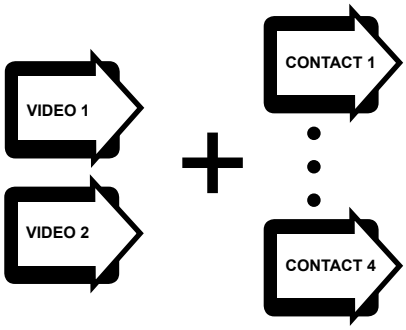
MERIDIAN TECHNOLOGIES

# Digitally Encoded Two Channel 10-Bit Video Multiplexer with Four Contact Closure




## *FEATURES:*

- 10 Bit Video Digital Encoding
- Real Time Video & DataTransmission
- 7 MHz Video Bandwidth
- NTSC, PAL, SECAM Compatible
- Four User-selectible, Contact Mapping (N.O, N.C)
- 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
- Meets NEMA TS1 / TS2 & CALTRANS Specifications
- 75 Ohm BNC Video Connector (Gold Center Pin)
- DB 15 Type Connectors for Contacts

## *DESCRIPTION:*

The DT/DR-2W4C-x product incorporates digital encoding technology. This fiber optic module transmits Two Real-time, Simplex 10-bit Video channels and Four Unidirectional Contact Closure channels over one optical fiber.
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-2W4C-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, optical levels etc. See SpectraSmart brochure for further details.

## *CONFIGURATIONS:*

The DT/DR-2W4C-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% |

## 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 | 500 Mb/s |

## Connectors

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

## Power **

| | |
|---|---|
| Card | 8 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 | Contact Closure Present |

## Physical

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

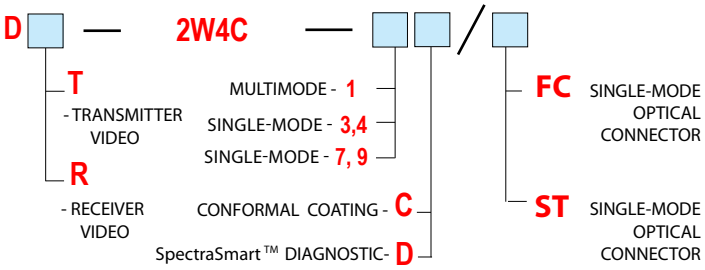
## Environmental

| | |
|---|---|
| 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<br>35°C per MIL217F |

## Part Numbers:




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


**DT-2W4C Transmitter** **DR-2W4C 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) |
|---|---|---|---|---|---|---|---|---|
| 1 | Multimode ( Laser) 62.5 / 125 | -3 | -23 | 20 | 1300 | ST | 23 | 2 |
| 3 | Singlemode (FP Laser) 9 / 125 | -3 | -23 | 20 | 1310 | ST, FC | 23 | 50 |
| 4 | Singlemode (FP Laser) 9 / 125 | -3 | -23 | 20 | 1550 | ST, FC | 23 | 70 |
| 7, 9, CWDM | Singlemode (DFB Laser) 9 / 125 | +1 | -23 | 24 | 1310, 1550 | ST, FC | 23 | 80 |

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