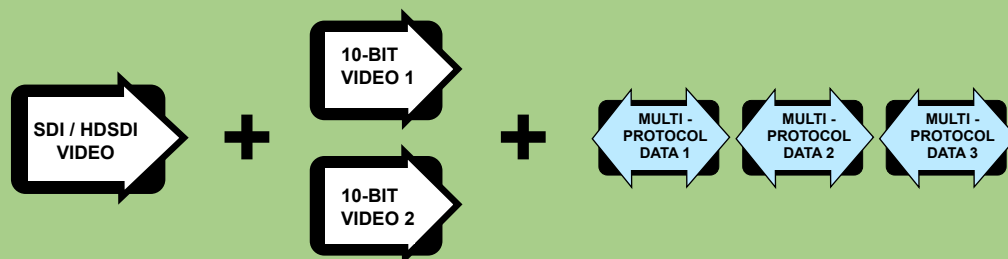


Digitally Encoded One SDI / HDSDI Video  
 and Two 10-Bit 7MHz Video Mux  
 with Three Full Duplex Multiprotocol Data



## FEATURES

- SDI / HD-SDI Video Transmission (19 Mbps to 1.5Gbps)
- Supports The Following Formats :
  - 19.4 Mbps (SMPTE 310M)
  - 143 To 540 Mbps SMPTE 259M/344M
  - 1.485 Gbps SMPTE 292M HDTV
  - DVB-ASI at 270 Mbps
  - SMPTE 305M SDTI Rates
- Error Free Pathological Pattern Performance
- 10 Bit 7 MHz Video Digital Encoding
- Real Time Video and Data Transmission
- Low Power Consumption
- Meets RS-250C Short Haul Transmission Specifications
- NTSC, PAL, SECAM Compatible
- Full Duplex Multiprotocol Data Channel Supports RS-232, RS-422 and RS-485 (2 & 4-wire)
- Wide Optical Dynamic Range: Eliminates Need For Optical Attenuators
- Surface Mount Technology (SMT) for High Reliability and Repeatability
- 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
- High Density DB-15 Connector for Data

## DESCRIPTION

The FT/FR-1HD2W3G/3G-12 series fiber optic transmission system that takes advantage of Meridian's new digital encoding technology transmits following signals:

1. One channel of SDI / HDSDI video
2. Two real-time, high quality, 10-bit 7MHz video
3. Three channel of user selectable, full duplex RS-232, RS-485 (2 or 4 wire), RS-422, Manchester, Bi-Phase or in combination

System transmits over one Singlemode fiber.

The versatility of the FT/FR-1HD2W3G/3G-12 system is enhanced by *SpectraView*, an On-Screen Video Diagnostic / Setup firmware system. The *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.

## CONFIGURATIONS

The FT/FR-1HD2W3G/3G-12 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).

## MARKETS

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

## SPECIFICATIONS:

### SDI/HDSDI Video

Formats	19.4 Mbps (SMPTE 310M) 143 To 540 Mbps SMPTE 259M/344M 1.485 Gbps SMPTE 292M HDTV DVB-ASI at 270 Mbps SMPTE 305M SDTI Rates
Nominal Level	0.8 Vp-p, 1.0 Vp-p max.
Data Rate	19 Mb/s - 1.5 Gb/s
Impedance	75 Ohm
Gain	Unity
Input Coupling	AC
Return Loss	>15 dB
Jitter (Pattological Data Pattern)	< 0.2 UI
Cable Equalization	Automatic 0-70 m @ 1.5 Gb/s
Bit-Error Rate (0 to -20dBm)	10 <sup>-12</sup>

### 10-BIT 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>

### Connectors

Video	75 Ohm BNC (Gold Center Pin)
Optical	ST, FC
Power (module)	See SR-500 Brochure for details
Data	High Density DB-15 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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### Optical

Wavelength HD Video	1490 nm
Wavelength 10-Bit Video	1310 nm
Wavelength Data	1550 nm
Fiber Data Rate	1.5 Gb/s

### Indicators (LEDs)

1 - Green	Power On
1 - Bi-color	TX Carrier/ Laser Over Current
1 - Bi-color	RX Carrier - Present / Error
1 - Bi-color	SDI/HD-SDI Signal Present (TX)
1 - Bi-color	SDI/HD-SDI Level 0/-20 dB (RX)
2 - Bi-color	Video Present / Overload
2 - Bi-color	Sync. Present / Load Absent
6 - Green	Data 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

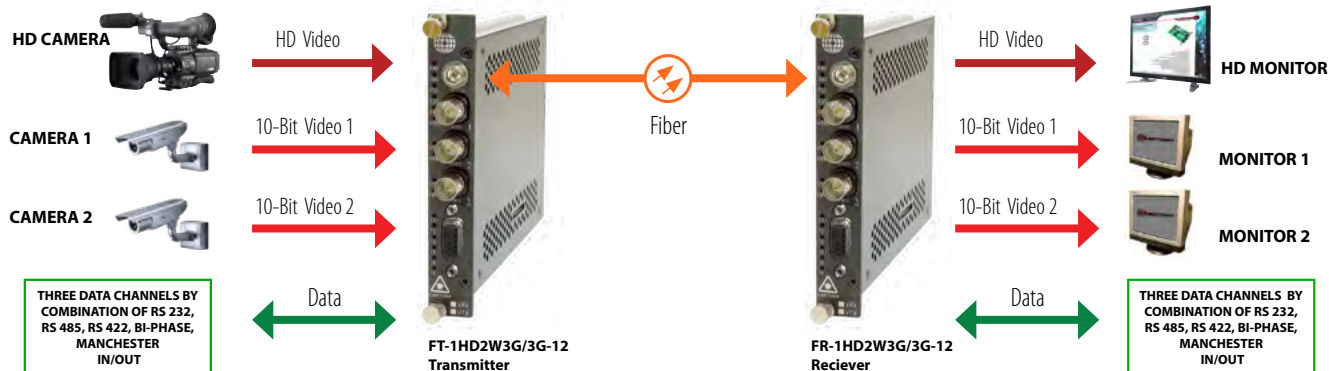
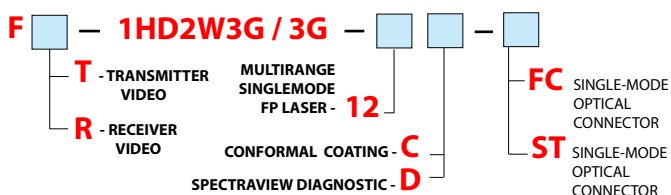
### Environmental

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:

Meridian Optical 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)
12	Singlemode (FP Laser) 9 / 125	-5	-25	20	1310 / 1490 / 1550	FC, ST	25	55

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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