

# OTP-1VTR2BATR4D

Duplex Composite Video, Duplex Analog Audio and Duplex Serial Data



DATASHEET

FIBER OPTICS



## Composite Video, Analog Audio & Serial Data Transmission

The Optiva OTP-1VTR2BATR4D provides for the transmission of 1 duplex channel of 12-Bit composite video, 2 duplex channels of analog audio and 4 duplex channels of serial data, over long or short distances, using a single fiber.

In addition, the OTP-1VTR2BATR4D is part of 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 without the need for additional fiber through our proprietary daisy-chain technology. 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.



## Features

- SMPTE Compliant
- Duplex Composite Video over Fiber
- Duplex Analog Audio over Fiber (Terminal Block Connection)
- Duplex Serial Data over Fiber
- Singlemode Options (up to 70 km)
- Multimode Options (up to 2 km)
- TDM - Single Wavelength
- No EMI, RFI, or Ground Loops
- 3-Year Warranty

## Applications

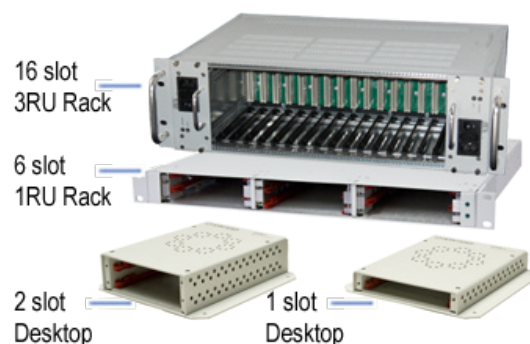
- High-Quality Video Security Systems
- Video Surveillance
- Train/Rail Station Camera Systems
- CCTV Applications
- Optical NTSC/PAL Video Switching

## System Design

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

**optiva** PLATFORM

## Enclosure Options



U.S. Patent #'s 7720385 & 8064773

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### Models

Transmitter	Receiver
OTP-1VTR2BATR4DZTR-XX/XX-YY	OTP-1VRT2BART4DZRT-XX/XX-YY
OTP-1VTR2BATR4DZTR-L4x1/L4x1-LC	OTP-1VRT2BART4DZRT-L4x1/L4x1-LC
OTP-1VTR2BATR4DZTR-NOC	OTP-1VRT2BART4DZRT-NOC

### Serial Data Options

Serial Data Code "Z"	Type
None	RS-232 (3 wire)
W	RS-422 (4 wire)
J	RS-485 (4 wire)
K	RS-485 (2 wire)

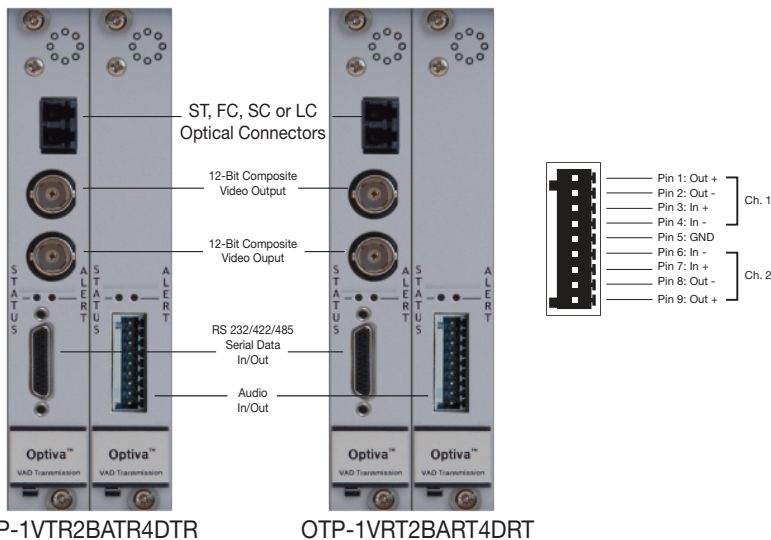
- When ordering replace "XX/XX" with one of the Optical Codes
- When ordering replace "YY" with one of the Connector Options
- When ordering replace "Z" with one of the Serial Data Codes
- Contact us for this chart: When ordering CWDM, replace "x" in the Optical Code L4x1 with A (1270 nm) through R (1610 nm)
- NOC: non-optical card
- 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, FC or ST
A2/A3*	SM/1	1310/1550	-5.5	-17.5	12	20	SC, FC or ST
A2/A3D*	SM/1	1310/1550	-3.5	-20.5	17	40	SC, FC or ST
A2/A3H*	SM/1	1310/1550	-2.5	-27.5	25	60	SC, FC or ST

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

### Connection Diagram



### 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

### Video

Specifications	Values
Standards	SMPTE 170, RS-250C (Short Haul)
Bit Resolution	12-Bit Digital Transmission
Level	1.0 Volt p-p
Bandwidth	5.5 MHz
Differential Gain	< 2%
Differential Phase	< 0.7°
Compatibility	NTSC, PAL, SECAM
Signal to Noise Ratio	> 67 dB
Connector	BNC (IEC 60169-8)

### Audio

Specifications	Values
Level	18 dBm In/Out
Bandwidth	20 Hz to 20 KHz
Signal to Noise Ratio	> 80 dB
Total Harmonic Distortion	< 0.1%
Signal Coding	24-bit
Connector	Terminal Block (See Pinout)

### Data

Type	Values
RS-232	DC, 200 Kbps, 3 wire
RS-422	DC, 1 Mbps, 4 wire
RS-485	DC, 1 Mbps, 2 or 4 wire
Connector	Micro DB25

### Compliance

