MERIDIAN TECHNOLOGIES

DT/DR-1W1D/1D

DigiFlex™

Digitally-Encoded 1 Channel Video
with Bi-directional RS-232 Data

## FEATURES:

- 10 Bit Video Digital Encoding
- Real Time Video & 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
- DC to 1 Mb/s Data Rate

## DESCRIPTION:

The DT/DR-1W1D/1D series products incorporate digital encoding technology. This fiber optic module transmits one each of real-time, high performance of Simplex 10-bit digitally encoded video signal & full Duplex RS-232 data over one or 2 fiber. Both multimode and singlemode 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-1W1D/1D series products are enhanced by their 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-1W1D/1D product family 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:

## 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-232 |
| Data Rate | 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 |
| 1 - Bi-color | Video Present / Overload |
| 1 - Green | Video Sync. Present |
| 2 - Green | Data 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 |

## Enviromental

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

## Quality

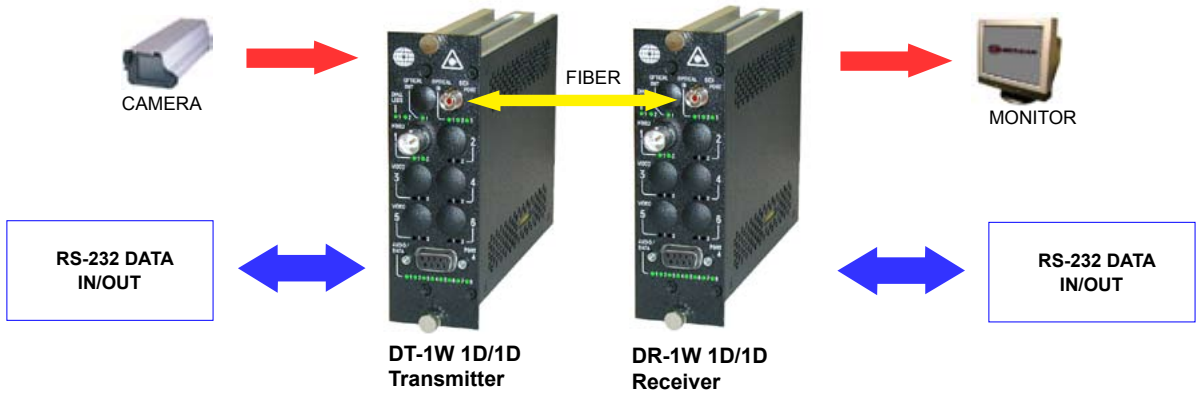
| | |
|---|---|
| MTBF | >170,000 hours @ Ground Fix<br>35°C per MIL217F |

**Part Numbers:**

D ☐ — 1W1D/1D — ☐ ☐ ☐ – ☐

- T - TRANSMITTER VIDEO
- R - RECEIVER VIDEO
- MULTIMODE - 2
- SINGLEMODE - 5
- DFB LASER - 8
- MODULE - M
- RACK CARD - R
- CONFORMAL COATING - C
- SpectraSmart ™ DIAGNOSTIC- D
- ST - MULTIMODE CONNECTOR
- FC or ST - SINGLEMODE CONNECTOR

* *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 | -24 | 21 | 1300 / 850 | ST | 24 |
| Singlemode (FP Laser) 9 / 125 | -3 | -24 | 21 | 1310 / 1550 | ST, FC | 24 |
| Singlemode (DFB Laser) 9 / 125 | +3 | -24 | 27 | 1310 / 1550 | ST , FC | 24 |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