

PX -1 500

Fiber Optic Telephone System

Installation and Operations Instructions



700 Elmont Rd, Elmont, NY 11003, Tel: 516-285-1000; Fax: 516-285-6300

www.Meridian-tech.com

Table of Contents

Description	3
Applications.....	4
Configurations	5
Features.....	6
System Specifications Series 1500, 15001 and 1500e,.....	7
Installation	8
Status Indicators .	9
Alarm Diagnostics	10
Power Supply	11
Pinout Diagram	12

Description

Series 1500, 1500i and 1500e are Frequency Modulated (FM) based telephone fiber optic transmission systems that operate with either two fibers (1500); one fiber (1500i); or as electrical add-on (1500e) to any Meridian FM fiber optic audio units. Multimode/singlemode versions interface to the telephone at one end, line at other end. Two telephone ends may be connected to provide multimode/singlemode versions interface to the telephone at one end; line at other end. Two telephones may connect to provide a dedicated phone line or intercom. When a set is lifted, the other rings until it is picked up. System is fully compatible with the operating telephone and supports duplex voice, dialtone, ringing, touchtone and pulse dialing. Complete system status on FM data/carrier detect, voltage, temperature and optical levels is provided via optional SpectraSmart™, a PC based, remote diagnostics and Network Management feature - see details in SR-2000 brochure. Series 1500, 1500i and 1500e are reliable, cost effective and long distance telephone transmission systems on fiber.

Applications

Designed to transmit phone signals up to 6Km on multimode; up to 100Km on singlemode. Ideal for:

- * Telephone/Intercom Communications
- * Intelligent Transportation Systems (ITS)

Configurations

Series 1500, 1500i and 1500e are available as stand alone (in SR-1000/S, SR-1000) or as cards for 19"L x 5.25"H subrack. FM Series 1500 and 1500i require no user adjustments and feature superior optical dynamic range circuit design.

Features

- ? Compact Card Units
- ? Cards are "Hot" Swapable
- ? Status Monitor LEDs
- * No EMI, RFI, Ground Loops
- ? No Attraction to Lightning
- ? Surface Mount Technology
- ? RJ 11C I/O Connector
- ? ST^{rm}, FC Optical Connector
- ? True 90V RMS AC Ring Voltage
- ? Coinpairbit, i/Roriry and Touchtone Telephone
- ^ - ^Pull Solid State Circiltry
- ? Monitor Phor^y, Port on Line Side
- ? 13 dB Budget w50/125u; 16 dB w62.5/125 Micron Fiber
- ? 26/36 dB Budget w/Singlemode Fiber
- ? 200W Switcher, 110V/220V (subrack)
- ? 9 Cards/EIA Subrack w/1 Supply and H7 Cards w/Redundant Supplies
- ? Desk Chassis for 2, 4 and 7 Slots
- ? SpectraSmartTM Network Management

ailaNe to comply wⁱth NEMA Snecification,

System Specifications Series 1500, 15001 and 1500e

Audio Performance

Electrical Interface	
Audio In/Output Impedance	Plain Old Telephone System (POTS) System
Audio Connector	10k Ohm unbalanced (Meridian Audio P/N 5D)
Frequency Response	RJ-11C
Signal to Noise Ratio	50 Hz to 10 KHz
A Lead Control	> 60 dB Pins 1 and 6 on RJ-11C

Optical Performance

Wavelength	LED 850 and 1300nm		1310 and 1550nm Laser
Fiber type	50/1250	62.5/1250	Singlemode
Output Power w/ST	-19 dBm	-16 dBm	N/A
Output Power w/FC	N/A	N/A	-8 dBm*
Receiver Sensitivity	-34 dBm	-34 dBm	-34 dBm
Optical Loss Budget (2 fiber)	15 dB	18 dB	26 dB*
Optical Loss Budget (1 fiber)	13 dB	16 dB	26 dB*
Optical Dynamic Range	20 dB	20 dB	26 dB

General Parameters

Operating Temperatures	-25°C + 70°C
Operating Humidity	0 to 95% non-condensing
Weight (in SR-1000)	1350g (48 oz)
Weight (card)	675g (24 oz)
Dimensions (in SR-1000)	182mm(7.16")L, 165mm(.5")W, 44mm(1.75")H
Dimensions (card)	160mm(6.3")L, (1.7")V, 100mm(4")H
	*available w/ 11/0 lasers

Installation

To install the PX-1500LR and PX-1500R, it is necessary to allow enough space to accommodate the bend radius of the optical cable connected to it. Connect "Line In" RJ-11 port of PX-1500LR to the telephone line, and "Phone" RJ-11 port of PX-1500R to the phone. Optical input/output is via LED and PIN detector; 850/1300nm for multimode; Laser and PIN detector @ 1310/1550nm for singlemode. Series 1500 transceivers are compatible with 50 and 62.5 micron multimode fibers; no attenuators required - the optical dynamic range is greater than the optical budget of the system (as measured with 62.5/125 fiber. For singlemode units, the budget is 26 dB and optical dynamic range is 25 dB - for short distances, attenuators are required. Series 1500 cards occupy two slots; two knurled captive screws (on top and bottom of front panel) secure each card to the desk chassis or subrack. There is a globe on the upper portion of same front panel which indicates the top to bottom orientation. The front panel also features a push button LED indicator on the right side of the slot, each card incorporates four fuses - L1 short circuit protection.

WARNING. A FULLY LOADED SUBRACK REQUIRES FORCED AIR COOLING. TO AVOID OVERHEATING OF CARD UNITS, WHENEVER POSSIBLE, INSTALL IN EVERY OTHER SLOT - A FAN ASSEMBLY TRAY (P/N FA-2000) WITH THREE (3) FANS IS AVAILABLE AND SHOULD BE INSTALLED UNDER THE 19" SR-2000/1.

Status Indicators

There are four (4) LEDs on the front panel of each PX-1500LR and PX1500R card.

Green Color ON

LED #1	Far side audio receive
LED #2	Near side audio send
LED #3	Near side off hook
LED #4	Far side off hook

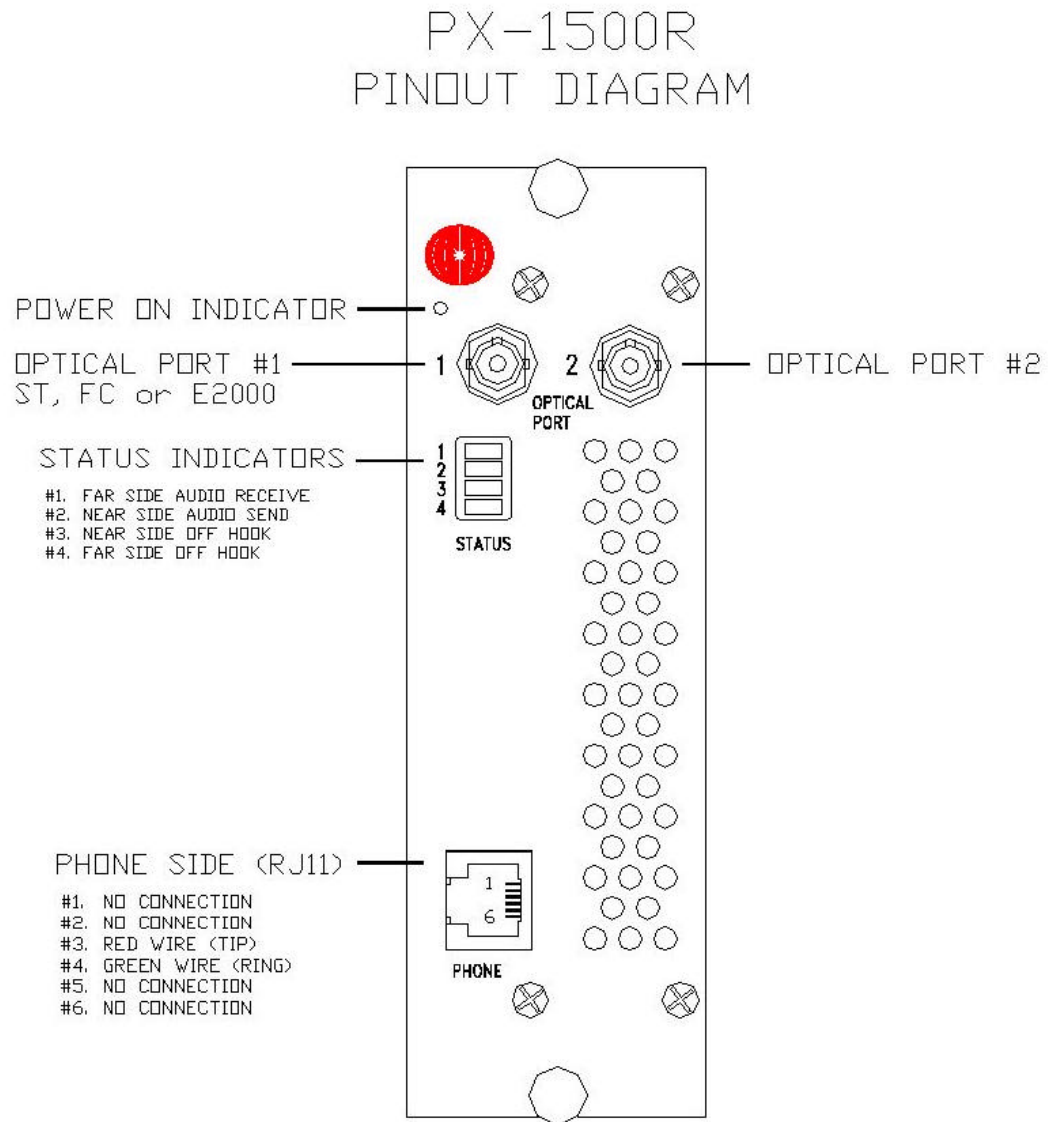
Alarm Diagnostics

There are no alarm diagnostic indicators on the front panel of the Series 1500 cards. Units feature extensive diagnostics only when ordered with the SR-2000 Command Center subracks and SpectraSmart software. For additional information, see SpectraSmart

Power Supply

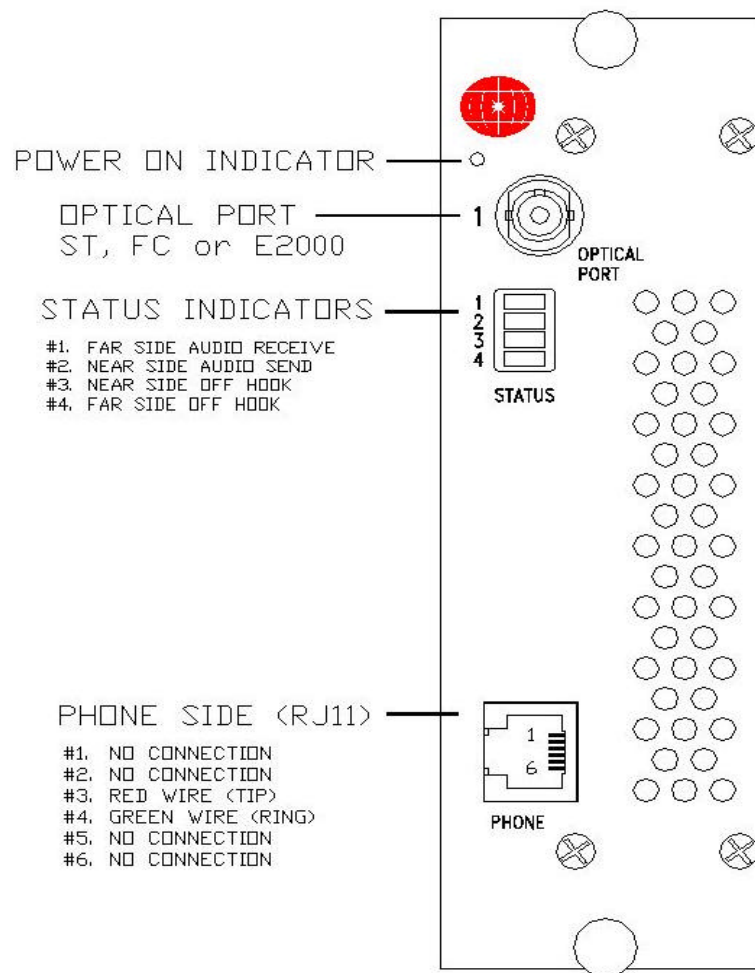
The unit is powered by a plugin power supply that is offered with the appropriate desk chassis or EIA 19" subrack.

Pinout Diagram



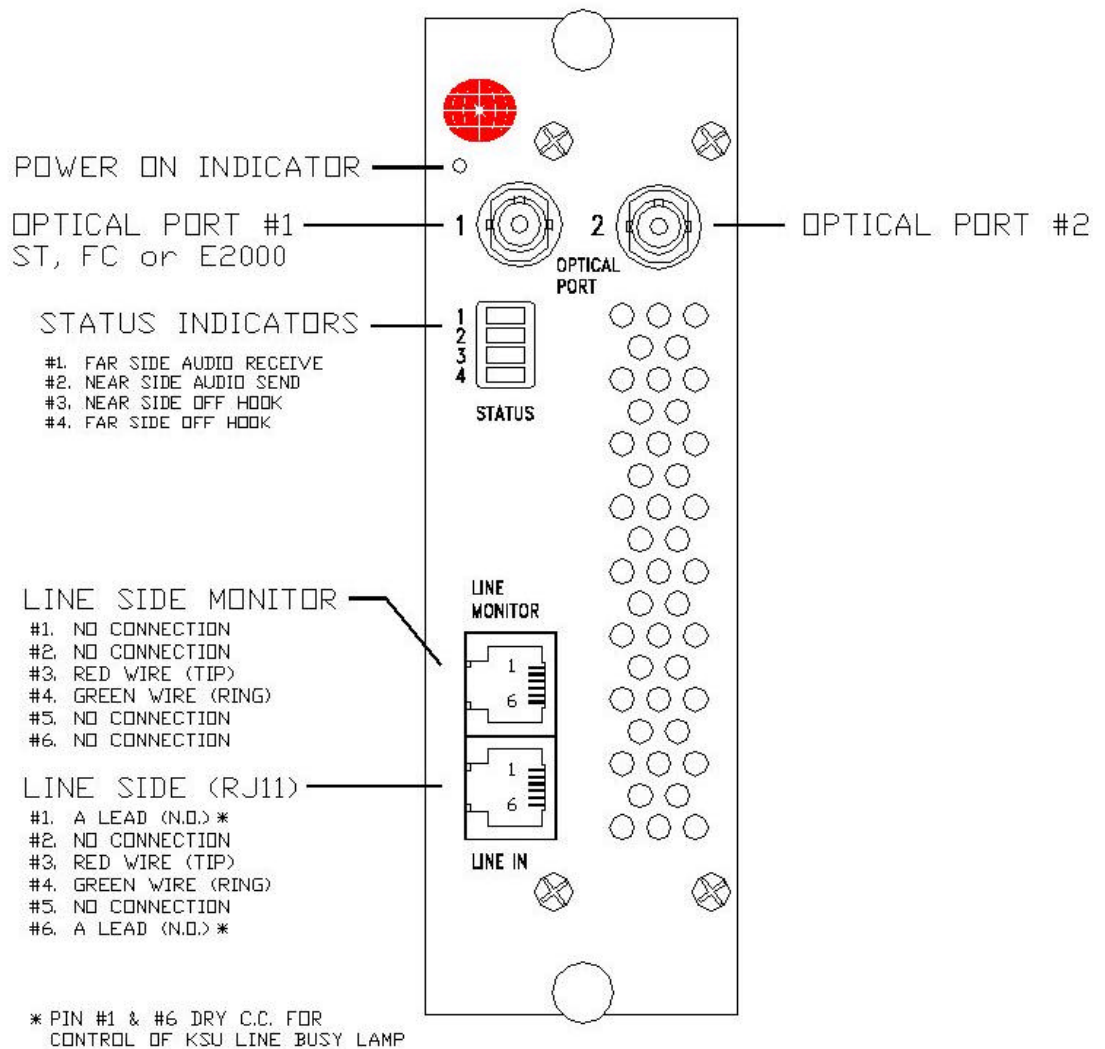
Pinout Diagram

PXA/PXB-1500iR PINOUT DIAGRAM



Pinout Diagram

PX-1500LR PINOUT DIAGRAM



Pinout Diagram

PXA/PXB-1500iLR PINOUT DIAGRAM

