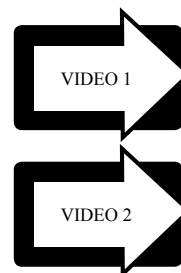# MERIDIAN TECHNOLOGIES

Digital 2 Channel 10 Bit Video Multiplexer

VIDEO 1

VIDEO 2

FEATURES:

- 10 Bit Video Digital Encoding

- Transmits 2 Real-Time Video Signals Over One Optical Fiber

- 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-2W series is a reliable, cost effective, state-of-the–art, one fiber one wavelength Digital Video transmission system. This fiber optic system transmits Two channels of real-time 10 bit Video over one Singlemode or Multimode fiber. The DT/DR-2W accepts PAL, SECAM, or NTSC formats.

The functionality of DT/DR-2W series are further enhanced by their compatibility with Meridian's PC based SpectraSmart, Network Management and Remote Diagnostic Software System. SpectraSmart supervises the operating parameters of the transmission system such as status on video levels, sync, carrier detect, voltage, temperature, optical levels, etc., and external equipment which are attached to the Meridian equipment. See the SpectraSmart™ brochure for more details.

CONFIGURATIONS:

The DigiFlex™ 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
√ 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	<0.3º
SNR	>67 dB (weighted)*
Return Loss	>30 dB
Field Tilt	< 0.5%

Optical

Fiber Data Rate	500 Mb/s

Connectors

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

Power **

Card	7 Watts

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

Part Numbers:

DT-2W-1	Transmitter, 1300nm, MM, Laser	DR-2W-1	Receiver, 1300nm, MM, Laser
DT-2W-3	Transmitter, 1310nm,SM, Laser	DR-2W-3	Receiver, 1310nm,SM, Laser
DT-2W-4	Transmitter, 1550nm,SM, Laser	DR-2W-4	Receiver, 1550nm,SM, Laser
DT-2W-7	Transmitter, 1550nm,SM,DFB Laser		
DT-2W-9	Transmitter, 1310nm,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
2- Green	Sync. Present
2- 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

Enviromental

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

Quality

MTBF	>200,000 hours @ Ground Fix 35ºC per MIL217F

DT-2W-x   **DR-2W-x**

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 (FP Laser) 62.5 / 125	-3	-23	20	1300	ST	24	1.5
3	Singlemode (FP Laser) 9 / 125	-3	-23	20	1310	ST, FC	24	50
4	Singlemode (FP Laser) 9 / 125	-3	-23	20	1550	ST, FC	24	50
7	Singlemode (DFB Laser) 9 / 125	+1	-23	24	1550	ST, FC	24	60
9	Singlemode (DFB Laser) 9 / 125	+1	-23	24	1310	ST, FC	24	60