

# OTP-1VTR2D

Duplex 12-Bit Composite Video and Duplex Serial Data



## Composite Video and Serial Data Transmission

The Optiva OTP-1VTR2D provides for the transmission of 1 duplex channel of 12-Bit composite video and 2 duplex channels of serial data, over long or short distances, using a single fiber.

In addition, the OTP-1VTR2D 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 /

## Features

- SMPTE Compliant
- Duplex Composite Video over Fiber
- 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

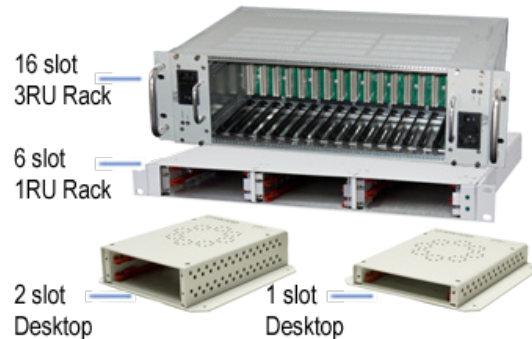
## System Design

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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## DATASHEET FIBER OPTICS

### Models

| Transmitter            | Receiver               |
|------------------------|------------------------|
| OTP-1VTR2DxTR-XX/XX-YY | OTP-1VRT2DxRT-XX/XX-YY |
| OTP-1VTR2DxTR-NOC      | OTP-1VRT2DxRT-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

### 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)               |

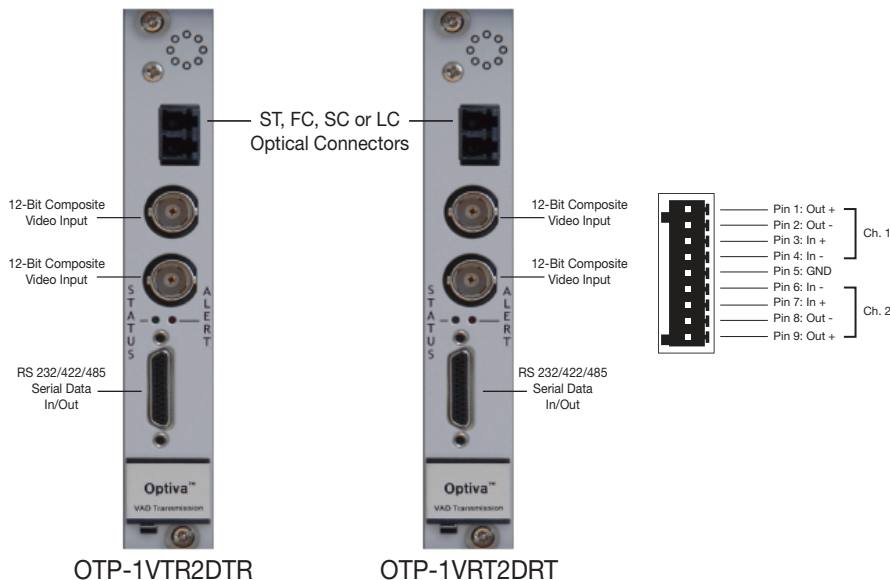
### Data

| 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 <sup>-14</sup>         |
| System Latency           | < 1 ms                    |
| Warranty                 | 3 Year                    |

### Connection Diagram



### Compliance

