High-capacity ATM networking—plus support for existing LANs—for maximum campus flexibility

IBM 8260 Nways ATM Campus Solutions

Highlights

Solutions that make you, your users, your networks and your campus environment more productive:

- ***Effective ways to handle the demands of bandwidth-intensive applications***
- ***Benefits of connecting backbones to high-powered workgroups and servers alike***
- ***ATM technology for achieving high speeds, reducing downtime, enabling virtual networks***
- ***Efficient use across LAN and WAN environments as well***

A combination of functions to increase network performance in one unit:

- ***A shared-media, multiprotocol switching hub***
- ***LAN-to-ATM connections***
- ***A modular ATM switch module***
- ***IBM Multiprotocol Switched Services (MSS) Server Module enables ATM routing***
- ***WAN connectivity***

A smooth migration path:

- ***Cost-effective use of today's technology***
- ***Tomorrow's technology available today with multimedia MPEG-2 video distribution over ATM***
- ***Optimized network performance with the power of ATM technology***



IBM 8260 Nways Multiprotocol Switching Hub

The IBM 8260 Nways™ Multiprotocol Switching Hub is the cornerstone of IBM's 8260 Nways ATM campus support. IBM offers 8260 ATM support in 3 models, the 17-slot Models A17 and G17 (also features a Packet-Channel backplane) and the 10-slot Model A10. Each hub has all of the features of non-ATM hubs plus an integrated ATM backplane, so you can implement a complete ATM network or mix ATM and non-ATM networks. For ATM support just add an ATM Switch/Control Point Module and one or more 25-Mbps, 100-Mbps, 155-Mbps or 622-Mbps ATM Modules. To upgrade your non-ATM 8260 Hub to ATM, just add an ATM backplane plus an ATM Switch/Control Point Module and media modules. To get ATM WAN connectivity you can add ATM E1/T1/J1, E3/DS3 or SONET (155 -Mbps) WAN Modules.

By combining ATM and non-ATM support in one unit, we simplify your networks' design. You can build on your organization's investment in current hardware and software because everything works together. And we separated the ATM Switch/Control Point Module from the ATM multimedia modules so that you can mix speeds and the number of ports to meet today's needs as well as adding modules to meet tomorrow's needs. You can also add a redundant ATM switch module to maximize availability at minimum cost.

And you can add LAN-to-ATM switches and bridges as well as value-added modules developed by other companies through IBM's ATMKit Development Program. All of these additions work together within a single, fault-tolerant, highly manageable unit—the IBM 8260 Nways Multiprotocol Switching Hub.

Protect your investments through 8260 technology

We also protect your investment in the 8260 when you enlarge your networks or upgrade to ATM. Combining ATM and LAN connections in the 8260 makes sense. It gives you only one hub to manage, takes less space and offers its built-in functions to all of its ATM components. These functions include:

- Intelligent power management
- Asset management
- Distributed management
- Fault tolerance
- Redundancy on a module and part basis

To upgrade from existing LANs to ATM you no longer need to rewire or even install a new switch module. The IBM 8271 and IBM 8272 ATM/LAN Switch Modules will help you make the transition from shared-media LANs to Switched Virtual Networking (SVN). They preserve your investment in adapters, building cabling and software, and they connect directly to the campus backbone.

Add flexibility to your strategy by choosing an 8260

Choosing an 8260 is the start of a flexible strategy. Implement an ATM backbone for maximum performance and minimum congestion. Add server connections for responsive applications. Add selected workgroups at 25, 100, 155 or 622 Mbps. Continue using your traditional, shared media—Ethernet, Token-Ring and FDDI LANs—and bridge them to ATM in a single unit.

Get a high-speed interface and eliminate downtime by adding an ATM backplane

The ATM backplane provides the high-speed interface between ATM devices or media modules in the 8260 and the ATM Switch/Control Point Module. The ATM backplane is separate from the existing 8260 backplane and serves all slots of the hub. You can connect ATM switch modules on the ATM backplane to the existing 8260 backplane without disrupting other networks. With no mechanical or electrical components to break or wear out, the ATM backplane is essentially a passive device. This means that you don't have to interrupt your users when you add or change LAN switch modules because you don't have to turn off the hub's power. And because you install these switch modules from the front, you save money by minimizing the space required in wiring closets.

Benefit from IBM's industry-leading ATM switching technology

Our ATM switching technology for the 8260 hinges on our innovative, single-chip switch module—the Switch-on-a-Chip. It has all these industry-leading features:

- 16 input ports
- 16 output ports
- 256–400 Mbps per port
- Modular ports with a variety of port speeds
- 2.4 million transistors

And these results:

- Increased aggregate throughput up to 6.4 Gbps per switch module
- Automatic load-sharing functions
- Self-routing functions
- Dynamically shared, buffered output
- Multicasting and broadcasting functions
- Flow control for no-loss packet-switching

Attain high speeds and greater flexibility through separate switching

Each Switch-on-a-Chip integrates ATM cell-switching and network control-point functions. It switches incoming cells from an ATM port on a concentrator to the appropriate destination ATM port or to an ATM Switch/Control Point Module. The Control Point provides fully distributed functions that control an ATM campus network and connect ATM networks over a WAN. The module dynamically "learns" about machine resources, port speeds and network topology so that you don't have to reconfigure it. It also computes all routes, bypassing failed nodes and links.

You can also add a redundant ATM Switch/Control Point Module to Models A17 and G17 of the 8260. By configuring it so that it works if the primary switch module fails, you offset downtime. Your users can continue working as if nothing has happened—an especially important goal if you're working in an organization with a critical mission such as air-traffic control.

Each Switch-on-a-Chip includes management functions for specifying configurations, downloading code and detecting and correcting errors. Additional management functions, such as in-band or out-of-band support, are also available. SNMP provides in-band support; an EIA 232 port for a local console or a remote console via Telnet or SLIP provides out-of-band support.

Features	*Benefits*
High port and system capacity with growth potential built in	*Accommodates up to:* One hundred sixty-eight 25-Mbps ports (+fourteen 155-Mbps) Fifty-six 100-Mbps ports Forty-two 155-Mbps ports, seven 622-Mbps ports Provides up to 4.2-Gbps aggregate throughput in full-duplex mode
Integrated ATM Switch/Control Point Module	• Increases reliability and network performance while reducing network complexity • Helps you manage your ATM network using fewer resources • Distributes control among multiple switching nodes to speed up network operation and eliminate bottlenecks in even the most complex networks • Eliminates the need for a separately managed control-point server and the risk of server failure
Increased traffic without losing quality and service	• Runs existing LAN applications in parallel with multimedia applications over the same resources without interference or lost cells • Transports high-quality video through dedicated connections over guaranteed bandwidth
ATM backplane star topology	• Offers higher bandwidth than traditional bus topologies • Accommodates tomorrow's faster transmission rates • Supports up to 2 separate star networks for higher port capacity using 1 star network and higher reliability using 2 star networks (with 1 as backup)
Scalable hub architecture	• Offers scalability at system and network levels • Provides switching functions independently of access functions so that system performance is not degraded as the number of ports increases • Supports subnetworking as well as multinetworking for medium-to-large, local or distributed ATM networks
Versatile network implementation	*Lets the 8260 operate as a backbone switch or a floor hub for:* Campus backbones High-speed server connections Workstation connections Desktop ATM ATM voice integration using FiberCom ATM Circuit Emulation (ACE) card Combinations of the above Integrates traditional and ATM LANs without compromising the functions of either Supports integrated LAN-to-ATM connections Wide Area Network ATM access Cable On-line solutions (HFC) Video (MPEG-1, MPEG-2)
ATM standards	Complies with ATM-Forum and other leading industry standards to ensure future viability Complies and works with other standards-based hardware and software
Upgrades available for existing 8260s	Protects and enhances your investment in the 8260 Switching Hub Provides a simple, cost-effective way to add ATM to your existing networks
Network management	*Monitors graphical networks using a wide range of application configurations, for example:* Intelligent Hub Manager for DOS Nways Manager for Windows® (NetView® for Windows) Nways Campus Manager LAN for AIX® (NetView® for AIX) Nways Campus Manager ATM for AIX (NetView for AIX) Nways Campus Manager LAN for HP-UX (HP OpenView®) Nways Campus Manager ATM for HP-UX (HP OpenView) Nways Campus Manager LAN Remote Monitor for AIX (TME10 Netview for AIX) Nways Campus Manager LAN Remote Monitor for HP-UX (HP OpenView)

Ensure maximum growth potential through separate concentration modules

To offer you greater flexibility as you increase the capacity of your networks, we separated the concentration module from the ATM Switch/Control Point Module. So you can select from 25-, 100-, 155-, and 622-Mbps switch modules to support a variety of media and multimedia connectors. Their distinguishing features include:

- 25-Mbps Switch Module: 12 category-3 UTP/STP ports with shielded RJ-45 connectors.
- 100-Mbps Switch Module: 4 multimode fiber ports with MIC or SC connectors.
- 155-Mbps Switch Modules: 2- or 3-port media adapters with separate I/O port features for single-mode or multimode fiber or category-5 UTP/STP RJ-45 connectors. These switch modules automatically detect the type of installed adapters and support any mix of fiber and UTP/STP adapters.
- 622-Mbps Switch Module: 1 OC/12 I/O port available as single-mode fiber with SC connector or multimode fiber. These switch modules offer the advantages of PNNI-1.

Decrease bandwidth contention and network congestion through SVN

If you set up your networking environment to combine workgroups of LAN switch modules with ATM backbones, you can increase performance through SVN. The IBM Nways Multiprotocol Switched Services (MSS) Server Module is functionally equivalent to the standalone IBM 8210. The MSS Server Module is the key to implementing SVN in environments that combine workgroup LAN switches and ATM backbones. Because the MSS Server provides ATM Forum-compliant LAN Emulation (LANE), you can have virtual LANs, enhanced broadcast management for LANE, bridging and routing between emulated LANs, IP routing on ATM (including Classical IP) and IPX routing on emulated LANs. And all available on our reliable, fault-tolerant, ATM-backplane-equipped models.

For more information about the IBM 8210, refer to *IBM Multiprotocol Switched Services (MSS) Server Introduction and Planning Guide*, GC30-3820.

Integrate existing LANs and LAN switching into the campus ATM network

The IBM 8271 and 8272 ATM LAN switch modules and the 8260 Switching Modules Series offer a broad range of support for different LAN types and port configurations. Supported media are Token Ring, Ethernet, FastEthernet and FDDI. ATM Forum compliant LANE and sophisticated VLAN functions integrate LAN switching into the ATM network and enable the migration of campus networks to 8260-based ATM backbone networks. For detailed information about LAN switching, refer to *IBM 8260 LAN Switch Modules*, G224-4488.

The IBM 8281 ATM LAN Bridge provides ATM integration with legacy LAN bridging functions for Ethernet or Token Ring.

Link campuses together with ATM

ATM WAN switch modules provide direct connections between 8260-based ATM networks over WANs. Thus you can join the campuses in your enterprise to get the maximum benefits of ATM technology. The ATM WAN switch modules support the following range of interfaces:

- 1-port E3 or DS3
- 155-Mbps
- 1-port OC3 Single Mode Fiber (SMF) or Multi-Mode Fiber (MMF)
- 1-port STM1
- 4-port E1/T1/J1

Integrate voice across the ATM backbone

The FiberCom ATM Circuit Emulation (ACE) card enables the 8260 to make T1/E1 voice trunk connections to PBXs and other constant bit-rate devices. Now you can consolidate data, voice and video traffic over your campus ATM backbone. And you'll get peace of mind knowing that the ACE card, based on the 8260 ATM carrier module, is certified for total compatibility with the 8260.

Achieve an efficient, low-cost operation using comprehensive management software

IBM offers you a range of software management solutions—from those available on local workstations to those that integrate management applications over multiple campuses. This software not only works on a variety of IBM and non-IBM platforms, it supports local or distributed work on simple-to-complex (such as graphical) workstations. You need an ASCII terminal (IBM 3151 PC with VT100 emulation or equivalent) to do the initial configuration only.

Benefit from our open platform through the ATMKit

IBM's open 8260 platform allows other vendors to port their high-value components quickly via the industry-standard UTOPIA interface. To offer other companies and developers a simple and inexpensive way to add their ATM technology to the 8260, we developed the IBM 8260 Nways ATMKit Development Program. Using this program developers can create ATM functions and switch modules for the 8260, and they can develop other ATM applications based on well-defined standard interface specifications. Because this industry-unique program creates business opportunities for other companies and because it results in more ATM applications being available, you benefit even more.

The ATMKit is based on an ATM carrier module, which acts as a generic motherboard for feature cards developed by other companies. It uses ATM Forum-compliant, standard UTOPIA interfaces to communicate with these feature cards. Through the UTOPIA interfaces the feature cards can communicate with other ATM modules and access features of the 8260. One- or two-slot versions of the carrier modules accommodate feature cards of various sizes.

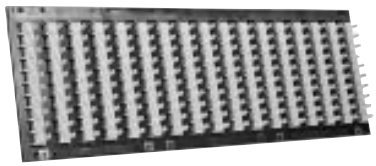
For more information on this program refer to *IBM 8260 ATMKit Development Program*, GA33-0373.

IBM 8260 Nways Multiprotocol Switching Hub Models A17, G17 and A10, and ATM backplane at a glance

Part numbers	58G5885: Model A17 58G9714: Model A10 29H4382: Model G17
Hub characteristics	• Hot-swappable switch modules eliminate turning off the 8260 to add new or change failed modules • Full-floating media modules • Uses your existing cabling • Intelligent power and inventory management automatically identify all resources for you and report hardware information
ATM backplane	• Supports full-floating, swappable media modules • Offers a passive backplane for swapping without turning off power • Is separate from the 8260 backplane and its Packet-Channel backplane • Models A17 and G17: ATM backplane configured as 2 star networks • Model A10: ATM backplane configured as 1 star network
LAN access functions	*LAN-to-LAN and LAN-to-ATM bridging with LANE and these bridging protocol options:* Token-Ring source-route bridging Ethernet transport bridging Ethernet, Token-Ring and FDDI media concentrator and management
Open platform	• Accepts other companies' ATM technology and applications through the ATMKit Development Program. • Works with UTOPIA, a development interface standard.
Slots and capacity	*Models A17 and G17* • 17 slots (14 slots available for ATM media modules) • Up to one hundred sixty-eight 25-Mbps, fifty-six 100-Mbps and forty-two 155-Mbps ATM ports, seven 622-Mbps *Model A10* • 10 slots (8 slots available for ATM media modules; 2 slots available for ATM Switch/Control Point Module, which allows 1 slot for a backup) • Up to ninety-six 25-Mbps, thirty-two 100-Mbps and twenty-four 155-Mbps ATM ports, four 622-Mbps
Warranty	1 year



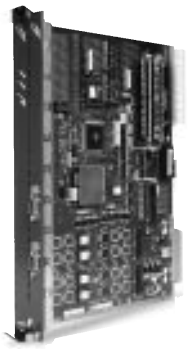
8260 showing interior and backplanes, 10 slots



8260 ATM backplane

IBM 8260 Nways ATM Switch/Control Point Module at a glance

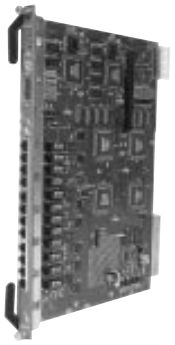
Part number	51H3880
Switching functions	• Single-stage, 16x16, 8-bit parallel switch with 4.2-Gbps full-duplex throughput • Constant, low, 30-µs latency under any load • All AAL types • CBR, VBR, UBR and ABR with independent traffic-queueing • Traffic management • Input and output cell-buffering • Early-packet discarding
Control Point functions	• Integrated into the ATM Switch/Control Point Module • ATM Forum-compliant, UNI 3.0 and 3.1 specifications, with full ILMI • Switched virtual circuits (SVCs) and permanent virtual circuits (PVCs) • Point-to-multipoint connections • Automatic topology management and dynamic-routing calculations • Peer workgroup communications • ATM Forum-compliant Interim Inter-Switch Protocol and PNNI • Permanent virtual-path tunneling for increased performance and decreased congestion • Aggregation of parallel links • Decreased congestion; calls set up in less than 10 ms
High availability, fault tolerance	• Accepts a redundant ATM Switch/Control Point Module (Model A17 only) • Works with distributed network-control functions • Offers N+1 load-sharing power supplies • Operates on parallel links • Automatically re-routes soft PVCs in case of link failure (defines PVCs at the edge of the network only)
Network management	*Provides SNMP agent with IETF AToMMIB, MIB2 and IBM ATM function extensions for:* • Product-specific resources • Network control activity • Q.2931 and SAAL signaling configurations and statistics • ATM activity statistics • Allows in-band management through Classical IP over ATM (RFC1577) and ATM Forum-compliant LANE • Offers client graphical management applications on DOS and for NetView for Windows, AIX or HP OpenView platforms
Maintenance and operations	• Allows out-of-band management via local EIA 232 port from an ASCII terminal (local or remote with a modem) or any TCP/IP workstation (including an SNMP management platform) using SLIP • Saves configurations in nonvolatile memory • Updates remote programs through TFTP • Uploads and downloads the configuration file • Offers 2 concurrent levels of microcode • Resets quickly (less than 2 seconds) • Accepts control-point activities and traces signaling • Provides an error log



8260 ATM Switch/Control Point Module

IBM 8260 Nways 25-Mbps ATM UTP/STP Media Modules at a glance

Part number	51H3828
Slots required	1
Ports	Twelve 25-Mbps UTP/STP ports with shielded RJ-45 connectors Support for up to 2000 bidirectional virtual connections Optional 155-Mbps uplink port
Maximum link distance	100 m (328 ft) with UTP category 3 200 m (656 ft) with UTP category 5, FTP and SFTP 255 m (836 ft) with STP



8260 25-Mbps ATM UTP/STP Media Module, 12 ports

IBM 8260 Nways 100-Mbps ATM Fiber Media Modules at a glance

Part numbers	58G5845: MIC 80G3310: SC
Slots required	1
Ports	• Four 100-Mbps multimode fiber interface ports with MIC and SC connectors • Support for up to 1000 bidirectional virtual connections
Maximum link distance	2 km (1.2 mi) for 8260-to-device (UNI) 3 km (1.8 mi) for 8260-to-8260 (NNI) 2.5 km (1.5 mi) for 8260-to-8260 for modules with SC connectors
Supported standards	• ATM Forum-compliant UNI 100-Mbps TAXI • ATM Forum-compliant UNI Specification 3.0 and 3.1 for SVC signaling with Q.2931 and SAAL • ATM Forum-compliant ILMI



8260 100-Mbps ATM Fiber Media Module, 4 ports

IBM 8260 Nways 622-Mbps ATM Module at a glance

Part numbers	10J2263: MMF 10J2264: SMF
Slots required	2
Ports	1 OC-12 with SC or MMF connector
Maximum link distance	500m for 8260-to-8260 MMF (NNI) 15Km for 8260-to-8260 SMF (NNI)



8260 622-Mbps ATM Module

IBM 8260 Nways 155-Mbps ATM Flexible Media Modules at a glance

Part numbers	58G9663: Switch module, 2 ports 51H4474: Switch module, 3 ports 58G9667: Multimode fiber I/O card 58G9855: Single-mode fiber I/O card 58G9856: UTP/STP I/O card
Slots required	1
Ports	Up to 2 or 3 fiber or UTP/STP I/O daughter cards 1 Multimode fiber I/O card with SC connector 1 Single-mode fiber I/O card with SC connector 1 UTP/STP I/O card with RJ-45 connector
Maximum link distance	2 km (1.2 mi) for multimode fiber 20 km (12.4 mi) for single-mode fiber 100 m (328 ft) for UTP category 5 150 m (492 ft) for STP



2-Port 8260 155-Mbps ATM Flexible Media Module



3-Port 8260 155-Mbps ATM Flexible Media Module

IBM 8260 Switching Modules Series at a glance

Part numbers	29H4350: 10BASE-T LAN Switch Module, 1-slot, 12-port 29H4352: 10BASE-T LAN Switch Module, 2-slot, 24-port 29H4354: 10BASE-FB/FL LAN Switch Module, 1-slot, 10-port 29H4356: 10BASE-FB/FL LAN Switch Module, 2-slot, 20-port 29H4358: 10BASE-T FDDI DAS LAN Switch Module, 2-slot, 12-port 29H4360: 10BASE-FB/FL FDDI DAS LAN Switch Module, 2-slot, 10-port 29H4362: Dual FDDI DAS LAN Switch Module, 1-slot 29H4366: 100BASE-TX LAN Switch Module, 1-slot, 4-port 29H4364: 100BASE-FX LAN Switch Module, 1-slot, 4-port 29H4368: Packet-Channel/ATM Switch Module, 2-slot 29H9840: LAN Access Switch Module, 2-slot, 16-port
Supported switch functions	Comprehensive VLAN support ATM Forum-compliant LANE Some models support ATM
Supported management functions	SNMP agents for each module in the Switching Modules Series Distributed RMON MIB and interface statistics support



100 BASE-TX and 100 BASE-FX Switching Modules

IBM 8271 and 8272 LAN Switch Modules at a glance

Part numbers	51H4595: 8271 LAN Switch Module, 2-slot 51H4593: 8271 LAN Switch Module, 3-slot 51H4591: 8272 LAN Switch Module, 2-slot 51H4589: 8272 LAN Switch Module, 3-slot 51H4931: 8271 ATM LAN Switch Module, 2-slot 51H4932: 8271 ATM LAN Switch Module, 3-slot 51H4933: 8272 ATM LAN Switch Module, 2-slot 51H4934: 8272 ATM LAN Switch Module, 3-slot
Supported management functions	Offer SNMP which provides an E1A 232 port for managing the configurations



2 Slot 8271 LAN Switch Module

IBM 8260 Nways 8281 ATM LAN Bridge Module at a glance

Part number	58G9858
Supported bridge functions	Bridges from LAN-to-LAN over an ATM network Bridges locally between LANs Bridges from LAN-to-ATM for ATM-attached workstations or LANE servers
Supported management functions	Offers SNMP, which provides an EIA 232, front-end port for managing the configurations
Other supported functions	• Detects other ATM technology or applications and establishes a connection on an as-needed basis (self-learning) • Provides filtering on Ethernet and Token-Ring networks
Slots required	2
Ports	4 RJ-45 connectors or 2 AUI connectors 1 on the ATM backplane for the 8260
Network segments supported	4 Token Ring 4 Ethernet



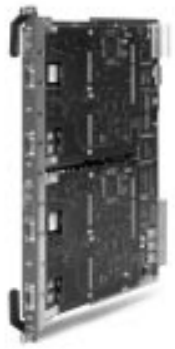
8281 ATM-LAN Bridge Module

IBM 8260 Nways ATM WAN Modules at a glance

Part numbers	51H4328: ATM WAN Module 51H4604: E3 I/O Card, 1-port (Switzerland) 51H4605: E3 I/O Card, 1-port (Sweden) 51H4606: E3 I/O Card, 1-port (U.K.) 51H4607: E3 I/O Card, 1-port (New Zealand) 51H4608: E3 I/O Card, 1-port (all others) 51H4338: DS3 I/O Card, 1-port 51H4557: STM1 I/O Card, 1-port 51H4558: OC3 I/O Card, 1-port
Flexible configuration	*Switch module, 2 ports* *Supports up to 2 daughter cards in any combination:* E3 I/O card, 1 port (34 Mbps) DS3 I/O card, 1 port (44.736 Mbps) STM1 (155 Mbps), 1 port, single-mode fiber OC3 (155 Mbps), 1 port, single-mode fiber and full SONET support
Slots required	1

IMB 8260 Nways ATM WAN2 Modules at a glance

Part numbers	10J2091: ATM WAN2 Module 10J2138: E1/T1/J1 I/O Card, 4-port (CEMark countries) 10J2146: E1/T1/J1 I/O Card, 4-port (Switzerland) 10J2159: E1/T1/J1 I/O Card, 4-port (UK) 10J2186: E1/T1/J1 I/O Card, 4-port (Italy) 10J2317: E1/T1/J1 I/O Card, 4-port (all others)
Flexible configuration	Switch module, 2 ports Supports up to 2 daughter cards, each providing 4 ports Traffic shaping
Slots required	1



8260 ATM WAN2 Module

IBM 8260 Nways Video Distribution Module at a glance

Part number	37H7725
Slots required	2
Ports	8 ports (output) 2 MPEG-2 (input)
Standards	MPEG-2 ATM UNI 3.1



8260 Video Distribution Module

Multiprotocol Switched Services Server Module at a glance

Part number	42H1350
Connections	ATM PCMCIA hard file PCMCIA Voice/Data/FAX Modem PCMCIA Data/FAX Modem EIA 232 service port
Slots required	2
8210 certifications	*Safety* EN 60950, UL 1950, CSA 950 *Electromagnetic-compliance:* • FCC Class A (USA) • VCCI Class 1 (Japan) • ICES-003 Class A (Canada) • European Community Mark of Conformity (CE Mark), EN55022 Class B (CISPR-22B)
Warranty	1 year



Multiprotocol Switched Services Server Module

For more information
To find out more about the IBM 8260 Nways ATM Campus Solutions and other ATM LAN Switch Modules and other high-performance IBM communications and networking products, contact your IBM representative or call IBM Direct at 1 800 IBM-CALL (1 800 426-2255). You can also access the IBM Networking Home Page at http://www.networking.ibm.com.

Copies of this and other related product specification sheets can be obtained from the IBM FAX Information Service by dialing 1 800 IBM-4-FAX (1 800 426-4329) in the U.S. or Canada or by dialing (415) 855-4329 outside the U.S. and Canada and requesting any of the following document numbers:

5627: *IBM 8260 LAN Switch Modules*

1588: *IBM 8260 Token-Ring Modules*

2661: *IBM 8260 Nways Multiprotocol Switching Hub*

2662: *IBM 8260 Ethernet Modules*

7263: *IBM 8250 Ethernet Modules*

7261: *IBM 8250 Token-Ring Workstation Networking Module with 3174 Features*

7262: *IBM 8250 Token-Ring Modules*

7264: *IBM 8250 FDDI Modules*

2120: *IBM 8260 Nways ATM Campus Solutions*



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IBM Corporation
Department TYCA
PO Box 12195
RTP NC 27709

Printed in the United States of America
3-97

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G221-4293-03