Expanding your Ethernet switching options

IBM 8271 Nways Ethernet Universal Feature Cards

Highlights

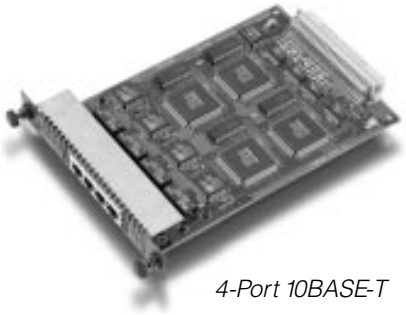
- ***Long-term usefulness and flexibility provided by Universal Feature Card (UFC) slots and optional, field-installable UFCs***
- ***Application and flexibility of LAN switches increased by new FDDI UFC providing a bridge between FDDI and Ethernet LANs***
- ***Additional 10-Mbps and 100-Mbps Ethernet ports***
- ***Connections for high-speed ATM uplinks, other shared-media and dedicated LAN segments***

FDDI 100-Mbps UFC

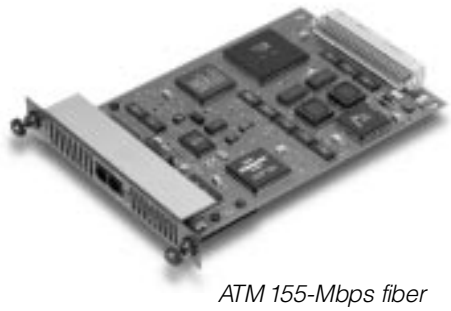
The new FDDI UFCs are available for three connection types:

- SAS UTP category 5 (UTP-5)
- SAS multimode fiber
- DAS multimode fiber

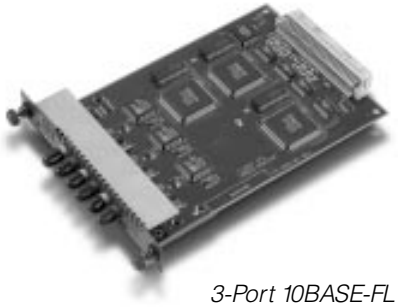
These UFCs provide additional, 100-Mbps uplink alternatives, allow interconnection of IBM 8271 Nways™ LAN Switches through dual-attachment concentrators (DACs) or stations (DAS) to an FDDI backbone and provide bridge access from the Ethernet ports to high-speed stations on the FDDI backbone. They are compatible with industry and international FDDI standards (ISO 9314/ ANSI X3T9.5) and support FDDI station management (SMT 7.3). They perform IP fragmentation (RFC 1188) and have an SNMP agent that supports MIB II (RFC 1213) and the FDDI MIB (RFC 1512). Another application is high-speed connectivity between LAN switches and servers. For redundancy the DAS UFC supports dual-homing.



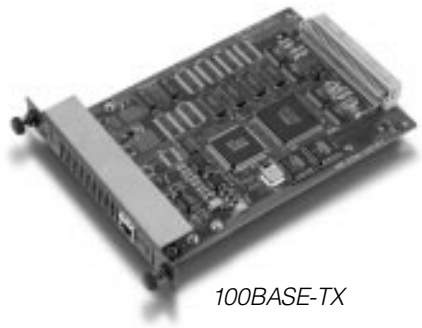
4-Port 10BASE-T



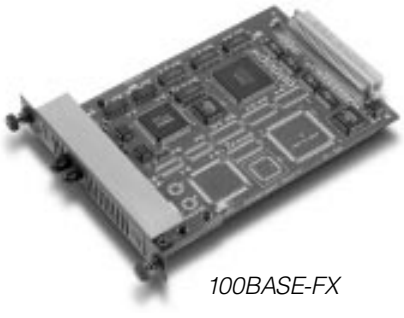
ATM 155-Mbps fiber



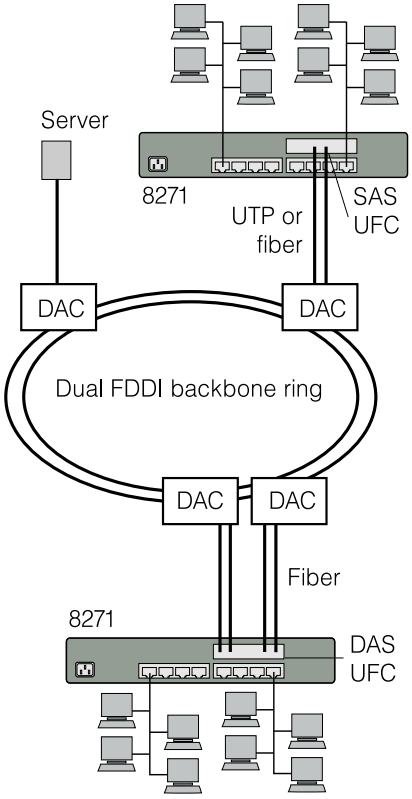
3-Port 10BASE-FL

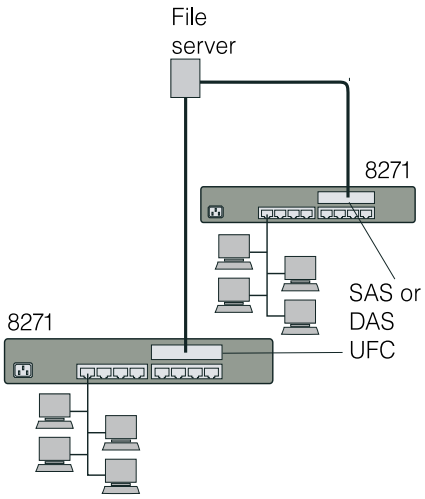


100BASE-TX



100BASE-FX



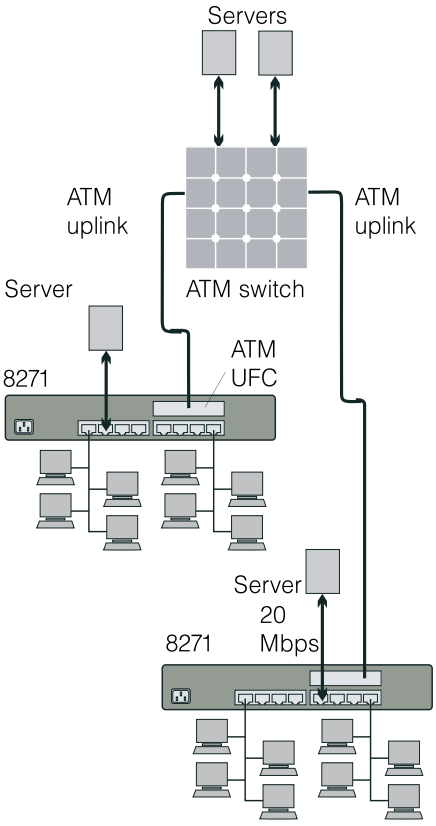


ATM 155-Mbps Multimode Fiber UFC

As new applications require more and more bandwidth in the backbone, the one-port, 155-Mbps ATM UFC, with its fully ATM Forum-compliant SONET interface, can switch data to an industry-standard ATM backbone switch such as the IBM 8260 Nways Multiprotocol Switching Hub, over multimode optical fiber cables to get to another switch or file server. The ATM UFC will support ATM Forum-compliant LAN Emulation (LANE) that will let you run all of your applications without any change to your software.

The ATM 155-Mbps Multimode Fiber UFC, supported in the IBM 8271 LAN Swtich and the 8271 LAN Switch Module for the 8260, switches Ethernet and Fast Ethernet frames between LAN segments connected to the LAN switch and an ATM network. The UFC provides an industry-standard LAN Emulation Client (LEC) that is fully compliant with ATM Forum specifications. The UFC also allows LAN traffic to be switched between LAN workstations or segments attached to a LAN switch and other devices with compatible ATM LANE applications.

The ATM UFC provides one ATM interface that complies with UNI 3.0 and 3.1 ATM Forum specifications. It's designed with an SC connector for attachment over multimode fiber media. The two pairs of LEDs on the faceplate of the UFC indicate the operational status of the UFC and of the ATM port.

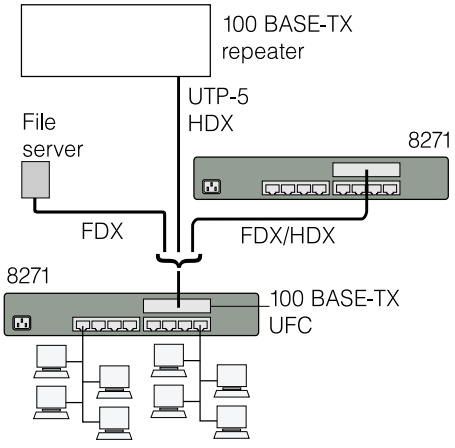


100BASE-TX UFC and 100BASE-FX UFC

These UFCs provide additional, 100-Mbps Ethernet ports for the 8271 that can be configured similarly to the fixed 10BASE-T, RJ-45 ports. Connect these UFC ports to a shared, 100-Mbps Ethernet segment via a compatible 100-Mbps repeater for a half-duplex connection, or directly to a dedicated, compatible 100-Mbps Ethernet adapter, such as the IBM 100/10 PCI Ethernet Adapter, for full-duplex communication.

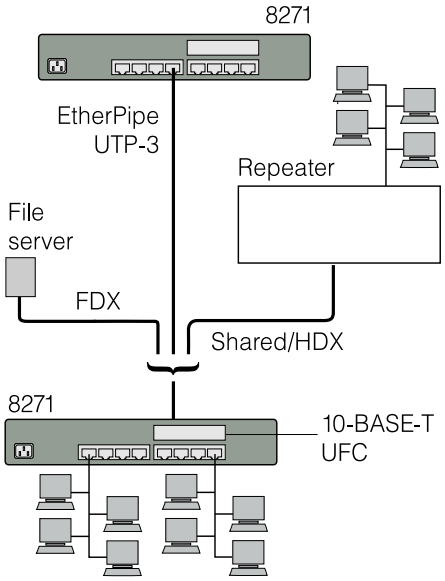
Fully compliant with IEEE 802.3u specifications, the 100BASE-TX UFC supports connections via unshielded twisted-pair, UTP-5 cabling. The 100BASE-FX UFC supports connections via multimode fiber media. In addition to the ports, there are four LEDs on the faceplate of each UFC that indicate the operational status of the UFC port.

You can connect each of these UFC ports to another 8271 or high-speed server using a dedicated, full-duplex 100-Mbps connection. You can also include UFC ports in any virtual switch, which you can then configure with address filters. You cannot mix UFC ports with fixed 10BASE-T ports to form a multilink EtherPipe connection to another 8271. But you can include the 100BASE ports in any virtual switch that you can then configure with address filters. You cannot configure the EtherProbe port on the 8271 Model 108 to monitor the 100BASE-TX or the 100BASE-FX UFC port.



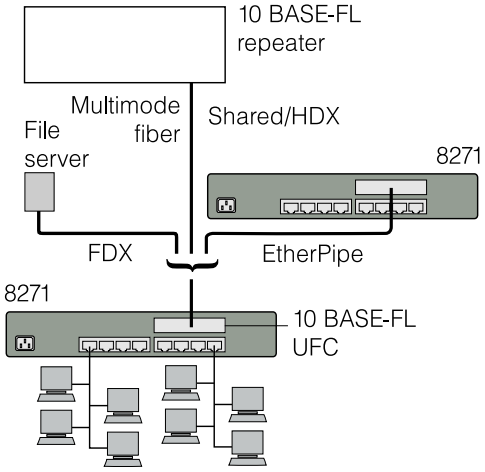
4-Port 10BASE-T UFC and 3-Port 10BASE-FL UFC

These UFCs provide additional 10-Mbps Ethernet ports that you can configure identically to the fixed Ethernet ports. Each or all of these UFC ports can be configured (in combination with any of the fixed ports) to be used in multilink EtherPipe connections and configured to be included in virtual switches. These UFC ports support address filters, BootP, TFTP, Telnet or SNMP sessions and can be monitored by the EtherProbe port.



The 4-Port 10BASE-T UFC provides four 10BASE-T MDI-X ports with RJ-45 connectors. Any of these four UFC ports can be configured similarly to any of the fixed 10BASE-T ports to provide either shared (half-duplex), 10-Mbps Ethernet connections or dedicated (full-duplex), 20-Mbps connections. In addition to the RJ-45 connectors for the 10BASE-T ports, there are 13 LEDs (1 set of 3 for each port plus 1 for the UFC overall) on the faceplate of this UFC that indicate the operational status of the UFC and the ports.

The 3-Port 10BASE-FL UFC provides three 10BASE-FL multimode fiber connections via ST connectors. Any of these three UFC ports can be configured similarly to any of the fixed 10BASE-T ports to provide either shared (half-duplex), 10-Mbps Ethernet connections or dedicated (full-duplex), 20-Mbps connections at distances up to 2 km (6600 ft). Shared connections are established by connecting a port on the UFC to a port on a compatible Ethernet repeater or hub such as the IBM 8224 Ethernet Stackable Hub or the 8260 Nways Multiprotocol Switching Hub. Dedicated connections are established by connecting these ports directly to a compatible Ethernet adapter. In addition to the ST connectors for the 10BASE-FL ports, there are 10 LEDs (1 set of 3 for each port plus 1 for the UFC overall) on the faceplate of this UFC that indicate the operational status of the UFC and the ports.



8271 UFCs at a glance	
FDDI 100-Mbps	Part number: 85H8480 — SAS UTP 85H8475 — SAS fiber 85H8470 — DAS fiber Ports: 1 SAS fiber or UTP, or 2 DAS fiber Cabling: SC/MM (fiber) or RJ-45 (UTP-5)
ATM 155-Mbps multimode fiber	Part number: 41H6988 Ports: 1 ATM 155-Mbps fiber port Cabling: Multimode fiber via an SC connector
100BASE-TX	Part number: 41H6995 Ports: 1 100BASE-TX port (HDX/FDX) Cabling: UTP-5
100BASE-FX	Part number: 41H7000 Ports: 1 100BASE-FX port (HDX/FDX) Cabling: Multimode fiber via ST connectors
4-Port 10BASE-T	Part number: 13H9195 Ports: 4 10BASE-T MDI-X ports (HDX/FDX) Cabling: Same as base 8271 ports
3-Port 10BASE-FL	Part number: 41H7020 Ports: 3 10BASE-FL ports (HDX/FDX) Cabling: Multimode fiber via ST connectors
Physical specifications	Width: 170 mm (6.7in.) Depth: 214 mm (8.4 in.) Height: 25 mm (1 in.) Weight: 0.3 kg (0.6 lb)
Standards supported	• 8271 Safety standards: EN 60950, UL 1950, CSA 950 compliance • 8271 Electromanetic Compliance standards: 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) or EN55022 Class CISPR-22A) when configured with the UFCs using unshielded cables, JEIDA Confirmed Harmonics Guide Line (Japan)
Warranty	1 year
Publications	• *ATM 155-Mbps Multimode Fiber Universal Feature Card Planning and Installation Guide*, GA27-4156 • *100BASE-TX and 100BASE-FX Universal Feature Cards Planning and Installation Guide*, GA27-4096 • *4-Port 10BASE-T and 3-Port 10BASE-FL Universal Feature Cards Planning and Installation Guide*, GA27-4120 • *FDDI Universal Feature Card Planning and Installation Guide*, GA27-4190

For more information

To find out more about the IBM 8271 UFCs 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:

4797: *IBM 8271 Universal Feature Cards*

3469: *IBM 8271 Nways Ethernet Switch*



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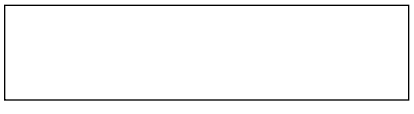
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