

INSTALLATION AND OPERATING INSTRUCTIONS

PX-9900iR

DESCRIPTION

The PX-9900iR is a rack mount card LED BASED fiber optic transceiver that converts Audio, RS-422 and RS-232 to (FM) Frequency Modulated light signals for coupling into an optical cable and also converts (FM) Frequency Modulated light signals from an optical cable into RS-232, RS-422 and Audio. Bidirectional transmission is via single optical fiber. Card is identified only by the Part Number/Serial Number label on the side cover.

IF S/N-P/N LABEL HAS FALLEN OFF YOU CAN IDENTIFY THE TRANSCEIVER UNIT FOR DESK SIDE BY FEMALE DB15 CONNECTOR; COMPUTER SIDE BY MALE DB15 CONNECTOR.

WARNING: NEVER LOOK INTO ANY KIND OF OPTICAL PORT WITH THE POWER ON.

SYSTEM COMPATIBILITY

The PX-9900iR is compatible with full duplex:

- a) Audio (600 Ohm balanced),
- b) RS-422 data for keyboard interface and
- c) RS-232 data for printer interface signals.

The PX-9900iR card features full optical dynamic range capability; units require no user adjustments for speedy installation and long term reliability.

Meridian Technologies keyboard end PX-9900iR card units plug into any of the following Meridian Technologies subrack or chassis part #s SR-4000, SR-4001, SR-2000, SR-2001, SR-1500, SR-1200 and SR-1000. Desk (keyboard) end PXA-9900iR transceivers are compatible with computer (control) end PXB-9900iR transceiver cards.

INSTALLATION

To install the PX-9900iR, it is necessary to allow enough space to accommodate the bend radius of the optical cable connected to it. The unit slides into any slot of the above mentioned subracks or desk chassis and requires as short as practical Audio/Data cable assembly to input/output the audio/data signals. Series 9900iR-0 transceivers are compatible with 50/125 and 62.5/125 micron multimode fibers; series 9900iR-1 are compatible with singlemode fibers.

Slide the top and bottom card extrusions along the mirror image card guides (not in spaces between the guides). There is a GLOBE (part of Meridian's logo) at the top of card front panel to indicate proper top to bottom orientation. Push hard to make good connection to mother board - loud snap indicates good installation. There are two captive screws on top and bottom of front panel that hold each card to the subrack. These must be locked by hand in a clockwise manner (do not over tighten).

There is an LED on the top portion of the front panel that will light up once the power supply to the subrack/chassis is turned on. The LED is connected to the + and - supply circuitry of the of the card. Once transceiver card is installed in chassis, please connect:

- a) Audio and RS-422 cable to the female DB15 port,
- b) RS-232 cable to the RJ45 port and
- c) fiber optic cable to the optical port

WARNING: A FULLY LOADED SUBRACK REQUIRES FORCED AIR COOLING. TO AVOID OVER HEATING OF CARD UNITS, WHENEVER POSSIBLE INSTALL EVERY OTHER SLOT.

Meridian recommends the installation of fan assembly units in between subracks (SR-4000, SR-4001, SR-2000 and SR-2001) to provide adequate ventilation to the high density rack system. Use Meridian Technologies P/N FA-2000 which is an EIA 19"L x 5 1/4"H subrack (see manual for FA-2000).

POWER SUPPLY

The unit is powered via a mother board by a switcher 110/220V supply which is provided with the subrack or desk chassis.

INDICATIONS

The front panel of the PX-9900iR features 6 LEDs which indicate:

PTD - Printer Transmitted Data
PRD - Printer Received Data
KTA - Keyboard Transmitted Audio
KRA - Keyboard Received Audio
KTD - Keyboard Transmitted Data
KRD - Keyboard Received Data

When cards are fully connected the six segment LEDs will turn on as data or audio are either transmitted or received. Ex: by touching keyboard, the KTD LED will light up on PT-9900iR (and KRD on opposite end card PR-9900iR).

DIAGNOSTICS

Additional diagnostics are available with the PX-9900iR cards when the units are ordered with diagnostics option and installed into:

- a) SR-2000 Master subrack with or without SR-2001 expansion units or SR-4000 Master subrack with or without SR-4001 and/or SR-2001 expansion units (see appropriate SpectraSmart manual for details) and
- b) SR-1500, SR-1200 and SR-1000 desk chassis with either SI-1500 Status Interface (local diagnostics) card or CI-1500 Computer Interface (PC remote diagnostics) card (see appropriate SpectraSmart manual for details).

TROUBLE SHOOTING HINTS - PX-9900iR Audio/RS-422/RS-232 Transceiver

Item - Card does not seem to fit in slot;

- a) check top to bottom orientation; globe must be on upper portion of card front panel;
- b) make sure card extrusions are aligned (top to bottom) with mirror image card guides and not in between guides;
- c) try another slot, guides may be in incorrect location.

Item - Card LED does not light up when power to chassis is applied; also power supply LED is first on then off (in subracks only); after short period of time power supply LED again turns on then turns off (repeat of cycle).

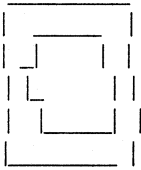
WHEN CARD UNITS ARE INSTALLED IN 18 OR 36 SLOT SUBRACKS, MINIMUM LOAD IS REQUIRED FOR POWER SUPPLY LED TO STAY ON - 3 CARDS. DESK CHASSIS DO NOT REQUIRE MINIMUM LOAD FOR POWER SUPPLY LED TO TURN AND STAY ON.

- a) try card in another slot and look for change in condition; if no change,
- b) try same card in another chassis , which has power supply LED on and houses cards that have lit up LEDs; if LED lights up no problem with card, if LED still off card is faulty, return for warranty repair.
- c) for problem with subrack and/or power supply check appropriate subrack installation and maintenance manual.

Item - 4 Cards are installed in SR-1200 chassis and slot #3 is only slot whose card's LED is not on;

- a) take card from slot #3 and install in another slot of same chassis, if condition is same card must be replaced; return for warranty repair.
- b) try a "good card" in slot # 3. If "good card's" LED does not light up, there is an additional problem with Mother Board; will not affect other cards but mother board assembly should be replaced if all slots are needed (see appropriate subrack manual for replacement procedure).

PINOUT INFORMATION AUDIO/DATA CARDS

Audio/Keyboard Functions		Printer Functions	
Controller DB15 Male	Keyboard DB15 Female	Controller RJ45	Keyboard RJ45
1 Audio In +	1 Audio Out +	1 N/C	1 N/C
2 Data In -	2 Data Out -	2 RD Out	2 RD In
3 Data In +	3 Data Out +	3 TD In	3 TD Out
4 Audio Out +	4 Audio In +	4 DTR In	4 DTR Out
5 Data Out -	5 Data In -	5 GND	5 GND
6 Data Out +	6 Data In +	6 DSR Out	6 DSR In
7 N/C	7 N/C	7 RTS In	7 RTS Out
8 N/C	8 +9V	8 CTS Out	8 CTS In
9 Common GND	9 Common GND	RJ45	
10 N/C	10 N/C		
11 N/C	11 N/C		
12 N/C	12 N/C		
13 Audio In -	13 Audio Out -		
14 Audio Out -	14 Audio In -		
15 Signal GND	15 Signal GND		