

Digitally Encoded Four 10-Bit 7MHz Video Mux



FEATURES

- 10 Bit 7 MHz Video Digital Encoding
- Real Time Video Transmission
- Low Power Consumption
- High Efficiency, Isolated Power Supply
- Meets RS-250C Short Haul Transmission Specifications
- NTSC, PAL, SECAM Compatible
- Wide Optical Dynamic Range: Eliminates Need For Optical Attenuators
- Laser Based Systems for both Multimode and Singlemode modules
- 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 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

DESCRIPTION

The FT/FR-4W-x series fiber optic transmission system that takes advantage of Meridian's new digital encoding technology transmits following signals:

1. Four real-time, high quality, 10-bit 7MHz video

Both, multimode and singlemode, one fiber versions are available. The versatility of the FT/FR-4W-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.

If greater diagnostic capability is required, the functionality of FT/FR-4W-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 etc.. See the SpectraSmart™ brochure for more details.

CONFIGURATIONS

The DigiCool™ 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 7 MHz @ -3 dB
Differential Gain	<0.6%
Differential Phase	<0.3°
SNR	>67 dB (weighted)*
Return Loss	>30 dB
Field Tilt	< 0.5%

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

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

Physical

Dimensions (Card)	20 (W) x 127 (H) x 160 (D) mm (0.8 x 5.0 x 6.3 inch)
Weight (Card)	450 gms (16 Oz)
No. of Slots	1
Module	See SR-500 Brochure

Environmental

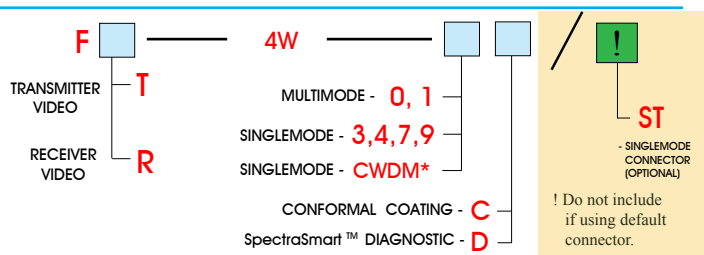
Operating Temperature ...	-34°C to +74°C
Storage Temperature	-55°C to +85°C
Relative Humidity	0 to 95% Non-condensing

Quality

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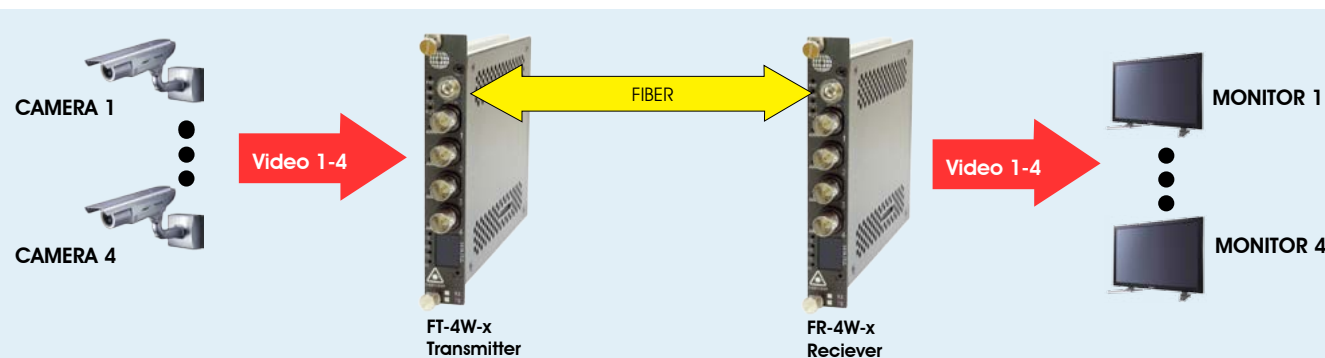
Part Numbers:

CWDM Laser Guide	
REFERENCE NUMBER	WAVELENGTH
27	CWDM, 1270 nm DFB Laser
29	CWDM, 1290 nm DFB Laser
31	CWDM, 1310 nm DFB Laser
33	CWDM, 1330 nm DFB Laser
35	CWDM, 1350 nm DFB Laser
37	CWDM, 1370 nm DFB Laser
39	CWDM, 1390 nm DFB Laser
41	CWDM, 1410 nm DFB Laser
47	CWDM, 1470 nm DFB Laser
49	CWDM, 1490 nm DFB Laser
51	CWDM, 1510 nm DFB Laser
53	CWDM, 1530 nm DFB Laser
55	CWDM, 1550 nm DFB Laser
57	CWDM, 1570 nm DFB Laser
59	CWDM, 1590 nm DFB Laser
61	CWDM, 1610 nm DFB Laser



STANDARD PART NUMBERS	
PART NUMBER	DESCRIPTION
FT-4W-0	Transmitter, multimode 850nm
FR-4W-0	Receiver, multimode 850nm
FT-4W-1	Transmitter, multimode 1300nm
FR-4W-1	Receiver, multimode 1300nm
FT-4W-3	Transmitter, singlemode 1310nm FP laser
FT-4W-4	Transmitter, singlemode 1550nm FP laser
FT-4W-7	Transmitter, singlemode 1550nm DFB laser
FT-4W-9	Transmitter, singlemode 1310nm DFB laser
FR-4W-3	Receiver, singlemode, wide band, 1270-1610nm

* See CWDM Laser Guide table for CWDM Lasers details



OPTICAL:

* measured @ max. optical budget

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

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)
0	Multimode (Laser) 62.5 / 125	-5	-25	20	850	ST	25	1
1	Multimode (Laser) 62.5 / 125	-5	-25	20	1300	ST	25	2
3	Singlemode (FP Laser) 9 / 125	-5	-25	20	1310	ST, FC	25	50
4	Singlemode (FP Laser) 9 / 125	-5	-25	20	1550	ST, FC	25	70
7, 9, CWDM	Singlemode (DFB Laser) 9 / 125	+1	-25	26	CWDM	ST, FC	25	90

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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