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Division

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Compaq Netelligent™ Repeater and Switch Products

The acquisition of NetWorth, Inc. by Compaq Computer Corporation represents a firm commitment by Compaq to offer complete desktop-to-desktop client/server solutions that are unmatched in price and performance. The newly formed Networking Products Division provides a broad range of industry standard high-performance network solutions including repeaters, switches, routers, controllers, and integrated management software. Since its inception in 1985, NetWorth established itself as a price/performance leader in the networking industry. Today, Compaq continues the same leadership role with its proven Fast Ethernet technology and the most complete product line in the networking industry.



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Compaq Netelligent Repeater and Switch Products

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THE BANDWIDTH CRUNCH

For most of the 1980s, 10 megabit per second (Mb/s) Ethernet offered sufficient bandwidth for most network applications. Eventually, the development of client/server applications and increasing numbers of network connections quickly consumed that bandwidth. Segmentation technologies were developed to divide networks into smaller *segments* by bridging and routing network traffic, temporarily relieving network congestion. However, segmentation created a need for more sophisticated ways to manage enterprise networks.

Today, many organizations use Ethernet *switching* to segment all or part of their networks, providing a dedicated 10 Mb/s of bandwidth to each individual connection. In fact, Ethernet switching is currently the fastest growing segment of the networking market, averaging 341% growth per year. Although Ethernet switching improves the bandwidth crunch for most overburdened networks, many newer applications, such as imaging, publishing, and interactive databases demand a more robust solution. Also, newer PCI-based computers, with their increased processing power, and multimedia applications, which add audio and video, challenge the once-adequate capabilities of standard 10 Mb/s switching technology.

To meet growing bandwidth needs, *Fast Ethernet* has emerged as the network technology of choice. Just as the 80286 processor has evolved to the Pentium (and now the Pentium Pro) processor, 10 Mb/s Ethernet has evolved to Fast Ethernet.

MIGRATING TO FAST ETHERNET

Many organizations consider Fast Ethernet the logical migration path from 10 Mb/s Ethernet. Here are a few reasons why Fast Ethernet wins over competing technologies in the high-speed networking marketplace:

- **It's Easy to Migrate** - When you migrate to Fast Ethernet, you don't need to spend time learning about the technology. Because Fast Ethernet evolved from standard 10 Mb/s Ethernet, most of the same rules apply. There also is no need to invest in new management and diagnostic tools.
- **It's Ethernet Compatible** - Fast Ethernet uses the same packets and protocols as 10 Mb/s Ethernet. Therefore, there is no need learn or maintain a new protocol.
- **It's Plug and Play** - Fast Ethernet supports all major network wiring systems, making it a "drop-in" enhancement for 10Base-T networks. In addition, the latest PC network controller cards support both 10 Mb/s and 100 Mb/s modes. Today's PCs are Fast Ethernet-ready at the desktop.
- **It's Cost Effective** - Compared to alternative high-speed networking technologies such as ATM and FDDI, Fast Ethernet is a bargain. The cost of Fast Ethernet is almost as low as that of 10 Mb/s Ethernet, yet it offers 10 times the performance. Other high-speed technologies are at least twice the cost of Fast Ethernet.

The Compaq Netelligent Fast Ethernet product line is the most comprehensive in the market today. Competitive offerings typically lack breadth of features, support for Fast Ethernet standards in the product line, or a fully integrated solution. Compaq Netelligent products, which include a mix of 10Base-T and 100Base-T devices, let you migrate to Fast Ethernet at your own speed.

COMPETING TECHNOLOGIES

Two main high-speed networking technologies currently compete with Fast Ethernet but are radically different in architecture and implementation: Fiber Distributed Data Interface (FDDI) and Asynchronous Transfer Mode (ATM). The following comparison describes the main characteristics of each technology.

Fiber Distributed Data Interface

FDDI is a proven and well-understood technology that delivers 100 Mb/s bandwidth with little overhead. Based on Token Ring, FDDI was developed as a backbone technology and offers many advanced features. Consequently, FDDI adapters and hubs are complex and expensive. Also, FDDI runs on fiber and twisted-pair cable (Category 5 only), while many installations use Category 3 twisted-pair.

Asynchronous Transfer Mode

ATM is a relatively new type of high-speed technology that uses *cell-switching* to achieve throughput from speeds of 150 Mb/s up to 640 Mb/s on a single fiber-optic circuit. Although industry analysts view ATM as a long-term strategic technology primarily in backbones and wide area networks (WANs), a lack of standards presents major concerns about its interoperability. Also, because ATM is such a radical departure from today's LAN technology, it requires expensive, complex, and time-consuming upgrades and learning curves.

NETELLIGENT REPEATER AND SWITCH OVERVIEW

The Compaq Netelligent product line offers a wide variety of innovative, standards-based shared media repeaters and switches.

Shared media Ethernet repeaters, which consist of one or more independent network segments, allow devices such as file servers, disk servers, workstations, and printers to share a common network (segment) so that they can communicate with each other. All devices connected to a particular segment share the bandwidth available on that segment.

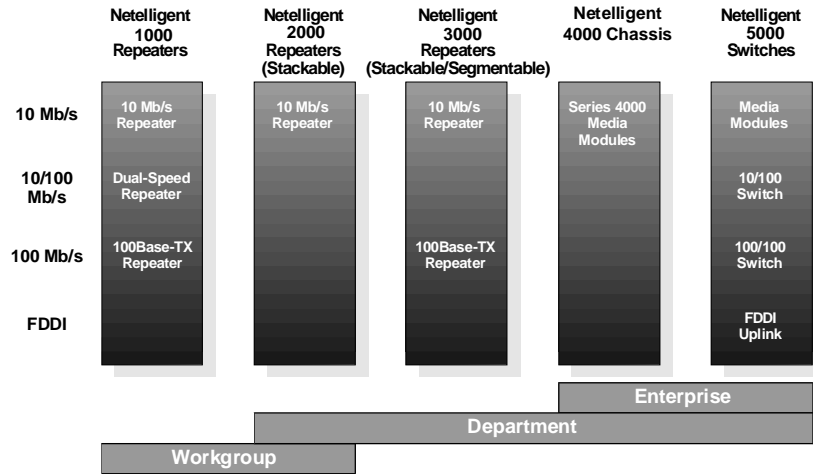
Ethernet switches provide each network connection a dedicated 10 Mb/s or 100 Mb/s of bandwidth. In other words, each part is its own network segment. A switch transfers data traffic from each individual segment to its destination without affecting traffic on other segments.

Shared media repeaters and switches can be managed or unmanaged. All managed repeaters support industry-standard SNMP (Simple Network Management Protocol) agents and hub specific MIB (Management Information Base) extensions.

Compaq Netelligent repeaters and switches address the unique needs of workgroup and departmental client/server computing while allowing for future expansion to larger, enterprise-level networks.

Core Technology

for 10 Mb/s and 100 Mb/s Ethernet



Netelligent 1000 products include low-cost, unmanaged repeaters tailored to meet the needs of smaller workgroups, while allowing the workgroups to migrate to larger departmental networks or expand to other workgroups.

Netelligent 2000 products, designed for department-level networks, support built-in management and high port densities. Included in this product line are a variety of stackable repeaters you can manage via industry-standard SNMP management software, such as Compaq Netelligent Management Software. Netelligent 2008/2016 repeaters are stackable up to 10 repeaters high. They feature Extended Repeater Architecture which allows a distance up to 250 feet between connected repeaters in a stack – ideal for multi-floor configurations.

Netelligent 3000 products are similar to Netelligent 2000 products, but have additional network segmentation capabilities within each stack of repeaters. These high-end departmental repeaters protect network investments by providing configuration flexibility as network bandwidth requirements increase. As the need arises, Netelligent 3000 stackable repeaters can be logically segmented into independent network segments for greater network security, higher network performance, and flexible network configurations. Compaq offers segmentable 10 Mb/s and 100 Mb/s repeaters in this product family.

Netelligent 4000 products include chassis-based 10 Mb/s Ethernet modules that are ideal for consolidating departmental and workgroup repeaters into a larger, manageable network system. These products serve as the central networking hub in an enterprise network system. Designed to support more than one departmental network and handle mission-critical data, Netelligent 4000 products provide such features as sophisticated backplanes and redundant power capability.

Netelligent 5000 products are based on network switching technology. Netelligent 10/100 Ethernet switches offer up to 12 dedicated 10 Mb/s Ethernet ports and one modular 100 Mb/s high-speed port that accepts an FDDI or Fast Ethernet module. Compaq switches provide “wire speed” throughput between ports on the switch and offer the most modular platforms available in the market. Compaq offers 10 Mb/s and 100 Mb/s switches within this product family.

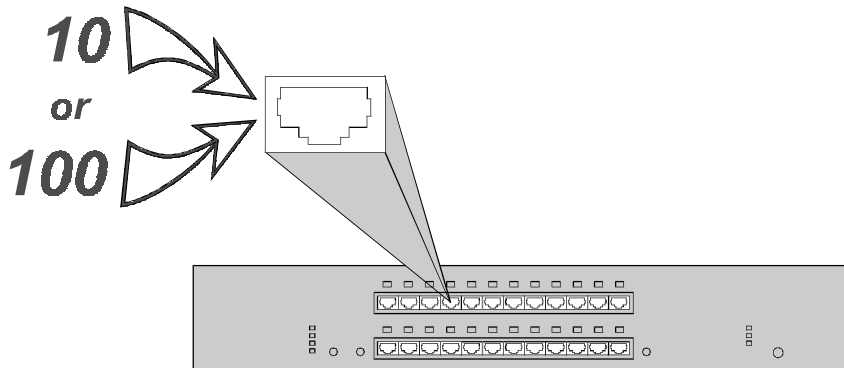
NETELLIGENT 10 MB/S ETHERNET PRODUCTS AND POSITIONING

Ethernet was initiated as a standard by DEC, Intel, and Xerox in the late 1970s and came to market in the early 1980s. The original application for Ethernet was to extend the distance of RS-232 cable from a terminal to the host. *Terminal servers* allowed serial devices such as dumb terminals and printers to connect to host computers over Ethernet. This allowed serial devices to be located up to 500 meters from the host, compared to the previous limit of 100 feet. When personal computers were introduced, Ethernet was used mainly for disk and printer sharing over the network. The development of Network Interface Controllers (NICs) allowed PCs to share expensive resources over the network and also access mainframe computers using terminal emulation. 10Base-T further increased the popularity of Ethernet by allowing the use of common Category 3 twisted-pair wiring. Even today, 10 Mb/s Ethernet remains the most widely used network technology worldwide.

The Compaq Netelligent heritage is based on a complete line of award-winning 10Base-T repeater and chassis products. As hardware and software technologies advance exponentially, 10Base-T products still lead the worldwide networking marketplace in the number of ports shipped per year. 10Base-T repeaters and NICs are the most affordable means for bringing devices together on a network, and Compaq is a leader in the 10Base-T market, offering low-cost workgroup, stackable, and segmentable repeaters.

NETELLIGENT DUAL-SPEED ETHERNET REPEATER PRODUCTS AND POSITIONING

The migration from 10 Mb/s Ethernet to 100 Mb/s Ethernet typically involves a complete replacement of the legacy 10 Mb/s repeater with a new 100 Mb/s repeater. If the NICs do not support dual-speed operation, they must also be swapped out. Fortunately, many new NICs operate in either 10 Mb/s or 100 Mb/s mode. Most of these cards *autosense* the speed of the repeater and adjust to the appropriate data rate. Compaq is the first company to leverage this dual-speed ability into the repeater.

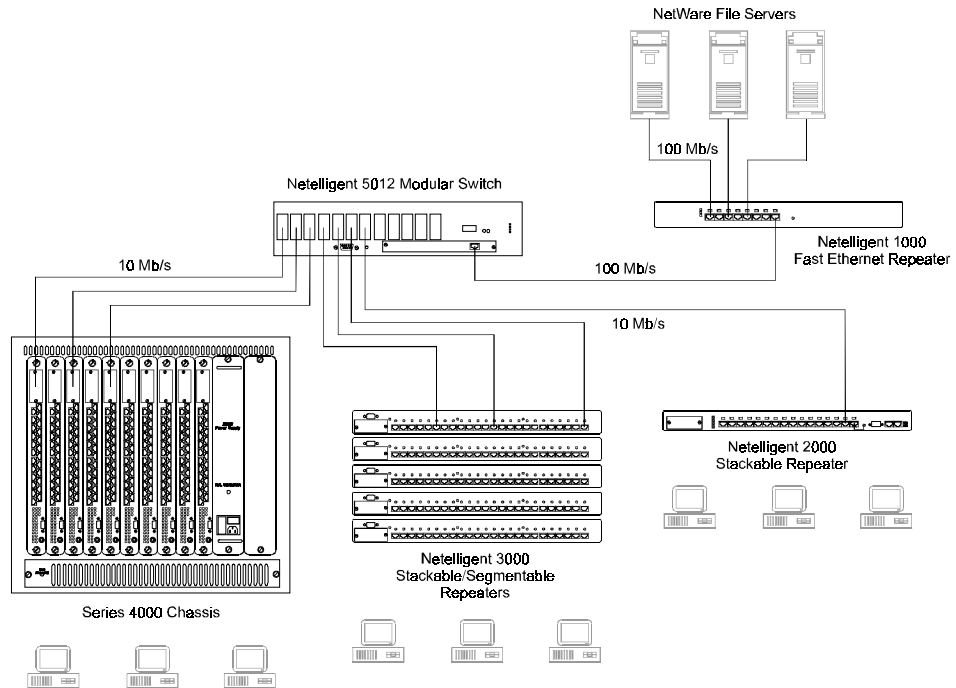


The Netelligent dual-speed repeater supports the gradual migration from 10 Mb/s to 100 Mb/s within a single hub. The repeater houses two internal repeaters, one that operates at 10Mb/s and the other at 100 Mb/s. Each port on the hub connects to both repeaters. When a port receives a transmission, it autosenses the speed of the NIC attached to it and channels the data to the appropriate repeater in the hub. This innovative technology has been enthusiastically received by customers.

Many installations still have workstations, printers, and laptops that only support 10 Mb/s Ethernet. The dual-speed repeater lets you migrate to Fast Ethernet at your own pace. Simply install the repeater, add a dual-speed NIC to the server for users who need Fast Ethernet

COMPAQ NETELLIGENT REPEATER AND SWITCH PRODUCTS (cont'd.)

connectivity, and attach the network wiring. Dual-speed repeaters save time and money, as they eliminate the need to rewire the repeater connection every time you upgrade from 10 Mb/s to 100 Mb/s.



NETELLIGENT DUAL-SPEED ETHERNET SWITCH PRODUCTS AND POSITIONING

Netelligent 10/100 switches are designed for department-level needs but provide enterprise-level features. These switches protect your investment by letting you add product enhancements as you need them. Netelligent 10/100 switches allocate a dedicated 10 Mb/s of bandwidth to each port and a 100 Mb/s modular uplink to servers and network backbones.

There are two primary applications for network switches. The first application is to connect multiple 10 Mb/s shared media repeaters into a network switch port, thereby segmenting each repeater from the next. This isolates network traffic within a single collision domain. If traffic is destined for another network, it passes through the switch at wire speed. The high-speed uplink connection on the switch connects to the enterprise backbone. The second application is to provide each workstation on the network a dedicated 10 Mb/s of bandwidth and switch the workstation traffic to a high-speed uplink connected to a server. Netelligent switches are designed with optimum flexibility for both applications. With support for over 8,000 MAC addresses, multiple Ethernet media options, and modular high-speed uplink technology, Netelligent 10/100 switches are the most flexible solutions for integrating legacy and high-speed networks.

All four versions of Netelligent 10/100 switches support a common set of high-speed modules. You can buy a 10/100 switch now to meet your current needs and use the same switch in the future as new high-speed technologies are available. Each switch uses a shared memory design which gives each switching function wire-speed access to a pool of shared memory. This architecture reduces contention and helps ensure compatibility with newer technologies such as virtual LAN support, and ATM cell-based technology. The software-based design allows Compaq

to add such features as you need them. Competitors that use custom hardware-based ASICs, which define and optimize a switch only for a particular switching scheme, lock you into current technology with little or no migration path.

Hot-swappable, load-sharing, redundant power supplies make Netelligent switches the most reliable in the industry. All Netelligent switches come with one power supply and are equipped for an optional redundant power supply. While some competitors offer redundant power capability, you must purchase a separate unit which is not hot-swappable and can cost as much as 80% more than the Compaq solution.

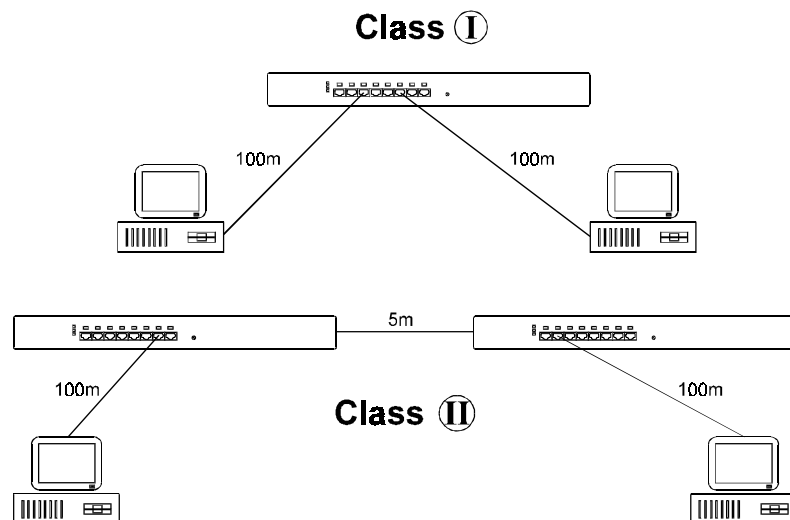
NETELLIGENT 100 MB/S ETHERNET REPEATER PRODUCTS AND POSITIONING

Fast Ethernet is an 802.3u IEEE specification defined to run over the same twisted-pair and fiber-optic cabling as 10Base-T Ethernet. Specifically, 100Base-TX supports Category 5 twisted-pair wiring and 100Base-T4 supports Categories 3, 4, and 5 twisted-pair wiring. The primary difference between TX and T4 technology is that TX uses 2 pairs of wire and T4 uses four pairs of wire to transmit data at 100 Mb/s. The maximum distance between the repeater and network device over twisted-pair is 100 meters.

In addition to differing cabling standards, Fast Ethernet is defined to run over two different types of repeaters, which are classified as either Class I or Class II.

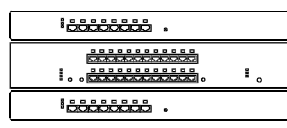
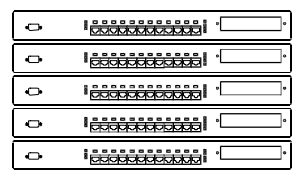
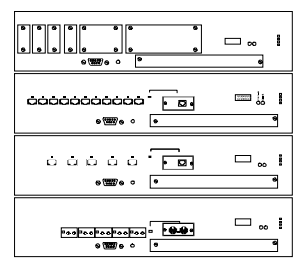
The Class I specification allows one repeater in a network segment. A Class I repeater can support only the network devices connected to it.

The Class II specification allows up to two repeaters in a network segment. The maximum distance between two transmitting devices in a Class II configuration cannot exceed 205 meters. For example, if the network devices connected to the repeaters are at the maximum distance of 100 meters, the repeaters must be no more than 5 meters apart. Compaq Smart Uplink technology overcomes the repeater hop limitations in the Fast Ethernet specification by allowing virtually unlimited expansion as your network grows.



Many vendors who entered the Fast Ethernet market were only able to provide products with limited capabilities. Compaq chose to aggressively attack this new market with a different approach – offering customers a choice. On the entry level, Compaq offers basic repeaters that provide low-cost per-port connectivity. For larger, more demanding networks, Compaq offers stackable repeaters with features such as Smart Uplink, RMON, redundant power, and segmentation. These features and others serve to distinguish the Compaq Netelligent 100Base-T product line from any competitive products shipping to date.

Fast Ethernet Family

<p>100 Mb/s Workgroup</p> 	<p>100 Mb/s Stackable</p> 	<p>10/100 Switches</p> 
<p>Workgroup Repeaters</p> <ul style="list-style-type: none"> 8-port TX Repeater 24-port TX Repeater 24-port Dual-Speed Repeater <p>Simple plug-and-play for different media and workgroup sizes</p>	<p>Departmental Repeaters</p> <ul style="list-style-type: none"> 12 to 60 ports per stack Smart Uplink for TX and FX allows extended distances and "unlimited" cascading Supports three segments on the backplane Managed (SNMP, RMON, and Telnet) and unmanaged units Integral dual-redundant power 	<p>Departmental Switches</p> <ul style="list-style-type: none"> 8- and 12-port models Modular high-speed port for FDDI, 100Base-T, and others 1.2 Gb/s bus - 592,000 pps throughput Fully modular unit allows any mix of media Integral dual-redundant power supplies

Fast Ethernet is attractive because it offers high performance at a low-cost. Many companies are implementing entry-level Fast Ethernet repeaters in environments where power users need the additional performance Fast Ethernet can provide. Also, customers view Fast Ethernet as an alternative to FDDI in the corporate backbone network. In both cases, Fast Ethernet is being aggressively evaluated for wide-spread corporate deployment to the desktop and is becoming the desktop network technology of choice. These same companies are implementing high-end Fast Ethernet solutions as their strategic long-term network investment.

Compaq took an early lead in Fast Ethernet and began shipping repeaters beginning in December 1994 as NetWorth. In the first half of 1995, NetWorth held nearly 50% market share in Fast Ethernet repeaters. Since then, NetWorth has introduced several industry firsts. Today, Compaq is the only company that offers a full-featured Fast Ethernet stackable product capable of expanding Fast Ethernet topologies beyond the limitations of the Fast Ethernet specification.

Netelligent 1000 10 Mb/s Unmanaged Repeaters

Key Concept: Low-cost workgroup connectivity

The majority of Ethernet networks in place today are supported with low-cost, low-port-density repeaters. This segment of the market is commodity oriented and price elastic, where customers prefer a highly reliable, name-brand product at a competitive price. Compaq has been very successful in this market with a line of products that meets market needs while differentiating itself from substitute products. The Netelligent 1000 product family, designed for smaller workgroup LAN applications, includes a variety of repeaters that are easy to install and economically priced. Netelligent 1000 products provide uplink capability for a clear migration path to higher capacity Compaq product lines as your LAN grows.

The Netelligent 1008 and 1016 repeaters are standalone, unmanaged units with 8 and 16 10Base-T Ethernet ports, respectively. An optional fixed AUI or BNC port is available for both the 8- and 16-port repeater; a fiber (10Base-FL) port is available for the 16-port repeater. LED indicators show data activity, collision states, and partitioning. The Netelligent 1016 repeater contains an alternate media expansion port for maximum media flexibility.

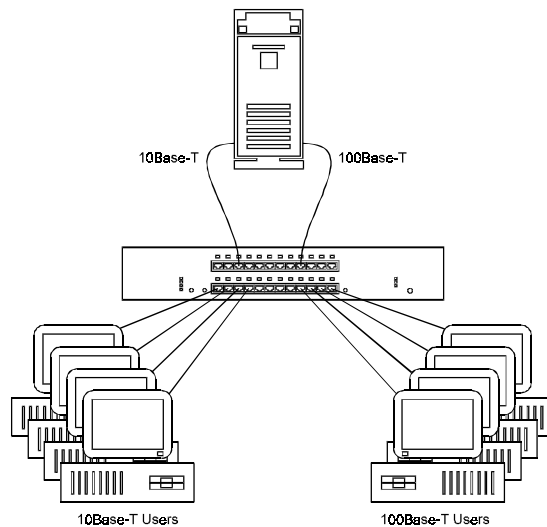
- Aggressive price/port connectivity
- 8 and 16-port configurations plus an additional alternate media expansion port
- Uplink port allows workgroup migration to the enterprise network
- Flexible alternate media expansion port configurations support AUI, BNC, and fiber options
- Simple, at-a-glance LEDs indicate power, link integrity, activity, and collision status
- Automatic port partitioning for disabling “noisy” network segments
- High reliability
- Name-brand recognition

Competition	Compaq Advantage
D-Link DE809TP	High reliability
SMC Tigerhub TP6	Price/Port
3Com Linkbuilder TP/8	Alternate Media Options
Bay Networks Lattis System 800	Uplink Capability
HPAdvanceStack J2610A	Alternate Media Options
Accton Etherhubs	High Reliability

Netelligent Dual-Speed 1000 10 or 100 Mb/s Unmanaged Repeaters

Key Concept: 10/100 Mb/s workgroup migration

The Netelligent 1224 is the industry's first dual-speed, autosensing repeater. It is designed to facilitate the migration from 10 Mb/s Ethernet to Fast Ethernet without requiring an expensive 10/100 switch or bridge. This product is ideal for workgroup networks in transition. The repeater can be permanently installed and wired to network outlets. As you migrate to 100 Mb/s Fast Ethernet or move between offices, no change at the repeater is required. Each port automatically detects the speed of the device connected to it and adjusts its data rate accordingly. In a simple application where the server supports a 10 Mb/s NIC and a 100 Mb/s NIC, maximum throughput to the server is maintained on each network segment.



The Netelligent 1224 repeater is actually two repeaters in one enclosure. Each port on the hub connects to an internal 10 Mb/s repeater and a 100 Mb/s repeater. Only one repeater per port is active. The 1224 repeater is a Class II Fast Ethernet repeater, which allows the connection of up to two repeaters, creating a 46-user workgroup. Dual redundant, hot-swappable power supplies can be included to maximize fault tolerance for high port density workgroups.

- 24 dual-speed autosensing ports can detect and operate with 10Base-T (Ethernet) or 100Base-TX (Fast Ethernet) equipment
- Price per port at or below 100 Mb/s-only repeaters
- Can be connected with a second 1224 or 100Base-TX Class II repeater
- Can be connected with one or more 10Base-T repeaters
- Modular power supply easily removable from the back of the unit
- Dual redundant hot-swappable power backup capability with the addition of a second power supply module

Competition	Compaq Advantage
No direct competition	Dual-speed autosensing ports

COMPAQ NETELLIGENT REPEATER AND SWITCH PRODUCTS *(cont'd.)*

Netelligent 1000 100 Mb/s 8-Port Unmanaged TX Repeater

Key Concept: Low-cost connectivity for power users

The Netelligent 1108 100Base-TX repeater was one of the first Fast Ethernet repeaters on the market. Ideal for small groups of power users, the 1108 repeater is an affordable alternative to high-speed network backbones. It also provides an excellent introduction to Fast Ethernet for customers who want to become familiar with 100Base-T before they make a major financial commitment.

- 8 RJ-45 100Base-TX (Fast Ethernet) ports
- A Class II repeater, which can be connected to a second repeater for future growth
- A large installed user base with proven reliability

Competition	Compaq Advantage
3Com, FMS100	Cost effective, mature technology
Grand Junction G300	Cost effective
Bay Networks AT2202001	Cost effective, mature technology
Dlink	Product reliability

Netelligent 1000 100 Mb/s 24-Port Unmanaged TX Repeater

Key Concept: Low-cost connectivity for large workgroups

The Netelligent 1124 repeater offers 24 100Base-TX ports for cost-conscious companies that need Fast Ethernet connectivity for a large number of users. The 1124 repeater has the largest port count of any Fast Ethernet repeater available, and you can connect it with a second 100Base-TX Class II repeater for future expansion. The modular power supply is easy to remove from the back of the unit. Dual-redundant backup power is available with the addition of a second power supply module. The power supply is hot-swappable, which allows the repeater to run continuously while one power supply module is replaced. No other competitors offer this capability on a per unit basis.

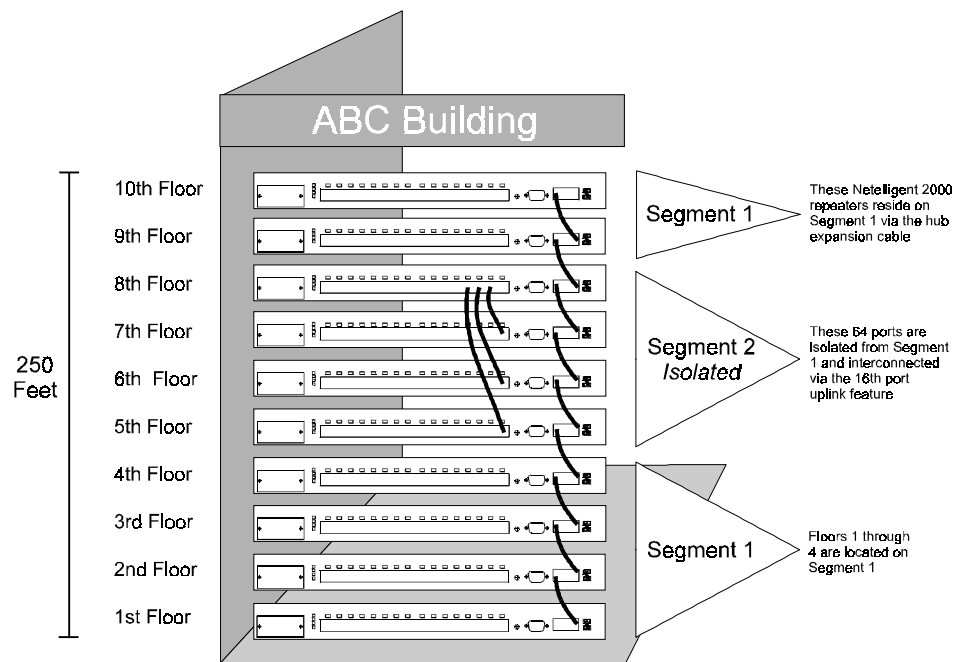
- 24 ports per unit
- Modular power supplies
- Dual redundant power backup on a per-unit basis
- Lower price per port than competition

Competition	Compaq Advantage
Grand Junction G300	Higher port density, price competitive
3Com Corporation, FMS100	Higher port density, price competitive
Bay Networks, AT2202001	Higher port density, price competitive

Netelligent 2000 Manageable, Stackable Repeaters

Key concept: Scalable and manageable network connectivity

Most companies are careful to design, scale, and maintain networks that can support mission-critical applications in changing network environments. Managers of these networks need intelligent, sophisticated, and scalable network equipment that can help meet these needs. The Compaq Netelligent 2000 repeater line leads the scalable and manageable repeater market with its 2008 8-port repeater and 2016 16-port repeaters. Both of these repeaters are SNMP manageable and can be stacked up to 10 units high. Management is incorporated into each repeater to allow for monitoring and changing of configurations over the network via SNMP or modem download. No known competitors provide these features as standard with every repeater.



Compaq Extended Repeater Architecture (ERA) allows the connection between units in a stack to extend up to 250 feet using normal Category 5 UTP copper cabling. This lets you extend a manageable stack of repeaters in multiple areas, such as between floors in a building or between buildings. This design reduces multiple repeater hops, which greatly improves network performance.

- Low entry cost network that scales as the network grows
- Extended Repeater Architecture extends distance up to 250 feet between end repeaters in a stack without bridging or routing
- Four-group RMON support (Model 2116) allows the management system, such as Compaq Netelligent Management Software, to remotely monitor the repeater for diagnostic purposes. Supported RMON groups include Statistics, History, Alarm, and Event.
- Stack repeaters up to 10 high for maximized port density and scalability
- Multiple media options offer a variety of Ethernet connections (AUI, BNC, and fiber)
- Powerful, fully redundant, industry standard network management in each unit maximizes network uptime and investment protection.

COMPAQ NETELLIGENT REPEATER AND SWITCH PRODUCTS (cont'd.)

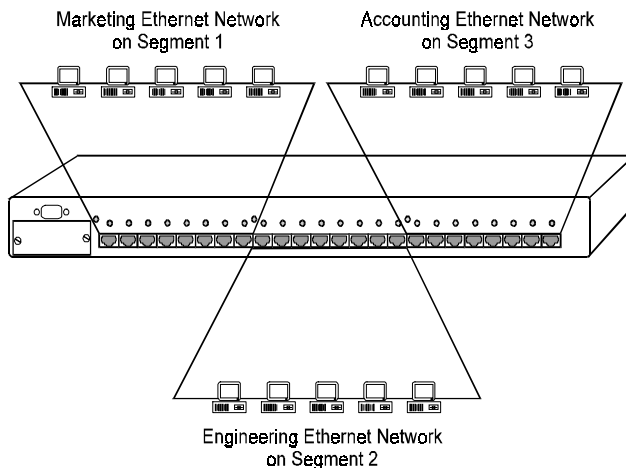
- 8 or 16 10Base-T ports per repeater gives you a choice so that you pay for only the number of ports you need
- Segmentable on a per-unit basis to reduce collisions and increase performance on busy networks.
- Port intrusion security disables a port when an unauthorized user begins to use it
- Out-of-band management support via serial port for “dial-in” management

Competition	Compaq Advantage
3Com 3C1627-1	Higher port density, more segments
Accton Etherhub EU2061	Higher port density, more segments
SMC Corporation, Tigerstack	More ports and segments, intrusion, backup

Netelligent 3000 10 Mb/s Manageable, Segmentable Repeaters

Key concept: Cost effective network optimization

Most organizations still use network segmentation – dividing network traffic into smaller,



independent segments – to optimize bandwidth and enhance network performance. The Compaq Netelligent 3000 family of segmentable repeaters offer the most flexible and cost-effective way to fine-tune network performance. The 3024 and 3124 repeaters can be segmented into 3 groups of 8 ports on the fly, resulting in a dramatic increase in network productivity. The repeaters are stackable up to 5 high for up to 120 ports in a single stack. A fully configured stack can support up to 15 independent network segments. You can assign segments via the repeater’s front panel or from the network

management console without resetting the repeater or the stack. *LAN Magazine* awarded these repeaters “Product Of The Year” in 1994 because of their innovative design.

- Supports up to three separate 8-port collision domains per hub, 15 per stack
- Each repeater offers a modular alternate media expansion port that supports AUI, BNC, or fiber options
- Expandable to five repeaters per stack, supporting 15 Ethernet segments and 120 ports
- Only one management repeater is required to support the entire stack regardless of how the stack is segmented
- Powerful, industry standard network management in each repeater enhances investment protection
- Port intrusion security disables a port when an unauthorized user tries to access it
- Out-of-band management support via serial port for “dial-up” network management

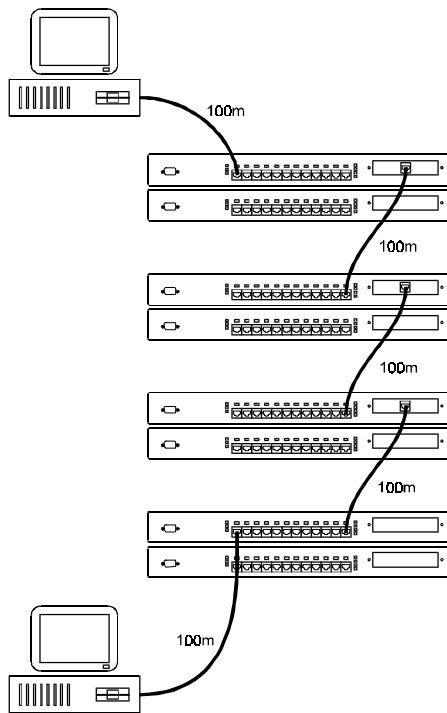
COMPAQ NETELLIGENT REPEATER AND SWITCH PRODUCTS (cont'd.)

Competition	Compaq Advantage
3Com, FMS-II 3C16671	More collision domains per stack
Bay Networks, CG1001E02	Intrusion security and redundant management
SMC Corporation, Tigerstack	Intrusion security and redundant management
Hewlett Packard, J2601A	More collision domains per stack

Netelligent 3000 Manageable, Stackable 100 Mb/s Repeaters

Key Concept: Scalable and manageable high-speed network connectivity

Compaq Netelligent 100Base-T repeaters are designed according to the IEEE Fast Ethernet standard, a 100 Mb/s technology based on regular 10 Mb/s Ethernet. Even though Fast Ethernet increases transmission speeds by a factor of 10, it uses the same protocols and methods as 10 Mb/s Ethernet, making it easy to migrate to the higher speed technology.



Netelligent 3512/3612 repeaters are stackable up to 5 units high for a total of up to 60 ports. An optional Smart Uplink Module™ allows the repeater or stacks of repeaters to overcome the distance and repeater hop limitations established by the IEEE Fast Ethernet specification.

Managed repeaters, such as the Model 3612, provide information via SNMP and RMON (groups 1,2,3, and 9), which lets you reconfigure the repeaters directly from an access port, through the network, or by remote modem. 100Base-TX repeaters are designed to work with Category 5 UTP copper cable. Each repeater contains a modular power supply that is easily removable and replaceable. Dual load sharing backup power is available for each repeater by adding a second “hot-swappable” power module (allows repeater to run continuously while one power supply module is replaced – no other competitors have this capability on a “per-hub” basis). This product was the winner of the *InterNetwork Magazine* award for the “Best Stackable Hub” category honoring products that best exemplify the state-of-the-art in stackable hub products.

- 12 ports per repeater, stackable up to five units high to allow for future expansion
- Extended topology for repeaters and stacks via the Smart Uplink-Module
- RMON management capability (groups 1, 2, 3, and 9)
- Units within a stack can be segmented onto one of five backplanes to reduce network congestion, or on an individual unit basis for maximum efficiencies
- Modular power supply and modular dual power redundancy on a “per-unit” basis

COMPAQ NETELLIGENT REPEATER AND SWITCH PRODUCTS *(cont'd.)*

Competition	Compaq Advantage
3Com, FMS100	Smart Uplink allows connection of multiple units/stacks up to 412 meters apart (fiber)
Bay Networks, BayStack	Modular power supplies and power backup on a "per unit" basis
Hewlett Packard, HPJ2410A	Smart Uplink allows connection of multiple units/stacks up to 412 meters apart (fiber)
Asante Corporation, AsanteFast 100	Units in a stack can be segmented to reduce network congestion
	Built-in RMON and advanced management

Netelligent 5006 6-Port 10/100 Switch

Key Concept: 10/100 migration, client/server bandwidth optimization

The Netelligent 5006 10Base-T Switch provides small to medium sized networks with more bandwidth and greater performance as well as a migration path to high-speed technologies. As with the other versions of the switch, the 6-port switch offers five fixed 10Base-T ports, a modular 10 Mb/s port, modular high-speed port and redundant power supply capability.

- Modular 10 Mb/s ports include 10Base-T/RJ-45, 10Base-2/BNC, 10Base-FL/ST and 10Base-5/AUI
- Modular high-speed media options including FDDI (DAS & SAS), 100Base-TX, and 100Base-FX
- Firmware upgrades for future technologies
- Roving Monitor Port (RMP) feature monitors network traffic on one or more ports
- VLAN allows logically independent groups of ports to operate on a single switch
- Hot-swappable, load sharing, redundant power supplies
- LED indicators show individual port connection activity and power supply (primary/secondary) status
- Character LCD displays status information during boot-up time and operation

COMPAQ NETELLIGENT REPEATER AND SWITCH PRODUCTS *(cont'd.)*

Competition	Compaq Advantage
3Com LinkSwitch 1200	Modular high-speed connections, not only FDDI but also 100Base-TX and 100Base-FX, as well as modular hot-swappable power supply
3Com LANplex 2500	Modular high-speed connections, not only FDDI, but also 100Base-TX and 100Base-FX, as well as modular hot-swappable power supply
Bay Networks Workgroup 1901/2001	FDDI offering
Kalpana EtherSwitch F100	Modular high-speed connections, not only FDDI, but also 100Base-TX and 100Base-FX

Netelligent 5006 6-Port 10/100-FL Switch

Key Concept: 10/100 migration, client/server bandwidth optimization

The Netelligent 5006 6-port 10/100 Switch facilitates the integration of fiber optic backbones and campus 10 Mb/s backbones into a high-speed network connection. This product is ideal for mixing 10Base-FL fiber with a high-speed FDDI or Fast Ethernet server connection or backbone network. As with the other versions of the switch, the 6-port switch offers five fixed 10Base-FL ports, a modular 10 Mb/s port, high-speed port and redundant power supply capability.

- Modular 10 Mb/s ports include 10Base-T/RJ-45, 10Base-2/BNC, 10Base-FL/ST and 10Base-5/AUI
- Modular high-speed media options including FDDI (DAS & SAS), 100Base-TX, and 100Base-FX
- Firmware upgrades for future technologies
- Roving Monitor Port (RMP) feature monitors network traffic on one or more ports
- VLAN allows logically independent groups of ports to operate on a single switch
- Hot-swappable, load sharing, redundant power supplies
- LED indicators show individual port connection activity and power supply (primary/secondary) status
- Character LCD displays status information during boot-up time and operation

COMPAQ NETELLIGENT REPEATER AND SWITCH PRODUCTS *(cont'd.)*

Competition	Compaq Advantage
3Com LinkSwitch 1200	Modular high-speed connections, not only FDDI, but also 100Base-TX and 100Base-FX, as well as modular hot-swappable power supply
3Com LANplex 2500	Modular high-speed connections, not only FDDI, but also 100Base-TX and 100Base-FX, as well as modular hot-swappable power supply
Bay Networks Workgroup 1901/2001	FDDI offering
Kalpana EtherSwitch F100	Modular high-speed connections, not only FDDI, but also 100Base-TX and 100Base-FX.

Netelligent 5012 12-Port 10/100 Switch

Key Concept: 10/100 migration, client/server bandwidth optimization

The Netelligent 5012 10/100 Switch provides medium to large sized networks with more bandwidth and greater performance as well as a migration path to high-speed technologies. As with the other versions of the switch, the 12-port switch offers 11 fixed 10Base-T ports, a modular 10 Mb/s port, a modular high-speed port and redundant power supply capability.

- Modular 10 Mb/s ports include RJ-45, BNC, 10Base-FL (ST type), and AUI
- Modular high-speed media options including FDDI (DAS & SAS), 100Base-TX, and 100Base-FX
- Firmware upgrades for future technologies
- Roving Monitor Port (RMP) feature monitors network traffic on one or more ports
- VLAN allows logically independent groups of ports to operate on a single switch
- Hot-swappable, load sharing, redundant power supplies
- LED indicators show individual port connection activity and power supply (primary/secondary) status
- LCD displays status information during boot-up time and operation

COMPAQ NETELLIGENT REPEATER AND SWITCH PRODUCTS *(cont'd.)*

Competition	Compaq Advantage
3Com LinkSwitch 1000	FDDI offering, supports thousands more MAC addresses, spanning tree support, firmware upgradeable, modular redundant power supplies
3Com LinkSwitch 2200	Modular high-speed connections, not only FDDI, but also 100Base-TX and 100Base-FX, as well as modular hot-swappable power supply
3Com LANplex 2500	Modular high-speed connections, not only FDDI, but also 100Base-TX and 100Base-FX, as well as modular hot-swappable power supply
Alantec 4000	Multiple 10 Mb/s media types, modular hot-swappable power supply
Kalpana EtherSwitch Pro16	FDDI support, as well as 100Base-FX, multiple 10 Mb/s media type offering.
Kalpana EtherSwitch ESP2015	Offers high-speed capabilities, modular redundant power supplies, supports spanning tree and VLAN.
Grand Junction FastSwitch 2100	Modular high-speed connections, not only 100Base-TX, but also 100Base-FX, FDDI, and modular hot-swappable power supply
SMC Tiger Switch	Modular high-speed connections, not only 100Base-TX, but also 100Base-FX, FDDI and multiple 10 Mb/s media types and modular hot-swappable power

Netelligent 5000 12-Port Modular 10/100 Switch

Key Concept: 10/100 migration, client/server bandwidth optimization

The Netelligent 5000 modular 10/100 Switch provides medium to large sized networks with more bandwidth and greater performance, as well as a migration path to high-speed technologies. This version of the switch is completely modular. It supports all 10 Mb/s media types and provides a modular high-speed interface. As with the other versions of the switch, the 12-port switch also supports the modular redundant power supply.

- Modular 10 Mb/s ports include RJ-45, BNC, 10Base-FL (ST type), and AUI
- Modular high-speed media options including FDDI (DAS & SAS), 100Base-TX, and 100Base-FX
- Firmware upgrades for future technologies
- Roving Monitor Port (RMP) feature monitors network traffic on one or more ports
- VLAN allows logically independent groups of ports to operate on a single switch
- Hot-swappable, load sharing, redundant power supplies
- LED indicators show individual port connection activity and power supply (primary/secondary) status
- Character LCD displays status information during boot-up time and operation

Competition	Compaq Advantage
3Com LinkSwitch 1000	FDDI offering, port by port modularity, supports thousands more MAC addresses, spanning tree support, firmware upgradeable, modular redundant power supplies
3Com LinkSwitch 2200	Modular high-speed connections, not only FDDI, but also 100Base-TX and 100Base-FX, as well as modular hot-swappable power supply
3Com LANplex 2500	Modular high-speed connections, not only FDDI, but also 100Base-TX and 100Base-FX, as well as modular hot-swappable power supply
Alantec 4000	Port by port modularity, multiple 10 Mb/s media types, modular hot-swappable power supply
Kalpana EtherSwitch Pro16	FDDI support as well as 100Base-FX, multiple 10 Mb/s media type offering,
Kalpana EtherSwitch ESP2015	Offers high-speed capabilities, modular redundant power supplies, supports spanning tree and VLAN
Grand Junction FastSwitch 2100	Modular high-speed connections, not only 100Base-TX, but also 100Base-FX, FDDI and port by port modularity, as well as modular hot-swappable power supply
SMC Tiger Switch	Modular high-speed connections, not only 100Base-TX but also 100Base-FX, FDDI

COMPAQ NETELLIGENT REPEATER AND SWITCH PRODUCTS *(cont'd.)*

Netelligent 5506 and 5606 100Base-T Switches

Key Concept: Cost-effective 100 Mb/s solution with full management support

Compaq Netelligent 5506 100Base-T switches offer cost-effective, high-performance solutions for increasing bandwidth demands and mission-critical networking applications. The managed 5606 switch supports RMON, spanning tree, and VLAN, as well as IP, IPX, remote management, and VT100/Telnet management – ideal as “collapsed backbone” connecting Fast Ethernet workgroups 10/100 switches, and direct, full-duplex connections to servers for maximum performance. Both, the unmanaged 5506 and the managed 5606 6-port switches support 100Base-TX and 100Base-FX (SC type) media.

- Half- or full-duplex connection options enable the switch to connect to other equipment at half-duplex for normal 100Base-T speeds or full-duplex, which provides twice the normal 100Base-T bandwidth
- The managed 5606 switch supports Telnet, spanning tree, RMON (Groups 1, 2, 3, and 9), roving monitor port, Level 1 and 2 VLAN, SNMP management, management application, and out-of-band management
- Each port can handle up to 6000 MAC addresses for maximum configuration and design flexibility
- 256K memory buffer on each port ensures reliable operation when transmitting large packet bursts at high transmission rates inherent to Fast Ethernet
- Congestion management technology optimizes performance during high network load
- Removable/replaceable modular power supply automatically senses voltage (110-220 VAC) and frequency (50/60 Hz)
- Load-sharing, hot-swappable redundant power supply option helps protect against down time

Competition	Compaq Advantage
3Com LinkSwitch 3000TX	Extra bay for redundant power supply. Hot-swappable power supplies. 100Base-FX support. Supports 2000 more MAC addresses. Lower price per port. 3-year warranty.
Bay Networks 28104R	Extra bay for redundant power supply. Hot-swappable power supplies. Lower price per port. 3-year warranty.
Cisco CiscoPro EtherSwitch 2201	Lower price per port. 256K memory per port. 100Base-FX support.
NPI NuSwitch FE-600	3-year warranty. 100Base-FX support. Telnet, spanning tree, RMON, roving monitor, and out-of-band management. Extra bay for redundant power supply. Hot-swappable power supplies.
NBASE NH2012	Extra bay for redundant power supply. Hot-swappable power supplies. RMON Groups 1, 2, 3, and 9, Level 2 VLAN, and roving monitor port. Supports almost 5000 more MAC addresses.

continued

COMPAQ NETELLIGENT REPEATER AND SWITCH PRODUCTS *(cont'd.)*

CNET PowerSwitch SH-100I	Extra bay for redundant power supply. Hot-swappable power supplies. 10Base-FX support. Supports 2000 more MAC addresses. Spanning tree, RMON, roving monitor, Levels 1 and 2 VLAN, SNMP management, management application, and out-of-band management.
CNET PowerSwitch SH-600	Extra bay for redundant power supply. Hot-swappable power supplies. 10Base-FX support. Supports 2000 more MAC addresses. Spanning tree, RMON, roving monitor, and Levels 1 and 2 VLAN.