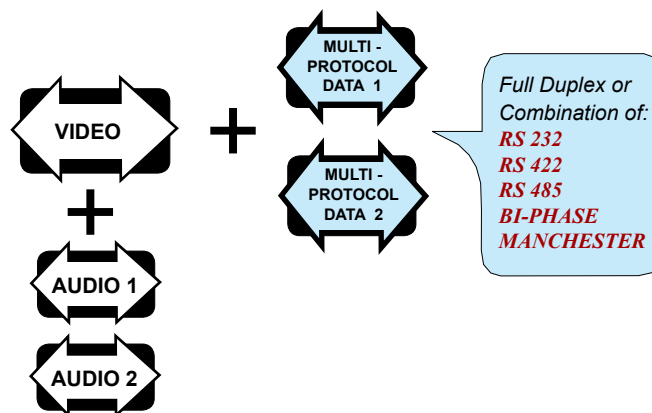


**Digitally-Encoded One Bi-directional 8-Bit or 10-Bit Video with Two Bi-directional 24-Bit Audio and Two Bi-directional Multi-Protocol Data**



### FEATURES:

- 8-Bit or 10-Bit Video Digital Encoding
- Real Time Video / Audio / Multi-Protocol 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 Audio and Data
- RS-232 DC to 125Kb/s (Per Channel)\* Data Rate  
RS-422/485 DC to 1Mb/s (Per Channel)\* Data Rate
- One or Two Fiber Versions Available

### DESCRIPTION:

The DX-1V2A2G, DX-1W2A2G products incorporate digital encoding technology. This fiber optic module transmits the following bi-directional (full duplex) signals: one real-time, 8-bit digitally encoded Video channel or high performance 10-bit digitally encoded Video channel with two 24-Bit Audio channels and two Multi-Protocol Data channels (RS-232, RS-422 and RS-485 (2 or 4-wire)) over one optical fiber. These data formats are also compatible with bi-phase & Manchester encoding schemes. 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 DX-1V2A2G, DX-1W2A2G 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 DX-1V2A2G, DX-1W2A2G products 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:

- √ Video conferencing
- √ 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 10 MHz @ -3 dB
Differential Gain	<0.6%
Differential Phase	<0.3°
SNR for 8-Bit Video	>60 dB (weighted)*
SNR for 10-Bit Video	>67 dB (weighted)*
Return Loss	>30 dB
Field Tilt	< 0.5%

## Audio

I/O Impedance	600 Ohms (Bal. / Un Bal.)
Frequency Response	10 Hz to 20 KHz
SNR	>90dB (Weighted)@ 1 KHz
In/Out Level	-8 to +8 dBm (4Vp-p max.) (+18 dBm available on request)
Total Harmonic Distort	<0.01% @ 1KHz
Resolution	24 Bit

## Data

Formats	RS-485, RS-422, RS-232 Bi-Phase, Manchester
Data Rate RS-422 / 485	DC to 1Mb/s (Per Channel)*
Data Rate RS-232	DC to 125 Kb/s (Per Channel)*
Bit Error Rate	10-9*

## Connectors

Video	75 Ohm BNC (Gold Center Pin)
Optical	ST, FC
Power	See SR-1000 Brochure for details
Audio / Data	DB9 Female

## Optical

Fiber Data Rate for 8-Bit Video	500Mb/s
Fiber Data Rate for 10-Bit Video	800Mb/s

## Power \*\*

Card	8 Watts
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\* 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 - Bi-color	RX optical signal - Present / Absent
4 - Bi-color	Video Present / Overload
4 - Green	Sync. Present
4 - Green	Audio Present
4 - Red	Audio Overload
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

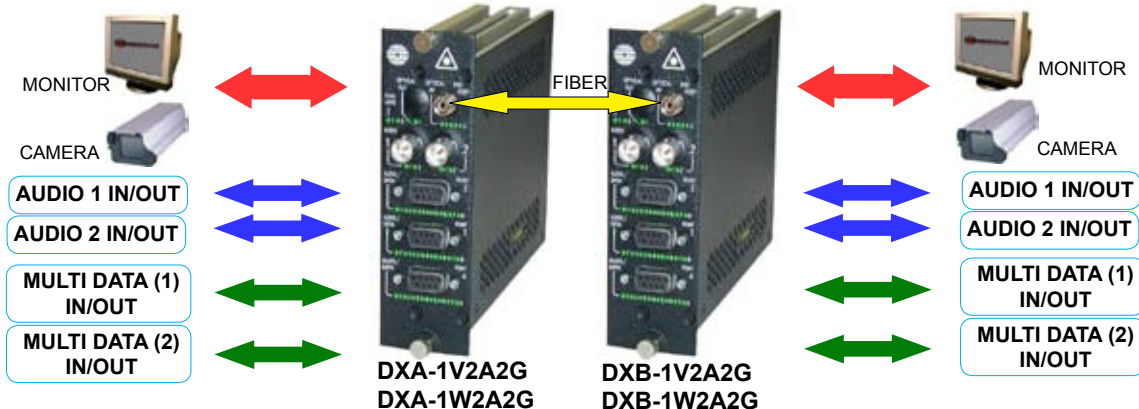
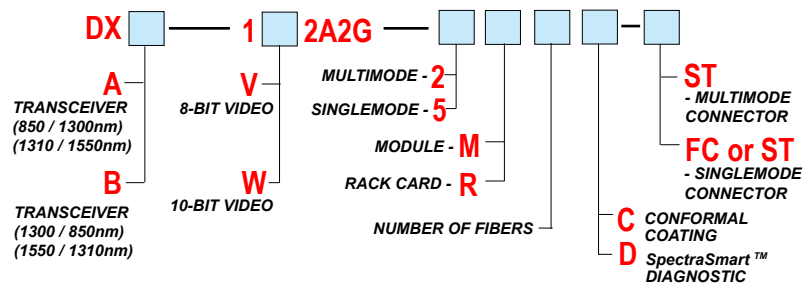
## Environmental

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
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## Part Numbers:



## 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