

# USB 3.0 Extender USB3-121-100



The Imoware USB 3.0 Extender can extend USB signal to a distance up to 100m via a single CAT6a cable. Transmitter features with one USB 3.0 Type B input, one FSYSNC GPIO input and one RS-232 pass-through. Receiver features with four USB 3.0 Type A outputs, one FSYSNC GPIO output and one RS-232 pass-through. Bi-directional 24V PoC is also supported.

## Features

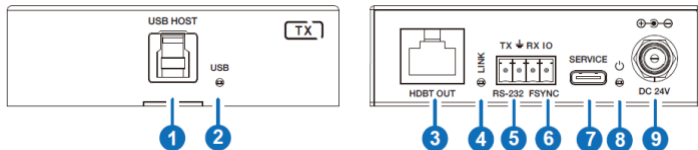
- ☆ Extension of USB 3.0 up to 100m over CAT6a cable
- ☆ USB 3.0 connectivity with data transfer rate up to 5Gbps
- ☆ Backwards compatible with USB 2.0 and 1.1
- ☆ Hardware acceleration for isochronous and bulk transfer
- ☆ USB-A port 1 and 2 support 5V/1.5A, port 3 and 4 support 5V/1A on the Receiver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

# Imoware

## Specifications

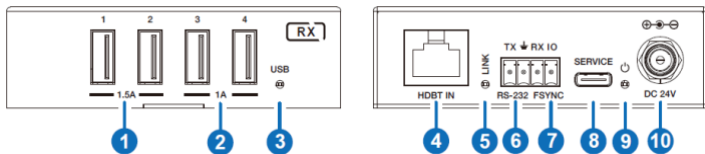
Technical	
USB Protocol	USB 3.0
Transmission Rate	Up to 5Gbps
Network Bandwidth	10G
Transmission Distance	100m over CAT6a (F/FTP) cable
ESD Protection	IEC 61000-4-2: ±8kV (Air-gap discharge), ±4kV (Contact discharge)
Connections	
Transmitter	Input: 1 × USB HOST [USB-B, 9pin Female] Output: 1 × HDBT OUT [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: AC 100~240V 50/60Hz Output: DC 24V/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)

## 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>• <b>On:</b> USB signal is detected.</li> <li>• <b>Off:</b> USB signal is not detected.</li> </ul>
3	HDBT OUT	Connects to the HDBT IN port on Receiver with CAT cable.
4	LINK LED	Connection signal indicator. <ul style="list-style-type: none"> <li>• <b>On:</b> Transmitter and Receiver are connected and linked.</li> <li>• <b>Flashing:</b> Transmitter and Receiver link is off due to USB low power mode.</li> <li>• <b>Off:</b> 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 3.3V.
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.

## Receiver Panel



No.	Name	Function Description
1	USB 1/2	Connect to USB devices, and max output power is up to 5V/1.5A.
2	USB 3/4	Connect to USB devices, and max output power is up to 5V/1A.
3	USB LED	USB signal indicator. <ul style="list-style-type: none"> <li>▪ <b>On:</b> USB signal is detected.</li> <li>▪ <b>Off:</b> 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>▪ <b>On:</b> Transmitter and Receiver are connected and linked.</li> <li>▪ <b>Flashing:</b> Transmitter and Receiver link is off due to USB low power mode.</li> <li>▪ <b>Off:</b> 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 3.3V.
8	SERVICE	Firmware update port.
9	POWER LED	The LED will be on when the Receiver is powered on.
10	DC 24V	DC 24V/2A power input port.

## 1. Application Example

