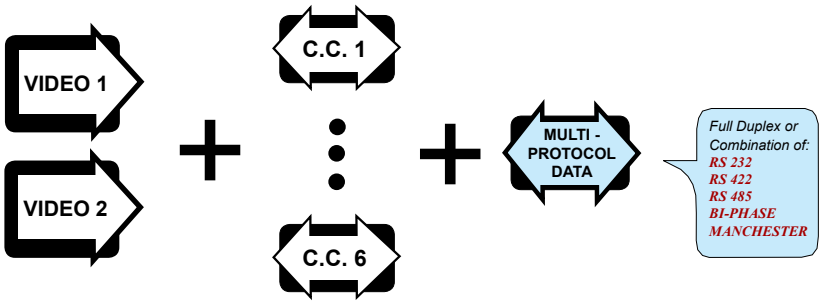
MERIDIAN TECHNOLOGIES

DT-2W6C1G/6C1G-47/49
DR-2W6C1G/6C1G-49/47

DigiFlex™

Digital Two Channel 10-Bit Video Multiplexer with One Full Duplex Multi-Protocol Data plus Six Bi-Directional Contact Closures



FEATURES:

- 10 Bit Video Digital Encoding
- Real Time Video & DataTransmission
- Six Bi-Directional Contact Closure Channels
- 7 MHz Video Bandwidth
- Meets RS-250C Short Haul Transmission Specifications
- NTSC, PAL, SECAM Compatible
- One switch-selectable, multi-protocol data channels. Compatible with RS-232, RS-422, RS-485, Manchester, bi-phase
- 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
- DB 9 (HD) connector for Contacts

DESCRIPTION:

The DT/DR-2W6C1G/6C1G products incorporate digital encoding technology. This fiber optic module transmits two real-time, simplex 10-bit video & one full-duplex channel of switch-selectable multi-protocol data (RS-232, RS-422 and RS-485 (2 or 4-wire)) plus 6 Bi-Directional channels of contact closure over two singlemode optical fibers. These data formats are also compatible with bi-phase & Manchester encoding schemes. 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-2W6C1G/6C1G series products is 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.

Tx side:
DT-2W6C1G/6C1G-47/49
a. 2-ch 10-Bit 7 MHz Video Mux = Tx @ 1470nm
b. 6-ch Contact Closure = Tx @ 1470nm & Rx @ 1490nm
c. 1-ch Multiprotocol Data = Tx @ 1470nm & Rx @ 1490nm

Rx side:
DT-2W6C1G/6C1G-49/47
a. 2-ch 10-Bit 7 MHz Video Mux = Rx @ 1470nm
b. 6-ch Contact Closure = Rx @ 1470nm & Tx @ 1490nm
c. 1-ch Multiprotocol Data = Rx @ 1470nm & Tx @ 1490nm

CONFIGURATION:

The DT/DR-2W6C1G/6C1G product family is available as rack mount cards and modules that can be installed in either Meridian's desk chaises or in 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-1002/s, 2 slot desk / wall mount chassis (87 VAC- 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-485, RS-422, RS-232
Data Rate RS-422 / 485	DC to 1Mb/s
Data Rate RS-232	DC to 125 Kb/s
Bit Error Rate	10^{-9*}

Contact Closure

Rate	10 Hz.(Per Channel)
Contact Rating	0.3A, 30V AC / DC
Contact Bounce Time	5 ms

Connectors

Video	75 Ohm BNC (Gold Center Pin)
Optical	FC- SM (default), ST - SM(optional)
Power (module)	See SR-1000 Brochure for details
Data	DB9 Female
Contacts	DB9 (HD) Female

Optical

Fiber Data Rate	500 Mb/s

Power **

Card	9 Watts

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

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
2 - Green	Data Present
6 - Green	Transmit Contact CLosure
6 - Green	Recieve Contact Closure

Physical

Dimensions (Card)	44 (W) x 127 (H) x 160 (D) mm (1.74 x 5.0 x 6.3 inch)
Weight (Card)	450 gms (16 Oz)
No. of Slots	2

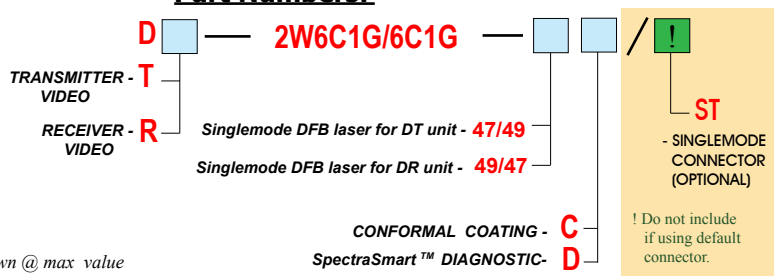
Environmental

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 35°C per MIL217F

Part Numbers:



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)
47/49	Singlemode (DFB Laser) 9 / 125	0	-27	27	1470 / 1490	ST, FC	24	90
49/47	Singlemode (DFB Laser) 9 / 125	0	-27	27	1490 / 1470	ST, FC	24	90

Meridian Technologies Inc.
700 Elmont Road. •Elmont, NY 11003 • 516. 285. 1000 • FAX 516. 285. 6300 • E-mail sales@meridian-tech.com
www.meridian-tech.com

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