

OTP-1VT1BATR1D

12-Bit Composite Video, Duplex Analog Audio and Duplex Serial Data



DATASHEET

FIBER OPTICS



Composite Video, Analog Audio and Serial Data Transmission

The Optiva OTP-1VT1BATR1D provides for the transmission of 1 channel of 12-Bit composite video, 1 duplex channel of analog audio and 1 duplex channel of serial data, over long or short distances, using a single fiber.

In addition, the OTP-1VT1BATR1D 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
- Composite Video over Fiber
- Duplex Analog Audio over Fiber using Terminal Block
- Duplex Serial Data over Fiber
- Singlemode Options (up to 60 km)
- Multimode Options (up to 2 km)
- TDM - Single Wavelength
- No EMI, RFI, or Ground Loops
- 3-Year Warranty

Applications

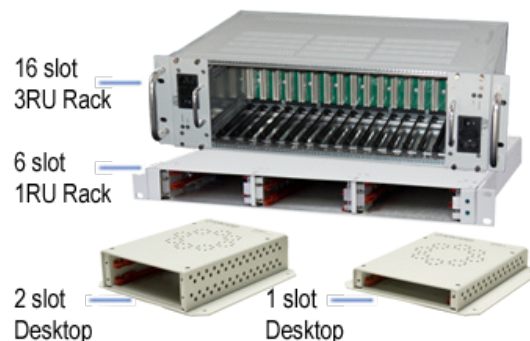
- High-Quality Video Security Systems
- Video Surveillance
- Train/Rail Station Camera Systems
- CCTV Applications
- Optical NTSC/PAL Video Switching

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.



Enclosure Options



U.S. Patent #'s 7720385 & 8064773

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Models

Transmitter	Receiver
OTP-1VT1BATR1DxTR-XX/XX-YY	OTP-1VR1BART1DxRT-XX/XX-YY
OTP-1VT1BATR1DxTR-NOC	OTP-1VR1BART1DxRT-NOC

Serial Data Options

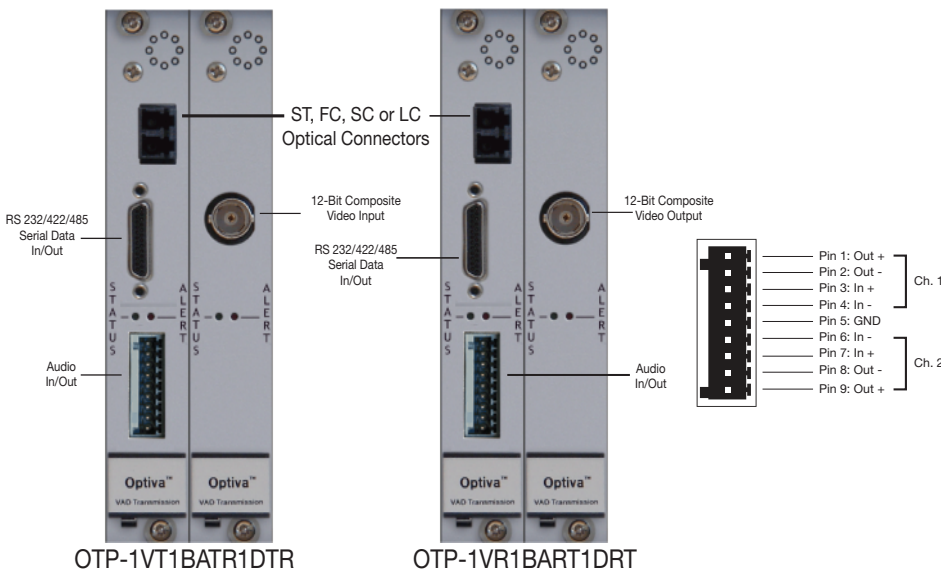
Code	Type
None	RS-232 (3 wire)
W	RS-422 (4 wire)
J	RS-485 (4 wire)
K	RS-485 (2 wire)

Optical Specifications

Duplex Code	Fiber Type / Number	Wavelength (nm)	Optical Budget (db)	Distance (km)	Connector Options
A0/A0	MM/2	850/850	5	0.5	LC (Dual)
A1/A1	MM/2	1310/1310	7	2	LC (Dual)
A2/A2	SM/2	1310/1310	5	10	LC (Dual)
A2D/A2D	SM/2	1310/1310	12	20	LC (Dual)
A3/A3	SM/2	1550/1550	17	40	LC (Dual)
A3D/A3D	SM/2	1550/1550	25	70	LC (Dual)
A1/A3M	MM/1	1310/1550	5	3	SC, FC or ST
A2/A3	SM/1	1310/1550	12	20	SC, FC or ST
A2/A3D	SM/1	1310/1550	17	40	SC, FC or ST
A2/A3H	SM/1	1310/1550	25	60	SC, FC or ST
L4x1/L4x1	SM/2	1270-1610 (CWDM)	25	20-70	LC (Dual)

- When ordering replace "XX/XX" with one of the optical codes
- When ordering replace "YY" with the designated optical connector
- When ordering replace "x" with the designated serial data code
- 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 connector type is UPC

Connection Diagram



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

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 ⁻¹⁴
System Latency	< 1 ms
Warranty	3 Year

Compliance

