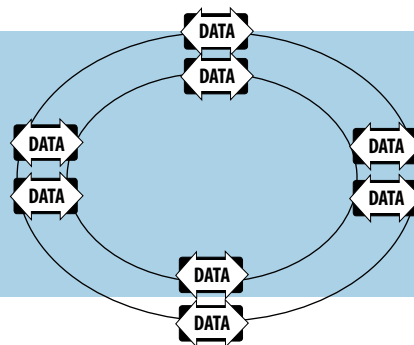


## Data Multidrop Self-Healing Optical Ring Modem, rack mounted card



### FEATURES:

- Network Diagnostics - Local and Remote Access
- Surface Mount Technology (SMT) for High Reliability and Repeatability
- Fault Tolerant Self-Healing Ring or Linear Bus Topology
- Multiple-Master Capability
- Asynchronous Data Rates up to 125 Kbps NRZ
- Uses Digital FPGA Technology
- Data Protocol Independent
- RS-232D, RS-422, RS-485 (2 and 4 wire) and TTL
- True Tri-State Sensing (no time outs needed)
- Single Handshake - RS-232D (RTS&CTS) or 2 Channel 125 Kbps Data Multiplexer
- Data Re-clocked & Regenerated at each Modem
- 99 Node Capability
- Individually Addressable Modems
- Anti-streaming (on/off or variable time)
- Local and Remote Loop Back Test
- Hot Swappable Input Power
- Fully Compatible with SpectraSmart™ PC Based Network Management
- Built In BER Tester w/GUI
- ESD Input Protection
- Exceeds NEMA TS-1/TS-2 and Caltrans Specifications

### DESCRIPTION:

The 2300R is a state-of-the-art, rack mounted, multi-drop data modem designed to provide the user with trouble-free data transmission in both self-healing ring and Multidrop string configurations. This 2-slot card modem has self-diagnostic capabilities that can be monitored on a computer via the front-panel mounted RS-232 or USB ports. A front panel mounted RS-485 port is provided for interconnecting the network diagnostics on two or more master modems. The PC based Network Management system incorporates real time system diagnostics for monitoring various network and modem parameters including, but not limited to: Optical connectivity, Optical budgets, Power supply voltages, Individual modem operating parameters, alarms & alarm history and network BER. A GUI network representation monitors the fiber connectivity for other modems that are on the ring / string network. If a fiber is broken an alarm activates, giving the user a visual representation of a broken fiber and its location in the network. Both primary and redundant fiber rings are simultaneously monitored by the network diagnostics. The 2300R product family combines sophisticated self-healing ring topology and computer based diagnostics to provide your network with round the clock monitoring. The self-healing ring automatically detects faults and re-routes communications on the ring to keep your network operational while the built in diagnostics reduces the time required by technicians to analyze, locate and repair the fault.

### CONFIGURATIONS:

The modems can be installed in a string or counter-rotating, fault-tolerant ring network. The switch selectable feature allows each modem to be set as a Master (primary or secondary) or Slave. The Master modems are connected to the PC via the RS-232 or USB ports. This modem interfaces with both additional PX-2300R modems as well as Meridian's PX-2300M, surface-mount Multidrop modem. The 2300R can be installed in all of Meridian's card chassis, desk chassis and 19" racking frames. These systems can be made a standalone system by using the SR-1000/S, 2 slot desk / wall mount chassis (87VAC-264VAC)

### MARKETS:

- ✓ Card Access Control
- ✓ Security Telemetry Systems
- ✓ SCADA System
- ✓ Computer Networks
- ✓ Process Control Systems
- ✓ ITS

## SPECIFICATIONS:

### Data

Formats	RS-232D, RS-422A, RS-485 2w/4w, TTL, Single Handshake - RS-232
Rate	DC to 125 Kb/s (Async.)
Bit Error Rate	10 <sup>-9</sup> *
PWD (Pulse Width Distortion)	<10% @ max. Data Rate
Data Re-transmit Time Delay	<5 ms

### Connectors

Optical	(4) ST, FC, SC
Power	Dual 2 Pin Terminal Blocks
I/O Data	DB25 Female

### Indicators (LEDs)

LCD Display (11)	Alarm, Power, Master, Link A, Link B, Diagnostic A, Diagnostic B, Data TX (1), Data RX (2), Data TX (2), Data RX (2)
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### Power

Operating Power	6 Watts
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### Optical

Fiber Data Rate	20 Mb/s
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### Physical

Dimensions	160mm(6.3")L, 100mm(4")W 44 mm (1.7")H
Weight	450 gms (0.9 lb.)
Number of slots	2

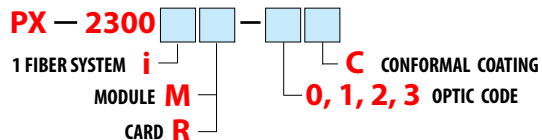
### Environmental

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

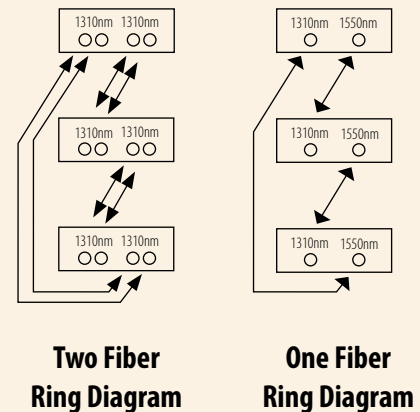
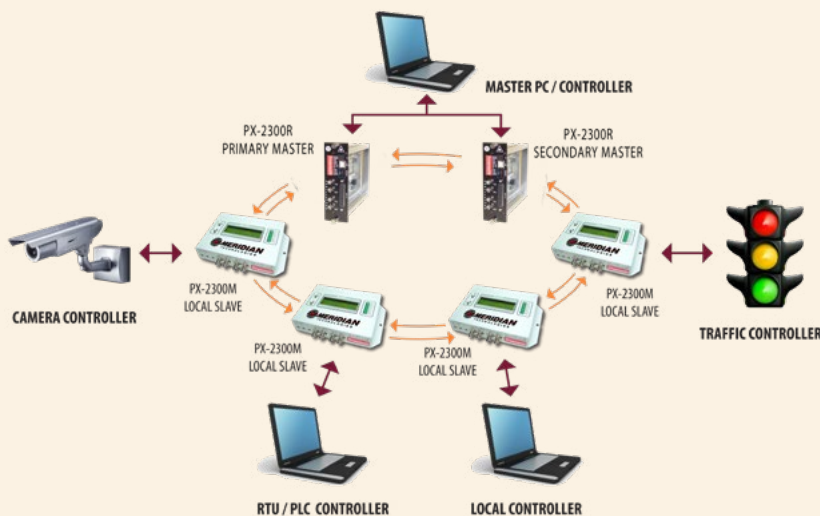
### Quality

MTBF	>260,000 hours @ Ground Fix 35°C per MIL217F
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### Part Numbers:



\* Measured @ 1Km (multimode), 10 Km (singlemode)



## OPTICAL:

### FOR TWO FIBER SYSTEMS

Meridian Optical Code	Fiber Type/Size (um)	Optical Output (dBm)	Receiver Sensitivity (dBm)	Optical Budget (dB)	Wavelength (nm)	Optical Connector	Optical Dynamic Range (dB)	Max Distance (Km)
0	Multimode (Laser) 62.5 / 125	-15	-30	15	850	ST, SC	30	5
1	Multimode (Laser) 62.5 / 125	-16	-30	14	1300	ST, SC	30	4.5
2	Single-mode (FP Laser) 9 / 125	-3	-33	30	1310	ST, FC, SC	33	85
3	Single-mode (FP Laser) 9 / 125	-3	-33	30	1550	ST, FC, SC	33	100

### FOR ONE FIBER SYSTEMS

Meridian Optical Code	Fiber Type/Size (um)	Optical Output (dBm)	Receiver Sensitivity (dBm)	Optical Budget (dB)	Wavelength (nm)	Optical Connector	Optical Dynamic Range (dB)	Max Distance (Km)
0	Multimode (Laser) 62.5 / 125	-18	-30	12	1310/1550	ST, SC	30	4
1	Single-mode (FP Laser) 9 / 125	-5	-33	28	1310/1550	ST, FC, SC	33	80

Distance is limited to fiber loss and splices. Higher output lasers are available.

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