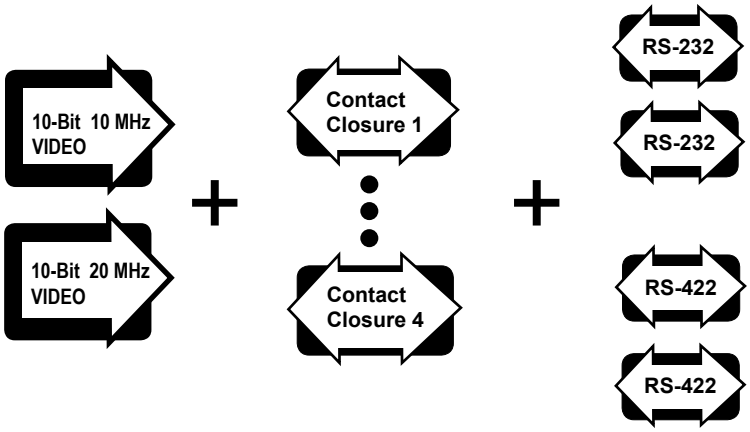
MERIDIAN TECHNOLOGIES

DT/DR-1U1X4C2D2F/4C2D2F-x DigiFlex™

Digitally-Encoded One Channel 10-Bit 10 MHz Video Plus One Channel 8-Bit 20 MHz Video with Four Bi-directional Contact Closures, Two Bi-directional RS-232 Data and Two Bi-directional RS-422 Data



FEATURES:

- 10-Bit 10 MHz and 8-Bit 20 MHz Video Digital Encoding
- Real Time Video, RS-422 and RS-232 Data
- Four Bi-Directional Contact Closure Channels
- 10 MHz & 20 MHz Video Bandwidth
- Meets RS-250C Short Haul Transmission Specifications
- NTSC, PAL, SECAM Compatible
- 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*™ Network Management Compatible
- 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 9 Type Connectors for Data
- DB 15 (HD) Type Connector for Contacts

DESCRIPTION:

The DT/DR-1U1X4C2D2F/4C2D2F-x series products incorporate digital encoding technology. This fiber optic module transmits 1 high performance simplex 10 MHz video signal, 1 real-time, high performance simplex 20 MHz video signal, 4 Bi-directional channels of Contact Closure, 2 Duplex channels of RS-232 and RS-422 data over one or two fibers. Both multimode and single-mode fiber versions are available. Meridian's digital product line incorporates plug-in personality signal cards to easily configure a wide variety of module types. The functionality of the DT/DR-1U1X4C2D2F/4C2D2F-x product is enhanced by its compatibility with Meridian's PC based SpectraSmart Network Management & Diagnostic Software system. SpectraSmart supervises the operating parameters of the transmission system such as the status on video levels, sync, digital carrier detect, voltages, temperatures, optical levels etc. See SpectraSmart brochure for further details.

CONFIGURATIONS:

The DT/DR-1U1X4C2D2F/4C2D2F-x product is available as rack mount cards and modules that can be installed in Meridian's card chassis, desk chaises 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/s, 2 slot desk / wall mount chassis (87VAC-264VAC)

MARKETS:

√ Intelligent transportation systems (ITS)
√ Security and surveillance
√ Access Control

SPECIFICATIONS:

Composite Video 10-Bit 10 MHz

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	<0.3º
SNR	>65 dB (weighted)*
Return Loss	>30 dB
Field Tilt	< 0.5%

Composite Video 8-Bit 20 MHz

Format	NTSC, PAL, SECAM
Voltage/Impedance	1 Vp-p, 75 Ohm, 1.5 Vp-p max.
Bandwidth	5 Hz to 20 MHz @ -3 dB
Differential Gain	<0.6%
Differential Phase	<0.3º
SNR	>60 dB (weighted)*
Return Loss	>30 dB
Field Tilt	< 0.5%

Contact Closure

Rate	10 Hz.(Per Channel)
Contact Rating	0.3A, 30V AC / DC
Contact Bounce Time	5 ms

Data

Formats	RS-232, RS-422
Data Rate RS-232	DC to 125 Kb/s
Data Rate RS-422	DC-1 Mb/s
Bit Error Rate	10^{-9*}

Optical

Fiber Data Rate	1 Gb/s

Connectors

Video	75 Ohm BNC (Gold Center Pin)
Optical	ST - MM(default), FC - SM(default)
Power (module)	See SR-1000 Brochure for details
Data	DB9 Female
Contacts	DB15 (HD) Female

Power **

Card	9 Watts

Indicators (LEDs)

1 - Green	Power On
1 - Bi-color	TX Carrier/ Laser Over Current
1 - Bi-color	RX Carrier - Present / Error
1 - Green	RX Optical Signal -Present/Absent
2 - Bi-color	Video Present / Overload
2 - Green	Video Sync. Present
8 - Green	Data Present
4 - Green	Transmit Contact CLosure
4 - Green	Receive Contact Closure

Physical

Dimensions (Card)	44 (W) x 127 (H) x 160 (D) mm (1.74 x 5.0 x 6.3 inch)
Weight (Card)	450 gms (16 Oz)
No. of Slots	2

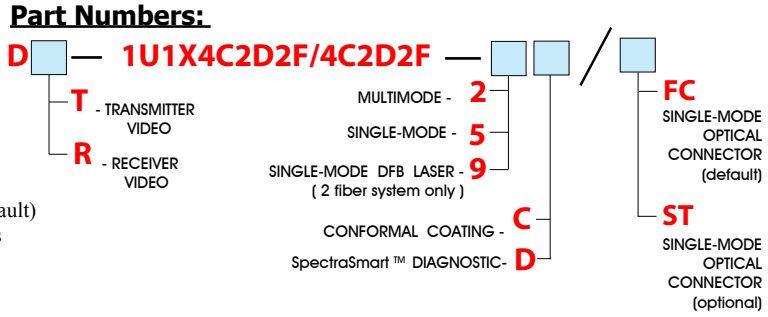
Enviromental

Operating Temperature	-40ºC to +74ºC
Storage Temperature	-55ºC to +85ºC
Relative Humidity	0 to 95% Non-condensing

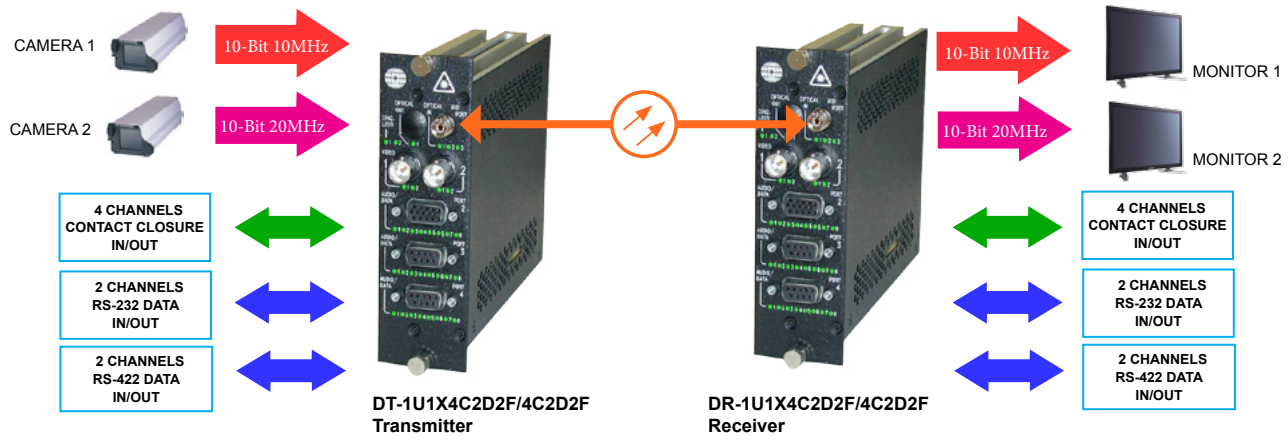
Quality

MTBF	>170,000 hours @ Ground Fix 35ºC per MIL217F

Part Numbers:



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



OPTICAL:

Fiber Type/Size (um)	Optical Output (dBm)	Receiver Sensitivity (dBm)	Optical Budget (dB)	Wavelength (nm)	Optical Connector	Optical Dynamic Range (dB)	Estimated Maximum Transmission Distance (km)
Multimode (FP Laser) 62.5 / 125	-3	-23	20	1300/850	ST	23	1
Singlemode (FP Laser) 9 / 125	-3	-23	20	1310/1550	ST, FC	23	55
Singlemode (DFB Laser) 9 / 125	+3	-23	26	1310/1310	ST, FC	23	75

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