System 3000 FDDI Host Modules

Expand Network Configuration

Consolidate Network Monitoring

Ensure Network Availability

Maintain Network Connections

Bay Networks' System 3000™ FDDI host modules support host connections to Fiber Distributed Data Interface (FDDI) networks operating at 100 megabits per second (Mbps) over existing horizontal cabling systems.

The modules are fully compatible with the International Standards Organization's (ISO) Physical Medium Dependent (PMD) and Physical Protocol (PHY) standards, as well as the American National Standards Institute (ANSI) FDDI X3T9.5 Station Management (SMT) specification.

Two System 3000 FDDI host modules are available, each supporting different types of fiber optic cabling.

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Benefits

Expand Network Configuration

System 3000 FDDI host modules reside in a Model 3000S or Model 3000SR Premises Concentrator, where they connect to the FDDI bus on the hub backplane. Up to 40 FDDI host stations can be supported in a concentrator configured exclusively for FDDI and supporting network management. System 3000 FDDI host modules can also coexist with System 3000 Ethernet and Token Ring host modules in the same concentrator, providing maximum network configuration flexibility.

Consolidate Network Monitoring

Fully integrated into Bay Networks' Optivity® Enterprise network management system, the FDDI host modules can be monitored and controlled from a single, central console. From the management station, individual ports can be configured to operate over Primary or Secondary paths running in the hub, enabling the network manager to configure the network for maximum efficiency.

Ensure Network Availability

System 3000 FDDI host modules include an automatic port isolation feature to maintain network availability in the event of a host station failure. If a module detects a powered-down end node or broken or disconnected cables, it automatically isolates (partitions) the affected port while allowing the rest of the network to remain operational.

Maintain Network Connections

The modules also support the FDDI Connection Management (CMT) specification, enabling them to operate in stand-alone mode. Under normal conditions, CMT runs on the host modules under the direction of a Model 3910S FDDI network management module. If a failure occurs at the network management module, the host modules are designed to support CMT, as well as portions of SMT, which normally reside on the network management module. This provides a level of redundancy to maintain network connections until a replacement network management module is installed.

Features

Model 3904 Multimode Fiber FDDI Host Module

The Model 3904 FDDI Fiber Optic Host Module offers four fiber optic media interface connectors (MICs) to support FDDI host stations operating at 100 Mbps over multimode fiber optic cable. The Model 3904 allows connections of up to two kilometers between the host station and the hub for use in widespread networking environments. The Model 3904 operates over existing 50/125 and 62.5/125 micron multimode fiber optic cabling.

Model 3904-2SM Single-mode/ Multimode Fiber FDDI Host Module

The Model 3904-2SM FDDI Fiber Optic Host Module is identical to the Model 3904, with the exception of two FDA-compliant Category 1 single-mode fiber interfaces in place of two multimode MIC connectors. The single-mode interfaces support connections up to 10 kilometers between the host station and the hub over 8.5/125 micron single-mode fiber optic cabling.

Additional FDDI Host Module Features

The System 3000 FDDI host modules feature a series of front-panel LEDs to report active ports, link error monitor (LEM) alarm conditions, fault status, and whether individual ports are attached to the Primary, Secondary or Local path. The modules also offer a front-panel RJ-45 service port for local configuration and diagnostics.

Figure 1 | **System 3000 FDDI Host Modules in Dual-Homed Configuration**

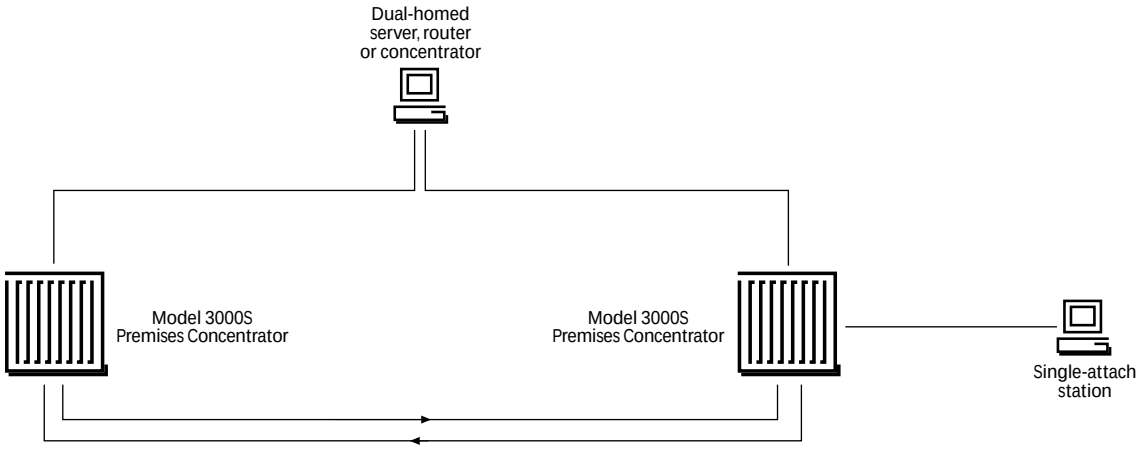
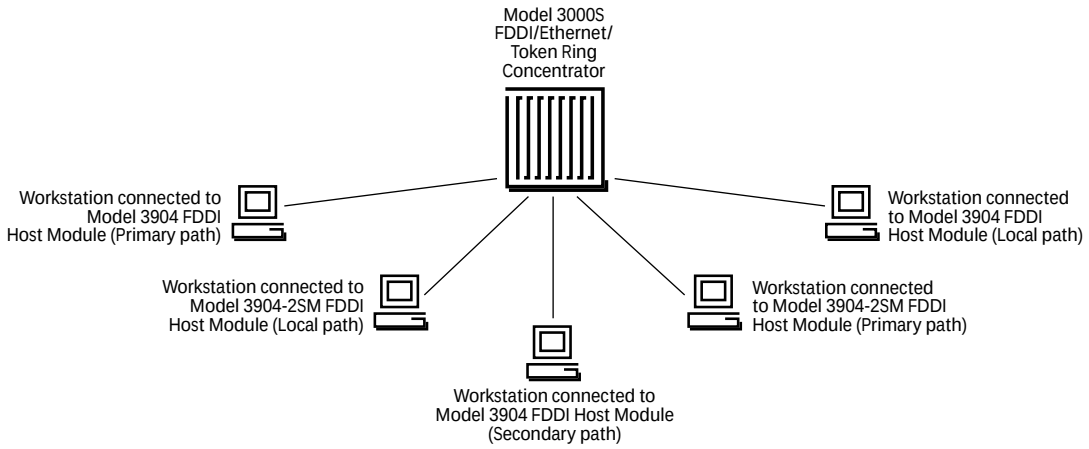


Figure 2 | **FDDI Stations Connected to System 3000 FDDI Host Modules Over Primary, Secondary and Local Paths**



Technical Specifications

Technical specifications for the System 3000 FDDI Host Modules appear in Table 1.

Table 1 | **System 3000 FDDI Host Module Technical Specifications**

Network Protocol and Standards Compatibility	ISO 9314-1 FDDI Physical Protocol (PHY) standard ISO 9314-3 FDDI Physical Medium Dependent (PMD) standard ANSI FDDI X3T9.5 Station Management (SMT) specification ANSI FDDI X3T9.5 Draft Twisted Pair Physical Medium Dependent (TP-PMD) standard
Data Rate	100 Mbps
Electrical Specifications	Power consumption: 20W max (+5V) and 2.4W max (-12V) Thermal rating: 76.4 Btu/hr max
Optical Specifications	
Multimode:	Transmitter/receiver: LED/PIN diodes Wavelength: 1300 nm Optical power coupled into 62.5/125 µm, 0.275 NA fiber: -17 dBm, -3 dBm Optical receiver sensitivity: -31 dBm min Optical receiver dynamic range: 17 dB max
Single-Mode:	Transmitter/receiver: LASER/PIN diodes Wavelength: 1300 nm Optical power coupled into 8.5/125 µm, 0.275 NA fiber: -17 dBm, -3 dBm Optical receiver sensitivity: -31 dBm min Optical receiver dynamic range: 17 dB max (All optical specifications meet the ANSI FDDI PMD specifications)
Physical Dimensions	(H) 15 in x (W) 1.2 in x (D) 10.5 in (H) 38.1 cm x (W) 3.1 cm x (D) 26.7 cm

Table 1 | **System 3000 FDDI Host Module Specifications (continued)**

Environmental Specifications	Operating temperature: 5°C to 40°C; storage temperature: -25°C to 70°C Operating humidity: 85% max relative humidity, non-condensing; Storage humidity: 90% max relative humidity, non-condensing Operating altitude: 10,000 ft (3,048 m), 40°C max Free fall/drop: ISO 4180-2, NSTA 1A Vibration: IEC 68-2-6/34 Stock/bump: IEC 68-2-27/29
Weight	2.2 lbs (1.0 kg)
Electromagnetic Emissions	Meets FCC Part 15, Subpart J, Class A and B Meets EN 55 022 (CISPR 22: 1985), Class B Meets General License VDE 0871, Class B (AmtsblVfg 243/1991, 46/1992) Meets VCCI Class 1 ITE
Electromagnetic Susceptibility	Electrostatic discharge (ESD): IEC 801-2, Level 2/4 Radiated electromagnetic field: IEC 801-2, Level 2 Electrical fast transient/burst: IEC 801-4, Level 2/3 Electrical surge: IEC 801-5, Level 1/3
Safety Agency Approvals	UL Listed (UL 1950) CSA certified (CSA 22.2, #950) TUV licensed (EN 60 950)

Ordering Information

Ordering information for the System 3000 FDDI host modules appears in Table 2.

Table 2 | **System 3000 FDDI Host Module Ordering Information**

Order Number	Description
3904	Model 3904 Fiber Optic FDDI Host Module

Bay Networks

For more sales and product information, please call **1-800-8-BAYNET**.

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1/96 DA508-286WC-F

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