

**Fiber Optic Telephone (POTS) System  
 On One or Two Fibers  
 Telephone System Electrical Add-on**

**FEATURES:**

- True 90V RMS AC Ring Voltage
- Compatible w/Rotary & Touchtone Service
- Phone Monitor Port on Line Side
- 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)
- RJ11C I/O Connector
- 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 1500/1500i and 1500e are Frequency Modulated (FM) fiber optic telephone transmission systems that operate over one (1500i) or two fibers (1500); or as electrical add-on (1500e) to any Meridian FM fiber optic audio units. This system can transmit telephone signals up to 6Km on multimode fiber and up to 80Km on singlemode fiber. This telephone system is fully compatible with standard telephone protocols and supports duplex voice, dialtone, ringing, touchtone and pulse dialing. The 1500e is a Meridian's Audio Converter. This card can be plugged in to any standard Meridian's Audio Channel to convert standard Audio in to a POTS channel. The System can also be utilized as a stand alone, point to point, dedicated Intercom system by connecting phone ends together. The Series 1500's capabilities are enhanced by its compatibility with Meridian's PC based SpectraSmart™ Network Management and Diagnostic software system. SpectraSmart™ supervises the operating parameters of the transmission system such as status on FM carrier detect, voltage, temperature, optical levels, etc., and external equipment which are attached to the Meridian equipment. See the SpectraSmart™ brochure for more details.

**CONFIGURATIONS:**

The 1500 product family is available as rack mount cards that can be installed in all of Meridian's card chassis, desk chassis and 19" racking frames. This system can be configured in either star (module to rack) or trunking (rack to rack) configurations. This product requires no user adjustments & features superior quality and performance.

**APPLICATIONS:**

Designed to transmit phone signals (POTS)  
 Telephone / Intercom Communications

## SPECIFICATIONS:

### Audio

Electrical Interface	Plain Old Telephone System (POTS)
Ring	90 VRMS, 20 Hz
Line	48 VDC, 20 mA
Audio I/O Impedance	10 kOhm (Unbalanced)
	Meridian Audio Pins
I/O Level	-6 to +6 dBm
Frequency Responce	50 Hz to 10 KHz
THD	<1%, 1KHz @ max modulation
SNR	>60 dB (weighted)*

### Connectors

Audio	RJ-11C
Optical	ST™, FC
Power	2 Pin Terminal Block

### Power\*\*

Card	3.5 W
Module	146 mA @ 24 VAC
Adapter for SR-1000	Model PS-100

### Indicators (LEDs)

Red	Power On
Green	Far Side Audio Receive
Green	Near Side Audio Send
Green	Near Side Off Hook
Green	Far Side Off Hook

### Physical

Dimensions:	
Module (w/SR-1000)	182 mm (7.16") L, 165 mm (6.5") W
	44 mm (1.75") H
Card	160 mm (6.3") L, 40 mm (1.7") W
	100 mm (4") H
Weight:	
Module (w/SR-1000)	1350 g (48 oz.)
Card	675 g (24 oz.)
Number of Rack Slots	Two

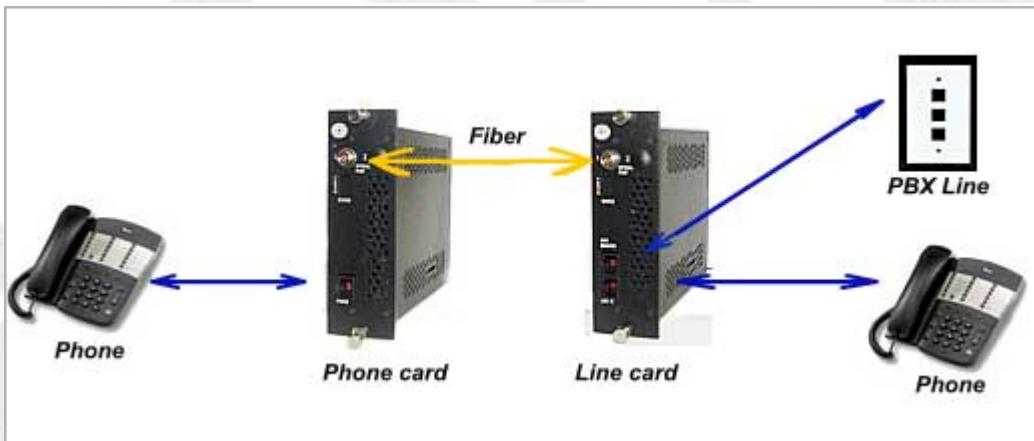
### Enviromental

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

### Quality

MTBF	>100,000 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 Sensivity (dBm)	Optical Budget (dB)	Wavelength (nm)	Optical Connector	Optical Dynamic Range (dB)
Multimode* (SLED)						
62.5/125	-13	-34	21**	850	ST	39
62.5/125	-16	-34	18**	1300	ST	39
62.5/125	-15/-18	-33/-33	15**	850/1300	ST	39
Singlemode (Laser)						
9/125	-7***	-36	29	1310	ST, FC	41
9/125	-10***	-36	26	1550	ST, FC	41
9/125	-10/-10	-34	24	1310/1550	ST, FC	41

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

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 or www.meridian-tech.tv