The ComNet™ FVT/FVR1031 transmits 10 bit digital video and full duplex data over one Singlemode or Multimode fiber. The video supports NTSC, PAL and SECAM CCTV camera systems. The data supports RS232, RS422 and RS485 (2W & 4W) at data rates up to 115 Kbps (NRZ). The FVT/FVR1031 series also supports “UP-THE-COAX” control signals for Pelco and Panasonic cameras with a maximum distance of 1500 feet (590 meters). The product is “Plug-and-Play” with no electrical or optical adjustments.

**FEATURES**

- 10-bit digitally encoded video transmission
- Supports RS232, RS422 or RS485 (2 or 4-wire) data interfaces
- Compatible with all NTSC, PAL, or SECAM CCTV camera systems
- Supports Pelco and Panasonic “UP-THE-COAX” control signals for a distance up to 1500 feet (590 meters).
- Exceeds all requirements for RS-250C short-haul transmission: True broadcast video performance
- Designed to meet full compliance with the environmental requirements (ambient operating temperature, mechanical shock, vibration, humidity with condensation, high-line/low-line voltage conditions and transient voltage protection) of NEMA TS-1/TS-2 and the Caltrans Specification for Traffic Signal Control Equipment.
- Voltage transient protection on all power and signal input/output lines provides protection from power surges and other voltage transient events.
- Automatic resettable fuses on all power lines
- Distances up to 43 mi (69 km)
- Hot-Swappable Modules
- Interchangeable between stand-alone or rack mount use - ComFit
- May be DIN-rail mounted by the addition of ComNet model DINBKT1 or DINBKT4 adaptor plate.
- Bi-color (Red/Green) LED status indicators provide rapid indication of critical operating parameters
- Lifetime Warranty

**APPLICATIONS**

- High Performance CCTV with PTZ Camera Control
## SPECIFICATIONS

**Video**
- **Video Input**: 1 volt pk-pk (75 ohms)
- **Overload**: >1.5 V pk-pk
- **Bandwidth**: 5 Hz - 10 MHz
- **Differential Gain**: <2%
- **Differential Phase**: <0.7˚
- **Tilt**: <1%
- **Signal-to-Noise Ratio (SNR)**: 67 dB @ Maximum Optical Loss Budget
- **Max. RG-59 COAX Distance**: 100 m (300 ft)

**Data**
- **Data Format**: RS-232, RS-422, 2 or 4-wire RS-485 w/Tri-State, Manchester, bi-phase and up-the-coax data
- **Data Rate**: DC-115 Kbps (NRZ)
- **Wavelength**: 1310/1550 nm, MM and SM
- **Number of Fibers**: 1
- **Optical Emitter**: Laser Diode
- **LED Indicators**: Video Sync Presence, Received Data, Transmitted Data, Optical Carrier Detect

**Connectors**
- Optical: ST (Standard)
- Power: SC of FC (Optional)
- Video: BNC (Gold Plated Center-Pin)
- Data: Terminal Block

**Power**
- **Operating Voltage Range**: 8 to 15 VDC (or from C1 Rack, sold separately)
- **Power Consumption**: 2 W

**Electrical & Mechanical**
- **Number of Rack Slots**: 1
- **Current Protection**: Automatic Resettable Solid-State Current Limiters
- **Circuit Board**: Meets IPC Standard
- **Size (in./cm) (L×W×H)**: 6.1 × 5.3 × 1.1 in (15.5 × 13.5 × 2.8 cm)
- **Shipping Weight**: <2 lb / 0.9 kg

**Environmental**
- **MTBF**: > 100,000 hours
- **Operating Temp**: -40˚ C to +75˚ C
- **Storage Temp**: -40˚ C to +85˚ C
- **Relative Humidity**: 0% to 95% (non-condensing)

### ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Fiber</th>
<th>Optimal PWR Budget</th>
<th>Max. Distance²</th>
<th>Max. UTC Distance²</th>
</tr>
</thead>
<tbody>
<tr>
<td>FVT1031M1</td>
<td>Video Transmitter/Data Transceiver</td>
<td>Multimode 62.5/125µm</td>
<td>16 dB</td>
<td>3 km (2 mi)</td>
<td>1 km (0.6 mi)</td>
</tr>
<tr>
<td>FVR1031M1</td>
<td>Video Receiver/Data Transceiver</td>
<td>Multimode 62.5/125µm</td>
<td>16 dB</td>
<td>3 km (2 mi)</td>
<td>1 km (0.6 mi)</td>
</tr>
<tr>
<td>FVT1031S1</td>
<td>Video Transmitter/Data Transceiver</td>
<td>Single Mode 9/125µm</td>
<td>23 dB</td>
<td>69 km (43 mi)</td>
<td>1 km (0.6 mi)</td>
</tr>
<tr>
<td>FVR1031S1</td>
<td>Video Receiver/Data Transceiver</td>
<td>Single Mode 9/125µm</td>
<td>23 dB</td>
<td>69 km (43 mi)</td>
<td>1 km (0.6 mi)</td>
</tr>
</tbody>
</table>

**Accessories**
- DC Plug-in Power Supply, 90-264 VAC, 50/60 Hz (Included)

**Options**
- [1] Add suffix ’/C’ for Conformally Coated Circuit Boards to extend to condensation conditions (extra charge, consult factory)
- Add ’/SC’ for SC Connectors
- Add ’/FC’ for FC Connectors
- DIN-Rail Mounting Adaptor Plate Kit – With mounting hardware (Optional, order model DINVKT1 or DINVKT4)

**NOTE:** This product requires a fiber installation with a minimum 30 dB connector return loss. The use of Super Polish Connectors is recommended. [2] Distance may be limited by optical dispersion. Check with control system manufacturer for distance limits on up-the-coax systems.

Complies with FDA Performance Standard for Laser Products, Title 21, Code of Federal Regulations, Subchapter J

In a continuing effort to improve and advance technology, product specifications are subject to change without notice.

## TYPICAL APPLICATION

![TYPICAL APPLICATION Diagram](image-url)