

RB-USB20

4 Ports USB 2.0 Fiber Optic Extender Set

Quick User Guide



Overview

The RB-USB20 fiber optic extender set can send an USB type A 2.0 interface to a remote 4 port USB 2.0 type A hub over one single strand of either SM or MM fiber. The USB 2.0 fiber optic extender uses a special USB PHY chip to meet the requirements of USB2.0 protocol and uses 10Gbps SFP transceivers for fiber optic transmission.

The set is made of a transmitter unit and a receiver unit. The receiver has the single interface and can be powered strictly through the 5V power supported by the USB 2.0 bus from the host equipment. The transmitter is powered by an external power supply and supplies power to the USB2.0 embedded hub through the USB2.0 A type connector. The fiber bandwidth is based on the same 10-bit transmission mode as SATA, so its full speed is only 1000MB/s. This is the theoretical transmission value. If several devices share the USB channel, the master control chip will allocate and control the bandwidth available to each device.

Applications

Extension of USB 2.0 interfaces over one single strand of fiber optic
Applications can include industrial data, surveillance, remote storage, digital signage, printer system, etc.

Features

- Compliant with the general USB 2.0 specifications
- Compliant with USB power delivery 2.0 Gen 1 specifications
- Internal USB PHY uses advanced CMOS process to achieve low power consumption
- Supports 4 channels independent operation
- PWR LED status indicator
- Plug and play, no drivers are required

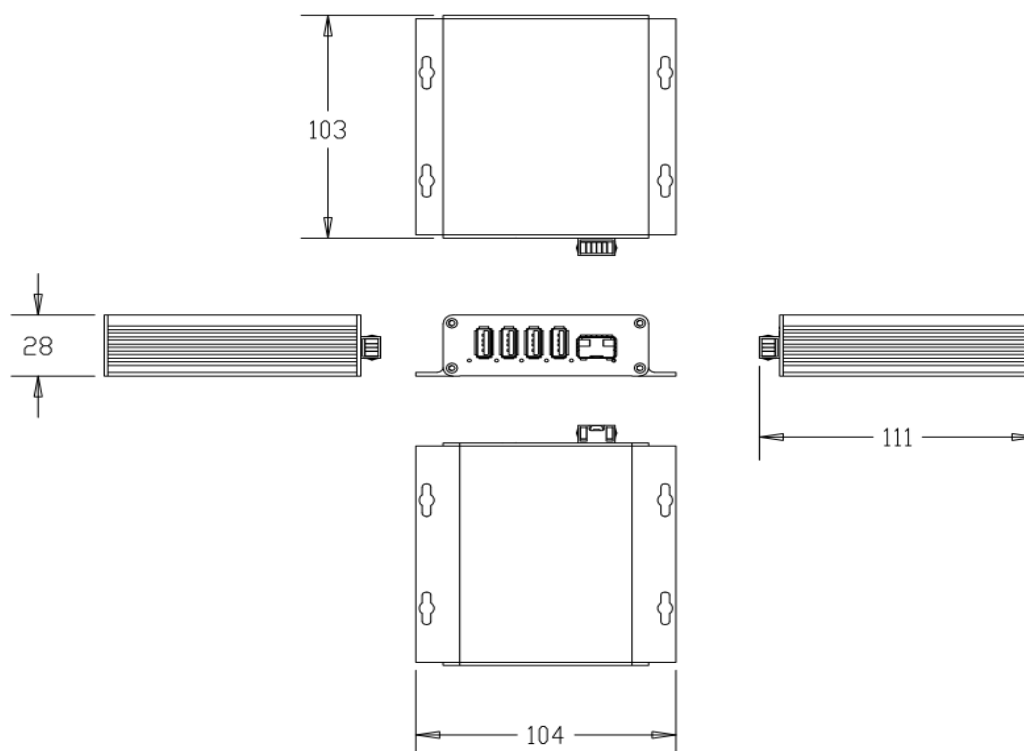
Technical Specifications

Fiber Specifications	
Wavelength	1310-1550nm
Rate	1.25Gbps
Tx power	-3db~ -6db
Rx sensitivity	-24db
Fiber connector	LC/UPC, Single fiber
USB Interface	
Version	Universal Serial Bus 2.0
Transmission rate	480Mbps
USB total load current	≤2A
Supply voltage	5V
Single USB supply current	>900mA
Physical interface	USB2.0 Type A connector
Power Requirements	
Transmitter input voltage	DC 12V
Transmitter power consumption	2.5W
Receiver input voltage	DC 5V
Receiver power consumption	2.5W
Mechanical Specifications	
Casing	Aluminium alloy
Product size	104*104*28mm
Net weight	0.4Kg
Installation	Wall-mounted type (desktop type)
Color	Black
Packing	
Material	Kraft carton

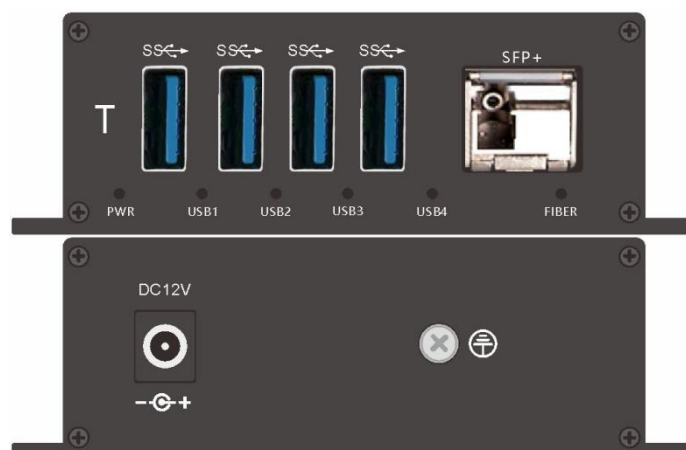
Package size	275*220*55mm
Gross weight	0.65Kg
Other	
Operating temperature	-20°C ~75°C
Storage temperature	-40°C ~85°C
Relative humidity	From 5 to 95% (non-condensing)

Dimensions(mm)

Transmitter



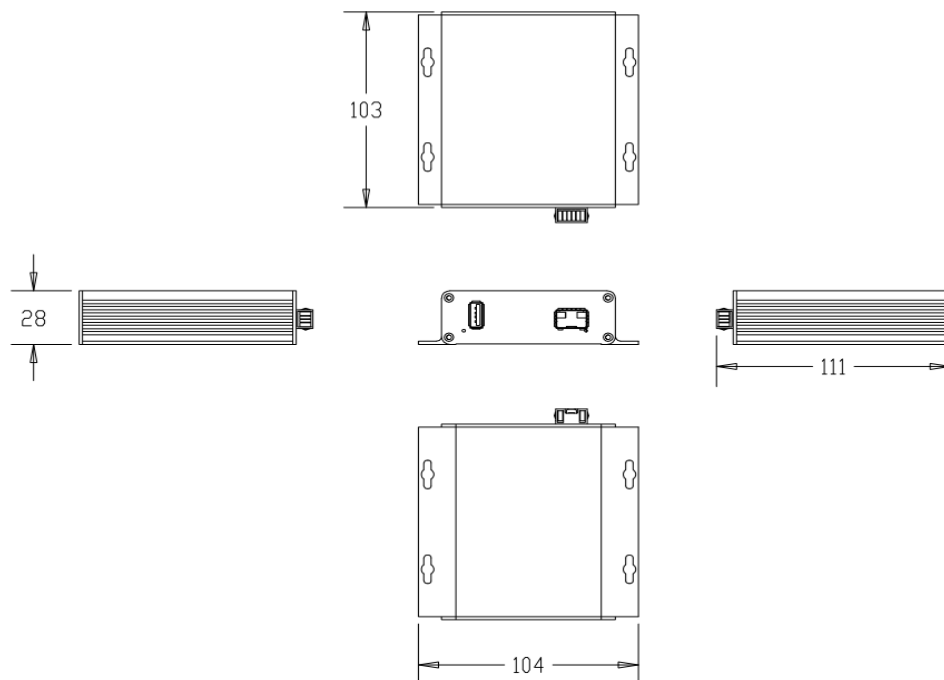
Transmitter panel printed / indicator description



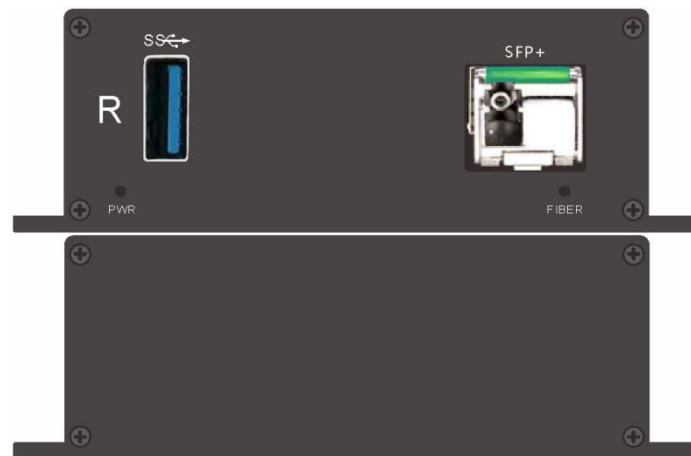
PWR	On: The device is powered on Off: The device is powered off
FIBER	On: fiber signal Off: no fiber signal
USB 1	Slow flash: The USB device is recognized Off: The USB device is not recognized
USB 2	Slow flash: The USB device is recognized Off: The USB device is not recognized
USB 3	Slow flash: The USB device is recognized Off: The USB device is not recognized
USB 4	Slow flash: The USB device is recognized Off: The USB device is not recognized

SFP+	10G SFP fiber module
DC 12V	12V power supply

Receiver

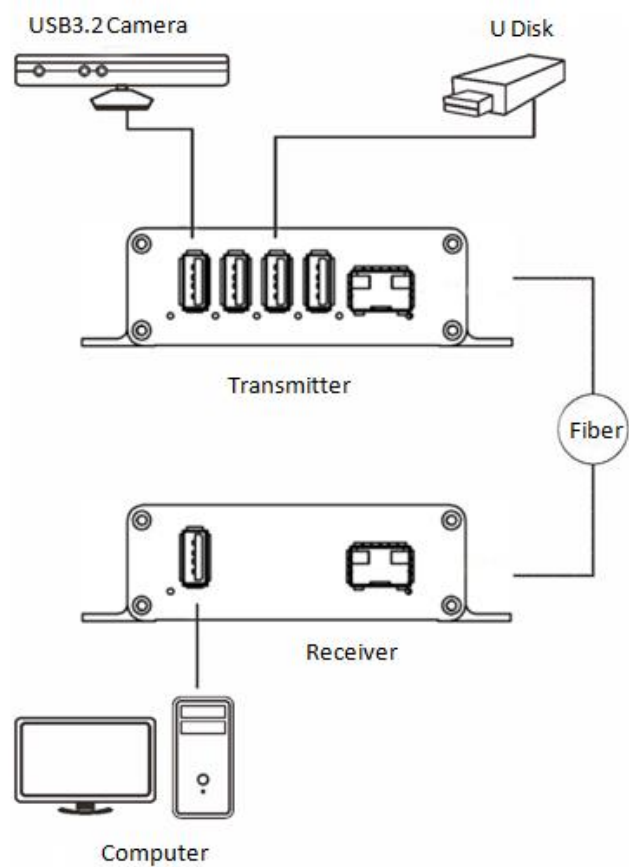


Receiver panel printed / indicator description



PWR	On: The device is powered on Off: The device is powered off
FIBER	On: fiber signal Off: no fiber signal

Application diagram



Application diagram example: accessories to a PC

Power-on sequence

1. Host optical converter (receiver R) is plugged into an USB PC connector
2. Remote optical converter (transmitter T) is connected to 12V AC power adapter
3. Remote USB devices can be connected to Ports 1 ~ 4 on the transmitter T unit
4. Fiber cable should be connected to the LC connectors between units
5. Observe FIBER light being turned ON for both devices. If no light, please re-check fiber connectivity between units.
6. Caution: Unit R may cause host PC to not boot. If such an event happens, PC BIOS settings must be changed regarding boot sequence. If first device to be booted from is the USB port, then boot sequence must be changed to hard disk as first boot device.

Packing list

Item#	Name	Unit	Quantity
1	Transmitter T	pcs	1
2	Receiver R	pcs	1
3	12V power AC adapter	pcs	1
4	USB2.0 cable	pcs	1
5	LC to LC optical cable	pcs	1

Additional information

Manual for RVB-USB20 might change without notice.

For most up to date manual, please visit www.robofiber.com