

Digital T1/E1 Transmission One or Two Fibers



FEATURES:

- Optical Bypass Operation
- Terminal Block or BNC Data Connector
- Cable Equalization up to 600 feet
- Data and Clock Recovery Functions
- Transmit Side Jitter Attenuation
- Digital FPGA Technology
- Switch Selectable AMI, B8ZS or HDB3
- Synchronous Data Rates 1.544/2.048 Mbs
- Surface Mount Technology (SMT) for High Reliability and Repeatability
- Hot Swappable Cards
- Laser Based Back-biased Photo Detection Circuitry for Stable Optical Output Over Full Temperature Range (Singlemode)
- ST™, FC Optical Connector
- SpectraSmart Compatible
- Meets NEMA TS1/TS2 and Caltrans Specifications
- Utilizes Internal Switching Power Supplies
- LED Status Indicators Provide Rapid Indication of Critical Operating Parameters
- Automatically Resettable Solid-State Current Limiters on All Power Lines: Provides Equipment Protection
- Wide Optical Dynamic Range: Optical Attenuators are Never Required

DESCRIPTION:

The Series 1100T/110Ti and 1100E/1100Ei digitally transmit T1 or E1 signals for distances of 6 Km (multimode) and 100 Km (singlemode) over one or two fibers. These Units support full duplex operation at data rates up to 1.544 (T1) and 2.048 Mbs (E1). The 1100's capabilities are enhanced by its compatibility with Meridian's PC based SpectraSmart Network Management and Diagnostic software system. SpectraSmart monitors operating parameters of the transmission system as well as allowing features like a remote optical bypass card, for optically bypassing any faulted card in a ring configuration. The optical bypass card is connected to the series 1100 through a two pin terminal block located on the front panel. For additional information see the SpectraSmart and BPX brochures.

CONFIGURATIONS:

The 1100T/1100E are available as rack mount cards that can be installed in all of Meridian's card chassis, desk chassis and 19" racking frames. The Series 1100 can be converted to a module by installing it in the SR-500 card chassis. This system can be configured in either star (module to rack) or trunking (rack to rack) configurations. In addition, it can be used in a daisy chain configuration with the Series BPX fiber optic bypass switch to insure system reliability. This product requires no user adjustments and features superior quality and performance.

APPLICATIONS:

Security and Surveillance
 Intelligent Transportation Systems (ITS)
 Telecommunications
 PBX Extensions

SPECIFICATIONS:

Data

Formats	AMI, B8ZS, HDB3
Data Rate	1.544 / 2.048 Mb/s
Bit Error Rate	10^{-11} *

Connectors

T1	100 Ohm (Balanced)
	3 Pin Terminal Block
E1	75 Ohm (Unbalanced)
	BNC
	120 Ohm (Balanced)
	3 Pin Terminal Block
Optical	ST™, FC
Power	2 Pin Terminal Block

Power **

Card	2 W
Module	80 mA @ 24 VAC

Indicators (LEDs)

Red	Power On
Green	Rx Sync Loss
Green	TX Data Loss
Green	TX Alarm
Green	TX BPV

Physical

Dimensions:	
Module (w/SR-500)	182 mm (7.16") L, 132 mm (5.21") W
	29 mm (1.15") H
Card	160 mm (6.3") L, (0.8") W
	10 mm (4") H
Weight:	
Module (w/SR-500)	900 g (32 oz.)
Card	450 g (16 oz.)
Number of Rack Slots	One

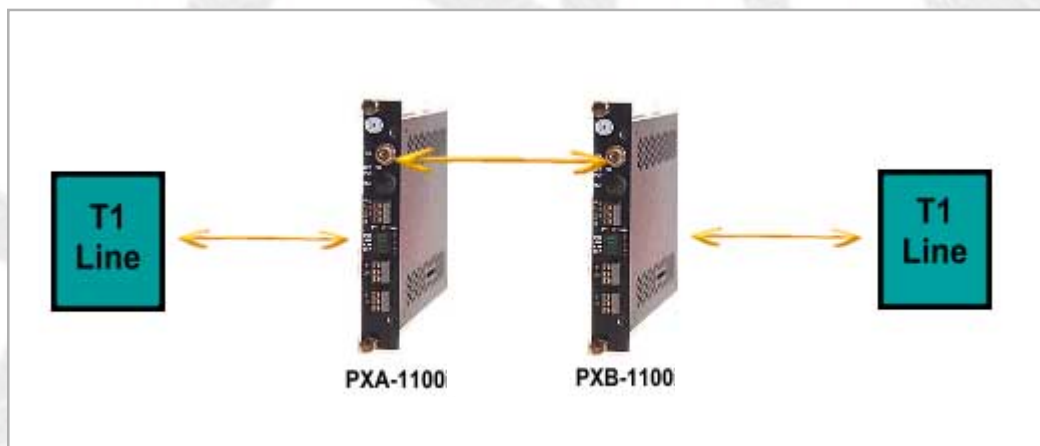
Enviromental

Operating Temperature	-40°C to +74°C
Storage Temperature	-55°C to +85°C
Relative Humidity	0 to 95% Non-condensing

Quality

MTBF	>210,000 hours @ Ground Fix
	35°C per MIL217F

* Measured @ 1Km (multimode), @ 10Km (singlemode)
** Due to variations of drivers and diagnostic options power shown at maximum measurements



OPTICAL:

Fiber Type/Size (um)	Optical Output (dBm)	Reciever Sensitivity (dBm)	Optical Budget (dB)	Wavelength (nm)	Optical Connector	Optical Dynamic Range (dB)
Multimode*						
(SLED)	-13	-36	23**	850	ST	39
62.5/125	-16	-36	20**	1300	ST	39
62.5/125	-15/-18	-34/-34	16**	850/1300	ST	39
62.5/125						
Singlemode (Laser)	-7***	-40	33	1310	ST, FC	41
9/125	-10***	-40	30	1550	ST, FC	41
9/125	-10/-10	-38	28	1310/1550	ST, FC	41
9/125						

* Distance is limited to fiber loss, splices and fiber bandwidth
** For 50/125mm fiber, subtract 3dB
*** Higher output lasers available

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