

## Digitally-Encoded 10 Bit One Channel Video



### FEATURES:

- 10 Bit Video Digital Encoding
- Real Time Video
- 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

### DESCRIPTION:

The DT/DR-1W series products incorporate digital encoding technology. This fiber optic module transmits one real-time, high performance Simplex 10-bit digitally encoded Video signal over one 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 - 1W 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- 1W product family is available as rack mount cards and modules that can be installed in Meridian's card chassis, desk chassis 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
- √ Broadcast Application

## 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%

### Optical

Fiber Data Rate	250 Mb/s
-----------------	----------

### Connectors

Video	75 Ohm BNC (Gold Center Pin)
Optical	ST, FC
Power	See SR-1000 Brochure for details

### Power \*\*

Card	7 Watts
------	---------

### Part Numbers:

DT-1W-1	Transmitter, 1300nm, MM, Laser
DT-1W-3.	Transmitter, 1310nm,SM, Laser
DT-1W-4.	Transmitter, 1550nm,SM, Laser
DT-1W-7.	Transmitter, 1550nm,SM,DFB Laser

DR-1W-1 . . . .	Receiver, 1300nm, MM, Laser
DR-1W-3 . . . .	Receiver, 1310nm,SM, Laser
DR-1W-4 . . . .	Receiver, 1550nm,SM, Laser
DR-1W-7 . . . .	Receiver, 1550nm,SM, DFB Laser

ADD THE SUFFIX "D" AT THE END OF THE PART NUMBER FOR SPECTRA SMART DIAGNOSTIC OPTION

### Indicators (LEDs)

1 - Green	Power On
1 - Bi-color	TX Carrier/ Laser Over Current
1 - Bi-color	RX Carrier - Present / Error
1 - Bi-color	RX optical signal - Present / Absent
1 - Green	Sync. Present
1 - Bi-color	Video Present / Overload

### Physical

Dimensions:	
Card	160 mm (6.3") L, 100 mm (4") W 44 mm (1.7") H
Weight:	
Card	450 gms (16 Oz)
No. of Slots	2

### Environmental

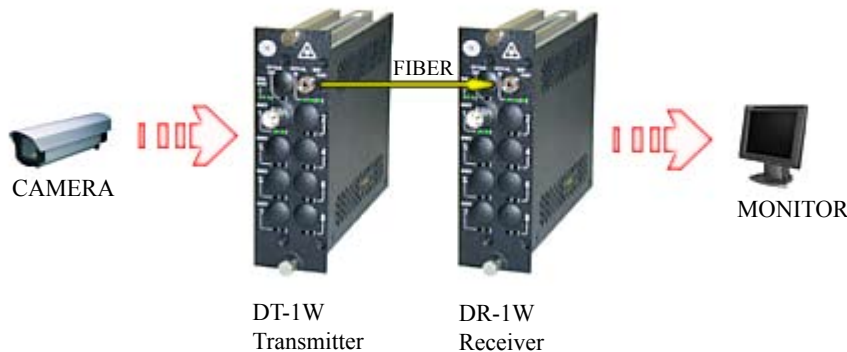
Operating Temperature	-34°C to +74°C
Storage Temperature	-55°C to +85°C
Relative Humidity	0 to 95% Non-condensing

### Quality

MTBF	>200,000 hours @ Ground Fix 35°C per MIL217F
------	---

\* 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	-27	24	1300 / 850	ST	27
Singlemode (FP Laser) 9 / 125	-3	-27	24	1310 / 1550	ST, FC	27
Singlemode (DFB Laser) 9 / 125	+3	-27	30	1310 / 1550	ST, FC	27

### Meridian Technologies Inc.

700 Elmont Road. • Elmont, NY 11003 • 516. 285. 1000 • FAX 516. 285. 6300 • E-mail sales@meridian-tech.com  
Visit our web side: www.meridian-tech.com or www.meridian-tech.tv