

Workgroup Products

BayStack

150 Series 10BASE-T Hubs

Data Sheet



Manageable, cost-effective hubs deliver a scalable solution designed for growing networks.

Scalable from 12 to 192 Nodes

Highly Affordable

Fully Integrated into Optivity

Web-based Management

The BayStack* 150 Series 10BASE-T Hubs offer a simple, scalable shared media solution for growing Ethernet networks. Delivering industry-standard IEEE 802.3i 10BASE-T connectivity for supporting 10 megabit-per-second (Mbps) Ethernet over unshielded twisted pair (UTP) cabling, the hubs provide a robust, expandable foundation for networks that are anticipating future growth.

Management capabilities are integrated in the BayStack 150 and BayStack 152 Hubs via a built-in network management module (NMM). One hub/NMM provides complete management for an entire 8-hub stack. A single hub/NMM can also control and monitor multiple segments separated by as

much as 100 meters through the hub's cascade connectors. For local management, a concise, understandable, easy-to-read LED display allows for at-a-glance network monitoring, including hub position within the stack.

The BayStack 150 Series 10BASE-T Hubs are an integral part of the BayStack Ethernet product family. Working with other BayStack products including hubs, switches, routers, and Internet access equipment, the BayStack 150 Series 10BASE-T Hubs offer a cost-effective, scalable solution for small networks, client/server workgroups, and remote offices.

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FEATURES AND BENEFITS

Scalable from 12 to 192 Nodes

The BayStack 150 Series Hubs deliver a simple, cost-effective method for starting and growing Ethernet networks. A single hub can support from 12 to 24 users, and as requirements grow more hubs can be added to the system to support new users. Up to 8 hubs can be stacked using standard Category 5 UTP cabling to support a total of 192 nodes. The network is able to grow with the business, protecting initial investments in hardware and software.

Highly Affordable

The BayStack 150 Series Hubs provide an inexpensive, manageable solution for growing Ethernet networks. As the network grows, additional hubs can be added for an incremental investment, providing a scalable, cost-effective solution that supports expanding network environments. The BayStack 150 or BayStack 152 Hub/NMM's ability to extend management to every hub in the stack contains management costs.

Fully Integrated into Optivity

The BayStack 150 Series Hubs are fully integrated into Optivity* network management software, enabling complete SNMP support and support for four RMON groups. Network administrators can manage their entire network, including all hubs, switches, and routers from a single management station using Optivity.

Web-based Management

The BayStack 150 and 152 Hub/NMM models also include web-based network management software, allowing network administrators to easily access key data and information such as device summary, configuration, and support. This feature provides an HTML formatted graphical user interface via the World Wide Web that allows users to access data about their network and individual hubs from anywhere in the world.

Table 1 shows the four BayStack 150 Series 10BASE-T Hubs that are available:

All four hubs feature a built-in, recessed AUI port, providing connectivity to a variety of media such as 10BASE-FL fiber, 10BASE-2 coaxial, 10BASE-T UTP, or AUI coaxial cables via external transceivers.

Management Capabilities

The BayStack 150 Series Hub/NMMs provide all of the capabilities of the Standard SNMP agent, and also offer Advanced-level management for all hubs residing on the same segment as the hub/NMM. Autotopology, a key feature, automatically creates maps that offer both logical and physical views of the network, enhancing the ability to monitor network operations. In addition, the hub/NMMs provide the following functionality:

- RMON support for IETF RMON MIB (RFC 1271) Alarms and Events Groups, Statistics, and History.

Table 1: Port and Network Management Configurations of the BayStack 150 Series 10BASE-T Hubs.

BayStack 150 Series 10BASE-T Hubs	10BASE-T Ports	Recessed AUI Port	Built-in Network Management Module (NMM)
150	24	Yes	Yes
151	24	Yes	—
152	12	Yes	Yes
153	12	Yes	—

- Supports up to 288 user-configurable thresholds. Thresholds can be applied to any counters on ports, hubs, or segments.
- Support for intrusion control and eavesdrop protection on a per-port basis.
- Software-based redundant links. Any two 10BASE-T ports in a stack with a hub/NMM installed may be designated as a redundant pair through Optivity. If one link fails, the standby link will automatically be enabled.

Isolated hubs act as separate collision domains, allowing network managers to proactively tune the network as the network traffic level dictates. An internetworking device, such as a switch, can be used to connect isolated hubs to the cascade in order to pass data among them.

Automatic Stack Position Resolution

Automatic Stack Position Resolution* enables the BayStack 150 Series Hubs to detect the top and bottom of the stack and apply the appropriate termination to the bus, eliminating the need to set a switch manually to indicate a hub's position in the stack. If any hub fails or loses power, the cascade automatically bypasses that hub.

Real-Time Hub Status at a Glance

For wiring closet management, the BayStack 150 Series Hubs offer a unique bar graph display that provides real-time hub performance data for at-a-glance network monitoring. The display includes data and collision LED meters, port link and partition status LEDs, and power and initialization status LEDs. The LED matrix provides a complete summary of hub activity and configuration for rapid on-site management.

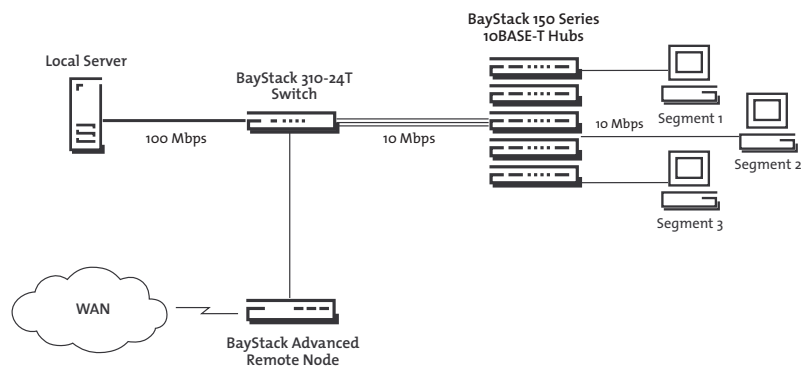
Reliability Features

The BayStack 150 Series Hubs are designed to provide the highest levels of reliability to ensure uninterrupted network operations. The field removable/replaceable power supply ensures minimal downtime in networking environments where expensive redundant power systems are not required. In addition,

the SmartSwap* feature saves configuration information in nonvolatile memory, and automatically restores hub configurations following power cycles or hub replacements. Redundant clock crystals allow any hub to provide clocking for an entire stack; should a hub providing the clock fail, another hub will automatically take over.

The BayStack 150 Series Hubs also include other features to ensure trouble-free operation. Per-port polarity detection and correction automatically compensates for wire-pair reversals on 10BASE-T receive data lines to maintain data flow, and per-port autopartitioning disconnects any port that experiences excessive consecutive or particularly long collisions, or a single packet of excessive length.

Figure 1: Workgroup Performance Enhancement Using BayStack Hubs and Switches.



APPLICATIONS

BayStack 150 Series Hubs offer a simple, scalable, plug-and-play networking solution. Working with other BayStack products, they provide a solid foundation for future expansion. As shown in the diagram, BayStack 150 Series Hubs provide connectivity to 10 Mbps Ethernet workgroups (see Figure 1, Page 3).

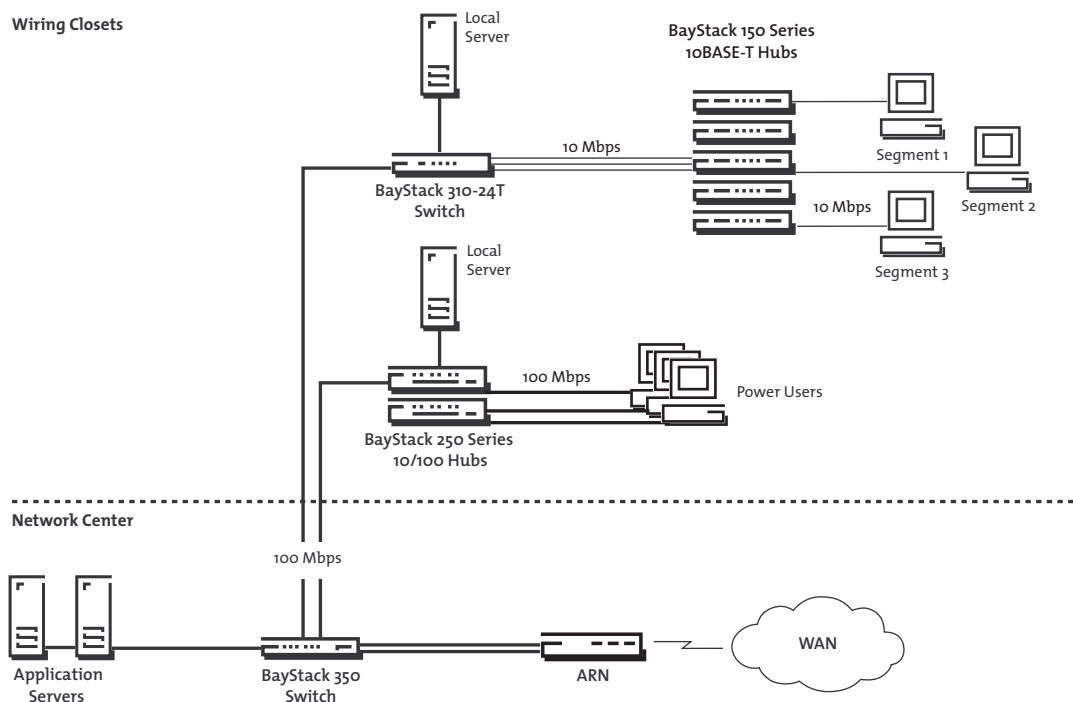
As the network grows and segmentation is required to alleviate bandwidth congestion, the addition of a BayStack 310-24T Switch provides high-performance links between segments to enhance network performance.

The Fast Ethernet port on the switch can be used to provide Ethernet workgroups with a “big pipe” connection to high-utilization devices such as departmental servers, while a second port, made available through the installation of an optional Media Dependent Adapter (MDA), can be used to create a copper or fiber uplink from network centers.

In environments where increasing network traffic is expected, the BayStack 350 Switches provide the most cost-effective migration path to Fast Ethernet. These all-in-one switches provide segment switch for workgroups consisting of 10 Mbps and 100 Mbps shared media end-stations (see Figure 2).

- For the complete electromagnetic emissions statements and declaration of conformance, see Installation and Reference for the BayStack 150 Series Ethernet Hubs (Bay Networks part number 893-01021).
- Compliance with the VCCI regulation is dependent upon the use of shielded AC power cables. The user is responsible for procuring the appropriate cables.

Figure 2: BayStack 150 Series 10BASE-T Hubs in a High-Performance Network Environment.



TECHNICAL SPECIFICATIONS

Table 2: BayStack 150 Series 10BASE-T Hubs Technical Specifications.

Network Protocol	10BASE-T Ethernet
Standards Support	IEEE 802.3 CSMA/CD IEEE 802.3i 10BASE-T
Electrical Specifications	
Power consumption	
Models 150 and 152	50W
Models 151 and 153	20W
Thermal Rating	
Models 150 and 152	170 BTU/hr. max.
Models 151 and 153	68 BTU/hr. max.
AC line frequency	50 to 60 Hz
Physical Specifications	
Weight	
Model 150	6.2 lb (3.0 kg)
Model 151	5.5 lb (2.7 kg)
Model 152	6.0 lb (2.9 kg)
Model 153	5.3 lb (2.6 kg)
Dimensions	(H) 1.73 in. x (W) 17.2 in. x (D) 8.46 in. [(H) 44.4 mm x (W) 441 mm x (D) 217 mm]
Rack space	One rack unit per hub (19 inch)

Environmental Specifications

Operating temperature	0° to 50° C
Storage temperature	-20° to 65° C
Operating humidity	20% to 80% maximum relative humidity, noncondensing
Storage humidity	5% to 90% maximum relative humidity, noncondensing
Ventilation clearance	Minimum 2 in. (5.08 cm) on all sides (stacking OK)
Operating conditions	At least 6 ft (1.83 m) to nearest source of electromagnetic noise
Power source availability	Adequate power source within 6 ft (1.83 m)
Recommended wiring closet service clearance	5 in. (front); 7 in. (rear)

Safety Agency Approvals

UL-listed
TUV-licensed

Electromagnetic Emissions Summary

Meets requirements of FCC Part 15, Subpart B, Class A
VCCI Class 1 ITE
EN 55 022 (CISPR 22, Class A)
AS/NZS 3548 Class A
EN 50082-1 Susceptibility
CE

ORDERING INFORMATION

Table 3: BayStack 150 Series 10BASE-T Hubs Ordering Information.

Order Number	Description
CG1001?11*	BayStack 150 Hub/NMM with 24 RJ-45 ports
CG1001?12*	BayStack 151 Hub with 24 RJ-45 ports
CG1001?13*	BayStack 152 Hub/NMM with 12 RJ-45 ports
CG1001?14*	BayStack 153 Hub with 12 RJ-45 ports

* The seventh character (?) of the order number is replaced with the proper code to indicate nationalization:

"A" No power cord included.

"B" European "Schuko" power cord common in Austria, Belgium, Finland, France, Germany, The Netherlands, Norway, and Sweden.

"C" Power cord commonly used in the United Kingdom and Ireland.

"D" Power cord commonly used in Japan.

"E" North American power cord.

"F" Australian power cord, also commonly used in New Zealand and the People's Republic of China.



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