**Model 3910S
FDDI Network
Management Module**

Multiple Communication Paths

Standards Compatibility

Onboard ROM

The Model 3910S Fiber Distributed Data Interface (FDDI) Network Management Module gathers FDDI network performance data at the hub, module, and port level to provide a comprehensive report of overall system activity. The module occupies two slots in a System 3000™ intelligent hub, where it attaches to network management and FDDI buses on the concentrator's backplane. In FDDI networks, each host station supports the American National Standards Institute's (ANSI) FDDI Station Management (SMT) protocol. The Model 3910S collects SMT-generated data from the host stations, and an onboard AMD 29005 RISC processor processes the management frames within the concentrator. A resident SMT-to-Simple Network Management Protocol (SNMP) proxy agent enables the central management station to access local and remote SMT data.

By supporting industry-standard SNMP, the Model 3910S is capable of passing management data through bridges or routers in extended networks. SNMP compatibility also enables network administrators to manage Bay Networks Ethernet, Token Ring, and FDDI networks, as well as other SNMP-compliant devices, from a single management station.

In addition, the Model 3910S FDDI Network Management Module works with Bay Networks Optivity® network management system to provide comprehensive, distributed management of 100 megabit-per-second (Mbps) FDDI networks.

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Benefits

Multiple Communication Paths

Three media access control (MAC) entities on the module enable the Model 3910S to manage three paths within the concentrator: primary, secondary, and local, as shown in Figure 1. FDDI stations are assigned to an internal path from the management station.

Standards Compatibility

The Model 3910S is fully compatible with the International Standards Organization's FDDI Media Access Control (MAC), Physical Medium Dependent (PMD), and Physical Protocol (PHY) standards. The module also supports the most current version of the ANSI FDDI X3T9.5 SMT protocol.

Onboard ROM

The Model 3910S supports 2 megabytes (MB) of ROM on board, incorporating full FDDI management information base (MIB), SMT, SNMP, and diagnostic software at the board level. An additional 2 MB of RAM enables SMT and SNMP

to be downloaded from the management station using Trivial File Transfer Protocol (TFTP) if remote download is desired. A standard local load capability allows startup without intervention by the network management station.

Features

Module Interface Options

The Model 3910S offers multimode fiber optic media interface connectors (MICs) as the interface to the network. Two MIC ports are offered on the module face plate, labeled Port A and Port B, to enable peer, tree, null-attached, and dual-homed network configurations over 50/125 and 62.5/125 micron multimode fiber optic cabling. Cabling distances up to two kilometers between concentrators are supported.

In addition, the Model 3910S offers three other interfaces to support various management functions. A service port, featuring a DB-9 male connector, enables diagnostic and configuration data to be obtained from a local terminal. An RS-232 serial communications port, implemented with a DB-25 male connector, enables the module to communicate with the management station out of band via a modem link, should in-band communications fail.

The module includes control of external optical bypass switches for attachment to dual rings. The switch function, implemented through a 6-pin mini-DIN connector, enables the network manager to remove the concentrator from the ring without causing the network to wrap.

LED Indicators

The Model 3910S features an array of front-panel LEDs to indicate module status, faults, wrap conditions, and active paths at a glance. In addition, individual port LEDs indicate activity, link error alarms, fault, and configuration status (tree or peer) for the A and B MIC ports.

Figure 1 | **The Model 3910S FDDI Network Management Module enables management of primary, secondary, and local paths from an Optivity management station.**
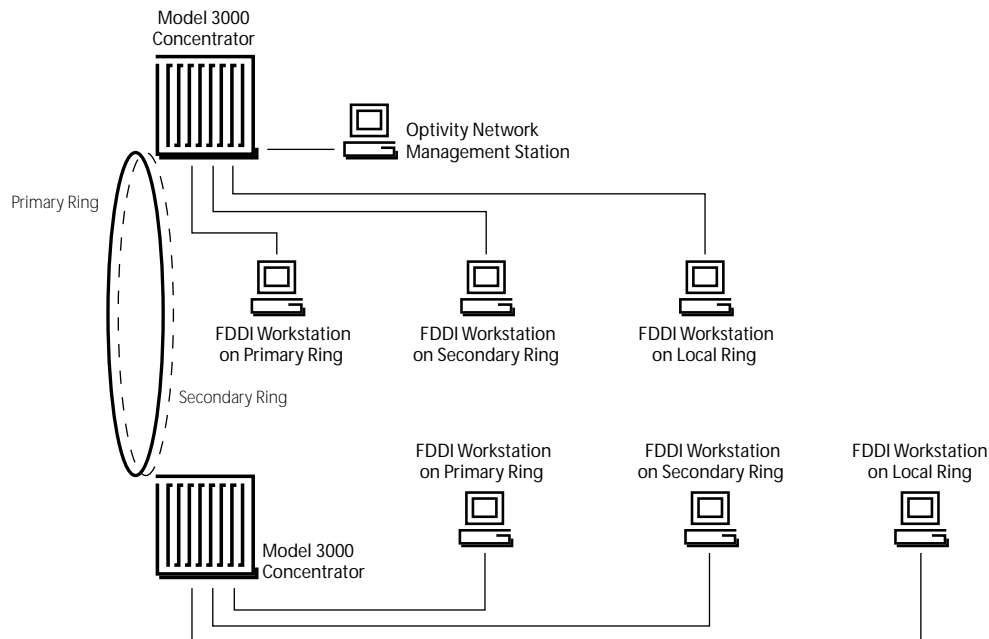
Technical Specifications

Technical specifications for the Model 3901S FDDI Network Management Module are shown in Table 1.

Table 1 | **Model 3910S FDDI Network Management Module Technical Specifications**

Network Protocol and Standards Compatibility	ISO 9314-1 FDDI Physical Protocol (PHY) standard
	ISO 9314-2 FDDI Media Access Control (MAC) standard
	ISO 9314-3 FDDI Physical Medium Dependent (PMD) standard
	ANSI FDDI X3T9.5 Station Management (SMT) specification version 7.3
Data Rate	100 Mbps
Electrical Specifications	
Power Consumption	40 W max (+5 V) and 8 W max (±12 V)
Thermal Rating	150 Btu/hr
Optical Specifications (Multimode)	
Transmitter/Receiver	LED/PIN diode
Wavelength	1300 nm
Optical Power Coupled into 62.5/125 µm, 0.275 NA Fiber	-16 dBm, ± 2 dBm
Optical Receiver Sensitivity	-31 dBm min
Optical Receiver Dynamic Range	17 dB max
Optical Specifications (Single-Mode)	
Transmitter/Receiver	LASER/PIN diode
Wavelength	1300 nm
Optical Power Coupled into 8.5/125 µm, 0.275 NA Fiber	-17 dBm, ± 2 dBm
Optical Receiver Sensitivity	-31 dBm min
Optical Receiver Dynamic Range	17 dB max
Physical Dimensions	(H) 15 in. x (W) 2.4 in. x (D) 10.5 in.
	(H) 38.1 cm x (W) 6.1 cm x (D) 26.7 cm
Microprocessors	16 MHz AMD 29005 RISC-based processor
	10 MHz NEC V35, with NEC 71059 interrupt controller and
	AMD 9513A timing controller
Memory	2 MB
ROM	2 MB EPROM
Environmental Specifications	
Operating Temperature	5°C to 40°C
Operating Humidity	85% max relative humidity, noncondensing
Operating Altitude	10,000 ft (3,048 m), 40°C max
Storage Temperature	-25°C to 70°C
Storage Humidity	95% max relative humidity, noncondensing
Weight	4.5 lbs (3.0 kg)
Electromagnetic Emissions	Meets FCC Part 15, Subpart B, Class A
Safety Agency Approvals	UL Listed (UL 1950)
	CSA certified (CSA 22.2 #950)
	TUV licensed (EN 60 950)
	CE Mark

Ordering Information

Ordering information for the Model 3910S is shown in Table 2.

Table 2 | **Model 3910S FDDI Network Management Module Ordering Information**

Order Number	Description
3910S-04	Model 3910S-04 FDDI Network Management Module with Local Load Capability; includes License for Advanced Network Management Agent

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