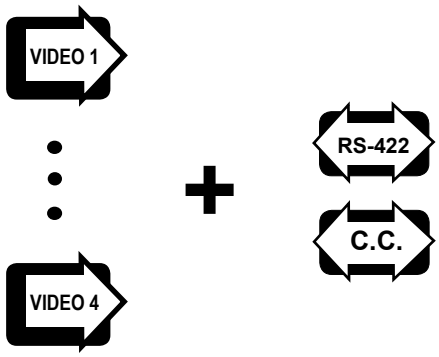
MERIDIAN TECHNOLOGIES

DT/DR-4V1F1C/1F1C

DigiFlex™

Digital 4 Channel Video Multiplexer with One Full Duplex RS-422, Manchester or Bi-Phase and One Bi-Directional Contact Closure



FEATURES:

- Standard 8 Bit Video Digital Encoding
- 4 Real-Time video vignals w/ One full duplex data channels and 1 Bi-directional Contact Closure
- Supports RS-422, Manchester or Bi-Phase
- 7 MHz video bandwidth
- Meets RS-250C 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
- SpectraSmartTM Network Management compatible
- Local LED status indicators to monitor critical system diagnostics for performance parameters
- 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)
- Meets EIA RS-170, RS-343A formats
- DC to 1 Mb/s data rate

DESCRIPTION:

The DT/DR-4V1F1C/1F1C series is a reliable, cost effective, state-of-the–art, one fiber, Bi-directional Digital Video and Data transmission system. This fiber optic system transmits four channels of real-time 8 bit video with one full duplex channels of RS 422, Manchester or Bi-phase data and One Bi-directional Contact Closure Channels over one Singlemode or Multimode fiber. These Contact Closure channels can be individually configured as either Normally Open (N.O.) or Normally closed (N.C.). The DT/DR-4V1F1C/1F1C accepts PAL, SECAM, or NTSC formats. The functionality of DV-4V 1F1C / 1F1C 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, data activity etc. See the SpectraSmart brochure for more details.

Note: *10 bit version available. See DT/DR-4W1F1C/1F1C series. System Shipped from the factory is configured as Normally Open.*

CONFIGURATIONS:

The DT/DR-4V1F1C/1F1C product family is available as rack mount cards and modules that can be installed in all of 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:

√ Security and Surveillance
√ Intelligent Transportation System (ITS)
√ Access Control Systems
√ Campus Lecture Networks
√ Pro. Video / Audio

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

Data

Formats	RS-422, Manchester, Bi-Phase
	Contact Closure
Data Rate	DC to 1Mb/s
Bit Error Rate	10^{-9}*
Contact Rating	0.3 A, 30 V AC/DC
Contact BounceTime	5 ms
Rate C.C.	10 Hz

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
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 - Bi-color	RX optical signal - Present / Absent
4 - Bi-color	Video Present / Overload
4 - Green	Sync. Present
4 - Green	Data Present

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

Quality

MTBF	>240,000 hours @ Ground Fix
	35°C per MIL217F

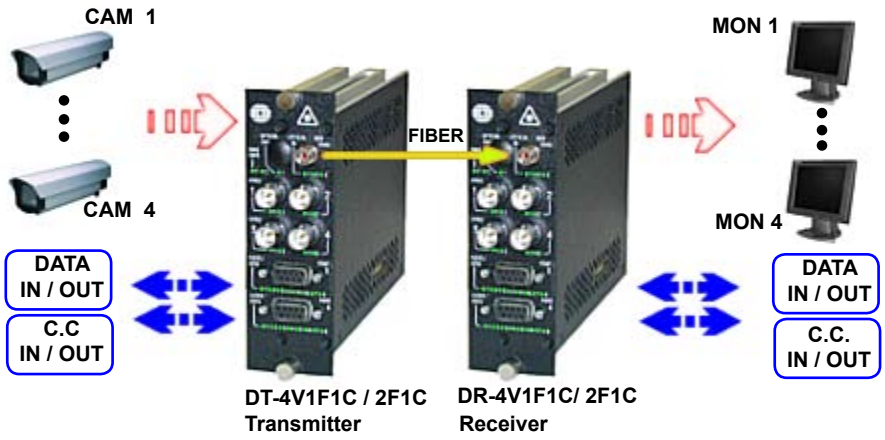
* *measured @ max. optical budget*
** *Due to variations of drivers and diagnostic options, power shown @ max value*

Part Numbers:

DT-4V1F1C/ 1F1C-2. . Transmitter, 850nm/ 1300nm, MM, Laser
DT-4V1F1C/ 1F1C-5. . .Transmitter, 1310nm/1550nm,SM, Laser
DT-4V1F1C/ 1F1C-8. . Transmitter, 1310nm/1550nm,SM, DFB Laser

DR-4V1F1C/ 1F1C-2. . Receiver, 1300nm/ 850nm, MM, Laser
DR-4V1F1C/ 1F1C-5. . Receiver, 1550nm/1310nm,SM, Laser
DR-4V1F1C/ 1F1C-8. . Receiver, 1550nm/1310nm,SM, DFB Laser

NOTE: Add the suffix "F" for enviromental conformal coating and the suffix "D" for PC based Diagnostic options at the end of the part number.



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	-23	20	1300 / 850	ST	23
Singlemode (FP Laser) 9 / 125	-3	-23	20	1310 / 1550	ST, FC	23
Singlemode (DFB Laser) 9 / 125	+3	-23	26	1310 / 1550	ST , FC	23

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

ver 04/04