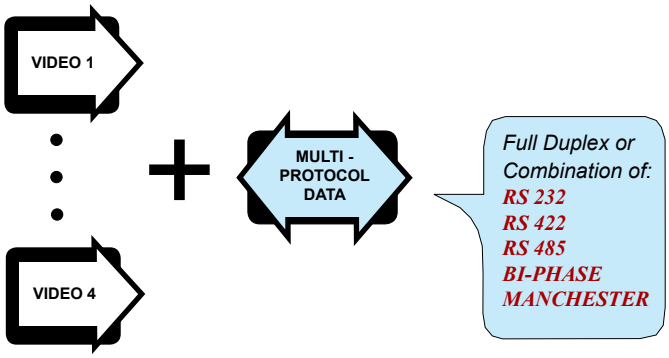
MERIDIAN TECHNOLOGIES

DT/DR-4W1G/1G

DigiFlex™

10-Bit Digital 4 Channel Video Multiplexer with One Full Duplex Multi-Protocol Data Channel



FEATURES:

- 10-bit Video Digital encoding/decoding
- 4 Real-Time Video Signals with Full Duplex Data Channel
- Supports RS-232, RS-422, RS-485, Manchester or Bi-Phase data formats
- 7 MHz Video Bandwidth
- Meets RS-250C 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
- Hot Swappable Cards
- Laser Back - Biased Photo Detector Circuitry for Stable Optical Output Over Full Temperature Range.
- Meets NEMA TS1 / TS2 & CALTRANS Specifications.
- 75 Ohm BNC Video Connector (gold center pin)
- Meets EIA RS-170, RS-343A Formats
- DC to 1 Mb/s Data Rate

DESCRIPTION:

The DT/DR-4W1G/1G series is a reliable, cost effective, state-of-the–art, one fiber, Bi-directional Digital Video and Data transmission system. This fiber optic module transmits four real-time, simplex 10-bit video & two channels of RS-232 and either one channel of RS-485 (2 or 4 wire) or RS-422 data over one optical fiber. The DV-4W1G/1G accepts PAL, SECAM, or NTSC formats. The functionality of DT/DR-4W1G/1G series are further enhanced by their 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 activity etc. See the SpectraSmart brochure for more details.

CONFIGURATIONS:

The DT/DR-4W1G/1G product family is available as rack mount cards and modules that can be installed in all of 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:

√ Security and Surveillance
√ Intelligent Transportation System (ITS)
√ Access Control Systems
√ Campus Lecture Networks
√ Pro. Video / Audio

SPECIFICATIONS:

Video

Format	NTSC, PAL, SECAM
Voltage/Impedance	1 Vp-p, 75 Ohm, 1.5 Vp-p max.
Bandwidth	5 Hz to 6.8 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-485, RS-422, RS-232
Data Rate RS-422 / 485	DC to 1Mb/s
Data Rate RS-232	DC to 125 Kb/s
Bit Error Rate	10^{-9*}

Optical

Fiber Data Rate	500 Mb/s

Connectors

Video	75 Ohm BNC (Gold Center Pin)
Optical	ST, FC
Power (module)	See SR-1000 Brochure for details
Data	DB9 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
4 - Bi-color	Video Present / Overload
4 - Green	Video Sync. Present
2 - Green	Data Present

Physical

Dimensions (Card)	160 mm (6.3") L, 127 mm (5") H 44mm (0.80")W
Weight (Card)	450 gms (16 Oz)
No. of Slots	2

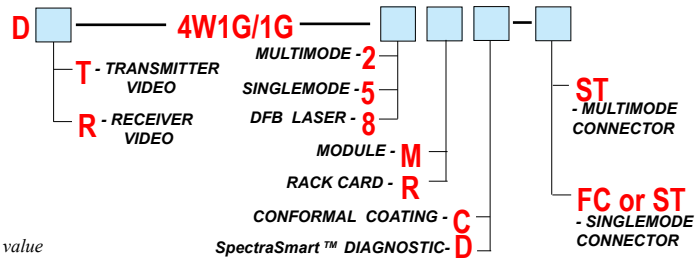
Enviromental

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

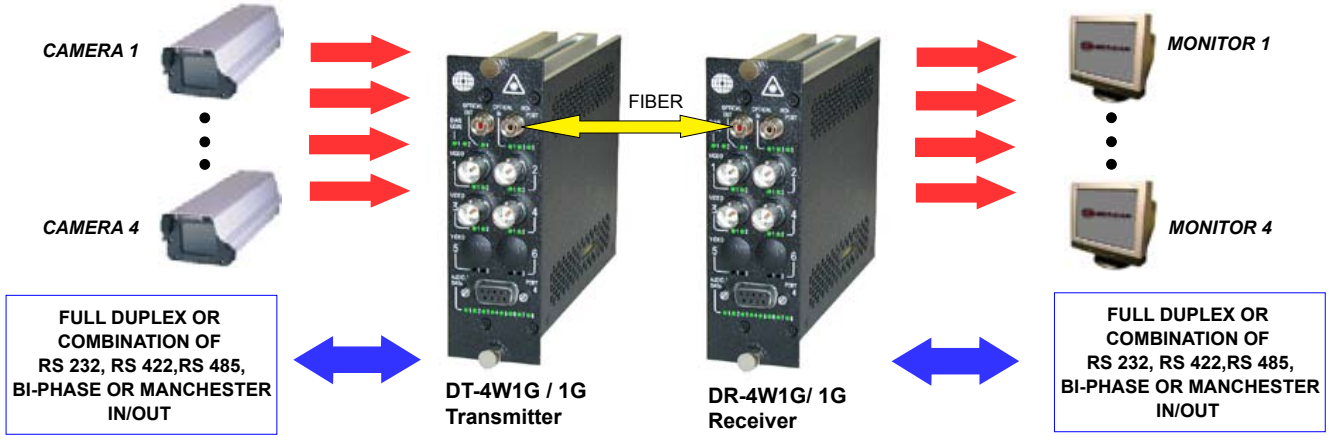
Quality

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

Part Numbers:



* *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)
Multimode (FP Laser) 62.5 / 125	-3	-23	20	1300 / 850	ST	23
Singlemode (FP Laser) 9 / 125	-3	-23	20	1310 / 1550	ST, FC	23
Singlemode (DFB Laser) 9 / 125	+3	-23	26	1310 / 1550	ST , FC	23

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