

*A reliable switching powerhouse for the backbone
or workgroup environment*



IBM 8274 Nways LAN RouteSwitch

- **Offers 3-, 5- and 9-slot models**
- **High-speed server access**
- **High-capacity Ethernet modules: 12 port 10/100-Mbps Auto-Sense module, 32-port 10BASE-T module, 16-port 10BASE-T module, 8-port 100BASE-FX module**
- **Intelligent management bus**
- **Flexible configurations**
- **Port capacity up to 256 Ethernet ports, 96 Fast Ethernet wire ports, 64 Fast Ethernet fiber ports, 48 Token-Ring ports, 16 OC3 ports, 64 CDDI ports, 16 FDDI ports, 16 ATM DS3 or E3 ports, 64 Frame Relay WAN ports**
- **Wide-body models for high-function, high-density switching**
- **Management Processor Module (MPM)**
- **Optional software programs add versatility**
- **Preloaded control program**
- **Optional Hardware Routing Engine (HRE) for heavy-duty routing requirements**
- **Optional, dual HREs**
- **Optional, dual MPMs and second power supply for redundancy and reliability**
- **Large, expandable buffers**



Model W53

Model W93

The IBM 8274 Nways® LAN RouteSwitch is a flexible, powerful, highly reliable switching platform. It combines an innovative hardware architecture with a sophisticated feature set, yet it's so inexpensive it can serve as a basic network building block. The 8274 is uniquely versatile, supporting any combination of Ethernet, Fast Ethernet, Token Ring, FDDI, CDDI and ATM at wire speeds with automatic any-to-any translation. It routes IP and IPX over twisted-pair, coaxial or optical fiber cable. It connects to network segments, file servers or individual workstations.

Positioning and Benefits

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Multiprotocol Switching Hubs

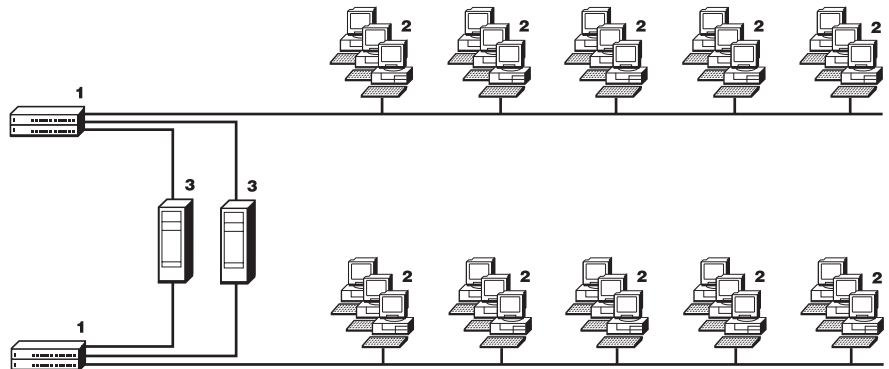
Any-to-Any

The IBM 8274 Nways LAN RouteSwitch is intended for customers who need extensive virtual LAN (VLAN) support and integrated routing with any-to-any connectivity that can include Ethernet, Fast Ethernet, FDDI, CDDI, Token Ring and ATM. The 8274 has a high port density coupled with the ability to do switching to the desktop or provide a backbone switch.

Problem: Deteriorating network response in an Ethernet LAN

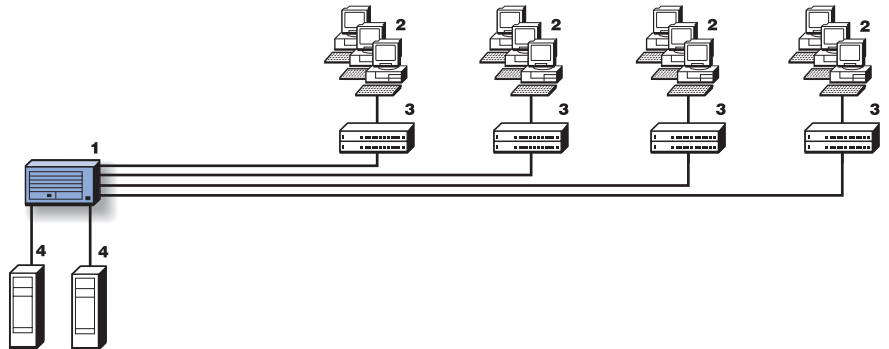
Environment: This small Ethernet LAN is congested due to heavy database and business application demands. All hubs are stacked in a single location.

- 1. Hubs
- 2. 20 PC workstations
- 3. Servers



Solution: Microsegmented by a dedicated, switched connection to each hub. An 8274 equipped with an MPM and a 12-port 10/100BASE-T switching module was used to microsegment the network by providing a dedicated, switched connection to each hub and directly attached server.

- 1. IBM 8274-5B3 with MPM and 12-port 10/100BASE-T switching module
- 2. 50 PC workstations
- 3. 8277
- 4. Servers



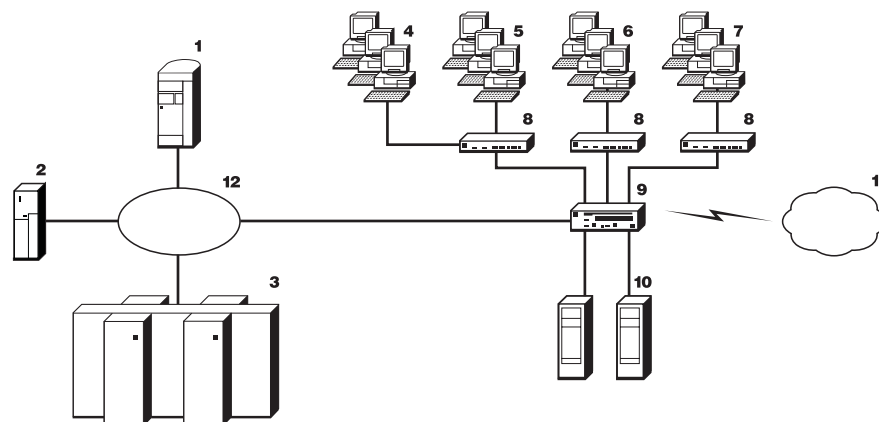
Benefits

- Utilizes existing infrastructure
- Improves server response dramatically
- Preserves investment in hubs and adapters
- Eliminates changes to software
- Speeds migration to a switched network (10 Mbps or 100 Mbps)
- Prepares the network for the move to an ATM backbone when required

Problem: Deteriorating performance in an enterprise network consisting of router and hubs in a shared-media LAN environment

Environment: A mixed IP host environment with Token Ring and Ethernet using a wide range of protocols in a routed network. Security is provided by filtering the IP subnetworks.

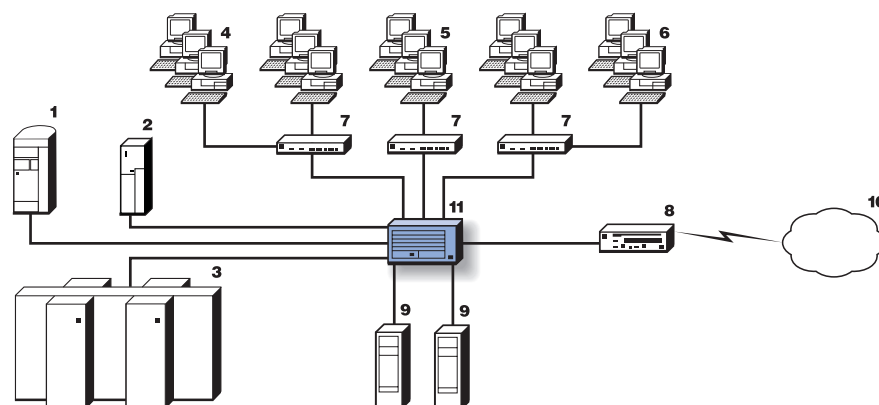
Router Network



1. AS/400®
2. RS/6000®
3. S/390®
4. Ethernet workstations (LAN 1)
5. LAN 2
6. LAN 3
7. LAN 4
8. Hub
9. Router
10. Server
11. WAN
12. Token Ring

Solution: Replace the router with an 8274 LAN RouteSwitch supporting ATM 155-Mbps backbones to Ethernet/ATM switches for dedicated bandwidth. Servers are connected to dedicated lines for better performance. Security is maintained by filtering the traffic among the VLANs, which are connected to each switch. Where heavy-duty routing is required just add the Hardware Routing Engine (HRE) to the 8274 and get over 220 000 packets per second (pps) of IP/IPX routing hassle-free.

IP Switching and VLANs



1. AS/400 (switched Token Ring)
2. RS/6000 (switched Token Ring)
3. S/390 (switched Token Ring)
4. VLAN 1
5. VLAN 2
6. VLAN 3
7. IBM 8277 Ethernet RouteSwitch (ATM 155 Mbps to the 8274)
8. Router (switched Token Ring)
9. Server (switched 100BASE-T)
10. WAN
11. IBM 8274

Benefits

- Improves network response
- Maintains network security using IP routing among the VLANs
- Positions the network for migration to ATM end-to-end
- Works seamlessly with existing routers with support for RIP or OSPF
- Makes forklift upgrade of existing routers unnecessary because of the 8274's high-throughput Layer 3 switching

Product Overview

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IBM 8274 Nways LAN RouteSwitch

The 8274 is a chassis-based switch available in three sizes: 3-slot, 5-slot and 9-slot. In all models, one slot is occupied by the Management Processor Module (MPM), which must be ordered as a feature. Model W33 contains three slots (one for the MPM and up to two, wide-switching module slots); Model W53 contains five slots (one for the MPM and up to four, wide-switching module slots); and Model W93 contains nine slots (one for the MPM and up to eight, wide-switching module slots). The wide-switching module slots offer the potential for greater port density and lower port cost.

Features

The 8274 features an intelligent hardware design that supports high data rates and a sophisticated feature set, yet is priced to serve as a basic network building block. The 8274 offers a unique, dual quality of providing powerful and complete LAN switching with ATM speed for the desktop and the backbone. It integrates the most complete, flexible VLAN architecture on the market today.

To build the most comprehensive, scalable networking solution, begin with an IBM 8260 Nways Multiprotocol Switching Hub or an IBM 8265 Nways ATM Switch. Install an IBM Multiprotocol Switched Services (MSS) backbone to work with the LAN Emulation (LANE) clients in your 8274s. Your network can now route local traffic across ATM for maximum speed and reliability.

All 8274 models provide policy-based VLANs, IP and IPX routing, FDDI trunking, ATM private virtual circuits, ATM LANE, Multiprotocol Encapsulation over ATM, Classical IP over ATM and graphical network management on a broad set of standard management platforms.

All models of the 8274 offer the following features:

- Multiple scalable processor architecture (SPARC) reduced instruction set computer (RISC) processor architecture. Each switching module as well as the

MPM has one or two fast SPARC RISC processors. Processor power is added every time a module is added. Switching tasks are distributed over all processors.

- Hot-swappable modules: Modules can be removed and inserted into the 8274 while the system is operational.
- Many types of modules to provide various types of connectivity:
 - Ethernet
 - Fast Ethernet
 - FDDI and CDDI
 - ATM
 - Token Ring
- Redundant power supplies. The 8274 supports an ac power supply in Models W53 and W93. A single power supply supports a fully configured chassis. A second, redundant power supply can be added and will switch over from the main to redundant power supply without any loss of data. All power supplies are hot-swappable and can be replaced while the 8274 is operational. Each power supply has its own power cord; therefore the 8274 can be fed from different power sources.
- Redundant cooling fans. There are two fan units in the 8274. If one should fail the other is capable of keeping the switch within operating temperatures.
- Temperature alarm. The 8274 can operate in a broad temperature range, but will generate an alert to notify the manager if the temperature in the wiring closet gets too high.
- Flash memory. All operating software and configuration information are stored in nonvolatile flash memory. New software revisions can be downloaded to the 8274. There is no mechanical disk drive to provide a potential source of failure.
- Small profile. The 8274 is smaller than many units of similar design. The 8274 can be rack-mounted in a standard 19-inch rack or placed on a tabletop.
- Standards-based 802.10 trunking.
- Internal IP and IPX routing.
- Comprehensive LAN-to-ATM internetworking (ATM, permanent virtual circuits [PVCs], switched virtual circuits [SVCs], LANE, Multiprotocol Encapsulation over ATM, Classical IP over ATM).
 - Transparent switching at wire speed with any-to-any translation.
 - Policy-based VLANs defined by:
 - Port
 - MAC address
 - Protocol type
 - Network layer address
 - Multicast address
 - Custom settings, user-defined.
- Any-to-any switching.
- RMON support (five Ethernet groups as defined in RFC 1757).
- SNMP management support using in-band and out-of-band access.
- Port mirroring.
- Graphical network management support on a broad range of management platforms.
- High-speed, content-addressable memory (CAM) that stores up to 2048 MAC addresses per switching module.
- LEDs that provide network and port-level status at a glance.
- Optimized Drive Switching mode that is automatically enabled by the 8274 when it senses that only one device is attached to a port. This mode ensures that the device receives only traffic it actually requires.
- Hardware Routing Engine: To accommodate today's highly routed networks, an HRE can be added to the 8274, allowing routing of over 220 000 pps of IP and IPX traffic.
- Lane Services.
- Route Channel.

Ethernet modules

Improved Ethernet support is provided by four Ethernet modules. The 12-port 10/100BASE-TX Fast Ethernet Switching Module has 12 copper ports that operate at either 10 or 100 Mbps in either half-duplex (HDX) or full-duplex (FDX) mode. Configuration for speed and mode is automatic and is independent for each port.

The 16-port 10BASE-T Ethernet switching module provides switched Ethernet at a low cost per port, making switched Ethernet to every desktop practical and affordable. This new 16-port Ethernet Switching Module provides added granularity when configuring IBM 8274s for use in an Ethernet network.

The 32-port 10BASE-T module provides an extremely cost-effective Ethernet solution where you need to switch between existing hubs or provide switching directly to the desktop. Each port can operate in either HDX or FDX mode.

The 8-port 100BASE-FX Fast Ethernet Switching Module gives you eight totally independent, multimode fiber ports operating in either HDX or FDX mode.

All of these new modules support adaptive cut-through switching, routing, policy-based VLANs and translation switching.

Models

Models W33, W53 and W93 include all of the features and functions described above. They are shipped with a 960-Mbps, frame-based backbone. Models W53 and W93 have an additional 13.2-Gbps, cell-based backbone. Model W33 offers the same function as the existing wide-body models at a lower cost.

Model W33 has a 150-watt power supply; Model W53 has a 250-watt power supply; and Model W93 has a 500-watt power supply. All models have power cords and rack-mounting hardware.

All models contain architecture for taking full advantage of frame-to-frame switching, which means a high-speed pipeline bus that uses hardware-controlled switching to keep throughput high and latency low.

And all models offer a management bus you can use to configure, diagnose and manage all system elements.

Network Management software

Customers have several management options, including out-of-band management from an ASCII terminal, SNMP management and remote logon using Telnet. For more information about management software for all the products, see the Network Management section of this product guide.

Your company's network of multivendor equipment can operate more efficiently with IBM Nways RouteSwitch Network Management Suite. The IBM Nways RouteSwitch Network Management Suite, an SNMP-based management application, brings integrated, heterogeneous SNMP management to your desktop. With it, you can manage fault, performance, configuration, accounting, and security for SNMP-enabled switches.

System downtime is minimized by using rapid problem source identification and resolution through easy-to-use graphical network and device displays. You can prevent problems like network congestion by setting thresholds and collecting data that help you make adjustments to keep the network humming.

Enhanced in Version 3.2:

- IBM Nways RouteSwitch Network Manager (NRNM) for UNIX® configures, monitors, and diagnoses your RouteSwitch network. Real-time graphical views, statistical information for accounting and performance monitoring, security setting, and all configuration options can be obtained through NRNM.

- IBM Nways RouteTracker Manager (NRTM) for UNIX is a powerful graphical application that lets you create and manage policy-based virtual LANs.
- IBM Nways RouteSwitch Network Manager for UNIX and IBM Nways RouteTracker Manager for UNIX support AIX®, HP-UX, and Sun Solaris.

New in Version 3.2:

- IBM Nways RouteSwitch Workgroup Manager (NRWM) includes previously known applications: Nways RouteSwitch Network Manager, Nways RouteTracker Manager, Nways RouteMonitor and Nways RouteDirector. This integrated suite of network management applications can be used to manage IBM 8277 Ethernet RouteSwitch, and IBM 8273 Ethernet RouteSwitch lines.
- IBM Nways RouteVision Campus Manager (NRCM) includes previously known applications: Nways RouteSwitch Network Manager, Nways RouteTracker Manager, Nways RouteMonitor and Nways RouteDirector. This integrated suite of network management applications can be used to manage the entire RouteSwitch products including IBM 8277 Ethernet RouteSwitch, IBM 8273 Ethernet RouteSwitch, IBM 8274 LAN RouteSwitch, and RouteCell platforms.
- The Nways RouteMonitor and Nways RouteDirector no longer exist as separate products.

User's guide

When you order the 8274, it includes a copy of the *IBM Nways RouteSwitch User's Guide*, GA27-4166. This includes the installation instructions.

Features	Benefits
Powerful, flexible platform	A broad range of model types and switching modules make the 8274 uniquely versatile. It routes IP and IPX over twisted-pair, coaxial or optical fiber cable. It connects to network segments, file servers or individual workstations. It supports any combination of Ethernet, Token Ring, FDDI, CDDI, Fast Ethernet and ATM at wire speed with automatic any-to-any translation.
High capacity	The 9-slot 8274 can be configured with one MPM and up to eight switching modules. This can provide as many as 256 Ethernet ports. Or you can have 32 Ethernet ports, 6 Token-Ring ports, twelve 10/100BASE-T and 8 CDDI ports for server connectivity and 4 FDDI and 2 ATM backbone connections.
High reliability	Redundancy keeps you up and running. Dual, redundant, hot-swappable power supplies, redundant management processors, redundant cooling fans and a temperature alarm make the 8274 a trustworthy powerhouse. Software and configuration are stored in nonvolatile flash memory.
Policy-based VLANs	With policy-based VLANs you can set up VLANs by port, by protocol or by MAC address. This makes setup simpler, throughput higher and latency lower than with complicated route configuration.
Management tools	Policy-based VLANs, VLAN intelligence, SNMP management, RMON and the suite of RouteSwitch and RouteTracker Network Managers all make managing your network an enjoyable experience.

8274 Nways LAN RouteSwitch Specifications

Chassis

Each chassis includes 1 management processor module (MPM), 1 voltage auto-sensing power supply (110 to 240V ac) and an ac cord.

Model	Total slots	Maximum available	Power supply	Loaded weight	Width/Depth/Height	PN
W33	3	2	150 W	8 kg (18 lb)	437 mm (17 in.) 318 mm (13 in.) 132 mm (5 in.)	86H3049
W53	5	4	250 W	24 kg (53 lb)	437 mm (17 in.) 305 mm (12 in.) 318 mm (9 in.)	86H0012
W93	9	8	500 W	43 kg (95 lb)	437 mm (17 in.) 318 mm (13 in.) 610 mm (24 in.)	86H0323

All models use flash memory for efficient code storage and updates and ship with a 960-Mbps frame-based backbone. Models W53 and W93 have an additional 13.2-Gbps cell-based backplane.

MPM



Each MPM has two serial DB-9 ports—one is DTE, the other DCE. Console connections up to 38.4 Kbps are provided.

MPM	FC	PN
MPM-1GW preload with V3.2 (must be used with Models W33, W53 and W93)	3059	86H3059
MPM-1GW-32MB preload with V3.2 (must be used with Models W33, W53 and W93)	3050	86H3050
Memory upgrades	FC	PN
1-KB CAM Upgrade for switching modules	7062	85H7062
1-KB CAM Upgrade for Ethernet switching modules	2646	08L2646
64-MB MPM Upgrade	2993	86H2993
32-MB MPM Upgrade	3191	08L3191

Hardware Routing Engine (HRE) options

This option can be added to the 8274 MPMs to accommodate routing of up to 220 000 pps of IP and IPX traffic.

HREs	FC	PN
HRE Plus Kit	3319	08L3319

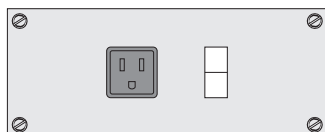
8274 Software Programs

The IBM Nways RouteSwitch Software Program (NRSP) V3.2 is the controlling software program for the 8274 RouteSwitches. For the 8274, the NRSP control software is priced and packaged with the 8274 hardware Management Processor Module (MPM). Customers should not place a separate software order for 8274 NRSP. This base software is not a separately orderable item. The IBM 8274 Nways RouteSwitch Software Program is preloaded onto this module. All 8274 RouteSwitch software programs require one license on a per-MPM basis.

8274 Software Programs	FC	PN
Nways RouteSwitch Software Program V3.2 (no charge with hardware MPM)	1473	4300028
Nways ATM RouteCell Software Program V3.2	1474	4300029
Nways Advanced Routing Program V3.2	1475	4300030
Nways LANE Software Module V3.2	5229	4300023
Nways NHRP Software Program V3.2	2503	4300039
Nways RouteSwitch Software Program V3.2 Upgrade (for current licensees of V2.0, V2.1 and V3.0)	0693	4300022
Nways ATM RouteCell Software Program V3.2 Upgrade (for current licensees of V2.0, V2.1 and V3.0)	0694	4300007
Nways Advanced Routing Program V3.2 Upgrade (for current licensees of V2.0, V2.1 and V3.0)	0695	4300008

Network Management	FC	PN
IBM Nways RouteSwitch Network Manager V3.2 for UNIX	2444	4300150
IBM Nways RouteTracker Manager V3.2 for UNIX	2458	4300158
IBM Nways RouteVision Workgroup Manager for NT/95	2484	4300193
IBM Nways RouteVision Campus Manager for NT/95	2485	4300194

Power supplies



Power supplies can be added to offer fully redundant capability and the ability to use different ac power sources.

Redundant power supply	FC	PN
250 W—used with W53	7141	85H7141
500 W—used with W93	7139	85H7139



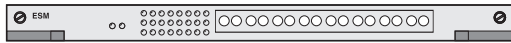

Blank panels	FC	PN
38-mm- (1-1/2-in.) wide filler blank	059	86H0590
13-mm- (1/2-in.) narrow-to-wide filler blank	0592	86H0592
25-mm- (1-in.) wide blank	7135	85H7135

Accessories

Accessory	Description	FC	PN
8274-5-CAB 5-Slot-W	Cable organizer for Model W53	2989	86H2989
8274-9-CAB 9-Slot-W	Cable organizer for Model W93	2991	86H2991

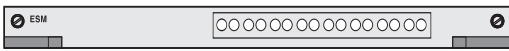

Ethernet Switching Modules

These modules support IEEE 802.3, 802.3i, IAB RFCs 826, 894, 1398 and offer FDX switched 10BASE-T ports. All have module and port LEDs that display physical and operational status and port LEDs that display status, activity and collisions at the port.

Module	Description	MAC addresses	FC	PN	
	ESM-C-32W	32-port RJ-45 UTP/STP module (for W53 and W93 only)	1-KB CAM	3171	86H3171
	ESM-C-16W	16-port RJ-45 UTP/STP module (for W33, W53 and W93 only)	1-KB CAM	3169	86H3169
	ESM-F-8	8-port ST module	1-KB CAM	7106	85H7106
	ESM-U-6	Universal module (mixed media) six ports total—use daughter card	1-KB CAM	7105	85H7105


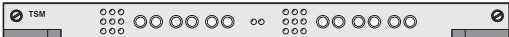
Fast Ethernet switching modules

These modules support IEEE 802.3 (100BASE-TX) and IEEE 100BASE-FX standards, respectively. All display physical and operational status.

Module	Description	MAC addresses	FC	PN
				
ESM-100FM-8-4C	8-port 100BASE-FX FDX SC MMF* module	4-KB CAM	3031	86H3031
				
ESM-100C-12-2C	12-port 10/100 BASE-TX FDX/HDX RJ-45 UTP category 5 module	2-KB CAM	3029	86H3029

Token-Ring switching modules





All support IEEE 802.5J (4 and 16 Mbps) and IAB FRC 1231 standards. All have module and port LEDs that display physical and operational status, link, activity and beacon detection.

Module	Description	MAC addresses	FC	PN
				
TSM-CD-6-4C		4-KB CAM	9590	02L0590
				
TSM-F-6-4C		4-KB CAM	9588	02L0588

*Multimode fiber

ATM switching modules


All support ATM Forum User to Network Interface 3.0 and 3.1; ISO Q.2931; IAB RFC 1483; IAB RCF 1577; ATM LAN Emulation Client V1.0; traffic-shaping for PCR; and additional ATM standards as they progress in the ATM Forum, including Available Bit Rate (ABR) as it reaches proposed standard status. ATM DS3 modules also support ANSI T1.624-1993. All have LEDs that display physical and operational status, link status/disabled, activity, yellow alarm, far-end status alarm and red alarm. ATM OC3 modules detect cell error and ATM DS3 modules detect cell loss and Alarm Indication Signal (AIS). All support LAN emulation clients (LECs); the number of LECs supported is shown on this chart.

Module	Description	SRAM	LECs	MAC addresses	FC	PN	
ASM-DS3-1	1-port BNC coax RG-59 module for DS	500-KB SRAM	32	1-KB CAM	7051	85H7051	
ASM-E3-1	1-port BNC coax RG-59 module for E3	500-KB SRAM	32	1-KB CAM	7053	85H7053	
	ASM2-155FM-1-4C	1-port SC MMF module	2-MB SRAM	32	4-KB CAM	3009	86H3009
	ASM2-155FM-2-4C	2-port SC MMF module	2-MB SRAM	32	4-KB CAM	3013	86H3013
	ASM2-155FS-1-4C	1-port SC SMF* module	2-MB SRAM	32	4-KB CAM	3017	86H3017
	ASM2-155FS-2-4C	2-port SC SMF module	2-MB SRAM	32	4-KB CAM	3021	86H3021

*Single-mode fiber

FDDI/CDDI switching modules

All FDDI and CDDI modules support ANSI X3T9.5 and RFCs 1390 and 1512. In addition, FDDI modules support X3.166 and CDDI modules support TP-PMD standards. All have module and port LEDs that display physical and operational status, link status/disabled, activity and ring operational status.

Module	Description	CAM	FC	PN
				
FSM-M-2-4C	2-port FDDI DAS MMF module	4-KB CAM	9582	02L0582
FSM-SH-1W	1-port FDDI DAS SMF module for Models W33, W53 and W93 only; Category 2 Laser connection	1-KB CAM	0583	86H0583

WAN Frame Relay

Supports RFC 1490, RFC 1293; FRF1, FRF3, FRF9; ANSI T1.617a-1994 Annex F standards. Offers DTE cable types: RS-232, V.35, X.21, RS-530, RS-449.

Module	Description	CAM	FC	PN
WSM-S-2	2-port 26-pin shielded serial	1-KB CAM	3023	86H3023

RouteCell switching modules

RouteCell modules are optimized for ATM cell switching. These modules provide increased ATM capability and add even more flexibility to the 8274's rich functionality.

Module	Description	FC	PN
CSM-A25-12W	12-port 25-Mbps ATM, RJ45	3063	86H3063
CSM-A25-24W	24-port 25-Mbps ATM, RJ45	3065	86H3065
CSM-155C-8W	8-port 155Mbps OC3, UTP5	3061	86H3061
CSM-155-8	8-port 155-Mbps OC3 SC MMF module	2995	86H2995
CSM-155-8S	8-port 155-Mbps OC3 SC SMF module	2997	86H2997
CSM-155C-8W	8-port 155-Mbps OC3 RJ-45 UTP module	3061	86H3061
CSM-622-2E	2-port 622-Mbps OC12 SC MMF module	2999	86H2999
CSM-622-2SE	2-port 622-Mbps OC12 SC SMF module	3001	86H3001
CSM-155-6M2SW	8-port (6-port MMF with 2-port SMF) 155-Mbps SC module	3003	86H3003
CSM-A25-12W	12-port 25-Mbps RJ-45 UTP module	3063	86H3063
CSM-A25-24W	24-port 25-Mbps RJ-45 UTP module	3065	86H3065
FCSM	Frame-to-cell module—links the frame bus and cell bus	0607	86H0607

Other features

Accessory	Description	FC	PN
1K-CAM-UPGR-M	1K CAM upgrade for switching modules	2646	082246
8274-5-Wall	Wall-mount bracket for Model 513	7137	85H7137
8274-9-Wall	Wall-mount bracket for Model 913	7136	85H7136

Module	Description	MAC addresses	FC	PN
ESM-C-12C	12-port RJ-45 UTP/STP module	2-KB CAM	6863	85H6863
ESM-F-8C	8-port ST module	2-KB CAM	6866	85H6866
ESM-T12C	12-port Telco module	2-KB CAM	6864	85H6864
ESM-U-6C	Universal module (mixed media) 6 ports total—use daughter card	2-KB CAM	6865	85H6865
ESM-100C-4C	4-port 100BASE-TX RJ-45 UTP category 5 (IEA/TIA 568) module	2-KB CAM	6867	85H6867
ESM-100C-8C	8-port 100BASE-TX RJ-45 UTP category 5 (IEA/TIA 568) module	2-KB CAM	6868	85H6868
ESM-100C-FD-1	1-port 100BASE-TX FDX RJ-45 UTP/STP module	1-KB CAM	7096	85H7096
ESM-100C-FD-1C	1-port 100BASE-TX FDX RJ-45 UTP/STP module	2-KB CAM	6869	85H6869
ESM-100C-FD-2C	2-port 100BASE-TX FDX RJ-45 UTP/STP module	2-KB CAM	6870	85H6870
ESM-100FM-FD-1	1-port 100BASE-FX FDX SC MMF module	1-KB CAM	7094	85H7094
ESM-100FM-FD-1C	1-port 100BASE-FX FDX SC MMF module	2-KB CAM	6871	85H6871
ESM-100FM-FD-2C	2-port 100BASE-FX FDX SC MMF module	2-KB CAM	6872	85H6872
ESM-100FS-FD-1C	1-port 100BASE-FX FDX SC SMF module	2-KB CAM	6873	85H6873
ESM-100C-5	1 FDX- and 4 HDX-port UTP/STP module	1-KB CAM	8722	85H8722
ESM-100C-5C	1 FDX- and 4 HDX-port UTP/STP module	2-KB CAM	8723	85H8723
ESM-100CFM-5	1 FDX- 100BASE-FX SC MMF port and 4 HDX- 100BASE-TXRJ-45 UTP or STP port module	1-KB CAM	8724	85H8724
ESM-100CFM-5C	1 FDX- 100BASE-FX SC MMF port and 4 HDX- 100BASE-TXRJ-45 UTP or STP port module	2-KB CAM	8725	85H8725
ESM-100CFS-5	1 FDX- 100BASE-FX SC SMF port and 4 HDX- 100BASE-TX RJ-45 UTP or STP port module	1-KB CAM	8726	85H8726
ESM-100CFS-5C	1 FDX- 100BASE-FX SC SMF port and 4 HDX- 100BASE-TXRJ-45 UTP or STP port module	2-KB CAM	8727	85H8727

Module	Description	SRAM	MAC addresses	FC	PN
TSM-CD-6C	6-port RJ-45 UTP/STP module	2-KB CAM	6876	85H6876	
TSM-F-6C	6-port fiber (ST) module	2-KB CAM	6875	85H6875	
ASM-155FM-1	1-port SC MMF module	500-KB SRAM	1-KB CAM	7087	85H7087
ASM-155FM-1C	1-port SC MMF module	500-KB SRAM	2-KB CAM	6877	85H6877
ASM-155FM-1EC	1-port SC MMF module	2-MB SRAM	2-KB CAM	6878	85H6878
ASM-155FM-2	2-port SC MMF module	500-KB SRAM	1-KB CAM	7027	85H7027
ASM-155FM-2C	2-port SC MMF module	500-KB SRAM	2-KB CAM	6879	85H6879
ASM-155FM-2EC	2-port SC MMF module	2-MB SRAM	2-KB CAM	6880	85H6880
ASM-155FS-1	1-port SC SMF module	500-KB SRAM	1-KB CAM	7083	85H7083
ASM-155FS-1C	1-port SC SMF module	500-KB SRAM	2-KB CAM	6881	85H6881
ASM-155FS-1EC	1-port SC SMF module	2-MB SRAM	2-KB CAM	6882	85H6882
ASM-155FS-2	2-port SC SMF module	500-KB SRAM	1-KB CAM	7081	85H7081
ASM-155FS-2C	2-port SC SMF module	500-KB SRAM	2-KB CAM	6883	85H6883
ASM-155FS-2EC	2-port SC SMF module	2-MB SRAM	2-KB CAM	6884	85H6884
ASM-155C-1EC	2-port RJ-45 UTP module	2-MB SRAM	2-KB CAM	6886	85H6886
ASM-155C-2EC	2-port RJ-45 UTP module	2-MB SRAM	2-KB CAM	6888	85H6888
ASM-DS3-1C	1-port RG-59 BNC coax module	500-KB SRAM	2-KB CAM	6889	85H6889
ASM-DS3-2C	2-port RG-59 BNC coax module	500-KB SRAM	2-KB CAM	6890	85H6890
ASM-E3-1C	1-port RG-59 BNC coax module	500-KB SRAM	2-KB CAM	6891	85H6891
ASM-E3-2C	2-port RG-59 BNC coax module	500-KB SRAM	2-KB CAM	6892	85H6892
FSM-M-1C	1-port DAS MMF module		2-KB CAM	6893	85H6893
FSM-M-2C	2-port DAS MMF module		2-KB CAM	6894	85H6894
FSM-C-4C	4-port CDDI RJ-45 UTP module		2-KB CAM	7075	85H7075
FSM-C-8C	8-port CDDI RJ-45 UTP module		2-KB CAM	7026	85H7026
FSM-M-CC	1-port FDDI DAS, 4-port SMF or UTP module		2-KB CAM	6895	85H6895
FSM-S-1C	1-port FDDI DAS SMF module		2-KB CAM	6896	85H6896
FSM-S-2C	2-port FDDI DAS SMF module		2-KB CAM	6897	85H6897
FSM-SH-1WC	1-port FDDI DAS SMF module for Models W53 and W93 only		2-KB CAM	0582	86H0582
FSM-SH-2WC	2-port FDDI DAS SMF module for Models W53 and W93 only		2-KB CAM	0584	86H0584

Key Customer Benefits

- Support for any-to-any connectivity
- Integrated, any-to-any translation—no need for an expensive external router
- Integrated IP and IPX routing—no need for an expensive external router
- Best policy-based VLAN implementation in the industry—provides dramatic network simplification
- Reduction in the cost of network administration
- RMON support
- Hybrid switch—wire-speed switching with Layer 3 capabilities where the customer needs them

Supplementary Information

The following sales tools are available for the 8274:

- Specification sheet:
IBM 8274 Nways LAN RouteSwitch, G224-4525
- Information on the 8274 is available at:
www.networking.ibm.com/netprod.html
www.networking.ibm.com/274/274prod.html
- The IBM Redbook is *IBM Nways RouteSwitch Implementation Guide*, SG24-4881-00. The Redbooks are available at:
www.redbooks.ibm.com
- A CD-ROM that contains the product documentation is provided with the 8274.