Digitally-Encoded Bi-directional Video, Audio (2 channels) and Multi-Protocol data (1 channel)

VIDEO

AUDIO

AUDIO

+

RS-232

RS-232

OR

RS-422

OR

RS-485
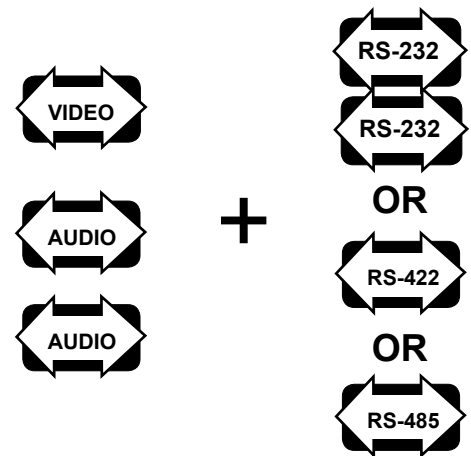
FEATURES:

- Standard 8-Bit Video Digital Encoding

- Real Time Video / Audio / Data

- Multi-protocol Data and 24-Bit Audio

- 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 Data & Audio

- DC to 125 Kb/s Data Rate

DESCRIPTION:

The DX-1V2A1G series products incorporate digital encoding technology. This fiber optic module transmits & receives the following bi-directional (full duplex) signals: one real-time 8-bit digitally encoded Video channel, one multi-protocol data channel and two 24-Bit Audio channels over one fiber. The data channels are user-configurable and can select between the following channels: 2 RS-232 or 1 RS-422 or 1 of each RS-232 & RS-422 or 1 RS-485 (2 or 4-wire). 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-1V2A1G 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-1V2A1G 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:

- √ 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 6.8 MHz @ -3 dB
Differential Gain	<0.6%
Differential Phase	<0.3o
SNR	>60 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*

Audio

I/O Impedance	600 Ohms (Bal. / Un Bal.)
Frequency Responce	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

Optical

Fiber Data Rate	500Mb/s

Connectors

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

MODEL NO:

DXA-1V2A1G-2. ..Transceiver side "A", MM, 850 / 1300 nm Laser
DXA-1V2A1G-5. ..Transceiver side "A", SM, 1310 / 1550 nm Laser
DXA-1V2A1G-8. .Transceiver side "A", SM, 1310 / 1550 nm DFB Laser
DXB-1V2A1G-2 . . Transceiver side "B", MM, 850/1300 nm, Laser
DXB-1V2A1G-5 . . Transceiver side "B", SM, 1310/1550 nm, Laser
DXB-1V2A1G-8 . .Transceiver side "B", SM, 1310/1550 nm, DFB Laser

Power **

Card	8 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
1 - Bi-color	Video Present / Overload
1 - Green	Sync. Present
2 - Green	Data Present
2 - Green	Audio Present
2 - Red	Audio 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

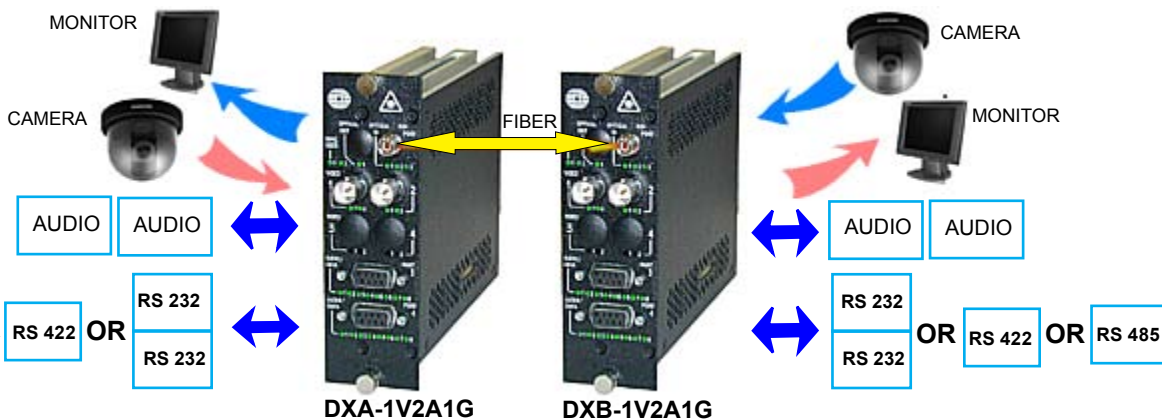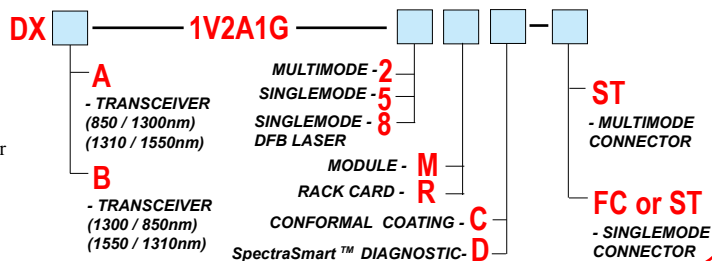|	
MTBF	>240,000 hours @ Ground Fix 35ºC per MIL217F

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

Part Numbers:

DX □ — 1V2A1G — □ □ □ – □

A
- TRANSCEIVER
(850 / 1300nm)
(1310 / 1550nm)

B
- TRANSCEIVER
(1300 / 850nm)
(1550 / 1310nm)

MULTIMODE - 2
SINGLEMODE - 5
SINGLEMODE - 8
DFB LASER

MODULE - M
RACK CARD - R
CONFORMAL COATING - C
SpectraSmart ™ DIAGNOSTIC - D

ST
- MULTIMODE CONNECTOR

FC or ST
- SINGLEMODE CONNECTOR

MONITOR CAMERA CAMERA MONITOR
FIBER
AUDIO AUDIO AUDIO AUDIO
RS 232 RS 232
RS 485 OR RS 422 OR RS 232 RS 232 OR RS 422 OR RS 485

DXA-1V2A1G   **DXB-1V2A1G**

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