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RAV-EX-UA-100-Tx/Rx

User Manual

RAV-EX-UA-100-Tx/Rx 4-Port USB-A Extender



Introduction

RAV-EX-UA100-Tx/Rx is a USB 3.2 Gen1 extender which can transmit USB 3.2 Gen 1 signals up to 100m using a Cat6A/7 ethernet cable. The Receiver (R) is included with the 4-port hub that can connect with many USB devices. This product supports a maximum bandwidth of 5 Gbps and is backward compatible for USB 2.0 and USB 1.1 devices. This product supports plug and play (no device drivers necessary) and is compatible with multiple operating systems.

The product is thin and light and can be used with the ear mounts, making it very convenient to install in many different environments. It supports RS-232 and FSYNC pass-through extension functions, which is suitable for industrial camera control or for transmitting RS-232 control signals to control equipment. In addition, the USB port has anti-static protection, which can effectively reduce the device failure and prevent static electricity causing damage to the USB port.

It is suitable for a variety of application scenarios, including USB cameras, video conferencing cameras, interactive whiteboards or touch panels, hard drives, pen drives and other USB 3.2, USB 3.0, USB 2.0 or USB 1.1 devices.

Key Features

- Supports USB 3.2 Gen 1 standard, backward compatible with USB 3.0, USB 2.0, and USB 1.1 standards.
- Supports data transmission up to 5Gbps.
- Supports transmission speeds of USB signals up to 100m/330ft via a signal Cat 6A / 7 F / FTP or U / FTP cable.
- 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.
- Supports RS232 and FSYNC GPIO pass-through for industrial camera control.
- Plug and play and compatible with multiple operating systems.
- Supports firmware upgrades via micro-USB port.
- Supports power from Receiver (RX).

Package Contents

Transmitter x 1 | Receiver x 1 | 12V / 3A US Power Adapter x 1 | USB3.2 Gen 1 Type-A male to Type-B male cable, 1.5m x 1 | 4-Pin Phoenix male connector x 2 | Ear Mounts x 4 | Screws Pack x 2

Specifications

Interface	
Transmitter	
Inputs	USB Type-B (Female) x 1 4-Pin Phoenix (Female) x 1
Outputs	RJ-45 port (Female) x 1
Firmware	USB Micro-B port (Female) x 1 (Only use for firmware update)
Power	5.5 / 2.1 mm with screw (Female)
Receiver	
Inputs	RJ-45 port (Female) x 1
Outputs	USB Type-A (Female) x 4 4-Pin Phoenix (Female) x 1
Firmware	USB Micro-B port (Female) x 1 (Only use for firmware update)
Power	5.5 / 2.1 mm with screw (Female)
Transmission	
USB Standard	USB 3.2 Gen 1 standard and backward compatible with USB 3.0、USB 2.0 and USB 1.1
Maximum bandwidth	5 Gbps
RS-232	Pass-Through
FSYNC GPIO	Input : 3.3V Output : 3.3V
Transmission distance	100m, using Cat6A / 7 F / FTP or U / FTP ethernet cable ※Please do not use UTP, F / UTP or U / UTP ethernet cable
Power	
Power supply	12V / 3A DC size : 5.5 / 2.1 mm with screw slot

Power	8.78W (No USB loaded)
Consumption	31.28W (USB Fully loaded)
ESD protection	$\pm 8\text{kV}$ (Air-gap discharge) / $\pm 4\text{kV}$ (Contact discharge)
Environment	
Operating Temperature	$-0^{\circ}\text{C} \sim 45^{\circ}\text{C}$
Storage Temperature	$-20^{\circ}\text{C} \sim 70^{\circ}\text{C}$
Humidity	$10^{\circ}\text{C} \sim 90^{\circ}\text{C}$ (non-condensing)
Product Structure	
Main Material	TX: Iron RX: Iron
Size W x D x H	TX : 105 x 20.5 x 100mm RX : 105 x 20.5 x 100mm
Weight	TX : 280g RX : 270g
Country of Origin	China
Certification	
Safety & Emission	CE / UKCA / FCC / RoHS / REACH

Interface

Transmitter



Interface	Description
USB Host	Connect to a host device such as a PC.
RS232&FSYNC IN	RS-232 Pass through FSYNC GPIO Input
Power	Connect to the 12V / 3A power adapter ※This product supports POC which can get the power from Receiver (RX)
Power LED	On: The device is powered on. Off: The device is powered off.
Link LED	On: TX and RX are connecting Blinking/Off: TX and RX doesn't link or link error.
Cat.6A / 7 Out	Connect to the Cat.6A / 7 ethernet cable to RX's Cat.6A / 7 IN
Data LED	On: The USB data is being transmitted. Off: There's no USB data being transmitted.
Firmware	USB Micro-B port for firmware upgrade.



Interface	Description
USB3.2	Connect to USB devices USB cameras, USB hard drives, USB pen drives...etc. Note: One 1.5A USB port can be used to connect with high-power USB devices such as USB camera.
RS232&FSYNC OUT	RS-232 Pass-through FSYNC GPIO Output
Power	Connect to the 12V / 3A power adapter
Power LED	On: The device is powered on. Off: The device is powered off.
Link LED	On: TX and RX are connecting Blinking/Off: TX and RX doesn't link or link error.
Cat.6A / 7 IN	Connect to the Cat.6A / 7 ethernet cable to TX's Cat.6A / 7 Out
Data LED	On: The USB data is being transmitted. Off: There's no USB data being transmitted.
Firmware	USB Micro-B port for firmware upgrade.