

## Nortel Networks

# Passport 2430

## Enterprise Router

### Passport 2430 features and benefits

- *Delivers high performance at a low price*
- *Provides flexible connectivity*
- *Easy to manage*
- *Maximizes investment protection through a modular architecture and easily-upgraded WAN adapter versions*

The Nortel Networks Passport 2430 Enterprise Router is a high-performance, flexible, yet low-cost branch-office router. Its flexible WAN and LAN options, small size, and quiet operation make the Passport 2430 switch the ideal solution for any small branch office.

The Passport 2430 offers two WAN adapter module slots that provide an array of options for WAN requirements. The WAN modules support serial, ISDN BRI (S/T and U), V.34 modem, and T1/FT1, E1/FE1 and 56K CSU/DSU selections.

An autosensing 10/100 Ethernet LAN gives Passport 2430 users flexibility and investment protection.

Nortel Networks BayRS software offers extensive WAN services support, allowing the most cost-effective primary and back-up links usage for remote site applications. Nortel Networks Optivity network management applications support comprehensive node configuration, monitoring, and control.

The Passport 2430 meets the business needs of flexible connectivity, ease of use, and high performance for small branch environments at a cost-effective price.



## Benefits

### *Delivers high performance at a low price*

With a 50 MHz processor and standard 16M DRAM, the Passport 2430 offers the features and performance of more expensive routers, but at a much lower price point. This makes the Passport 2430 the perfect solution for small branch offices with demanding network and budgetary requirements. Additionally, the Passport 2430's quiet operation, sleek enclosure, Kensington-compatible lock mount, and variety of mounting options allow it to be used virtually anywhere.

### *Simplifies management*

The Passport 2430 simplifies configuration and management by using a variety of powerful tools, including EZ-Install, EZ-Update, and Optivity. This eases the burden of IT staffs and allows for centralized management and monitoring. The Passport 2430 supports the use of a Xircom PCMCIA "Realport" 56K V.90 modem for out-of-band remote management.

### *Provides flexible connectivity*

The Passport 2430's support for 10/100 LAN and a variety of WAN interfaces makes it an ideal platform for remote sites with varied connectivity needs and LAN-based client/server traffic over Frame Relay, PPP, leased line, or dial-up links (see Figure 1). Integrating transmission devices—(such as DSU/CSUs) into the Passport 2430 chassis—reduces the number of multivendor, separately managed devices and cabling.

### *Maximizes investment protection*

The modular architecture of the Passport 2430, and the availability of a wide variety of easily upgraded WAN adapter modules, assure an easy, cost-effective migration path for upgrading to the newest WAN access technologies.

## Features

### *High-performance processors and memory modules*

The Passport 2430 contains a high-performance Motorola microprocessor to maintain high processing and forwarding rates. The product includes 16 MB of DRAM; up to 32 MB of DRAM can be installed to support customized partitioning between local and global memory. Router software resides in local memory while global memory is dedicated to packet buffers.

With these reserved buffers, the Passport 2430 prevents traffic overflow and resulting network delays, which can be caused by large bursts of traffic.

### *LAN interface*

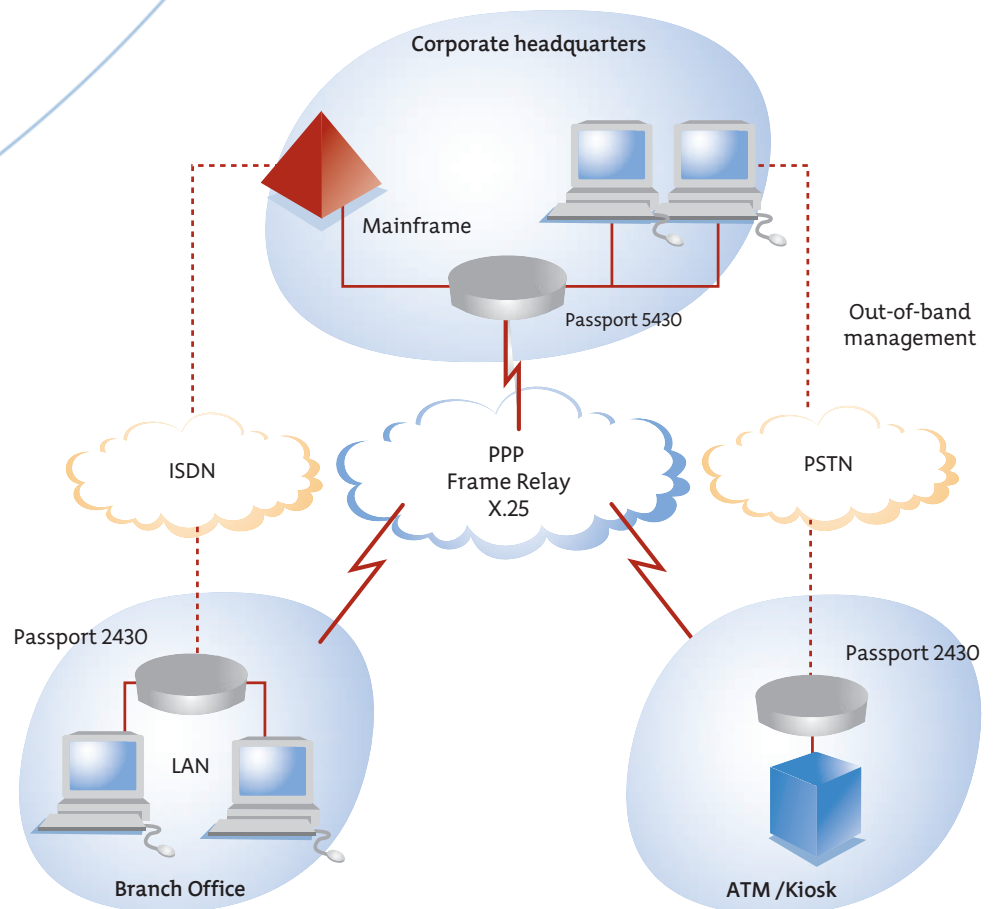
#### **10/100Base-TX Autosensing**

The 10/100Base-TX autosensing interface automatically senses line speed, providing a high-speed LAN connection to branch offices as they migrate to Fast Ethernet technologies. The cable connector is an RJ-45.

### *Expansion options*

#### **PCMCIA Flash Memory Card**

The externally accessible 16 MB PCMCIA Flash Memory Card allows for nonvolatile storage of router software and configuration files. To facilitate remote configuration and management, the PCMCIA Flash Memory Card can be programmed at the net-



**Figure 1:** Passport 2430 architecture

work center, mailed to a remote site, and easily installed. The PCMCIA Flash Memory Card can be logically divided into two equal partitions for redundancy.

Each partition can be addressed separately and is a fully functional flash file system volume.

### V.34 Modem Module and V.90 PCMCIA Console Modem

Both V.34 and PCMCIA modem options can be used to simplify remote router management. If the primary network access link becomes unavailable, these modules enable out-of-band, dial-up troubleshooting.

### Integral WAN connectivity

The Passport 2430 can accommodate two slide-in WAN adapter modules, enabling a broad choice of wide area networking links (see Table 2).

### WAN adapter module options

#### Serial

Using either internal or external clocking, serial interfaces can be operated at speeds from 1200 bps to 2.048 Mbps, (full duplex) to connect to wide area links. Passport 2430 serial interfaces can also be used to support SNA devices such as SDLC and BSC controllers, integrating these applications with the LAN traffic in a remote branch office. Nortel Networks supports BSC Pass-through, allowing customers to converge BSC 3270 device traffic. Automated teller machine traffic, for example, can be put on a high performance, multiprotocol IP backbone, eliminating costly dial-up BSC links. Using standard TCP/IP as the inter-network transport, dynamic rerouting capability provides added resiliency for mission-critical BSC data.

### ISDN BRI

Supplying two 64-kbps B-channels for data and one 16-kbps D-channel for signaling, the ISDN BRI adapter modules provide an integrated, high performance solution for companies interested in using extensive dial services such as Dial Backup, Dial-on-Demand, and Bandwidth-on-Demand. ISDN BRI options are available with or without an integral Network Termination 1 (NT1) device. Both ISDN BRI “S/T” and “U” modules support worldwide signaling specifications (see Table 1).

### T1/Fractional T1 DSU/CSU

The T1 and Fractional T1 (FT1) DSU/CSU module offers high-speed connectivity to the digital data services (DDS) network in North America. It is capable of operating at FT1 rates, in increments of 64-kbps, up to 1.544 Mbps. Users can customize the DS0s in the FT1 connection. Extensive diagnostic and test functions, such as loopback and Bit Error Rate Test (BERT) tests, are built in for easy troubleshooting.

### E1/Fractional E1 Adapter Module

The E1 and Fractional E1 (FE1) adapter module is G.703/G.704-compliant and operates at up to 2.048 Mbps for connectivity to E1/FE1 digital data services. Extensive diagnostic and test functions are also supported, similar to the T1/FT1 module.

### 56/64-kbps DSU/CSU

The integral 56/64-kbps DSU/CSU adapter module simplifies connectivity between the router to the DDS network 56K DDS or 64K Clear Channel services. Extensive diagnostic and loopback test capabilities pinpoint WAN connection difficulties.

### V.34 modem

When ISDN BRI services are not available or are too costly, the V.34 modem adapter module can be used to support Nortel Networks dial services capabilities. Providing nominal speeds of 28.8 kbps, the V.34 modem standard V.42bis compression capabilities boost throughput to 115.2 kbps or greater. Standard V.42 and MNP 10 error correction capabilities also ensure reliable transmission of mission-critical data.

### Power options

The Passport 2430 comes with an external 100 to 240 VAC power supply.

### Maximized connectivity and interoperability via BayRS

The Passport 2430 runs the standards-based BayRS router software that supports all major routing and bridging protocols to maximize interoperability in multivendor, multiprotocol environments.

**Table 1: Supported ISDN signaling specifications**

Region/country	ISDN standard
Australia	AUSTEL TSO13
Europe	Euro ISDN (CTR4)
France	VN-3
Japan	INS-64
North America	National ISDN-1
AT&T	4ESS and 5ESS ISDN
Nortel Networks	DMS-100 and DMS-250

## Software options

Three packages of software are available for the Passport 2430: IP Access, Remote Office, and Corporate. IP Access provides basic IP and bridging support; Remote Office adds IPX, Apple Talk, and IBM protocols; Corporate offers the full BayRS multi-protocol routing suite. This allows the Passport 2430 to be configured with software that best fits the remote site's requirements.

## Traffic management

Comprehensive traffic management capabilities are provided to the Passport 2430 through the use of BayRS Data

Compression, Traffic Prioritization, Uniform Traffic Filters, and Differentiated Services Queue Management Services (DSQMS).

## Remote installation and management

Remote installation of the Passport 2430 router is simplified through the use of EZ Install and EZ Update, two software applications designed to simplify installations, reconfigurations, and software updates from a central site.

## SNMP-based node management

Nortel Networks Optivity network management applications deliver a complete, SNMP-based enterprise

management solution that provides operation, policy, and design services for end-to-end management of routers, hubs, and switches. This approach enables proactive network planning and accelerates problem solving. This results in reduced costs associated with owning and operating corporate internetworks of any size.

## Router system management

System management directly supports the Bay Command Console (BCC) command line interface and the Technician's Interface (TI) for static and dynamic router configuration, as well as monitoring and manage-

**Table 2: Passport 2430 specifications**

## Technical specifications

<b>Architecture</b>	<ul style="list-style-type: none"><li>- Base module using Motorola MC 860T microprocessor</li><li>- One 10/100 Ethernet</li><li>- Two WAN adapter modules per base module</li><li>- One PCMCIA modem slot</li><li>- One PCMCIA flash memory slot</li></ul>										
<b>Connectivity</b>	<ul style="list-style-type: none"><li>- Ethernet (RJ-45)</li><li>- 10/100BASE-TX (RJ-45)</li><li>- Serial (44-pin: RS-449/422, RS-232, RS-530, V.24, V.35, X.21)</li><li>- ISDN BRI S/T (RJ-45)</li><li>- ISDN BRI U (RJ-45: integral NT1)</li><li>- 56/64 Kbps DSU/CSU (RJ-45)</li><li>- T1/FT1 DSU/CSU Adapter Module (RJ-45)</li><li>- E1/FE1 Adapter Module (RJ-45)</li><li>- E1/FE1 Adapter Module (BNC)</li><li>- V.34 Modem (RJ-45)</li><li>- PCMCIA 56K V.90 modem</li></ul>										
<b>Packaging</b>	<ul style="list-style-type: none"><li>- Tabletop/Wall-Mount/Rack-Mount</li><li>- Quiet, sleek enclosure</li><li>- Kensington-compatible locking slot</li><li>- AC voltage 100/240 VAC at 1.0 A maximum</li></ul>										
<b>Physical specifications</b>	<table><tbody><tr><td>Height</td><td>3.4 inches (8.6 cm)</td></tr><tr><td>Width</td><td>14.4 inches (36.7 cm)</td></tr><tr><td>Depth</td><td>8.0 inches (20.3 cm)</td></tr><tr><td>Weight</td><td>3.5 lbs</td></tr></tbody></table>	Height	3.4 inches (8.6 cm)	Width	14.4 inches (36.7 cm)	Depth	8.0 inches (20.3 cm)	Weight	3.5 lbs		
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ment services. The BCC provides an integrated collection of tools for configuration, monitoring, and debugging of network devices. Providing a simplified, English word-style command set, BCC addresses customer requirements for a complete, easy to use, and efficient management interface that enables device configuration and maintenance. The TI is based on a simple command line interpreter that supports SNMP-based access to the MIB,

displays event logs, and supports file system management and other administrative commands.

### **HTTP-based monitoring**

The embedded Web server complements and extends the functionality of existing SNMP-based and command line interfaces (CLIs) such as Site Manager and the T1/BCC.

The HTTP-based interface allows authorized Web browsers to access device management information for monitoring and troubleshooting.

**Table 3:** *Passport 2430 Router ordering information*

## Ordering information

<b>Base Unit</b>	
PB2002005	Passport 2430, 10/100 Ethernet AC Base Unit, 16M DRAM, includes power supply, console cable, and documentation. Power card must be ordered separately.
<b>WAN Adapter Modules</b>	
CV0011044	Serial Adapter Module
CV0011045	ISDN BRI S/T (without NT1) Adapter Module
CV0011046	ISDN BRI U (with NT1) Adapter Module
CV0011055	56/64K DSU/CSU Adapter Module
CV0011048	V.34 Modem Adapter Module (North American only)
CV0011050	T1/Fractional T1 DSU/CSU Adapter Module (North American only)
CV0011053	E1/FE1 Adapter Module (RJ-45)
CV0011054	E1/FE1 Adapter Module (BNC)
<b>PCMCIA Console Modem</b>	
PB3811001	Xircom RealPort, 56K, V.90 Modem (worldwide homologation)
<b>Memory Upgrade</b>	
PB001103	16M to 32M DRAM upgrade kit
<b>Mounting Options</b>	
PB0011001	Passport 2430 wall-mount kit
PB0011002	Passport 2430 rack-mount kit

**Passport 2430 note:** Power cords, adapter modules, expansion modules, and system software must be ordered separately for each Passport 2430. Each Passport 2430 includes an installation manual and console cable kit. The purchase of one complete set of Nortel Networks documentation (Router Installation Documents, Router Management Documents, and Technician's Interface and Hardware Documents) for each central site is recommended.

The logo for Nortel Networks, featuring the word "NORTEL" in a bold, blue, sans-serif font with a stylized globe icon integrated into the letter "O". Below it, the word "NETWORKS" is written in a similar bold, blue, sans-serif font with a trademark symbol (TM) to its upper right.

# NORTEL NETWORKS™

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**In the United States:**

Nortel Networks  
35 Davis Drive  
Research Triangle Park,  
North Carolina 27709  
USA

**In Canada:**

Nortel Networks  
8200 Dixie Road,  
Suite 100  
Brampton, Ontario L6T 5P6  
Canada

**In Europe:**

Nortel Networks  
Maidenhead Office Park  
Westacott Way  
Maidenhead Berkshire SL6 3QH  
UK

**In Asia:**

Nortel Networks Singapore Pte Ltd  
151 Lorong Chuan #02-01  
New Tech Park,  
Singapore 556741

**In Australia:**

Nortel Networks Australia Pty Limited  
380 St. Kilda Road  
5th/6th Floor  
Melbourne, Victoria  
Australia 3004

For more information, contact your Nortel Networks representative, or call 1-800-4 NORTEL or 1-800-466-7835 from anywhere in North America.

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