



## Features

- USB 1.1 & USB 2.0 Protocol Compliance
- Plug & Play Design, no software required
- USB type B connector on transmitter, 4 USB type A connectors on the receiver
- LC optical connectors (SC on A1/A3M)
- Multimode or singlemode fiber options
- Range up to 70 km
- Front panel LED status and alert indicators
- Hot swappable
- No EMI, RFI, or ground loops
- 3-Year Warranty

## Applications

- Remote USB Devices (cameras, printers, etc...)
- KVM - USB Based Video Solutions and Human Interface Devices
- Professional Audio Visual Installations
- Facility Interconnections
- Hospitals / Medical facilities
- Military & Defense
- Security System
- High-end Home Theaters

## USB Transmission over Fiber

The OTP-USB provides the flexibility to connect and extend high-speed USB 2.0 communication over lightweight optical cable. It provides up to 480 Mbps of bi-directional throughput shared across each of the 4 USB-A ports. Because of the small size and easy installation, the OTP-USB is a perfect solution for space constrained installations or quick extension and bypass for temporary use.

Fiber optic cable allows the user many benefits over copper. The USB 2.0 specification indicates that a USB signal can only travel up to approximately 5m without signal degradation and reliability issues. This makes fiber a perfect solution for connecting remote devices beyond the 5m limit. The OTP-USB has a range of up to 70 km.

The optical signal is not compressed and installation is easy because optical cable is approximately 80% lighter in weight and gauge. Additionally, the fiber optic signal is not effected by environmental conditions, electro-magnetic interference or radio frequency interference. The OTP-USB is a plug & play device requiring no software or external control.

The OTP-USB cards can be part of a more comprehensive application when used with our innovative Optiva video, audio and data media transport system. Optiva was designed to maintain lossless fiber extension between input and output signals. New signals may be added to most products without the need for additional fiber through our proprietary daisy-chain technology, with the exception of DVI, 3G HD-SDI, GigE and USB. The Optiva line of products also includes insert cards for up to 16 channels of multiplexing / demultiplexing, 16x16 matrix switching, optical add/drop, as well as remote system monitoring.

## System Design

Optiva insert cards support both 19" rackmount and compact tabletop or wall-mountable enclosures. The 3RU 19"

**optiva** PLATFORM

rackmount enclosures (Models: OT-CC-16 & OT-CC-16F) can support up to 16 insert cards as well as dual-redundant, hot-swappable power supplies utilizing two 100 watt or two 200 watt power supplies. Also available in the rackmount form factor is our 1RU enclosure (Model: OT-CC-6-1U) which can accommodate six insert cards and utilizes two 60 watt power supplies. For desktop or wall mounting applications there are one-slot (Model: OT-DTCR-1) and two-slot (Model: OT-DTCR-2) enclosures. Both use an external wall mount power supply.

U.S. Patent #'s 7720385 & 8064773

**DATASHEET** **FIBER OPTICS**

## Models

Transmitter	Receiver
OTP-USBTR-XX/XX-YY	OTP-USBRT-XX/XX-YY
OTP-USBTR-L4x1/L4x1-LC	OTP-USBRT-L4x1/L4x1-LC

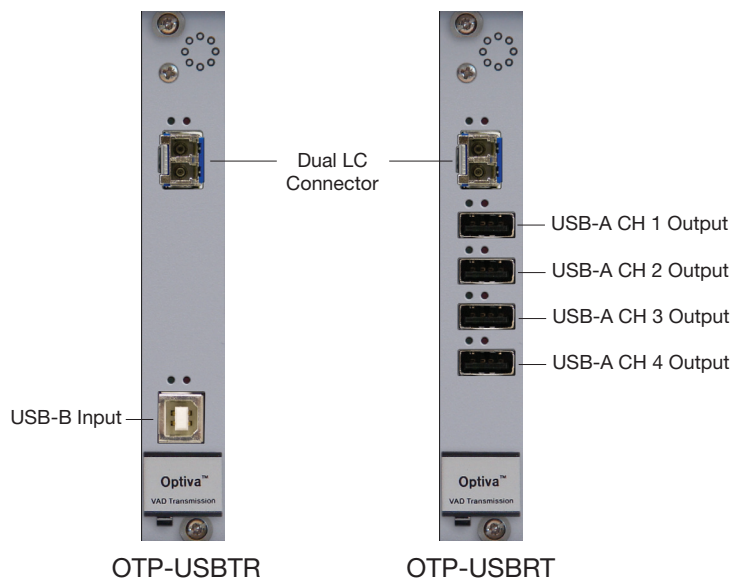
- When ordering replace "XXXX" with one of the Optical Codes
- When ordering replace "YY" with one of the Connector Options
- Contact us for this chart: When ordering CWDM, replace "x" in the Optical Code L4x1 with A (1270 nm) through R (1610 nm)
- Chromatic dispersion as well as other losses should also be taken into account
- Stated distances are the maximum range, shorter distance may require attenuation
- Standard connection type is UPC

## Duplex Optical Specifications

Optical Code "XX/XX"	Fiber Type / Number	Wavelength (nm)	Min. Output Power (dBm)	Rx Sensitivity (dBm)	Optical Budget (db)	Distance (km)	Connector Options "YY"
A0/A0	MM/2	850	-10	-17	7	0.5	LC (Dual)
A1/A1	MM/2	1310	-5.5	-10.5	5	2	LC (Dual)
A2/A2	SM/2	1310	-5.5	-12.5	7	10	LC (Dual)
A2D/A2D	SM/2	1310	-5.5	-17.5	12	20	LC (Dual)
A3/A3	SM/2	1550	-3.5	-20.5	17	40	LC (Dual)
A3D/A3D	SM/2	1550	0	-25	25	60	LC (Dual)
L4x1/L4x1	SM/2	1270 to 1610 (CWDM)	-2.5	-28	25	50 to 70	LC (Dual)
A1/A3M*	MM/1	1310/1550	-5.5	-10.5	5	3	SC or LC
A2/A3*	SM/1	1310/1550	-5.5	-17.5	12	20	SC or LC
A2/A3D*	SM/1	1310/1550	-3.5	-20.5	17	40	SC or LC
A2/A3H*	SM/1	1310/1550	-2.5	-27.5	25	60	SC or LC

- \*Use "XX/XX" as is for ordering transmitter models but reverse for ordering receiver models

## Connection Diagram



## USB

Specifications	Values
Data Rate	480 Mbps
Transmitter Ports	1 USB-B Female
Receiver Ports	4 USB-A Female
Compatibility	USB 1.1, 2.0

## General

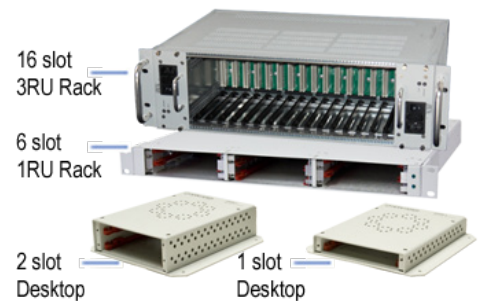
Specifications	Values
Dimensions (Insert Card)	6.69" L x 0.81" W x 5.06" H
Weight	11 oz.
Operating Temperature	-20°C to +55°C
Storage Temperature	-40°C to +85°C
Humidity	0 to 95% (Non-Condensing)
Operating Voltage	12 VDC
Power Consumption	6 Watts
Bit Error Rate	10 <sup>-14</sup>
System Latency	< 1 ms
Warranty	3 Year

## Monitoring & Control

Specifications	Values
Local	Front panel LED status and alert indicators
Remote	OptivaView® SNMP Management Suite*

- Requires OptivaView SNMP Controller Card (Model: OPV-CTRL)

## Enclosure Options



## Compliance

