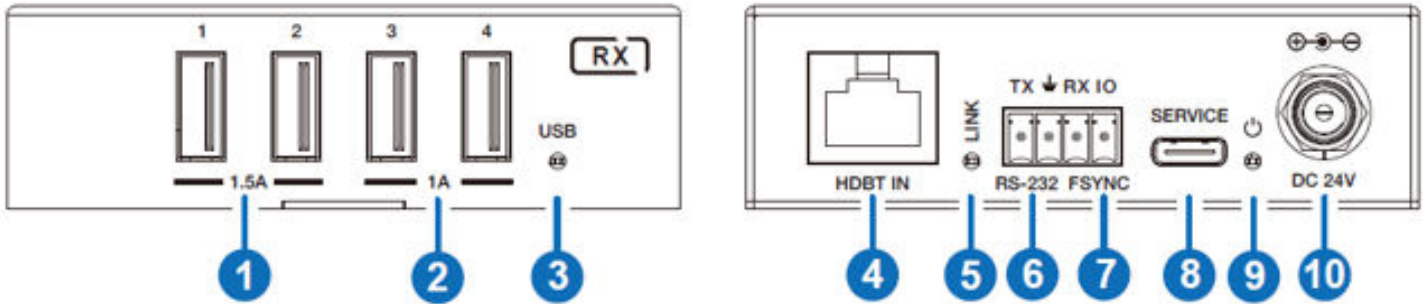
## 6 Operation Controls and Functions

### 6.1 Transmitter Panel



No	Name	Function Description
1	USB HOST	Host port, supporting USB 3.0. Connects to a PC or host.
2	USB LED	USB signal indicator. <ul style="list-style-type: none"> <li>On: USB signal is detected.</li> <li>Off: USB signal is not detected.</li> </ul>
3	HDBT OUT	Connects to the HDBT IN port on Receiver with CAT cable.
4	LINK LED	<ul style="list-style-type: none"> <li>Connection signal indicator.</li> <li>On: Transmitter and Receiver are connected and linked.</li> <li>Flashing: Transmitter and Receiver link is off due to USB low power mode.</li> <li>Off: Transmitter and Receiver are not connected.</li> </ul>
5	RS-232	3pin phoenix connector, connected to a PC or control system for RS-232 command pass-through.
6	FSYNC	FSYNC port, used for level pass-through to the Receiver, and synchronizing the external devices. The default level is 3.3VDC.
7	Service	Firmware update port.
8	Power LED	The LED will be on when the Transmitter is powered on.
9	24VDC	24VDC/2A power input port.

## 6.2 Receiver Panel



No	Name	Function Description
1	USB 1/2	Connect to USB devices, and max output power is up to 5VDC/1.5A
2	USB 3/4	Connect to USB devices, and max output power is up to 5VDC/1A
3	USB LED	USB signal indicator. <ul style="list-style-type: none"> <li>On: USB signal is detected.</li> <li>Off: USB signal is not detected.</li> </ul>
4	HDBT IN	Connects to the HDBT OUT port on Transmitter with CAT cable.
5	Link LED	Connection signal indicator <ul style="list-style-type: none"> <li>On: Transmitter and Receiver are connected and linked</li> <li>Flashing: Transmitter and Receiver link is off due to USB low power mode</li> <li>Off: Transmitter and Receiver are not connected</li> </ul>
6	RS-232	3pin phoenix connector, connected to a PC or control system for RS-232 command pass-through
7	FSYNC	FSYNC port, receiving level pass-through from the Transmitter, and synchronizing the external devices. Default level is 3.3VDC.
8	Service	Firmware update port
9	Power LED	The LED will be on when the Receiver is powered on
10	24VDC	24VDC/2A power input port

## 7 Application Example

