



**MERIDIAN**  
TECHNOLOGIES

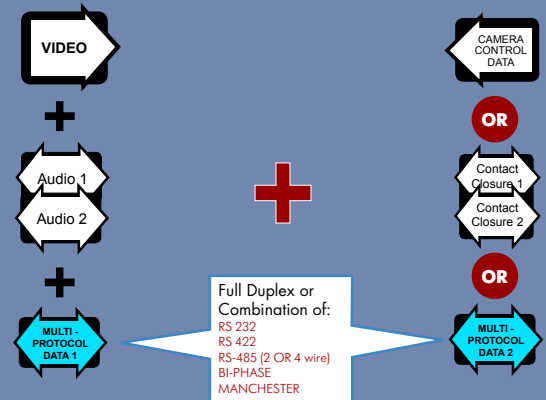
FT/FR-1U2A2C2G/1M2A2C2G-x

**DigiCool™**



## EXTENDED RANGE CAMERA CONTROL

Digitally Encoded One 10-Bit 10MHz Video Mux with Two Full Duplex 24-Bit Audio, Two Bi-directional Contact Closure, Two Full Duplex Multiprotocol Data and One Return Channel of Pelco® Coaxitron or Panasonic® Up-the-coax Control Data



### FEATURES

- One Digitally Encoded 10-bit Video Signal with One Integrated Pelco® Coaxitron or Panasonic® Up-the-coax PTZ Camera Control
- 10 MHz Video Bandwidth
- Model supports both Pelco® Coaxitron and Panasonic® "up-the-coax" PTZ Camera Control
- Integrated Pelco® Coaxitron or Panasonic® Up-the-coax PTZ Camera Control is Time Base Corrected
- Meets RS-250C Short Haul Transmission Specifications
- NTSC, PAL, SECAM Compatible
- Two Channels of Bi-Directional Audio, Multi-protocol Data and Contact Closure
- Wide Optical Dynamic Range: Eliminates Need For Optical Attenuators
- Laser Based Systems for Multimode and Singlemode
- Surface Mount Technology (SMT) for High Reliability and Repeatability
- SpectraSmart™ PC Based Network Management
- SpectraView™ Fault / Setup Firmware
- Local LED Status Indicators to Monitor Critical System Diagnostics for Performance 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
- DB 25 Type Connectors for Audio, Data and Contact Closure

### DESCRIPTION

The FT/FR-1U2A2C2G/1M2A2C2G-x series fiber optic transmission system that takes advantage of Meridian's new digital encoding technology transmits following signals on permanent bases:

1. One real-time, high quality, 10-bit 10 MHz video
2. Two full duplex 24 bit audio
3. One user selectable, full duplex RS-232, RS-485 (2 or 4 wire), RS-422, Manchester, Bi-Phase or in combination

In addition, following signals are optionable and interchangeable:

4. One integrated Pelco® Coaxitron or Panasonic® Up-the-coax PTZ camera control data
5. One user selectable, full duplex RS-232, RS-485 (2 or 4 wire), RS-422, Manchester, Bi-Phase or in combination
6. Two full duplex contact closure channels

Each camera's PTZ can be individually controlled.

Time Base Correction feature aloud achive distances:

- up to 3Km for multimode
- up to 50Km for singlemode

Both, multimode and singlemode, one fiber versions are available. The functionality of this 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 DigiCool™ family products 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).

### MARKETS

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

## SPECIFICATIONS:

### Video

Format .....	NTSC, PAL, SECAM
Voltage/Impedance .....	1 Vp-p, 75 Ohm, 1.5 Vp-p max.
Bandwidth .....	5 Hz to 10 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

### Audio

I/O Impedance .....	600 Ohm (Bal.), 47 KOhm (Un Bal.)
Frequency Response .....	10 Hz to 20 KHz
SNR .....	>90dB (Weighted)@ 1 KHz
In/Out Level .....	-8 to +8 dBm (4V <sub>p-p</sub> max.) (+18 dBm available on request)
Total Harmonic Distortion ....	<0.01% @ 1KHz
Resolution .....	24 Bit

### Optical

Fiber Data Rate .....	350 Mb/s
-----------------------	----------

### Connectors

Video .....	75 Ohm BNC (Gold Center Pin)
Optical .....	ST - MM(default), FC - SM(default)
Power (module) .....	See SR-500 Brochure for details
Data/Audio/Contact closure ...	DB25 Female

\* measured @ max. optical budget

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

### Power \*\*

Card .....	5 Watts
------------	---------

### Indicators (LEDs)

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

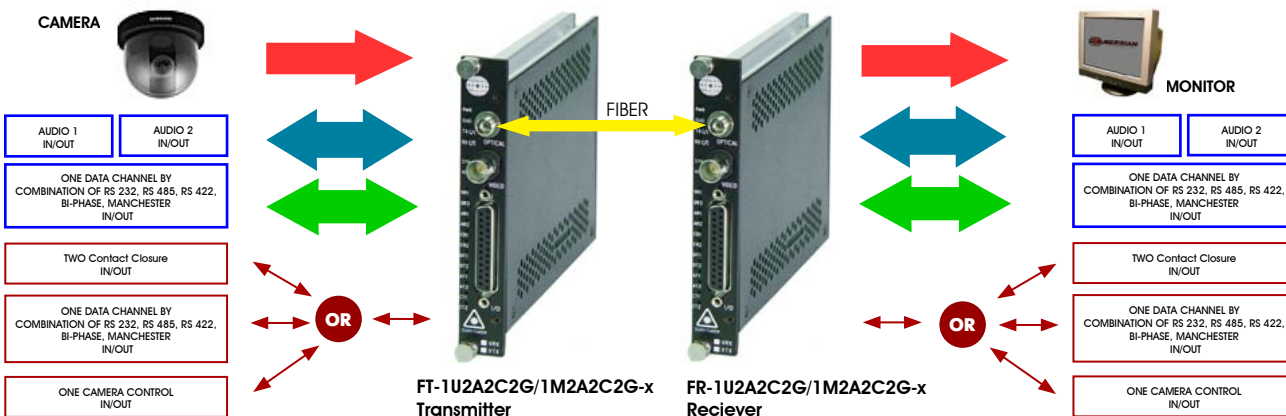
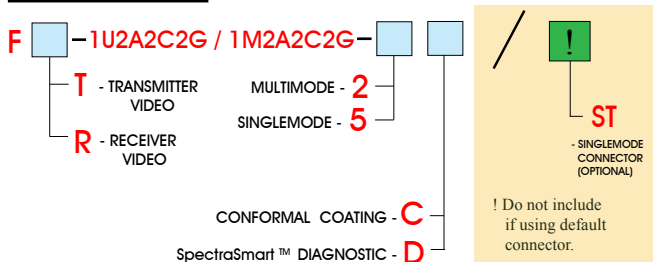
### Environmental

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
------------	---

### Part Numbers:



## OPTICAL:

Meridian optic code	Fiber Type/Size (um)	Optical Output (dBm)	Receiver Sensitivity (dBm)	Optical Budget (dB)	Wavelength (nm)	Optical Connector	Optical Dynamic Range (dB)	Max Distance (Km)
2	Multimode (FP Laser) 62.5 / 125	-5	-25	20	1300 / 850	ST	25	3
5	Singlemode (FP Laser) 9 / 125	-5	-25	20	1310 / 1550	ST, FC	25	55

Singlemode DFB lasers available on request.

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

ver 04/2014 C