MERIDIAN TECHNOLOGIES
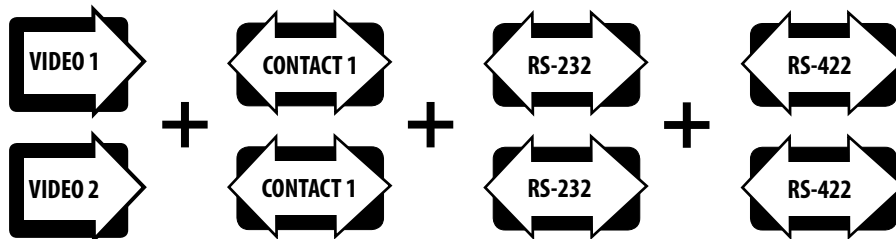
Digitally-Encoded Two Channel 10-Bit Video
with Two Bi-directional RS-232,
Two Bi-directional RS-422 Data
and Two Bi-directional Contact Closures

VIDEO 1 + VIDEO 2 + CONTACT 1 + CONTACT 1 + RS-232 + RS-232 + RS-422 + RS-422

FEATURES:

- 10-Bit Video Digital Encoding

- Real Time Video, RS-422 & RS-232 Data

- 7 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 Type Connectors for Contact Closure

DESCRIPTION:

The DT/DR-2W2C2D2F/2C2D2F-x series products incorporate digital encoding technology. This fiber optic module   transmits two high performance simplex 7 MHz video signals, two Full-Duplex RS-232 and RS-422 Data channels and two Bi-directional Contacts Closure channels over one or two fibers. Both multimode and singlemode fiber versions are available.

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

The functionality of the DT/DR-2W2C2D2F/2C2D2F-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-2W2C2D2F/2C2D2F-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 8-Bit 7 MHz

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	<0.3º
SNR	>60 dB (weighted)*
Return Loss	>30 dB
Field Tilt	< 0.5%

Data

Formats	RS-232, RS-422
Data Rate RS-232	DC to 125 Kb/s
Data Rate RS-422	DC to 250 Kb/s
Bit Error Rate	10^{-9}*

Contact

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

Connectors

Video	75 Ohm BNC (Gold Center Pin)
Optical	ST, FC
Power (module)	See SR-1000 Brochure for details
Data	DB 9 Female
Contact Closure	DB 15 Female

Optical

Fiber Data Rate	500 Mb/s

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
4 - Green	Data Present
2 - Green	C.C Present (One Per Channel)

Physical

Dimensions (Card)	160 mm (6.3") L, 127 mm (5") H 44mm (0.80")W
Weight (Card)	540 gms (1.2 lb.)
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:

D☐ – 2W2C2D2F/2C2D2F – ☐☐ – ☐

T TRANSMITTER VIDEO
R RECEIVER VIDEO

MULTIMODE **2**
SINGLEMODE **5**
CONFORMAL COATING **C**
SpectraSmart™ DIAGNOSTIC **D**

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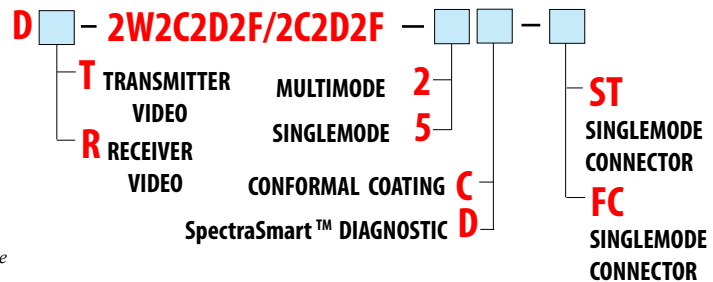
*   measured @ max. optical budget .
** Due to variations of drivers and diagnostic options, power shown @ max value

DT-2W2C2D2F/2C2D2F-x
Transmitter

DR-2W2C2D2F/2C2D2F-x
Receiver
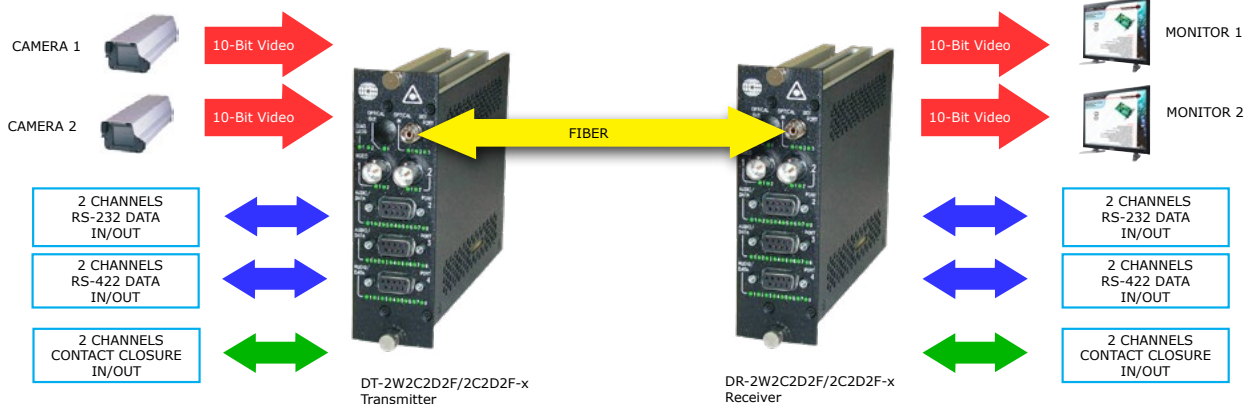
OPTICAL:

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