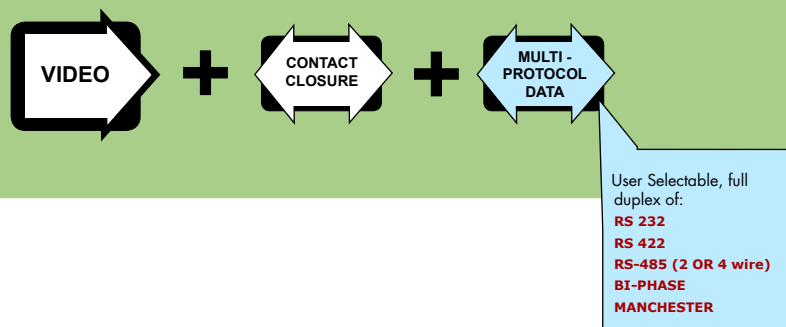


Digitally Encoded Four 10-Bit 7MHz Video Mux  
 with One Full Duplex Multiprotocol Data  
 and One Bi-directional Contact Closure



#### FEATURES

- 10 Bit 7 MHz Video Digital Encoding
- Real Time Video and Data Transmission
- Low Power Consumption
- High Efficiency, Isolated Power Supply
- Meets RS-250C Short Haul Transmission Specifications
- NTSC, PAL, SECAM Compatible
- Full Duplex Multiprotocol Data Channel Supports RS-232, RS-422 & RS-485 (2 & 4-wire)
- Wide Optical Dynamic Range: Eliminates Need For Optical Attenuators
- Data protocol conversion capable
- SpectraSmart™ PC Based Network Management
- SpectraView™ Fault / Setup Firmware
- Local LED Status Indicators to Monitor Critical System Parameters
- ST, FC Optical Connector
- Hot Swappable Cards
- Laser Back - Biased Photo Detector Circuitry for Stable Optical Output Over Full Temperature Range.
- 75 Ohm BNC Video Connector (Gold Center Pin)
- Meets EIA RS-170, RS-343A Formats
- RJ45 Connector for Data and Contact Closure

#### MARKETS

- ✓ Security and Surveillance
- ✓ Intelligent Transportation System (ITS)
- ✓ Access Control Systems
- ✓ Campus Lecture Networks

#### DESCRIPTION

The FT/FR-4W1C1G/1C1G-x series fiber optic transmission system that utilizes Meridian's new digital encoding technology to transport following signals:

- Four real-time, high quality, 10-bit 7MHz video channels
- One Bi-directional Contact Closure channel
- One channel of user selectable, full duplex RS-232, RS-485 (2 or 4 wire), RS-422, Manchester, Bi-Phase data
- End-to-End data protocol conversion capable

Both, multimode and singlemode, one fiber versions are available. The versatility of the FT/FR-4W1C1G/1C1G-x system is enhanced by *SpectraView*, an On-Screen Video Diagnostic / Setup firmware system and *SpectraSmart*, an optional PC Based Network Diagnostic System. *SpectraView* monitors the integrity of the video signal and the fiber link. A break in the fiber path will cause a loss of fiber alarm to be displayed on an associated monitor. *SpectraView* is easy to use, always active and eliminates the need for additional test equipment. *SpectraView* also includes a selectable on-board audio & data test signal generator with built-in local and remote loop-back functions. This card is also capable of data protocol conversions within the link to provide additional data flexibility. If greater diagnostic capability is required, the functionality of FT/FR-4W1C1G/1C1G-x series is further enhanced by its compatibility with Meridian's PC based SpectraSmart™, Network Management and Remote Diagnostic Software System. SpectraSmart supervises the operating parameters of the transmission system such as status on video levels, sync, carrier detect, voltage, temperature, optical levels, data present etc. See the SpectraSmart brochure for more details.

#### CONFIGURATIONS

The FT/FR-4W1C1G/1C1G-x product are available as rack mount cards that can be installed in Meridian's card chassis, desk chassis and 19" racking frames. This system can be configured in either star (module to rack) or trunking (rack to rack) configurations. These systems can be made a standalone system by using the SR-500/S, 1 slot desk / wall mount chassis (87VAC-264VAC).

## SPECIFICATIONS:

### Video

Format .....	NTSC, PAL, SECAM
Voltage/Impedance .....	1 Vp-p, 75 Ohm, 1.5 Vp-p max.
Bandwidth .....	5 Hz to 7 MHz @ -3 dB
Differential Gain .....	<0.6%
Differential Phase .....	<0.3°
SNR .....	>67 dB (weighted)*
Return Loss .....	>30 dB
Field Tilt .....	< 0.5%

### Data

Formats .....	RS-232 w/ full speed handshake, RS-485, RS-422, Manchester or Bi-Phase
Data Rate (RS-232).....	DC to 125 Kb/s
Data Rate (RS-422, RS-485)...	DC to 250 Kb/s
Bit Error Rate .....	10 <sup>-9</sup> *

### Contact Closure

Rate .....	10 Hz.(Per Channel)
Contact Rating .....	0.3A, 30V AC / DC
Contact Bounce Time .....	5 ms

### Optical

Fiber Data Rate .....	900 Mb/s
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### Connectors

Video .....	75 Ohm BNC (Gold Center Pin)
Optical .....	ST - MM(default), FC - SM(default)
Power (module) .....	See SR-500 Brochure for details
Data .....	RJ45 Connector

\* measured @ max. optical budget

\*\* Due to variations of drivers and diagnostic options, power shown @ max value

### Power \*\*

Card .....	4 Watts
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### Indicators (LEDs)

1 - Green .....	Power On
1 - Bi-color .....	TX Carrier/ Laser Over Current
1 - Bi-color .....	RX Carrier - Present / Error
4 - Bi-color .....	Video Present / Overload
4 - Bi-color .....	Sync. Present / Load Absent
2 - Green .....	Data Present
2 - Green .....	Contact Closure Present

### Physical

Dimensions (Card) .....	160 mm (6.3") L, 127 mm (5") W 20mm (0.80") W
Weight (Card) .....	450 gms (16 Oz)
No. of Slots .....	1
Module .....	See SR-500 Brochure

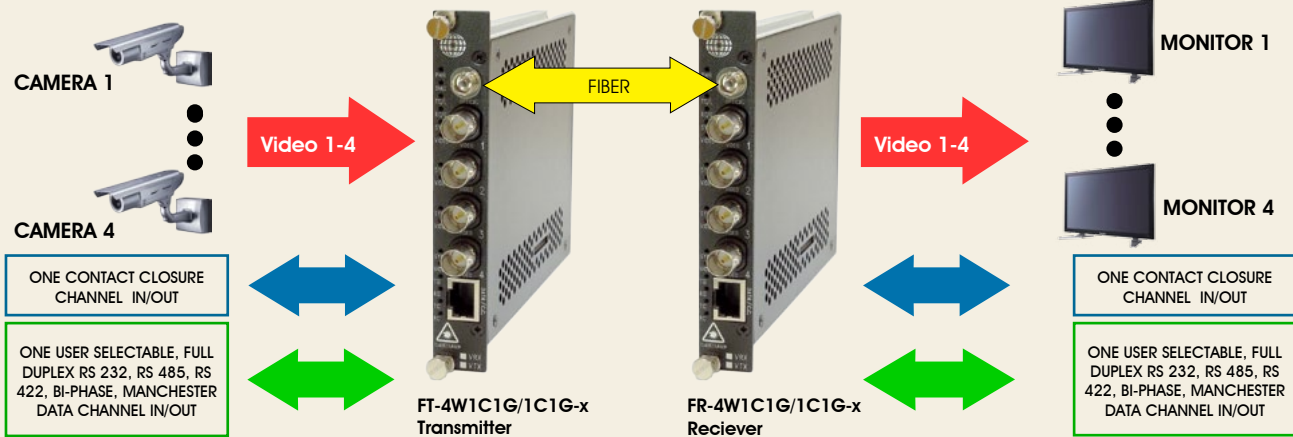
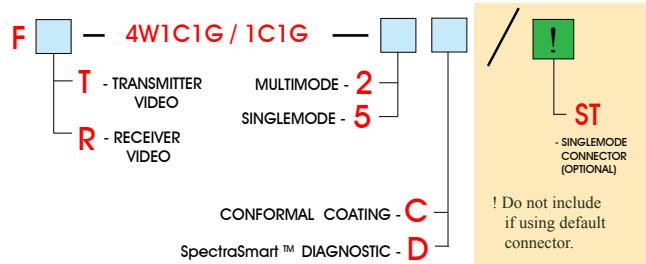
### Environmental

Operating Temperature ...	-34°C to +74°C
Storage Temperature .....	-55°C to +85°C
Relative Humidity .....	0 to 95% Non-condensing

### Quality

MTBF .....	>170,000 hours @ Ground Fix 35°C per MIL217F
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### Part Numbers:



## OPTICAL:

Optical Code	Fiber Type/Size (um)	Optical Output (dBm)	Receiver Sensitivity (dBm)	Optical Budget (dB)	Wavelength (nm)	Optical Connector	Optical Dynamic Range (dB)	Estimated Maximum Transmission Distance (km)
2	Multimode (FP Laser) 62.5 / 125	-5	-25	20	1300 / 850	ST	25	2
5	Singlemode (FP Laser) 9 / 125	-5	-25	20	1310 / 1550	ST, FC	25	50

Meridian Technologies Inc.

700 Elmont Road. • Elmont, NY 11003 • 516. 285. 1000 • FAX 516. 285. 6300 • E-mail sales@meridian-tech.com  
 www.meridian-tech.com

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