



**MERIDIAN**  
TECHNOLOGIES

FT/FR-1U1A1C1G/1P1A1C1G-SFP

**DigiCool™**



## EXTENDED RANGE CAMERA CONTROL

Full Duplex or  
Combination of:  
RS-232  
RS-422  
RS-485 (2 OR 4 wire)  
BI-PHASE  
MANCHESTER



+



+



+



OR



### FEATURES

- Digitally Encoded 10-bit Video Signal with One Integrated Pelco® Coaxitron or Panasonic® Up-the-coax PTZ Camera Control
- 10 MHz Video Bandwidth
- 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
- One Channel of Bi-Directional Audio, Multi-protocol Data and Contact Closure
- Multimode, Singlemode and CWDM fiber options via SFP modules
- Wide Optical Dynamic Range: Eliminates Need For Optical Attenuators
- 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
- LC, SC Optical Connector (SFP dependent)
- 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
- Screw Terminals Type Connectors for Audio, Data and Contact Closure

### MARKETS

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

### DESCRIPTION

The FT/FR-1U1A1C1G/1P1A1C1G-SFP fiber optic transmission system takes advantage of Meridian's new digital encoding technology and transmits following signals on permanent bases:

- One real-time, high quality, 10-bit 10 MHz video
- One full duplex 24 bit audio
- 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:

- One integrated Pelco® Coaxitron or Panasonic® Up-the-coax PTZ camera control data
- One full duplex contact closure channel

Each camera's PTZ can be individually controlled. With Time Base Correction feature, these systems can achieve distances:

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

System is employing the industry standard Small Form Pluggable (SFP) optical device. This SFP gives you the option for either singlemode, multimode or CWDM wavelength selections by simply plugging in the appropriate SFP module.

The functionality of this system 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).

## 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 .....	LC, SC - SFP dependent
Power (module) .....	See SR-500 Brochure for details
Data/Audio/Contact closure ...	Screw Terminals Connector

### 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
2 - Green .....	Data Present
2 - Bi-Color .....	Audio Present / Overload
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

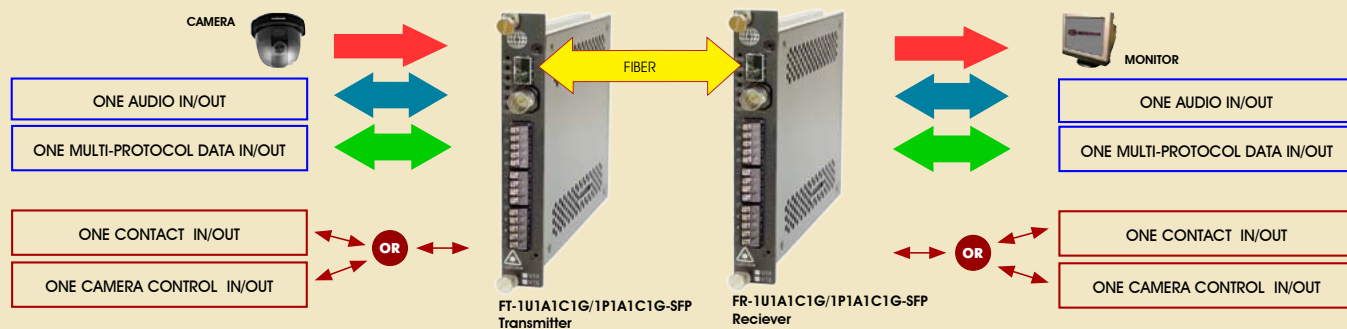
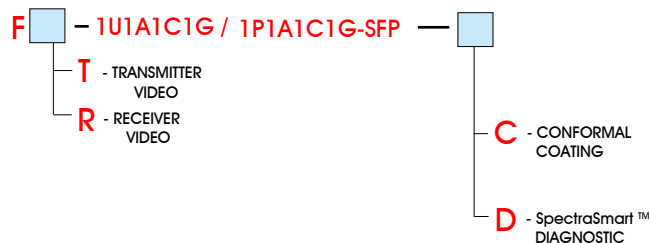
### Enviromental

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:



### SFP OPTIONS:

The SFP series products are available for both singlemode and multimode fiber applications and either one or two fiber versions.  
Recommended optical speed for this product is 1.25 Gb/s.

For more specifications on a SFP optical devices go to SFP data sheet clicking [or](#)

go to: **WWW.MERIDIAN-TECH.COM -> PRODUCTS -> ACCESSORIES -> SFP OPTICAL DEVICES**