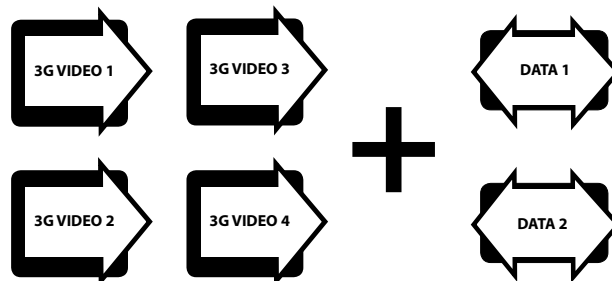


Four Channels Multi-rate 3G-SDI (4K/UHD) Video
with Data over One Single-mode Fiber



FEATURES:

- Transmission of Two 4K/UHD Video at 30 fps or One 4K/UHD Video at 60 fps
- Transmission of Multi-Rate SDI / HD-SDI / 3G-SDI (19 Mbps to 2.97Gbps (3G))
- Real-Time, Uncompressed Video Transmission
- 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
 - 2.97Gbps (3G) SMPTE 424M
 - SMPTE 305M SDTI Rates
- Simplex or Full Duplex RS-232, RS-485 Data
- Supports - Canon C500 4K dual-link Digital Cinema Camera with distances in excess of 50 Km
- Error Free Pathological Pattern Performance
- Rack Mounted Card Units
- Supports Embedded Audio and Metadata Distances in Excess of 50 km
- Wide Dynamic Range: Eliminates Need for Optical Attenuators
- Available with ST or FC Optical Connectors
- Requires No User Adjustments
- Laser Back - Biased Photo Detector Circuitry for Stable Optical Output Over Full Temperature Range.
- Screw Terminal Type Connectors for Data



DESCRIPTION:

The FTFR-4HGx/x fiber optic transmission system takes advantage of Meridian's new digital encoding technology and transmits following signals over one singlemode fiber:

1. Four channels of real-time 3G-SDI Video (4K/UHD support)
2. Simplex or Full Duplex RS-232, RS-485 or RS-422 Data

This FT/FR-4HGx/x series will support either one 4K/UHD signal at 60 fps, or two 4K/UHD signals at 30 fps simultaneously.

Using Coarse Wavelength Division Multiplexing (CWDM) technology, the content details of each video channel are preserved by real-time transmission of each video channel in a compact card format. These serial digital video transmitters & receivers provide broadcast quality transmission of the industry standard range of digital video data rates.

Data formats are factory preconfigured on customer request. Select from variety of protocols, like RS-232, RS-485 (2-wire), RS-485 (4-wire) or RS-422.

No user adjustments are needed thus ensuring fast deployment and setup with broadcast quality results.

Please refer to the Ordering Information Table below for possible data protocol combinations.

CONFIGURATIONS:

The FTFR-4HGx/x 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-1000 series, 2 slot desk / wall mount chassis (87VAC-264VAC).

MARKETS:

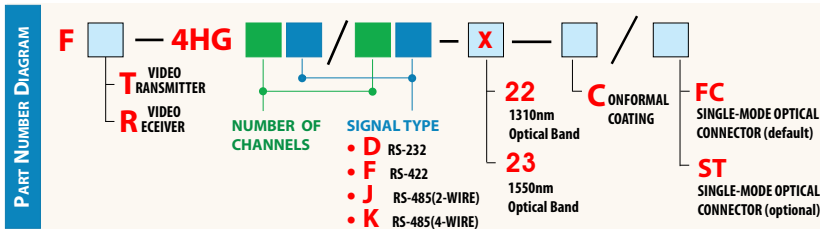
- ✓ Remote broadcast camera links
- ✓ Sporting events, concerts, etc.
- ✓ Media feeds
- ✓ Video production
- ✓ Studio to studio & head end feeds
- ✓ Military information displays
- ✓ Video Transport Systems

SPECIFICATIONS:

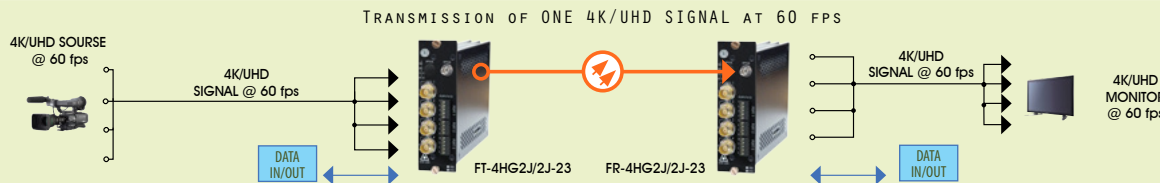
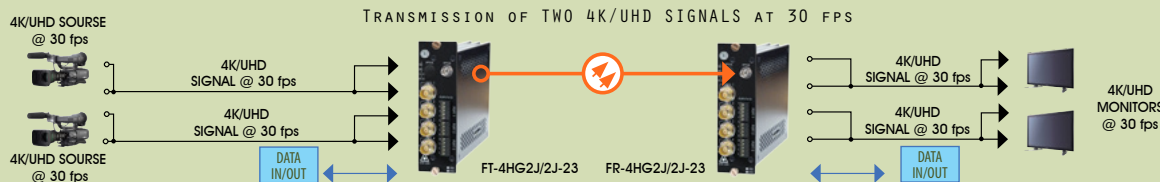
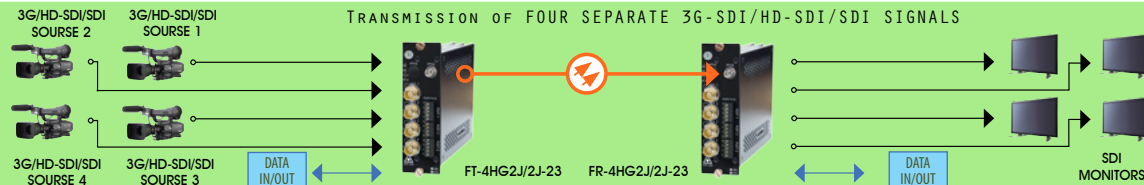
Video	
Formats	19.4 Mbps (SMPTE 310M) 143 To 540 Mbps SMPTE 259M/344M 1.485 Gbps SMPTE 292M HDTV DVB-ASI at 270 Mbps 2.97Gbps (3G) SMPTE 424M SMPTE 305M SDTI Rates
Nominal Level	0.8 Vp-p, 1.0 Vp-p max.
Data Rate	19Mb/s - 3Gb/s
Impedance	75 Ohm
Gain	Unity
Input Coupling	AC
Return Loss	>15 dB
Jitter (Pattological Data Pattern)	< 0.2 UI
Cable Equalization	Automatic 0-70m @ 3 Gb/s
Bit-Error Rate (0 to -20dBm)	10 ⁻¹²

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, RS-422)	DC to 250 Kb/s
Bit Error Rate	10 ⁻⁹
Optical	
Wavelengths 1310 Band	1290nm, 1310nm, 1330nm, 1350nm, 1370nm, 1390nm
Wavelengths 1550 Band	1510nm, 1530nm, 1550nm, 1570nm, 1590nm, 1610nm
Output power	+1 dBm per channel
Connectors	
Video	75 Ohm BNC (Gold Center Pin)
Optical	FC (default), ST (optional)
Data	Screw Terminals

Power		
Power Consumption		2.8 W
Indicators		
1	Green	Power On
4	Green	Signal Present (TX)
4	Green	Laser (TX)
4	Green	Level 0/-10 dBm (RX)
4	Green	Level -10/-20 dBm (RX)
2	Green	Tx Data Present
2	Green	Rx Data Present
Physical		
Dimensions		160(W) x 127(D) x 44 (H) mm (6.3 x 5 x 1.7 inch)
Weight		213 gms (0.5 lb)
No of Slots		2
Module		See series SR-1000 Chassis specs.
Environmental		
Operating Temperature		-10°C to +50°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



Product	Signals	Wavelengths Distribution	Ordering Information						
Transmitter card, SM 1310nm Optical Band	Video	ch1=1290nm, ch2=1310nm, ch3=1330nm, ch4=1350nm	Part Numbers	Video Type	Data Type	Video Ch. Direction		Data Ch. Direction	
	Data	ch1=1370nm, ch2=1390nm				Forward	Return	Forward	Return
Receiver card, SM 1310nm Optical Band	Video	ch1=1290nm, ch2=1310nm, ch3=1330nm, ch4=1350nm	FT/FR-4HG2D-x	3G-SDI Video	RS-232	4		2	
	Data	ch1=1370nm, ch2=1390nm							
Transmitter card, SM 1550nm Optical Band	Video	ch1=1510nm, ch2=1530nm, ch3=1550nm, ch4=1570nm	FT/FR-4HG2F/2F-x	3G-SDI Video	RS-422	4		2	2
	Data	ch1=1590nm, ch2=1610nm	FT/FR-4HG2J/2J-x	3G-SDI Video	RS-485 (2-wire)	4		2	2
Receiver card, SM 1550nm Optical Band	Video	ch1=1510nm, ch2=1530nm, ch3=1550nm, ch4=1570nm	FT/FR-4HG2K/2K-x	3G-SDI Video	RS-485 (4-wire)	4		2	2
	Data	ch1=1590nm, ch2=1610nm							



FT/FR-4HG2J/2J-x link is shown

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)
22	Singlemode (DFB Laser) 9 / 125	+1 (per channel)	-19	20	1290, 1310, 1330, 1350, 1370, 1390	FC, ST	20	50
23	Singlemode (DFB Laser) 9 / 125	+1 (per channel)	-19	20	1510, 1530, 1550, 1570, 1590, 1610	FC, ST	20	60

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