DVDO

DVDO-Xtend-USBC-USB-100L

USB-C & USB-A 3.0 100m Extender over HDBaseT

User Manual

Version v1.0

Thank you for purchasing DVDO-Xtend-USBC-USB-100L

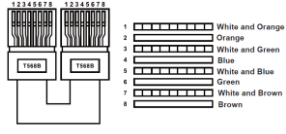
For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

Surge protection device recommended

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lighting strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

Caution

The network cable connection method required for this product is direct connection. Please do not cross connect.



Direct Interconnection Method

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1. Introduction

DVDO-Xtend-USBC-USB-100L is a USB extender that can extend USB 3.0 signals up to 100m/328ft via a single CAT6a cable. The transmitter features one USB 3.0 Type B input, one FSYSNC GPIO input and one RS-232 pass-through. The receiver features two USB-C and two USB-A device ports. Bi-directional 24V PoC (Power over Cable) function allows user to only supply power to either the transmitter or the receiver.

It can be widely used for long distance USB signal transmission between USB sources and devices like webcams, PTZ cameras, keyboards, mouse devices, USB microphones, flash sticks, printers, scanners, touch panel displays and other USB devices.

2. Features

- ☆ Extension of USB 3.0 signal up to 100m/328ft via CAT6a cable
- ☆ USB 3.0 connectivity with data transfer rate up to 5Gbps
- ☆ Backwards compatible with USB 2.0 and 1.1
- ☆ Hardware acceleration for isochronous and bulk transfer
- ☆ Tx features 1× USB-B host port, Rx features 2× USB-C (1× 5V@1A and 1× 5V@1.5A) and 2x USB-A device ports (1× 5V@1A and 1× 5V@1.5A)
- ☆ Support firmware upgrade via USB-C service port
- ☆ Support RS-232 pass-through and FSYNC GPIO pass-through (for industry camera use)
- ☆ Support bi-directional 24V PoC (Power over Cable)
- ☆ Plug-and-play with no drivers downloads or software setting required

3. Package Contents

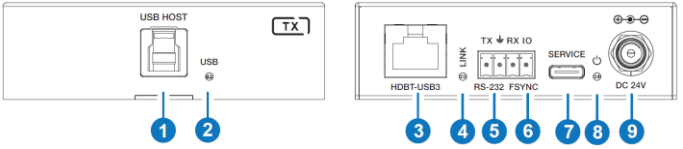
① 1× USB 3.0 Extender (Transmitter)
② 1× USB 3.0 Extender (Receiver)
③ 1× 24V/2A Locking Power Supply
④ 2× 4pin-3.5mm Phoenix Connector (Male)
⑤ 4× Mounting Ear
⑥ 8× Machine Screw (KM3*4)
⑦ 1× User Manual

4. Specifications

Technical	
USB Protocol	USB 3.0
Transmission Rate	Up to 5Gbps
Transmission Distance	100m/328ft via CAT6a (F/FTP) cable 1.5m/4.9ft via USB cable
ESD Protection	IEC 61000-4-2: ±8kV (Air-gap discharge), ±4kV (Contact discharge)
Connections	
Transmitter	Input: 1× USB HOST [USB-B, 9pin female] Output: 1× HDBT-USB3 [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-USB3 [RJ45 connector, 24V PoC] Output: 2× USB-A DEVICE [USB Type A, 9-pin female] 2× USB-C DEVICE [USB Type C, 24-pin female] Control: 1× RS-232 [3pin-3.5mm phoenix connector] 1× FSYNC [1pin-3.5mm phoenix connector] 1× SERVICE [USB Type C, firmware update port]
Mechanical	
Housing	Metal Enclosure
Color	Black
Dimensions	Transmitter / Receiver: 100mm [W] × 85mm [D] × 25.5mm [H]
Weight	Transmitter: 253g; Receiver: 275g
Power Supply	Input: AC 100~240V 50/60Hz Output: DC 24V/2A
Power Consumption	40W (Max)
Operating Temperature	0°C ~ 40°C / 32°F ~ 104°F
Storage Temperature	-20°C ~ 60°C / -4°F ~ 140°F
Operating Humidity	20%~80% relative humidity, non-condensing
Storage Humidity	10%~90% relative humidity, non-condensing

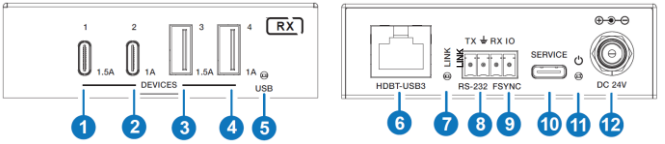
5. Operation Controls and Functions

5.1 Transmitter Panel



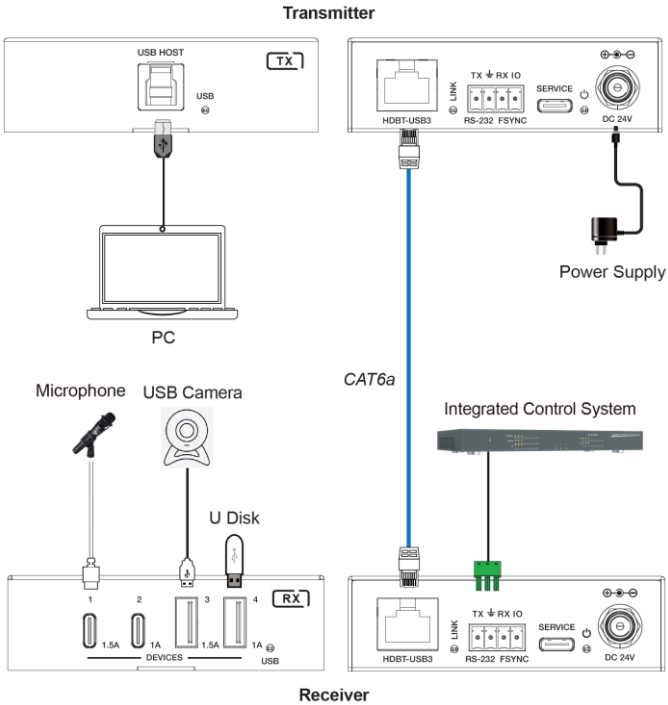
No.	Name	Function Description
1	USB HOST	Host port, supporting USB 3.0. Connects to a PC or host.
2	USB LED	USB signal indicator. ▪ **On:** USB 3.0 signal is detected. ▪ **Blinking:** USB 2.0 signal is detected. ▪ **Off:** There is no USB signal.
3	HDBT-USB3	Connects to the HDBT-USB3 port on Receiver with CAT cable.
4	LINK LED	Connection signal indicator. ▪ **On:** Transmitter and Receiver are connected and linked. ▪ **Blinking:** Transmitter and Receiver link is off due to low power mode. ▪ **Off:** Transmitter and Receiver are not connected.
5	RS-232	3-pin 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 5V.
7	SERVICE	Firmware update port.
8	POWER LED	The LED will be on when the Transmitter is powered on.
9	DC 24V	DC 24V/2A power input port.

5.2 Receiver Panel



No.	Name	Function Description
1	USB DEVICES 1	Downlink USB-C port, connected to USB devices such as U disk or hard disk. Its output power is up to 5V/1.5A.
2	USB DEVICES 2	Downlink USB-C port, connected to USB devices such as U disk or hard disk. Its output power is up to 5V/1A.
3	USB DEVICES 3	Downlink USB-A port, connected to USB devices such as U disk or hard disk. Its output power is up to 5V/1.5A.
4	USB DEVICES 4	Downlink USB-A port, connected to USB devices such as U disk or hard disk. Its output power is up to 5V/1A.
5	USB LED	USB signal indicator. ▪ **On:** USB 3.0 signal is detected. ▪ **Blinking:** USB 2.0 signal is detected. ▪ **Off:** USB signal is not detected.
6	HDBT-USB3	Connects to the HDBT-USB3 port on Transmitter with CAT6a cable. It can also be used for 24V PoC power supply.
7	LINK LED	Connection signal indicator. ▪ **On:** Transmitter and Receiver are connected and linked. ▪ **Off:** Transmitter and Receiver are not connected.
8	RS-232	3pin phoenix connector, connected to a PC or control system for RS-232 command pass-through.
9	FSYNC	FSYNC port, the level pass through from Transmitter to Receiver, to synchronize the external devices. Default level range is 0~5V.
10	SERVICE	USB-C port for firmware update, supporting USB 2.0.
11	Power LED	The LED will be on when the receiver is powered on.
12	DC 24V	DC 24V/2A power input port.

6. Application Example



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