

Fiber Transmission Products (10-Bit) Transmitter/Receiver

Overview

The video and data series fiber transmission products support optical transmission of 10-Bit PCM coded video (up to 8 channels) through one fiber either in multi-mode or single-mode for convenience and flexibility. Adjustment and maintenance free, these modules are universally compatible with major CCTV camera manufacturers and support data interface.

The unit's unique modular design for in field configuration also accommodates installation and system growth and delivers long operating distances of up to 60 Km. Featuring robust construction well suited for harsh environments the unit is available in wall mount configuration. Plug-and-Play design ensures ease of installation requiring no electrical or optical adjustments.

Standard Features

Video

- Non-compressed 10-Bit Digitally Encoded Video Transmission
- Support NTSC P, PAL & SECAM video systems
- No video degradation over max. operating distance

Control

- Supports one bi-directional Contact Closure
- Support dry contact or TTL inputs
- Dry Contact Closure outputs (Normal Open)

LEDs

- Duplicated LED indicators on the front and rear of the unit for the convenience of observation

Network management system for rack communications

- Web browser support
- Systems (video, audio, data and contact closure) performance monitoring
- System devices and components (Transmitters, Receivers, Modules, etc.) status monitoring and operational management
- LAN, Ethernet networking capabilities
- IP addressable
- Alarm activation, execution, message responding and reporting
- Operational level determination and access control
- Network ready for health and connection monitoring

Others

- Adjustment and maintenance free
- Unique modular design for in field configuration to match installation and system growth
- Long distances operation up to 60Km
- No setup just plug-and-play
- Excellent suppression of EMI & RFI and elimination of ground loop
- Transient voltage protection on power supply and all signal inputs & outputs
- Robust design for harsh environment applications

Single-, Two-, Four-, Eight-Channel Video (10-Bit) Transmitter/Receiver and Single-Channel Duplex Control (Contact Closure) Transceiver



Specifications

| Video | | |
|---|-------------------|-------------------|
| Number of Channels | 1, 2, 4, 8 | |
| Color Systems | NTSC | PAL |
| I/O Impedance | 75 Ohm | 75 Ohm |
| I/O Composite Video Level | 1Vp-p ± 5.5 IRE | 700mVp-p ± 40 IRE |
| Sync Amplitude | 40± 2 IRE | 300± 20 IRE |
| Burst Amplitude | 40± 2 IRE | 300± 20 IRE |
| Bandwidth | ≥4.6MHz | ≥5.8MHz |
| Differential Gain | <2% | <2% |
| Differential Phase | <1 Degree Typical | <1 Degree Typical |
| SNR-CCIR weighted | > 60dB | > 60dB |
| Tilt | <1 % | <1 % |
| K-factor | 1% | 1.5% |
| Signal Indication (Video Presence/ Absence) | Green/Red LED lit | Green/Red LED lit |
| Input/output Connectors | BNC | BNC |

| Contact Closures | |
|------------------------------|------------------------------------|
| Number of Channels | 1 |
| Direction | Bi-directional Duplex |
| Input Type | TTL Logic (positive)/ Dry Contract |
| Output Type | Default: Logic LOW/ Normal Open |
| Dry Contact Output Rating | 110 VDC/125VAC, 30W/62.5VA max. |
| Contact Output Response Time | 2 msec. |
| Input/output Indications | LEDs (Green lit/OFF) |
| Input/output Connectors | 5-pin screw terminals |

| Optical | | |
|--|---|-----------------------------|
| Wavelength | 1310 and 1550 | |
| Number of Fiber | 1 | |
| Tx Output Power: | | |
| Single Mode (40Km) 1V+1CC | 1310nm & 1550nm | -9dBm ± 3 dBm |
| Single Mode (40Km) 2V+1CC, 4V+1CC, 8V+1CC | 1310nm & 1550nm | -8dBm ± 3 dBm -6dBm ± 2 dBm |
| Multi-mode (4Km) 1V+1CC | 1310nm & 1550nm | -7dBm ± 3 dBm |
| Multi-Mode (2Km) 2V+1CC, 4V+1CC, 8V+1CC | 1310nm & 1550nm | -7dBm ± 3 dBm |
| Optical Budget: | | |
| Multi-mode (62.5µm/125µm) | 12dB (1V+1CC) 10dB (2V+1CC) 8dB (4V+1CC, 8V+1CC) | |
| Single-mode (9µm/125µm) | 18dB (wavelength in 1310nm) 14dB (wavelength in 1550nm) | |
| Single-mode (9µm/125µm) - Long Haul | 19dB (wavelength in 1550nm) | |
| Transmission Distance: | | |
| Multi-Mode (Limited by Fiber Bandwidth) | 4Km (DFVMMD1001-T/R) 3Km (DFVMMD2001-T/R) 2Km (DFVMMD4001-T/R) 1Km (DFVMMD8001-T/R) | |
| Single-Mode (Limited by Fiber Bandwidth) | 40Km | |
| Single-Mode (Long Haul version) | 60Km | |
| Fiber Connector (Standard Supply) | ST | |

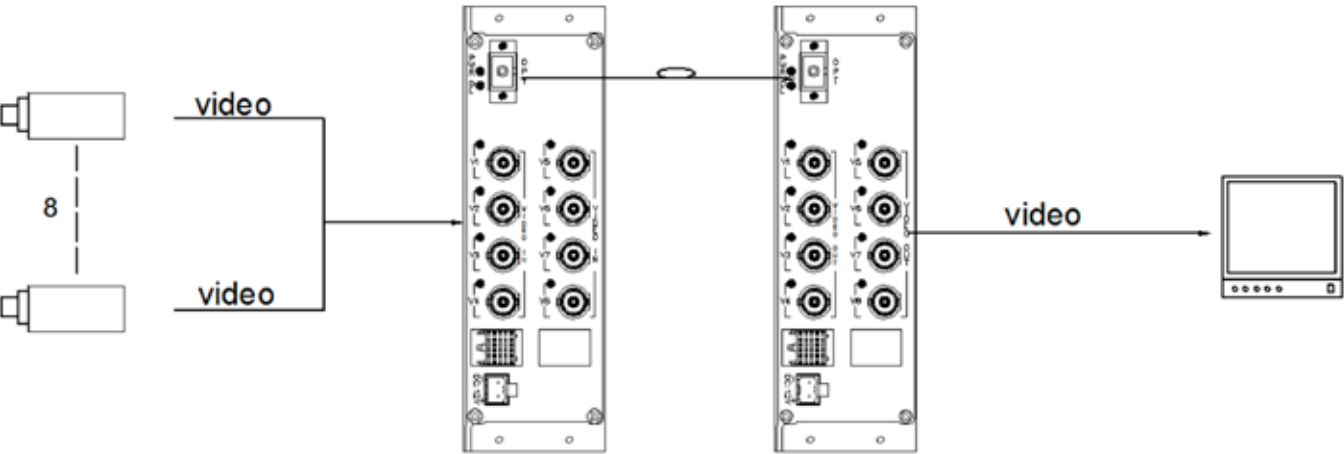
| Mechanical | |
|--------------------------------------|---|
| Dimensions or Module H x W x D in mm | (a) 25.4 x 158.4 x 231.8 1-Slot (b) 50.8 x 158.4 x 231.8 2-Slot (c) 76.2 x 158.4 x 231.8 3-Slot |
| Shipping weight | (a) 0.55kg 1-slot (b) 0.80kg 2-slot (c) 1.10kg 3-Slot |

Specifications (continued)

| Environmental | |
|-----------------------|-------------------------|
| MTBF | >100,000 hours |
| Operating Temperature | -40° C to +75° C |
| Storage Temperature | -40° C to +85° C |
| Relative Humidity | 0 to 95% non-condensing |

| Power Requirement | |
|---------------------|--|
| Supply Voltage | 12V DC (Standalone: derived from an external adaptor via the 2-pin connector at rear of the module. Rack chassis: derived from the chassis PSU via the 30-pin connector at rear of the module.) |
| Card Protection | Poly Fuse (1 A) |
| Current Consumption | Max. 500mA |

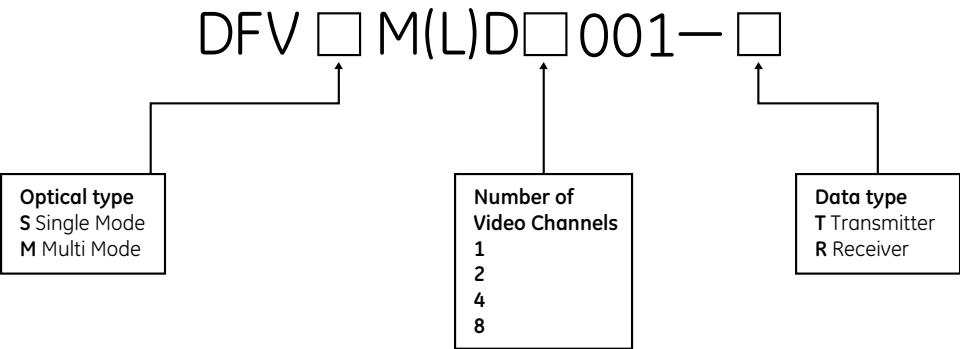
Application Diagram



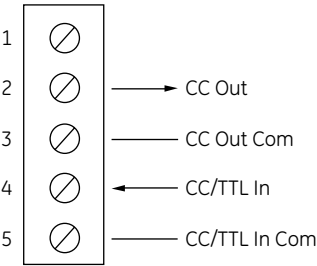
Model Number Key

| | | | | | |
|----|--------------------|----|-----------------------------------|--------------|----------------------------|
| DF | 10 bit rack/module | SM | Single mode | First digit | Number of video channels |
| F | 8 bit rack/module | MM | Multimode | Second digit | Number of audio channels |
| MF | 8 bit module only | L | Long distance | Third digit | Number of data channels |
| V | Video | D | Duplex | Forth digit | Number of contact closures |
| D | Data | F | Forward data Only 8 channel CC | T | Transmitter |
| A | Audio | | | R | Receiver |
| CC | Contact Closure | | | | |

Part Number Key



Pin Connections



North America
T 888-GE-SECURITY
888-437-3287
F 503-691-7566

Asia
T 852-2907-8108
F 852-2142-5063

Australia and New Zealand
T 613-9239-1200
F 613-9239-1299

Europe
T 32-2-719-98-47
F 32-2-719-98-46

Latin America
T 305-593-4301
F 305-593-4300

Specifications subject to
change without notice.

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Ordering Information

| Product Type | Model | Description | Opt. PWR. Budget dB | | Max. Distance Km | No. of Slots | |
|---|-------------|-------------------|--|--------|------------------|--------------|---|
| | | | 1310nm | 1550nm | | | |
| (i) Single-mode | (i) 1V+CC | (a) DFVSMD1001-T | 1-Ch. Video Transmitter and 1-Ch. Bi-Directional Control Transceiver | 18 | 14 | 40 | 1 |
| | | (b) DFVSMD1001-R | 1-Ch. Video Receiver and 1-Ch. Bi-Directional Control Transceiver | 18 | 14 | 40 | 1 |
| | (ii) 2V+CC | (a) DFVSMD2001-T | 2-Ch. Video Transmitter and 1-Ch. Bi-Directional Control Transceiver | 25 | 14 | 40 | 1 |
| | | (b) DFVSMD2001-R | 2-Ch. Video Receiver and 1-Ch. Bi-Directional Control Transceiver | 25 | 14 | 40 | 1 |
| | (iii) 4V+CC | (a) DFVSMD4001-T | 4-Ch. Video Transmitter and 1-Ch. Bi-Directional Control Transceiver | 12 | 14 | 40 | 2 |
| | | (b) DFVSMD4001-R | 4-Ch. Video Receiver and 1-Ch. Bi-Directional Control Transceiver | 12 | 14 | 40 | 2 |
| | (iv) 8V+CC | (a) DFVSMD8001-T | 8-Ch. Video Transmitter and 1-Ch. Bi-Directional Control Transceiver | 18 | 14 | 40 | 2 |
| | | (b) DFVSMD8001-R | 8-Ch. Video Receiver and 1-Ch. Bi-Directional Control Transceiver | 18 | 14 | 40 | 2 |
| (ii) Single-mode (For Long Distance Transmission) | (i) 1V+CC | (a) DFVSMLD1001-T | 1-Ch. Video Transmitter and 1-Ch. Bi-Directional Control Transceiver | 25 | 19 | 60 | 1 |
| | | (b) DFVSMLD1001-R | 1-Ch. Video Receiver and 1-Ch. Bi-Directional Control Transceiver | 25 | 19 | 60 | 1 |
| | (ii) 2V+CC | (a) DFVSMLD2001-T | 2-Ch. Video Transmitter and 1-Ch. Bi-Directional Control Transceiver | 25 | 19 | 60 | 1 |
| | | (b) DFVSMLD2001-R | 2-Ch. Video Receiver and 1-Ch. Bi-Directional Control Transceiver | 25 | 19 | 60 | 1 |
| | (iii) 4V+CC | (a) DFVSMLD4001-T | 4-Ch. Video Transmitter and 1-Ch. Bi-Directional Control Transceiver | 25 | 19 | 60 | 2 |
| | | (b) DFVSMLD4001-R | 4-Ch. Video Receiver and 1-Ch. Bi-Directional Control Transceiver | 25 | 19 | 60 | 2 |
| | (iv) 8V+CC | (a) DFVSMLD8001-T | 8-Ch. Video Transmitter and 1-Ch. Bi-Directional Control Transceiver | 25 | 19 | 60 | 2 |
| | | (b) DFVSMLD8001-R | 8-Ch. Video Receiver and 1-Ch. Bi-Directional Control Transceiver | 25 | 19 | 60 | 2 |
| (iii) Multi-mode (62.5/125µm) | (i) 1V+CC | (a) DFVMMD1001-T | 1-Ch. Video Transmitter and 1-Ch. Bi-Directional Control Transceiver | 12 | 12 | 4 | 1 |
| | | (b) DFVMMD1001-R | 1-Ch. Video Receiver and 1-Ch. Bi-Directional Control Transceiver | 12 | 12 | 4 | 1 |
| | (ii) 2V+CC | (a) DFVMMD2001-T | 2-Ch. Video Transmitter and 1-Ch. Bi-Directional Control Transceiver | 10 | 10 | 3 | 1 |
| | | (b) DFVMMD2001-R | 2-Ch. Video Receiver and 1-Ch. Bi-Directional Control Transceiver | 10 | 10 | 3 | 1 |
| | (iii) 4V+CC | (a) DFVMMD4001-T | 4-Ch. Video Transmitter and 1-Ch. Bi-Directional Control Transceiver | 8 | 8 | 2 | 2 |
| | | (b) DFVMMD4001-R | 4-Ch. Video Receiver and 1-Ch. Bi-Directional Control Transceiver | 8 | 8 | 2 | 2 |
| | (iv) 8V+CC | (a) DFVMMD8001-T | 8-Ch. Video Transmitter and 1-Ch. Bi-Directional Control Transceiver | 8 | 8 | 1 | 2 |
| | | (b) DFVMMD8001-R | 8-Ch. Video Receiver and 1-Ch. Bi-Directional Control Transceiver | 8 | 8 | 1 | 2 |

Accessories DFR. 19' Rack mount chassis (purchased separately) for housing modules

Options ST type connector is standard

Notes: Transmission distance will suffer if additional losses are introduced by the optical connectors, fusions, splices and the fibers within the network. Operating distance of multimode is limited by the characteristics of the fiber bandwidth

