Provide Network Access

Adapt to Existing Cabling

Support Industry Standards

Ethernet transceivers from Bay Networks provide an IEEE 802.3-compatible interface for linking a variety of host devices to twisted pair and fiber optic cabling systems.

The transceivers support connections between Ethernet hubs, switches, or routers and PCs, workstations, Apple Macintosh computers, and other networked equipment over star-configured cabling systems. Utilizing the industry-standard attachment unit interface (AUI) 15-pin D connector or the Apple Attachment Unit Interface (AAUI) 14-pin connector, the transceivers provide a smooth transition from standard network interface cards to a building's structured cabling system.

The Ethernet transceivers are fully compatible with all Bay Networks Ethernet products, including hubs, 10 megabit-per-second (Mbps) switches, and IEEE 802.3 interfaces on the Access Node (AN®), Access Stack Node (ASN™), and Backbone Node (BN®) routers.

Bay Networks

Benefits

Provide Network Access

The Bay Networks Ethernet transceivers offer an IEEE 802.3-compatible interface that provides PCs, workstations, Apple Macintosh computers, printers, and other networked equipment with direct access to the network.

Adapt to Existing Cabling

The Ethernet transceivers allow devices utilizing network adapters equipped with standard AUI interfaces to access a variety of twisted pair and fiber optic cabling. The transceivers provide a smooth transition to the existing cabling plant, taking full advantage of the available media.

Support Industry Standards

Bay Networks Ethernet transceivers are fully compatible with the IEEE 802.3 Ethernet standard, featuring both 10BASE-T and 10BASE-FL interfaces for supporting 10 Mbps Ethernet over unshielded twisted pair and fiber optic cabling, respectively.

Features

Bay Networks offers three different Ethernet transceivers, each designed for specific environments or cabling plants.

The Model 928A Integrated 10BASE-T Transceiver provides a clean, direct desktop-to-network connectivity solution for a variety of Ethernet devices. The Model 928A's slim design — slightly larger than a standard AUI drop cable connector — allows the transceiver to be connected directly to a network interface card installed in an Ethernet station. A captive 15-foot (4.6 meter) unshielded twisted pair cable terminated with a standard RJ-45 modular connector provides connectivity to an IEEE 802.3i 10BASE-T Ethernet segment. The Model 928A includes an automatic polarity correction feature, which enables the transceiver to compensate for wiring errors by inverting positive and negative signals from the host module. The Model 928A also offers a user-selectable Signal Quality Error (SQE) test function, accessed via an external switch on the transceiver chassis.

The Model 518 10BASE-T Transceiver for Apple Ethernet provides a 10BASE-T connection for Apple Macintosh computers networked via the Apple Ethernet Cabling System. The transceiver features one RJ-45 modular jack receptacle, which accommodates connections to 10BASE-T host modules and concentrators, while an integral AAUI cable with 14-position connector provides the interface to Macintosh AAUI ports. The Model 518 enables 10BASE-T connectivity between Macintosh computers and Bay Networks equipment by converting Macintosh signaling to a 10BASE-T format suitable for transmission over unshielded twisted pair wire.

The Model 504A 10BASE-FL Fiber Optic Transceiver converts host device signals to an optical format suitable for transmission over 62.5/125 micron core cladding multimode fiber optic cables. The Model 504A is designed to meet the IEEE 802.3 10BASE-FL draft proposal for Ethernet over fiber optic cable and is compatible with the IEEE fiber optic inter-repeater link (FOIRL) standard. The ST-type connectors provide the link to fiber optic cable running from the host module to the transceiver, supporting cabling distances up to two kilometers.

Transceiver LED Functions

The Model 928A is equipped with a link status LED, which illuminates when the transceiver is connected to a powered host and there is a valid cable connection to the appropriate host module. The Model 518 features LEDs to indicate link status, transmit, receive, collision, and jabber conditions as well as the activation of autoinversion.

The Model 504A includes an assortment of status and diagnostic LEDs that indicate power, link, transmit, receive, and collision conditions.

All transceivers include a switch that can disable the SQE test signal so the transceiver can connect to an IEEE 802.3 repeater.

Figure 1

Ethernet Transceivers Provide Ethernet-Compatible Interface Between Concentrators and Host Devices on the Network
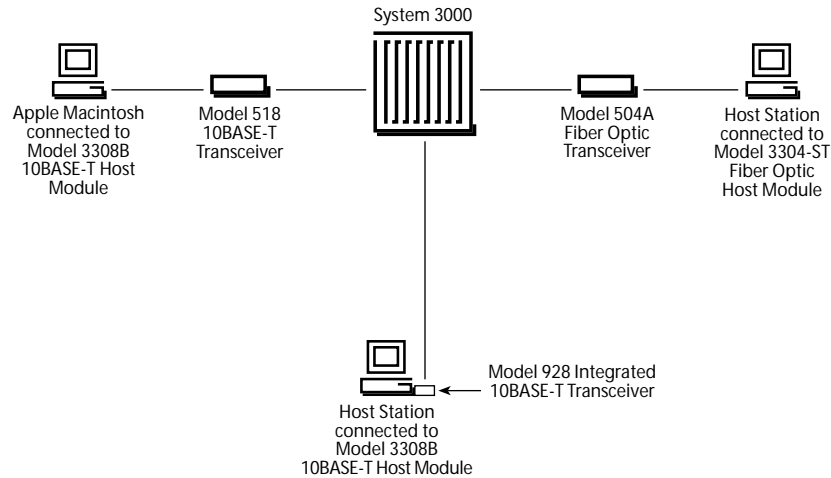
Technical Specifications

Technical specifications for the Ethernet transceivers appear in Table 1.

Table 1 | **Ethernet Transceivers Technical Specifications**

Data Rate	10 Mbps Manchester encoded IEEE 802.3
Physical Dimensions	
Model 504A	(H) .9 in. x (W) 4 in. x (D) 5.4 in. [(H) 2.3 cm x (W) 10.2 cm x (D) 13.7 cm]
Model 518	(H) 1.3 in. x (W) 3.4 in. x (D) 5 in. [(H) 3.2 cm x (W) 8.6 cm x (D) 12.7]
Model 928A	(H) .6 in. x (W) 1.6 in. x (D) 2.5 in. [(H) 1.6 cm x (W) 4.1 cm x (D) 6.4 cm]
Cable Specifications	
Model 928A	
Length	4.6 meters
Connector Type	8-position RJ-45 modular connector
Model 518	
Length	0.5 meters
Connector Type	14-position cable-mount male
Environmental Specifications	
Operating Temperature	5°C to 40°C; storage temperature: -25°C to 70°C
Operating Humidity	85% max relative humidity; storage humidity: 95% max relative humidity
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
Thermal Rating (max)	
Models 502A	8.0 watts (27 Btu/hr)
Model 518	1.0 watt (3.4 Btu/hr)
Model 928A and 504A	3.0 watts (10.3 Btu/hr)

Table 1   **Ethernet Transceivers Technical Specifications (continued)**

Weight	
Model 504A	10.5 oz (.29 kg)
Model 518	6.75 oz (.23 kg)
Model 928A	6.0 oz (.17 kg)
Electromagnetic Emissions	
Model 518	Meet FCC Part 15, Subparts A and B, Class A
Model 928A	Meets FCC Part 15, Subpart J, Class A
	Meets VCCI Class 1 ITE
Model 504A	Meets FCC Part 15, Subpart B, Class A
	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

Ordering Information

Ordering information for the Ethernet transceivers appears in Table 2.

Table 2   **Ethernet Transceivers Ordering Information**

Order Number	Description
504A	Model 504A 10BASE-FL Transceiver
518	Model 518 10BASE-T Transceiver with AAUI Port for Apple Ethernet
928A	Model 928A 10BASE-T Transceiver

Bay Networks

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

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