Overview

GE's 8-bit Digital Video and Data Modules are now IFS. For use in industrial security and Intelligent Transportation Systems (ITS) applications, the 8-bit series video and data transmitters and receivers feature a robust design well-suited for harsh environments. These modules support 8-bit PCM digital video transmission that provides no video degradation versus optical path loss, as well as, RS-232/422/485 serial data. All modules are laser-based and optimized for the highest optical performance on either one multi-mode or single mode fiber.

The plug-and-play design provides broad-range compatibility with major video surveillance manufacturers. The unique unified modular design can easily be deployed in either stand-alone or rack-mount applications. In-field configuration flexibility includes a diverse range of optics and connector choices to meet specific system and connectivity requirements. In addition, remote health and status monitoring can be implemented via the IFS Smart Rack Network Module.

Standard Features

Video

- Compatible with NTSC or PAL video standards
- 8-bit digitally encoded (non-compressed) video transmission
- No video degradation over the entire operating distance

Data

- Meets EIA RS-232/422/485 specifications
- Full RS-485 Tri-state support
- Simplex or full-duplex operation
- Transparent to data encoding
- Data rates up to 115.2Kbps

Optical

- One fiber design
- High performance laser-based optics
- Multi-mode or single mode versions
- Distances up to 60Km

Robust Design

- Plug-and-play design, no in-field adjustments required
- Unified modular design for stand-alone or rack-mount installation
- Hot-swappable design
- Wide operating temperature range of -40° C to +75° C
- Designed for use in harsh environments

Local & Remote Diagnostics

- Service-friendly LED status indicators on both front and rear of the module provide for local monitoring
- Remote health & status monitoring via Smart Rack IP Network Module

Warranty

- Comprehensive Lifetime Warranty

8-bit Digital Video & Data Transmitters and Receivers

Specifications

Video	
Composite Video I/O	1 Volt pk-pk (75 ohms)
Bandwidth	6 Mhz
Differential Gain	<2%
Differential Phase	<1° Typical
Tilt	1%
SNR-CCIR Weighted	≥ 53dB

Data	
Data Interface	RS-232, RS-422, RS-485 (2 or 4-wire) w/Tri-state
Data Format	DIP switch selectable
Data Rate	0~115.2Kbps
Operating Mode	Simplex or Full-Duplex
Data Protocol	Protocol transparent
Line Carrier Detection	RS-485 (2/4-wire) Tri-state output

Optical	
Emitter Type	Laser diode
Wavelength	1310/1550nm
Number of Fibers	1

LED Indicators	
Video Presence	Green/Present; Red/Absent
Data Status	Green/Present; Red/Absent
Power	Green/On

| Connectors	
Video	BNC
Data	7-pin screw terminal
Optical	ST (Standard); optional SC or FC connector kits available*
Power (surface-mount)	2-pin screw terminal block
Power (rack-mount)	10-pin smart bus connector

Electrical & Mechanical	
Operating Voltage	12VDC
Current Draw	500mA Max.
Current Protection	Automatic resettable fuse
Dimensions (in./cm.) (HxWxD)	1.0 x 6.2 x 9.1 in. (2.54 x 15.84 x 23.18 cm)
Shipping Weight	1.2 lbs. / 0.55kg

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
Regulatory Compliance	FCC, UL, CE, C-Tick, FDA

Typical Application
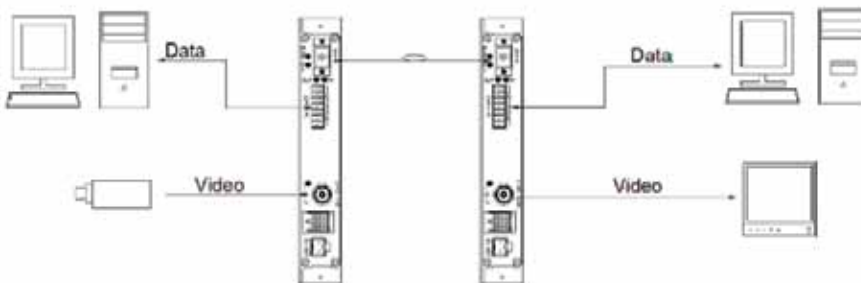
Ordering Information

Fiber	Part Number	Description	Wavelength	Optical Pwr Budget*	Max. Distance**	Rack Slots
8-bit Digital Video / Data Transceiver						
Multi-mode 62.5/125µm	FVMMD101-TX FVMMD101-RX	Digital 8-bit Video TX/Data TCVR, 1 MM Fiber Digital 8-bit Video RX/Data TCVR, 1 MM Fiber	1310/1550 nm	12 dB	2.5 miles (4km)	1
Single mode 9/125µm	FVSMD101-TX FVSMD101-RX	Digital 8-bit Video RX/Dat TX, 1 SM Fiber Digital 8-bit Video TTX/Dat RX, 1 SM Fiber	1310/1550 nm	14 dB	25 miles (40km)	1
	FVSMLD101-TX FVSMLD101-RX	Digital 8-bit Video RX/Data TX, 1 SM Fiber, LD Digital 8-bit Video TX/Data RX, 1 SM Fiber, LD	1310/1550 nm	19 dB	37 miles (60km)	1

*For 50/125 fiber, subtract 4dB from optical budget

**Optical transmission distance is limited to optical loss of the fiber and any additional loss introduced by connectors, splices and patch panels. Operating distance for multi-mode is limited by fiber bandwidth due to the inherent characteristic of modal dispersion within MM fiber.

Note: Power supply must be ordered separately.

Accessories

Connector Kits	
SC/FC-OA	SC to FC Optical Adaptor
SC/SC-OA	SC to SC Optical Adaptor
SC/ST-OA	SC to ST Optical Adaptor

Cable Kits	
SC/LC-MM-FPC	SC to LC MM Fiber Patch Cord
SC/LC-SM-FPC	SC to SC Optical Adaptor

Smart Rack Chassis	
DFR	Smart Rack - Chassis Only

Security Products by GE are now part of the UTC Fire & Security family

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A United Technologies Company