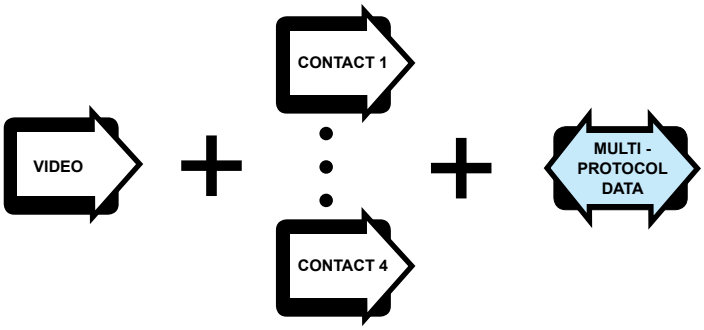
MERIDIAN TECHNOLOGIES

DT/DR-1W4C1G/1G-x DigiFlex™

Digitally Encoded One Channel 10-Bit Video Multiplexer with Four Contact Closure and Full Duplex Multi-Protocol Data Channel



FEATURES:

- 10 Bit Video Digital Encoding
- Real Time Video & Data Transmission
- 7 MHz Video Bandwidth
- Meets RS-250C Short Haul Transmission Specifications
- NTSC, PAL, SECAM Compatible
- Four User selectible, Contact Mapping (N.O, N.C)
- Full Duplex Multi-protocol Data channel, Compatible with RS-232, RS-422, RS-485, Manchester, Bi-phase
- Wide Optical Dynamic Range: Eliminates Need For Optical Attenuators
- Laser Based Systems for Multimode and Single-mode
- 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 Type Connectors for Contacts

DESCRIPTION:

The DT/DR-1W4C1G/1G-x product incorporates digital encoding technology. This fiber optic module transmits One real-time, Simplex 10-bit Video channel, Four Contact Closure channels and One Full-duplex channel of Multi-protocol Data (RS-232, RS-422 and RS-485 (2 or 4-wire)) over one optical fiber. These data formats are also compatible with Bi-phase & Manchester encoding schemes. Both Multimode and Single-mode fiber versions are available.

The Contact Closure channels can be configured as either Normally Open (N.O.) or Normally Closed (N.C.).

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-1W4C1G/1G-x series products is enhanced by their compatibility with Meridian's PC based SpectraSmart™ Network Management & Diagnostic Software system. SpectraSmart monitors the operating parameters of the transmission system such as the status on video levels, sync, digital carrier detect, voltages, temperatures and optical levels etc. See SpectraSmart brochure for further details.

CONFIGURATIONS:

The DT/DR-1W4C1G/1G-x cards can be mounted in either a small, 2-slot stand-alone chassis for shelf or wall mounting or in one of Meridian's 3RU desk chassis or rack mounting in our 19" racking frames. The small stand-alone chassis (SR-1002) with its AC power supply (87 VAC - 164 VAC) is used for shelf or wall mounting.

MARKETS:

√ Intelligent Transportation Systems (ITS)
√ Security and Surveillance
√ Access Control

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	$<0.3^0$
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*}

Contact Closure

Formats	Normally Open (N.O.) or Normally Closed (N.C.) - jumper selectable
Rate	10 Hz.(Per Channel)
Contact Rating	0.3A, 30V AC / DC
Contact Bounce Time	5 ms

Optical

Fiber Data Rate	250 Mb/s

Connectors

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

Power **

Card	7 Watts

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

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
1 - Bi-color	Video Present / Overload
1 - Green	Video Sync. Present
2 - Green	Data Present
4 - Green	Contact Closure 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

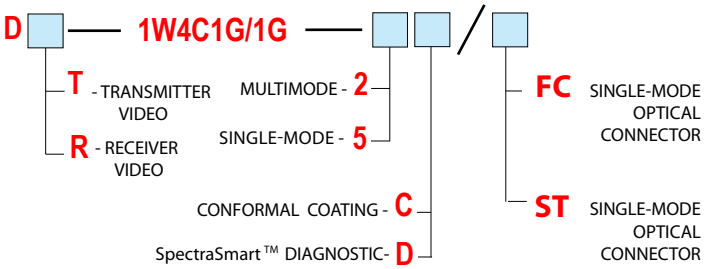
Environmental

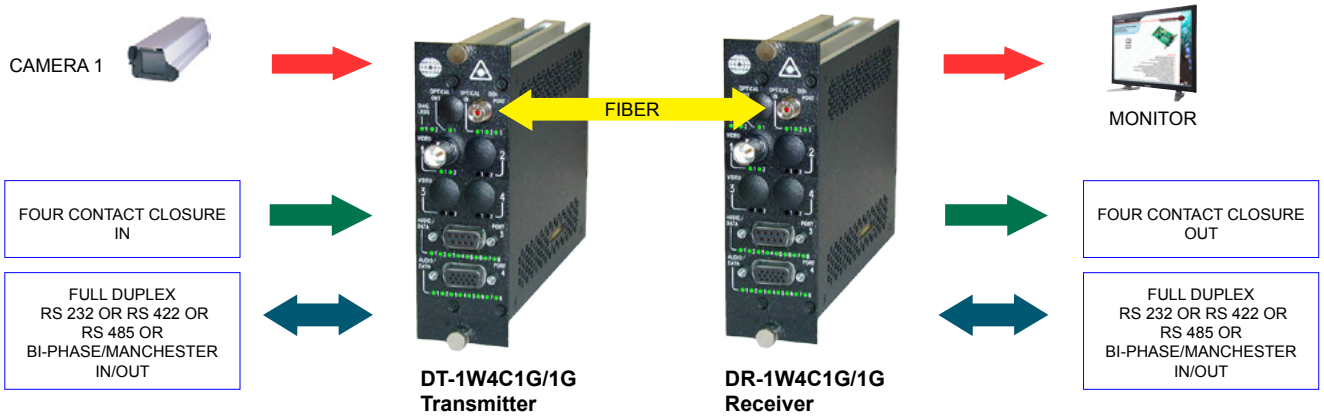
Operating Temperature	-40°C to +74°C
Storage Temperature	-55°C to +85°C
Relative Humidity	0 to 95% Non-condensing

Quality

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

Part Numbers:





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)
2	Multimode (Laser) 62.5 / 125	-3	-23	20	1300 / 850	ST	23	4
5	Single-mode (FP Laser) 9 / 125	-3	-23	20	1310 / 1550	ST, FC	23	55

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