

Nortel Networks

Passport 1424T

Routing Switch

Benefits

- *Increases application performance for mission-critical solutions*
- *Enhances network bandwidth utilization*
- *Easy to manage and install with SNMP and Web management*
- *Two built-in GBIC-based uplinks for maximum flexibility*

As more critical and revenue-based applications flow across company networks, data networks are becoming the corporate “competitive” edge. Lack of performance in the wiring closet, more stringent application bandwidth requirements, and the lack of qualified network experts are all challenges that have to be met before implementing the next “killer application.”

Fixed port desktop routing switches provide core network routing features without the large rack space requirements and large capital expenditure required by traditional core routing switches. By enabling better bandwidth utilization, application performance increases and both employee productivity and revenue can be enhanced—creating a truly competitive network.

The Nortel Networks Passport* 1424T routing switch is an application-based fixed port desktop Ethernet switch that delivers the enhanced network performance, simplicity, and flexibility required by today’s bandwidth-sensitive applications. Simple to install and maintain, the Passport 1424T combines network core routing features with wiring closet type efficiency (*Figures 1 and 2*).

Twenty-four 10/100 Ethernet ports and two GBIC slots combine to provide connectivity for workgroups, servers, and switches in a 1U high solution. Wire-speed routing and a non-blocking architecture provide core routing type performance. For applications that are more sensitive to network jitter and delay, four priority queues—with support for 802.1p and DiffServ—provide Quality of Service within the network.



Passport 1424T

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Reliability within the network is accomplished with features such as Multi-Link Trunking, which allows a Passport 1424T to function as an edge member of a Split Multi-Link Trunking (SMLT) solution. SNMP and Web management increase reliability and simplicity by providing a simple way to configure and monitor the switch.

Application performance

Wire-speed routing and a non-blocking architecture provide the performance required by today's bandwidth-sensitive applications. The use of Quality of Service (QoS) and hardware-based routing helps decrease network latency and jitter. The Nortel Networks Passport 1424T's ability to classify traffic at the network edge allows network administrators to set policies based on traffic type, which ensures that applications with special bandwidth requirements get the bandwidth they need, when they need it.

Routing performance

The Passport 1424T provides increased application performance by enabling better bandwidth utilization and enhancing network performance. Wire-speed routing and a non-blocking architecture mean fewer dropped packets and an improved routing performance felt network wide. Fast and efficient traffic classification, policy enforcement, and filtering are all dependent on wire-speed routing.

Quality of Service

VoIP and IP video traffic are more sensitive to both jitter and delay. By assigning QoS levels to traffic flows, applications can get the bandwidth and network priority where and when they need it. Four priority queues are the basis for QoS in the Passport 1424T. The ability to classify traffic as early as possible helps ensure mission-critical applications provide the competitive edge they were designed to provide.

Simplicity

The Nortel Networks Passport 1424T is a simple-to-use-and-maintain network performance enhancer. With both Web-based and SNMP management, the Passport 1424T can be configured quickly with fewer errors. Fewer errors enables decreased implementation times and fewer problems to troubleshoot.

Management

An embedded Web-based (HTML) interface allows users to configure the switch from anywhere within the network.

Using a Web browser such as Netscape™ Navigator/Communicator or Microsoft™ Internet Explorer, users instantly have a universal configuration and access tool that can communicate directly with the switch using the HTTP protocol. In addition, the Passport 1424T can be configured with Java™ Device Manager

(JDM), a graphical user interface application that enables network managers to discover, view, and configure more than 300 network devices and their physical links on a topology.

This easy-to-use application expands the pool of administrators capable of performing complex network configurations. Network managers can import, export, or modify individual port settings, default gateways, SNMP traps, VLAN configurations, and product or image files.

Optivity* NMS provides a comprehensive set of discovery, fault, and diagnostic capabilities for identifying problems before they impact network services.

Flexibility

With 24 10/100 ports and 2 GBIC slots, the Nortel Networks Passport 1424T provides enhanced connectivity

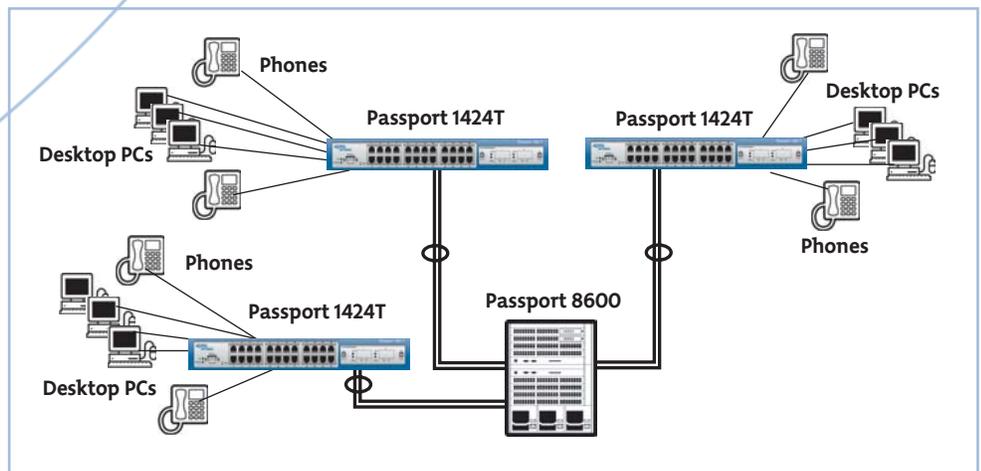


Figure 1. Network Edge

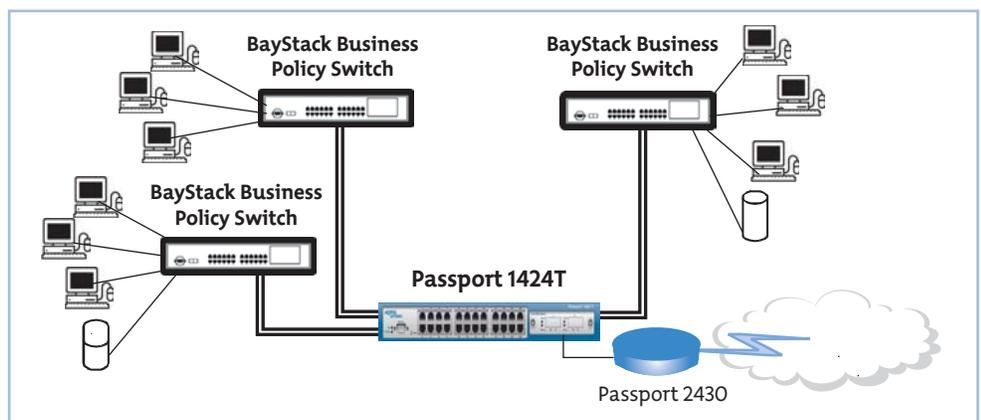


Figure 2. Network Core

for workgroups and servers. The GBIC ports allow for connectivity of single and multi-mode fiber with support for Gigabit Ethernet SX, LX, XD, ZX as well as 1000BASE-T connectivity. Multi-layer redundancy is delivered by Multi-Link trunking capabilities that provide multiple ports acting as one trunk and the ability to participate as a Split Multi-Link Trunk client.

Auto polarity and sensing

Connecting users was never so simple. The Passport 1424T comes with auto polarity and auto sensing built right in. Auto polarity allows for switch-to-switch connection with no crossover cable. Auto sensing provides support for 10MB or 100MB speed negotiation. So whether you are connecting desktops or switches, 10MB or 100MB—it is as simple as plugging in a cable.

GBICs

With two built-in GBIC-based uplinks and support for both SX, LX, XD, ZX, and 1000BASE-T, the Passport 1424T provides maximum flexibility for connections to the network core. Utilizing both GBICs provides the maximum in both performance and reliability for your network. By supporting a wide range of Gigabit Ethernet GBICs, connecting the Passport 1424T to the Passport 8600 network is more simple than ever.

Summary

The Passport 1424T makes good on its promise of delivering performance to the wiring closet. As a desktop routing switch, the Passport 1424T routing switch provides the performance, simplicity, and flexibility required by today's applications-focused network. As competition in the global marketplace fuels the growth for network applications, Nortel Networks continues to be uniquely positioned to provide customers with the broadest range of solutions for your business' success.

Technical specifications

Physical specification	Weight: 2.8kg (6.2 lb.) Height: 43 mm (1.7in.) Width: 441 mm (17.3 in.) Depth: 210 mm (53.3 in.)
Performance specifications	Frame forwarding rate (64 byte packets): - 8.8 Gbps switching fabric capacity - 6.6 Mpps packet forwarding rate Port forwarding performance (64 byte packets): - 8.8 Gbps switching fabric capacity - 6.6 Mpps packet forwarding rate Port filtering performance (64 byte packets): - Address database size: 8K - Addressing Frame length: Up to 1536 bytes
Data rate	10 Mbps Manchester encoded or 100 Mbps 4MB/5MB encoded
Interface options	10BASET/100BASE-TX: RJ-45 (8-pin modular) connectors for MDI-X interface GBICs: 2-port GBIC-based Gigabit Ethernet Module The Passport 1424T GBIC MDA supports the following GBICs: - 1000BASE-SX uses shortwave 850 nm fiber optic connectors to connect devices over multi-mode (550 m or 1,805 ft) fiber optic cable. - 1000BASE-LX uses longwave 1,300 nm fiber optic connectors to connect devices over single mode (5 km or 3.1 mi) or multi-mode (550 m or 1,805 ft) fiber optic cable. - 1000BASE-XD uses longwave 1550 nm fiber optic connectors to connect devices over single-mode (up to 50 km or 31 mi) fiber optic cable - 1000BASE-ZX uses longwave 1550 nm fiber optic connectors to connect devices over single-mode (up to 70 km or 43 mi) fiber optic cable - 1000BASE-T uses RJ-45 connectors to connect devices over category 5 copper cabling (up to 100 m or 328 ft)
Network protocol and standards compatibility	- IEEE802.3 10BASE-T Ethernet (twisted-pair copper) - IEEE802.3u 100BASE-TX Fast Ethernet (twisted-pair copper) - ANSI/IEEE802.3 Auto-negotiation - IEEE802.3x Flow Control - IEEE802.1p Priority Queues - IEEE802.1q VLANs - IEEE802.1D Spanning Tree
RFC support	- RFC 768 User Datagram Protocol (UDP) - RFC 783 Trivial File Transfer Protocol (TFTP) - RFC 791 / 950 Internet Protocol (IP) - RFC 792 Internet Control Message Protocol (ICMP) - RFC 826 Address Resolution Protocol (ARP) - RFC 854 Telnet - RFC 2236 Internet Group Management Protocol (IGMP) version 2 - RFC 1542 BOOTP - RFC 1058 Routing Information Protocol (RIP) - RFC 1519 Classless Inter-domain Routing (CIDR) - RFC 1723 Routing Information Protocol (RIP) version 2 - RFC 1724 RIPv2 MIB - RFC 1583 OSPFv2 - RFC 1850 OSPFv2 MIB - RFC 2131 BOOTP/DHCP relay - draft-ietf-idmr-dvmrp-v3-10 DVMPv3
Electrical specifications	Power supply: 100 - 240 VAC, 50-60 Hz internal universal
Environmental specifications	Operating temperature: 0 - 50 °C Storage temperature: -25 - 55 °C Humidity: 5% - 95% non-condensing
Safety agency approvals	CUS,TUV, CB, NOM
Electromagnetic emissions summary	FCC Class A, CE Mark, VCCI Class I, BSM
Electromagnetic immunity	EN55024 :1998

Ordering information

Part No.	Description
DJ1412A05	Passport 1424T Routing Switch with 24 10/100TX ports and 2 GBIC slots (No power cord included)
DJ1412B05	Passport 1424T Routing Switch with 24 10/100TX ports and 2 GBIC slots (Includes European Schuko power cord)
DJ1412C05	Passport 1424T Routing Switch with 24 10/100TX ports and 2 GBIC slots (Includes power cord used in the UK and Ireland)
DJ1412D05	Passport 1424T Routing Switch with 24 10/100TX ports and 2 GBIC slots (Includes power cord used in Japan)
DJ1412E05	Passport 1424T Routing Switch with 24 10/100TX ports and 2 GBIC slots (Includes North American power cord)
DJ1412F05	Passport 1424T Routing Switch with 24 10/100TX ports and 2 GBIC slots (Includes Australian power cord, also used in New Zealand and the PRC)



Nortel Networks is an industry leader and innovator focused on transforming how the world communicates and exchanges information. The company is supplying its service provider and enterprise customers with communications technology and infrastructure to enable value-added IP data, voice and multimedia services spanning Wireless Networks, Wireline Networks, Enterprise Networks, and Optical Networks. As a global company, Nortel Networks does business in more than 150 countries. More information about Nortel Networks can be found on the Web at:

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GSA Schedule GS-35F-0140L
1-888-GSA-NTEL

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