



Provide Cost-Effective Evolution to High- Speed Networking

BayStack™ Fast Ethernet converters provide simple, standards-based media and speed conversion capabilities for BayStack environments, delivering a low-cost solution for segmenting BayStack networks.

Support Campus Network Designs

Featuring dual-speed 10 and 100 megabit-per-second (Mbps) Ethernet ports, the BayStack Fast Ethernet converters deliver a simple solution for providing users attached to a BayStack 10BASE-T hub with high-speed access to resources on a 100BASE-T network segment. Offering both copper and fiber interface options, the BayStack Fast Ethernet converters also allow for the creation of low-cost campus backbones and enable switching between two network segments separated by up to 2 kilometers (km).

The BayStack Fast Ethernet converters round out the BayStack 10BASE-T and 100BASE-T product offerings, as well as compatible solutions operating within the System 3000™ and System 5000™ product families. Complementing 10 Mbps and 100 Mbps interfaces on Bay Networks hubs, switches, and routers, the BayStack Fast Ethernet converters represent a cost-effective method for connecting high-speed networks to existing LANs.

Benefits

Provide Cost-Effective Evolution to High-Speed Networking

Many workgroups could benefit from the addition of 100 Mbps Fast Ethernet but don't yet require the services of a multiport switch. The BayStack Fast Ethernet converters offer a cost-effective method for introducing Fast Ethernet to existing workgroups, providing a high-performance "big pipe" connection to critical resources such as high-utilization servers or to 100 Mbps network segments. The BayStack Fast Ethernet converters also provide an essential link between 10 Mbps and 100 Mbps domains operating within System 3000 hubs.

Support Campus Network Designs

Built-in support for 100BASE-FX fiber connections makes the BayStack Fast Ethernet converters ideal for building and supporting low-cost campus backbones. The fiber interface supports high-speed 100 Mbps full-duplex switching between network segments separated by up to 2 km.

Features

Two models of the BayStack Fast Ethernet converter are available: the BayStack 30T Fast Ethernet Speed Converter and the BayStack 30F Fast Ethernet Media Converter.

BayStack 30T Fast Ethernet Speed Converter

The BayStack 30T Speed Converter supports two dual-speed (10/100 Mbps) unshielded twisted pair (UTP) Ethernet ports to provide a compatible interface between 10 Mbps and 100 Mbps networks (see Figure 1). Both port pairs, which consist of one MDI-X and one MDI RJ-45 connector, support the IEEE 802.3i 10BASE-T and 802.3u 100BASE-TX specifications. The MDI-X port eliminates the need for crossover cables, allowing straight-through connections to other 10/100 Ethernet devices using standard, readily available UTP patch cables.

BayStack 30F Fast Ethernet Media Converter

The BayStack 30F Fast Ethernet Media Converter offers one RJ-45 port for supporting one dual-speed 10 or 100 Mbps link over UTP, and one duplex SC-type connector for supporting 100 Mbps connections over 50/125 and 62.5/125 μm multimode fiber optic cabling (see Figure 1). The fiber port, which conforms to the IEEE 802.3u 100BASE-FX specification, supports high-speed 100 Mbps fiber links up to 2 km in length.

Transparent Bridging

The BayStack Fast Ethernet converters function as high-performance MAC layer bridges through the use of switch-based technology. The converters support frame filtering and forwarding functions on each port at a rate of 14,880 packets per second (pps) for 10 Mbps operations and 148,800 pps at 100 Mbps.

The converters also offer real-time cut-through frame processing, which dynamically changes among standard cut-through, fragment-free cut-through, and store-and-forward processing, depending on the collision rate. Packets experience minimum latency of less than 20 microseconds in normal cut-through frame processing mode.

Autosensing Ports

The BayStack Fast Ethernet converter includes an autosensing feature that enables individual ports to automatically determine the speed of the devices attached to them — 10 Mbps or 100 Mbps.

BayStack Fast Ethernet Converter Applications

The BayStack Fast Ethernet converters are designed for two specific applications: linking 10 and 100 Mbps networks and supporting long-distance links between network segments.

Linking Different Speed Networks A common application for the BayStack Fast Ethernet converters is to bridge connections between 10 and 100 Mbps network segments (see Figure 2).

Supporting Long Distance Links The fiber interface on the BayStack 30F Fast Ethernet Media Converter allows two 100 Mbps networks separated by up to 2 km to be connected on a common system, consolidating the network (see Figure 3). The fiber port also provides a reliable, secure uplink to a central switch or router.

Figure 1 | BayStack 30T and 30F Fast Ethernet Speed Converters

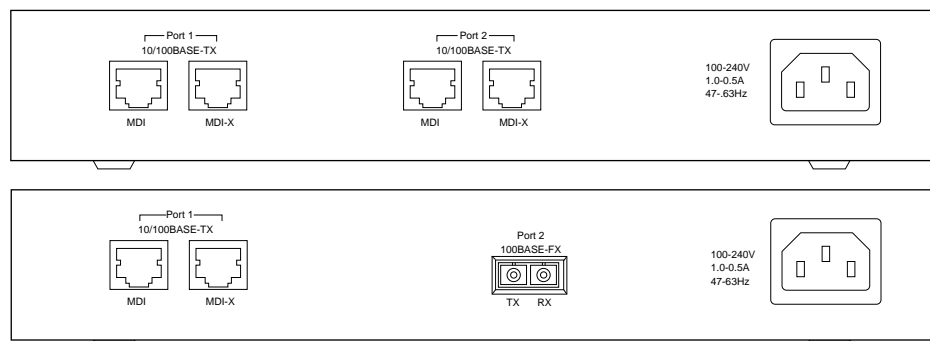


Figure 2 | 10-to-100 Mbps Switching

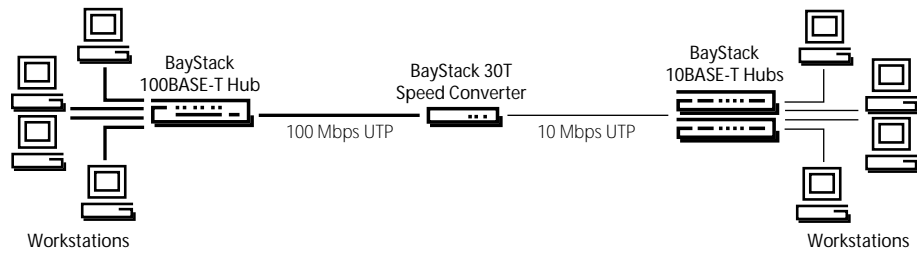
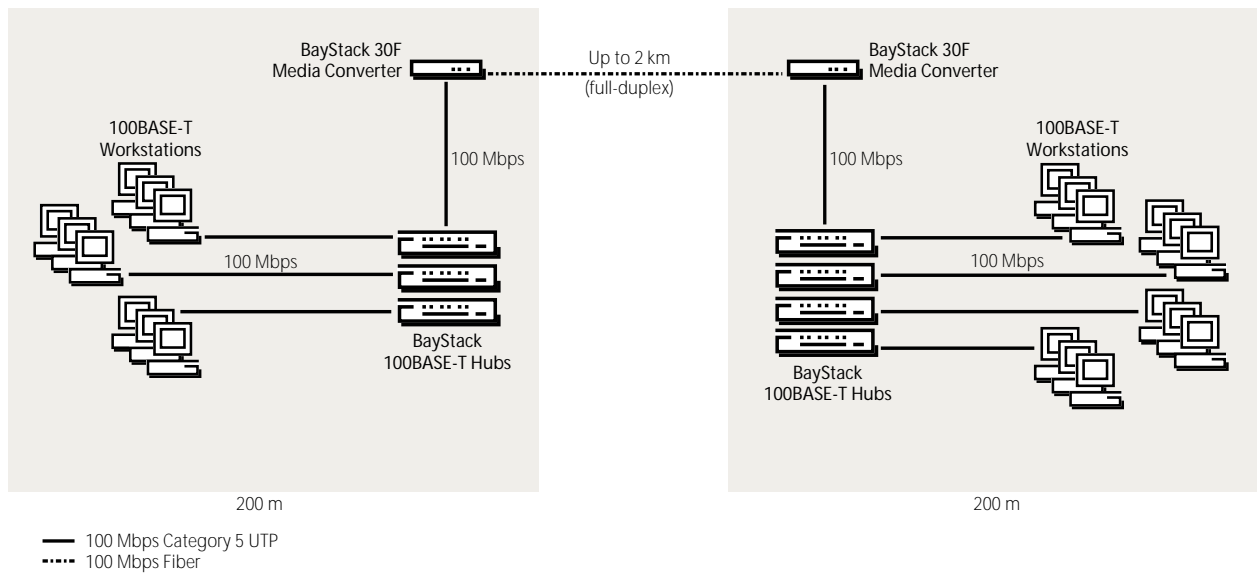


Figure 3 | Campus Network



Technical Specifications

Technical specifications for the BayStack Fast Ethernet converters appear in Table 1.

Table 1 | BayStack Fast Ethernet Converters Technical Specifications

Protocol and Standards Compatibility	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-T
Environmental Specifications	
Operating Temperature	5° to 40° C
Storage Temperature	25° to 70° C
Operating Humidity	85% max relative humidity, noncondensing
Operating Altitude	10,000 ft (3,000 m) max
Storage Altitude	10,000 ft (3,000 m) max

Table 1 | BayStack Fast Ethernet Converters Technical Specifications (continued)

Electromagnetic Emissions	
Meets Requirements of	FCC Part 15, Subpart B, Class A EN 55 022 (CISPR 22:1985), Class B VCCI Class 1 ITE
Electromagnetic Susceptibility	
Electrostatic Discharge (ESD)	IEC 801-2, Level 3/2
Electrical Fast Transient/Burst	IEC 801-4, Level 2
Electrical Surge	IEC 801-5, Level 2/1
Safety Agency Approvals	
	UL listed (UL 1950) UL 94-V1 CSA certified (CSA 22.2 #950) IEC 950/EN 60 950 (TUV)

Ordering Information

Ordering information for the BayStack Fast Ethernet converters appears in Table 2.

Table 2 | BayStack Fast Ethernet Converters Ordering Information

Order Number	Description
CY2012001	BayStack Model 30T Fast Ethernet Speed Converter
CY3112001	BayStack Model 30F Fast Ethernet Media Converter
CY0011001	Rack-Mount Kit for 30T/30F



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

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