

*Reliable, low-cost solution for Ethernet networks*



## IBM 8275 Ethernet Desktop Switch Model 113

- **Eleven 10BaseT Ethernet ports**
- **Two Fast Ethernet Twisted Pair (10/100BASE-TX) ports and one module slot for an additional Fast Ethernet 10/100TX or 100FX port**
- **Simple to use, graphical Web-based management interface for both in-band and out-of-band access from a Web browser running on a client workstation**
- **V.24 management port for local and remote out-of-band management**
- **Support for IETF Repeater, Standard MIB-II, Ether-like, and RMON Management Information Bases**
- **Control panel equipped with illuminated display and ergonomic menu buttons for easy configuration and at-a-glance status updates**
- **Virtual local area network support for up to four domains**
- **Attachment unit interface**



IBM now offers end-to-end connectivity solutions for Ethernet-based networks with the IBM 8275 Ethernet Desktop Switch Model 113. With its standard 10-Mbps data transmission rate to the desktop and 100-Mbps capabilities for connecting to network servers or backbones, the 8275 Ethernet Desktop Switch was engineered to meet the demands of small- and medium-range networking applications. The 8275 offers the flexibility needed to scale with the demands of growing workgroups and expanding network backbones.

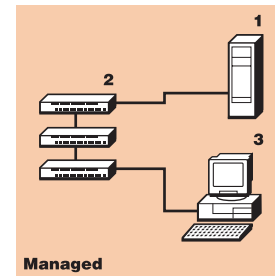
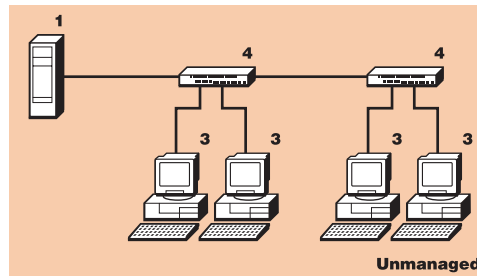
# Positioning and Benefits

The IBM Ethernet Desktop Switch 8275 Model 113 offers end-to-end connectivity solutions for Ethernet networks. With its affordable, standard 10-Mbps data transmission rate to the desktop and powerful 100-Mbps capabilities for connecting to network servers or backbones, the 8275 has been engineered to meet the demands of small and medium-range networking environments. The 8275 Model 113 also provides the flexibility to offer 10-Mbps shared hub aggregation to increase bandwidth by segmenting small networks.

**Problem: Need for additional bandwidth and switching performance to the desktop.**

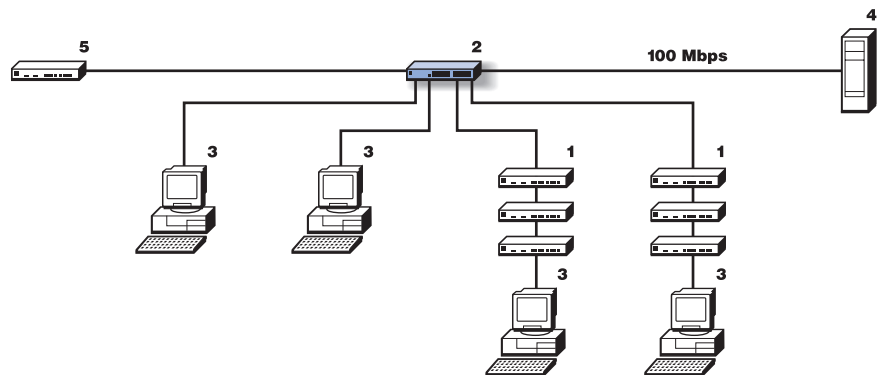
**Environment:** Shared Ethernet networks requiring additional bandwidth to the server and desktop. Manageability is becoming a requirement for the network. Adding new users with network growth.

- 1. Server
- 2. 8237 Stackable Ethernet Hub 10BASE-T
- 3. Workstation
- 4. 8242 10 Mbps Unmanaged Hub



**Solution:** Segment the LAN by connecting power users directly to the 8275-113, offering 10-Mbps Ethernet to the desktop; aggregate 10-Mbps shared hubs to provide additional bandwidth and investment protection. The server or backbone connection gets the high-speed 100-Mbps link, improving network performance.

- 1. 8237 Stackable Ethernet Hub 10BASE-T
- 2. 8275 Ethernet Desktop Switch Model 113
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## Benefits

- Affordable 10-Mbps switching to the desktop, while protecting customer investment in existing infrastructure.
- In all scenarios, network capacity and performance have been improved without changing building wiring, installing new adapters, or rewriting software.
- The addition of the 8275-113 provides 10-Mbps switched Ethernet to the desktop and offers high-speed server and backbone links.
- Distance capabilities through the optional 100-Mbps fiber uplink.
- Remote management (ease of use) through Web-based management.
- At-a-glance status and configuration capabilities through the illuminated control panel.

# Product Overview

The 8275 features 11 standard 10BaseT ports, two 10/100BASE-TX Fast Ethernet ports, an attachment unit interface (AUI) port, and one local console port in a convenient desktop enclosure. For attaching the 8275 to high-speed network backbones, the unit features a module slot that can be fitted with optional 100BASE-FX or 10/100BASE-TX uplink ports.

For growing networks with 10-Mbps switching requirements, the IBM 8275 Ethernet Desktop Switch offers both low port densities and low cost-per-port for Ethernet network segmentation. Combined with the IBM 8271 Model 712 Ethernet LAN Switch, the 8275 Ethernet Desktop Switch provides powerful solutions for aggregating and segmenting Ethernet workgroups and building high-availability, low-cost network backbones.

## **VLAN-ready for configurable deployments**

The IBM 8275 Ethernet Desktop Switch can be integrated into virtual local area networks (VLANs) with ease. For network applications that require traffic pattern control, heightened security or broadcast behavior control, administrators and engineers are calling upon VLANs to help users separated by geography share information.

The IBM 8275 Ethernet Desktop Switch defines a VLAN as a group of ports that together comprise a single multicast domain. All network end stations connected to the group of ports can communicate with one another, yet broadcast packets received on a port in a particular VLAN will not be transmitted to ports that are not designated as members of the VLAN.

Beyond the ability to configure complementary ports for data transmission, VLANs offer the power to gather individual LAN resources distributed across the entire enterprise. With VLAN support from IBM, key properties of the accounting department LAN, for example, can be integrated securely into the sales department LAN. This ability to group allied enterprise assets yields powerful results—more organizational communication and well-informed workgroups.

## **High-speed connectivity**

Equipped with two 10/100 BaseTX ports, the 8275 Ethernet Switch can connect with high-speed network backbones, end stations, hubs, routers and other switches.

Full-duplex transmission support, standard in the 8275, allows for optical fiber cables to be laid at distances of up to 2 km (1.24 miles) between switches on campus networks while also doubling available bandwidth. Both of the Fast Ethernet ports on the 8275 support full-duplex transmission, as do the fixed 10BaseT port and the optional Fast Ethernet modules for use with the open module slot.

## **Switching, management, and transmission features**

When deployed in Ethernet-to-Ethernet architectures, the default switching operation on the 8275 is store and forward, while cut-through switching is optional. When deployed in Ethernet-to-Fast Ethernet or Fast Ethernet-to-Fast Ethernet architectures, the 8275 supports store-and-forward operation only.

Simple Network Management Protocol (SNMP) or Telnet sessions can be used to configure the 8275 to store-and-forward operation when deployed for Ethernet-to-Ethernet transmission. The 8275 also features an EIA-232 port for configuration. Telnet and VT100 format can be used for local management operations.

The 8275 supports four remote monitoring groups—events, alarms, history and statistics—and also supports several standard Management Information Bases (MIBs). Network administrators can employ MIB-II, Repeater MIB, RMON MIB, and Web-based graphical management interface protocols.

## **Engineered for ease of use**

The IBM 8275 Ethernet Desktop Switch Model 113 features an illuminated control panel with easy-to-access menu buttons, providing administrators with at-a-glance status indication. The 8275 stores configuration data in nonvolatile storage for safekeeping, and the unit is also equipped with LEDs on the front panel for added ease of use. For installations away from the desktop, the IBM 8275 includes a rack-mount kit.

# 8275 Ethernet Desktop Switch Model 113 Specifications

<b>Ports</b>	<ul style="list-style-type: none"> <li>• Eleven 10BASE-T Ethernet ports</li> <li>• Two 10/100BASE-TX Fast Ethernet ports</li> <li>• One AUJ port</li> <li>• One management port</li> <li>• One module slot for an optional Fast Ethernet port</li> </ul>											
<b>Data rate</b>	<ul style="list-style-type: none"> <li>• 10 Mbps</li> <li>• 100 Mbps</li> </ul>											
<b>Standards compliance</b>	Supports IEEE 802.3 network components											
<b>Features</b>	<p><i>Rate of transmission:</i></p> <table border="0"> <tr> <td>Desktop</td> <td>10-Mbps Ethernet switching</td> </tr> <tr> <td>Backbone/Server</td> <td>100-Mbps Ethernet switching</td> </tr> </table> <p><i>Switching:</i></p> <table border="0"> <tr> <td>Ethernet-to-Ethernet</td> <td>Store and forward or cut through</td> </tr> <tr> <td>Ethernet-to-Fast Ethernet</td> <td>Store and forward</td> </tr> <tr> <td>Fast Ethernet-to-Fast Ethernet</td> <td>Store and forward</td> </tr> </table>		Desktop	10-Mbps Ethernet switching	Backbone/Server	100-Mbps Ethernet switching	Ethernet-to-Ethernet	Store and forward or cut through	Ethernet-to-Fast Ethernet	Store and forward	Fast Ethernet-to-Fast Ethernet	Store and forward
Desktop	10-Mbps Ethernet switching											
Backbone/Server	100-Mbps Ethernet switching											
Ethernet-to-Ethernet	Store and forward or cut through											
Ethernet-to-Fast Ethernet	Store and forward											
Fast Ethernet-to-Fast Ethernet	Store and forward											
<b>VLAN</b>	Support for up to four domains											
<b>Physical specifications</b>	Width: 439.4 mm (17.3 in.) Depth: 217 mm (8.5 in.) Height: 64 mm (2.5 in.) Weight: 3.95 kg (8.7 lb.)											
<b>Maximum power consumption</b>	47 watts (159.8 BTU/hr)											
<b>Voltage</b>	Universal 100 to 250 V ac											
<b>Management</b>	Ports	V.24 9-pin male, D-type EIA-232 port										
	Protocols	SNMP, SNMP traps Telnet Web-based graphical management interface VT 100 format MIBs (MIB-II, IETF Repeater, Proprietary) RMON (events, alarms, history, statistics) Remote, out-of-band management (available in future releases)										

## Optional Features

Feature Code	Description
<b>2941</b>	100BASE-FX Fast Ethernet Uplink Module <ul style="list-style-type: none"> <li>• Supports full-duplex operation with fiber cable up to 2 km (1.24 miles)</li> <li>• Supports half-duplex operation with fiber cable up to 450 m (1476 ft)</li> <li>• Conforms to IEEE Fast Ethernet standard</li> <li>• SC type connector</li> </ul>
<b>2945</b>	10/100BASE-TX Fast Ethernet Uplink Module <ul style="list-style-type: none"> <li>• Supports full- and half-duplex operation with Category 5 cable up to 100 m (328 ft)</li> <li>• Can be configured to MDI if the module port is connected to the switch with an MDIX port, or MDIX if the module is connected to an end station or server</li> <li>• Conforms to IEEE Fast Ethernet standard</li> <li>• RJ-45 connectors</li> </ul>

## Key Customer Benefits

- Comes in a convenient desktop unit
- Provides high-speed ports for connection to a backbone or server link
- Offers Fast Ethernet 10/100BASE-TX and Fast Ethernet 100BASE-FX optional connections
- Supports IBM's patented adaptive cut-through switching technology, enabling the switch to adapt to changing network conditions
- Provides SNMP Web and RMON management capabilities
- Comes with a V.24 9-pin male, D-type management port for local and remote out-of-band management
- Provides local management through an EIA-232 port, VT100 emulation and Telnet
- Quick at-a-glance and configuration capabilities through the illuminated control panel

## Supplementary Information

The following sales tools are available for the 8275:

- Specification sheet:  
*IBM 8275 Ethernet Desktop Switch Model 113, G224-4562*
- Information on the IBM 8275 is available at:  
[www.networking.ibm.com/275/275prod.html](http://www.networking.ibm.com/275/275prod.html)