IBM Networking 8371 Multilayer Ethernet Switch

- **High-performance Layer 3 Ethernet switch**

- **Sixteen 10/100BASE-TX auto-sensing ports**

- **Compact, efficient packaging**

- **Two feature slots**

- **Increased flexibility and network connectivity**

- **Management console port**

- **Built-in control software in EPROM and flash memory**

- **Built-in auto-ranging, auto-sensing ac power supply**

- **Multiprotocol over ATM (MPOA) client function**

- **MPOA load balancing and redundancy support for dual ATM links**

- **Self-learning IP routing**

- **Expandable to 24/32 10/100-Mbps Ethernet ports**

The IBM Networking 8371 Multilayer Ethernet Switch Model A16 is the initial offering of an exciting new line of high-performance Layer 3 Ethernet switches. The 8371 Model A16 is a workgroup switch that provides Ethernet desktops, downstream Ethernet hubs and switches access to ATM or Fast Ethernet backbone networks and servers. The 8371 ships with a control software package that provides next-generation ATM network services of LANE Version 2 and Multiprotocol over ATM (MPOA) clients.

Workgroup Switches

Ethernet

Product Overview

The latest in Ethernet switches

In conjunction with the MSS server in the ATM network, the 8371 Ethernet switch provides local, wirespeed Internet Protocol (IP) and Internet Packet Exchange (IPX) routing between Fast Ethernet ports on the same module and MPOA virtual one-hop routing over the ATM backbone network. The 8371 also includes self-learning IP routing, which can offload and extend the life of the installed routers. The 8371 is designed to connect a variety of high-speed Fast Ethernet, ATM backbones and server links that will meet the high-performance IP routing requirements of today's and tomorrow's campus network environment. The 8371 makes an excellent choice for the wiring closet as a feeder to the 8265 Nways® ATM Switch.

Feature slots

The 8371 Model A16 comes standard with sixteen 10/100BASE-TX auto-sensing Fast Ethernet ports for UTP or STP cabling. It also has two feature slots that can be filled with the following expansion modules:

- 2-port 155-Mbps MMF expansion module

- 8-port 10/100BASE-TX expansion module

- 8-port 100BASE-FX MMF expansion module

The 8-port 10/100BASE-TX module plugs into the 8371 feature slots and expands the number of auto-sensing, full-duplex 10/100-Mbps ports. A maximum of two 8-port 10/100BASE-TX modules can be used with each 8371 Model A16 to expand the 8371 to 24 or 32 10/100BASE-TX ports.

The optional 8-port 100BASE-FX module plugs into the Model A16 feature slots and provides eight full-duplex ports for connectivity to a variety of Fast Ethernet hubs, devices, server links and backbone links. A maximum of two 8-port 100BASE-FX modules can be used with each 8371.

The 2-port 155-Mbps ATM module plugs into one of the 8371 Model A16's feature slots and provides two full-duplex OC3 155-Mbps ports for connectivity to the ATM server and backbone links. A maximum of one 2-port 155-Mbps ATM module can be used with each 8371 model.

The 2-port 155-Mbps ATM port can provide load-sharing and redundant links to the ATM network.

Designed for two critical network environments

The 8371 addresses networking requirements in two critical environments.

ATM networks will benefit from the 8371-A16 MPOA client function, which, along with an MPOA server like the IBM MSS, delivers high performance and ease of installation. The MPOA Virtual Router model delivers reduced network latency through "one-hop routing" and simplified installation by treating the entire MPOA network as a single router, thus reducing definitions, both in the initial install and day-to-day operations. The 8371 technology, along with the 8265 Nways ATM Switch, the MSS and 8270 Token-Ring Switch delivers the most complete ATM solution in the industry.

Ethernet networks will benefit from the self-learning IP routing that allows the 8371 to offload routers, deliver higher performance and extend their useful life. This feature can "learn" the required routing information and build shortcut routes bypassing the installed router. This function does not use any proprietary interfacing to the router and will work with any industry standard router. It will be beneficial in environments where the majority of the traffic is between client workstations and servers attached to the same router.

Ethernet Switch chassis

The Networking 8371 Multilayer Ethernet Switch Model A16 chassis contains a built-in auto-ranging power supply and two fans for cool running operation and high reliability.

The 8371 employs a state-of-the-art chip set that yields a 10-Gbps non-blocking, full-duplex switch fabric for high performance in the most demanding networks. The 8371 Model A16 provides LED indicators on the front panel that indicate the hardware and software status of the switch, power supply status and link activity associated with each of the ports. The 8371 also comes equipped with a DB9 connector on the front panel for attachment of a management console or modem.

Built-in control software

The 8371 has built-in control software that provides a set of full-function Ethernet Layer 2 switching and Layer 3 routing in hardware for higher performance. The control software is stored in EPROM and flash memory and is automatically invoked when the switch is powered on. The software functions include:

- MPOA support for IP and IPX routing

- MPOA support for shortcuts with other MPOA client (Ethernet and Token Ring)

- MPOA shortcuts to non-MPOA Clients (LANE1) (Ethernet and Token Ring)

- MPOA support for load balancing/ redundancy with dual ATM uplinks

- SNMP

- IP Multicast VLANs with media speed forwarding

- Self-learning IP routing

Networking 8371 Multilayer Ethernet Switch Specifications

Chassis	• Two feature slots • Two cooling fans • 10-Gbps aggregate non-blocking switch fabric
Ports, slots and capacity	Ports: 16 Slots: Two optional module slots Connector type: RJ-45 Data rate: 10/100 Mbps Cable type: UTP/STP Maximum frame size: 1518 bytes MAC address: 64 000 at box level Port LED indicators: Power supply status, hardware and software, port link activity
Standards supported	IEEE 802.3, IEEE 10/100BASE-TX, 100BASE-FX
Physical specifications	Width: 440 mm (17.3 in.) Depth: 336 mm (14.0 in.) Height: 63 mm (2.5 in.) Weight: 6.5 kg (14.2 lb)
Operating environment	Temperature: 10° to 40°C (50° to 104°F) Relative humidity: 8% to 80% non-condensing Maximum wet-bulb temperature: 29°C (84.2°F) Acoustic performance: 58 dB/pW weighted sound power level to EN 27779 (ISO 9295) Electrical power: 100 to 250 V ac at 50 to 60 Hz
Storage environment	Temperature: 1° to 60°C (33° to 140°F) Relative humidity: 5% to 80% non-condensing Maximum wet-bulb temperature: 29°C (84.2°F)
Warranty	One year
Year 2000 ready	The IBM Networking 8371 Multilayer Ethernet Switch Model A16 is year 2000 ready when used in accordance with its associated documentation and is capable of correctly processing, providing and receiving data within and between the 20th and 21st centuries, provided all other hardware, software, and/or firmware used with the product properly exchange accurate data with it.

Workgroup Switches

Ethernet

8371 Features at a glance

8-port 10/100BASE-TX Module

Ports: 8
Connector type: RJ-45
Data rate: 10/100 Mbps
Cable type: UTP/STP
Maximum frame size: 1518 bytes
Port LED indicators: Link and activity status
Standards: IEEE 802.3, IEEE 10BASE-T/100BASE-TX

8-port 100BASE-FX Module
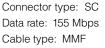
Ports: 8
Connector type: MT-RJ
Data rate: 100 Mbps
Cable type: MMF
Maximum frame size: 1518 bytes
Port LED indicators: Link and activity status
Standards: IEEE 802.3, IEEE 100BASE-FX

2-port 155-Mbps (OC3) ATM MMF Module

Ports: 2
Connector type: SC
Data rate: 155 Mbps
Cable type: MMF
Maximum frame size: 1518 bytes
Port LED indicators: Link status/disabled, activity, red alarm, yellow alarm, far-end status alarm,
    cell loss error
Standards: ATM Forum User-Network Interface 3.0/3.1; CCITT Q.291

Ordering information

Description	Country	Feature code/Part number
Models		
8371 Model A16	Worldwide	90G0645
Features		
ATM Uplink Feature		
2-port 155-Mbps Uplink Module	Worldwide	6625/90G0523
Fast Ethernet Features		
8-port 10/100BASE-TX Module	Worldwide	6626/90G0530
8-port 100BASE-FX Module	Worldwide	6627/35H9203
Power cords		
125 V, 10 A, unshielded, 2.8 m (9 ft)	U.S., Canada, Mexico, Japan, Korea (South), Phillipines, Taiwan	6851/6952300
125 V, 10 A, unshielded, 1.8 m (6 ft)	Chicago (U.S.)	6852/6952301
250 V, 10 A, unshielded, 2.8 m (9 ft)	U.S., Bahamas, Barbados, Bolivia, Brazil, Costa Rica, Dominican Republic, El Salvador, Equador, Guatemala, Guyana, Haiti, Honduras, Jamaica, N. Antillies, Panama, Peru, Trinidad, Venezuela, Japan, Phillipines, Taiwan, Thailand, Liberia	6853/1838574
250 V, 10 A, unshielded, 2.8 m (9 ft)	Australia, New Zealand	6854/13F9940

Ordering information

Description	Country	Feature code/Part number
250 V, 10 A, unshielded, 2.8 m (9 ft)	Indonesia, Korea (South), Albania, Angola, Austria, Belarus, Belgium, Bosnia, Bulgaria, Croatia, Czechia, Egypt, Finland, France, Germany, Greece, Hungary, Iceland, Iran, Kazakhstan, Lebanon, Luxembourg, Macedonia, Mozambique, Netherlands, Norway, Poland, Portugal, Romania, Russia, Saudi Arabia, Slovakia, Slovenia, Spain, Sudan, Sweden, Syrian Arab, Turkey, Ukraine, Yugoslavia, Zaire	6855/13F9979
250 V, 10 A, unshielded, 2.8 m (9 ft)	Brunei, Hong Kong, Macao, Malaysia, China, Singapore, Bahrain, Cyprus, Ghana, Iraq, Ireland, Jordan, Kenya, Kuwait, Libya, Malawi, Malta, Nigeria, Oman, Qatar, Sierra Leone, Somalia, Tanzania, Uganda, Un. Arab Emirates, U.K., Yemen, Zambia	6856/14F0033
250 V, 10A, unshielded, 2.8 m (9 ft)	Denmark	6857/13F9997
250 V, 10 A, unshielded, 2.8 m (9 ft)	Chile, Ethiopia, Italy	6858/14F0069
250 V, 10A, unshielded, 2.8 m (9 ft)	Switzerland, Leichtenstein	6859/14F0051
250 V, 10A, unshielded, 2.8 m (9 ft)	Israel	6860/14F0087
250 V, 10 A, unshielded, 2.8 m (9 ft)	Bangladesh, Myanmar, Sri Lanka, Pakistan, South Africa, Namibia, Swaziland, Zimbabwe	6861/14F0015
250 V, 10 A, unshielded, 2.8 m (9 ft)	Argentina, Paraguay, Columbia, Uraguay	6862/6952291

Supplementary Information

The following sales tools are available for the 8371:

- Specification sheet:
  IBM Networking 8371 Multilayer Ethernet Switch, G224-4589

- Information on the IBM 8371 is available at:
  www.networking.ibm.com/netprod.html