

*VPN, Remote LAN, advanced multiprotocol routing and voice support in one manageable package*



## IBM 2212 Access Utility

- **Incorporates open standards-based software to enable the use of virtual private networks**
- **Supports IP Security connections over the Internet keep your operating costs low**
- **Lets you carry SNA through the IP network and Internet**
- **Offers a hardware encryption option and high performance to provide a central-site solution for virtual private networks (VPNs)**
- **Combines remote LAN access and advanced router functions in a single integrated solution**
- **Provides a modem bank solution for remote LAN users**
- **Offers previewed voice solutions for voice compression and combined voice and data networks**
- **Incorporates IP load balancing and native APPN/HPR routing for cost-effective, central site solutions**
- **Offers a previewed High-Performance System Card and Encryption/Compression CPCI Adapter for performance that meets VPN requirements**
- **Uses modular design for simple system upgrades**
- **Provides remote management functions for centralized software tailoring**
- **Uses upgradable system card**



The IBM 2212 Access Utility is expanding its already impressive family with the addition of Models 10F and 10H. These two models create affordable entry configurations for environments where high scalability of the physical connections is not needed, such as VPNs and small branch offices. Full-function software ensures functional interoperability with a central site, and performance can be upgraded when future VPN needs require more. The 2212 Models 10F and 10H are the most affordable routers with a hardfile.

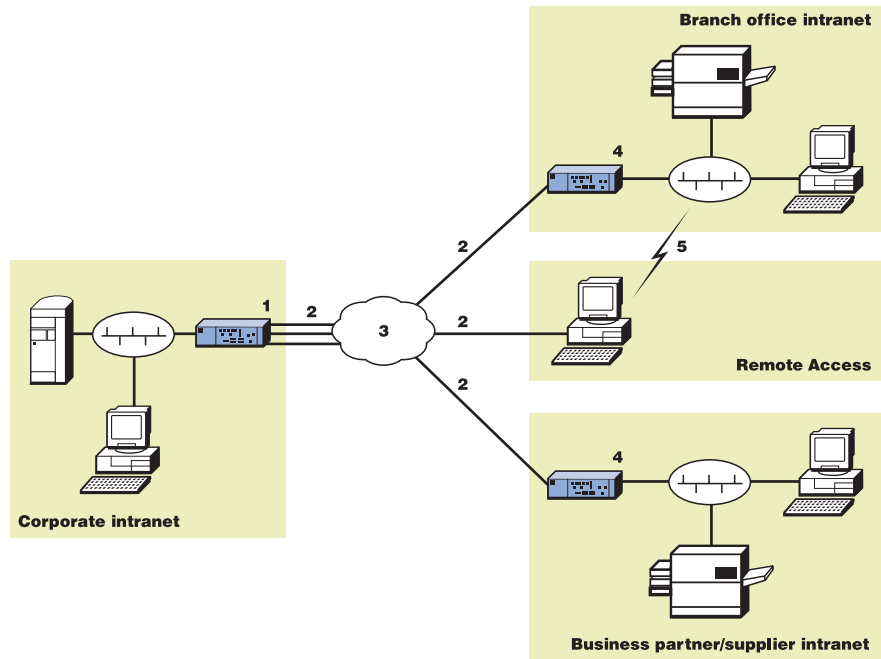
# Positioning and Benefits

**Problem: Need to reduce line costs and enable the mobile workforce.**

**Environment:** A growing company needs to have secure access to its intranet for customers, business partners and members of its remote workforce.

**Solution:** Secure virtual private network (VPN) and remote LAN (RLAN). The IBM 2212 Access Utility supports VPNs for extending intranets to customers and business partners and allowing employees secure dial-in network access. Designed to protect confidential transactions over the public Internet backbone, VPNs can also provide significant cost savings when used as an alternative to leased-line or intranet growth.

1. IBM 2212 Access Utility
2. Virtual private network (VPN)
3. Internet
4. IBM 2210 or IBM 2212 Access Utility
5. Remote LAN (RLAN)



Use the IBM 2212 Access Utility to build virtual private networks (VPNs)

## Benefits

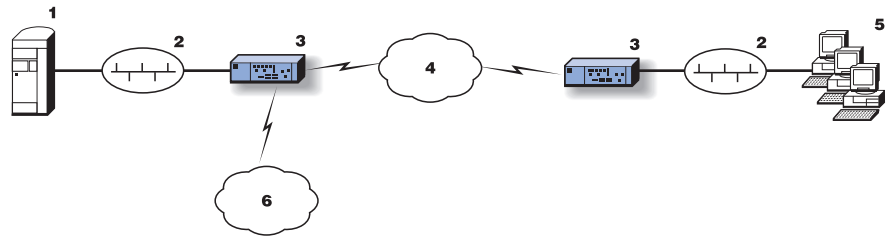
- Secure dial-in access for remote employees
- A cost-efficient alternative to leased lines
- Secure integration of the public Internet backbone into your enterprise data communication network

**Problem: Need to allow multiprotocol traffic and enable e-business.**

**Environment:** A growing company with an AS/400® server attached to a campus backbone needs to support a growing number of IP and desktop users.

**Solution:** General multiprotocol routing. Ideal as a general multiprotocol router for midsize networks, the IBM 2212 Access Utility offers four WAN ports integrated into every model plus four customizable slots for LAN (including 10/100-Mbps Ethernet), WAN, ISDN and future adapter options. The IBM 2212 Access Utility provides more connectivity than an entry-level router such as the IBM 2210 Nways® Multiprotocol Router and throughput approaching that of the IBM Nways 2216 Multiaccess Connector at a lower price. The IBM 2212 Access Utility conveniently accesses the host through the corporate data center LAN and connects the company to the Internet for e-business as illustrated in the following figure.

1. AS/400 Server
2. Campus backbone
3. IBM 2212 Access Utility
4. WAN backbone
5. IP clients
6. Internet



The IBM 2212 Access Utility is also designed for concentrating the WAN traffic of multiple branch offices or for use as a high-end departmental server. It capitalizes on the common code base, user interface, configuration, and management foundations of the IBM 22xx Nways family of products to provide synergistic cross-platform continuity.

**Benefits**

- More connectivity and higher throughput at a lower cost
- Host access with minimal channel disruption
- Uses the common code base, user interface and configuration of other IBM 22XX Nways products

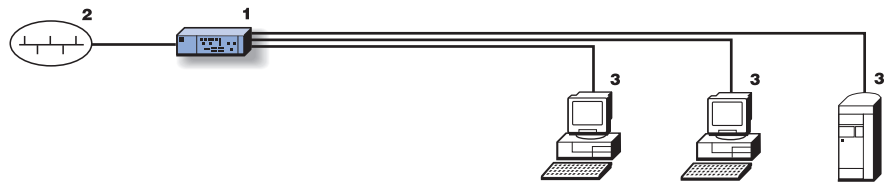
**Problem: Need to create a scalable Web server.**

**Environment:** A growing company needs to support multiple IP servers.

**Solution:** Allow horizontal growth by distributing the load. IBM's new Network Dispatcher, provided in the IBM 2212 Access Utility, balances traffic load among multiple IP servers. It also provides backup protection for routing around failed servers.

Network Dispatcher balances traffic load and enhances availability across any manufacturer's set of IP servers. When Network Dispatcher is used to distribute TN3270E traffic load among several 2212s or IBM Network Utility TN3270E servers, an IBM-exclusive Network Advisor for TN3270E queries the servers and analyzes the results to determine the best distribution of incoming traffic.

1. IBM 2212 Access Utility
2. Campus backbone
3. IP Servers

**Benefits**

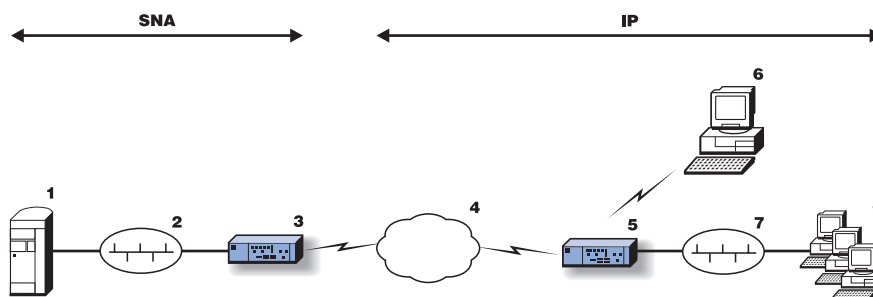
- Balanced traffic load and enhanced availability across any manufacturer's set of IP servers
- Backup protection and rerouting around failed servers

### Problem: Need to enable IP-based workstation to access SNA host.

**Environment:** A company needs to provide SNA host access to its IP desktop users, as well as to remote users dialing into the network

**Solution:** Implement TN3270E gateway. TN3270E technology allows IP desktop traffic to access SNA host applications. The IBM 2212 Access Utility provides a TN3270E logical gateway that integrates SNA and IP to enable IP desktop users to connect to SNA hosts via the Internet, intranets, and extranets. The IBM 2212 Access Utility supports up to 1000 TN3270E sessions. The Network Dispatcher feature provides traffic load-balancing across multiple IP and TN3270E servers. TN3270E server function can be distributed to branch offices for maximum performance and availability.

1. AS/400 or S/390® Server
2. Campus LAN
3. IBM 2212 Access Utility for TN3270E integration
4. WAN backbone
5. IBM 2212 Access Utility for remote concentration
6. Remote user
7. Branch office LAN
8. IP desktop users



### Benefits

- Advanced data transport features for SNA environments
- Connection for IP users through the Internet, intranets and extranets

**Problem: Need for reducing cost of ownership of workstations.**

**Environment:** A company with a primary server that distributes applications to network stations that are connected through a WAN.

**Solution:** Implement network supporting network stations.

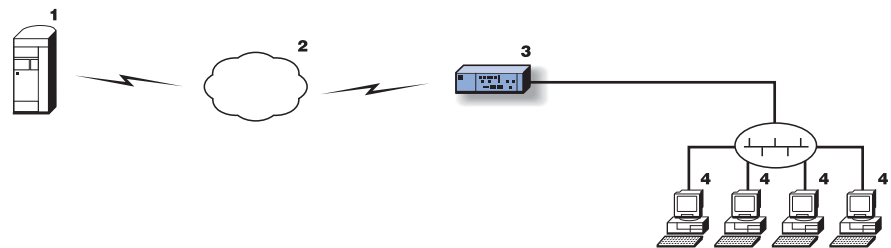
In traditional network computing scenarios, a master server distributes applications to low-end, low-cost “thin clients” or “network stations.” But when hundreds or thousands of users access the master server during a short window of time, or when network stations are separated from the master server by a wide area network (WAN), performance can suffer. Now, with the Thin Server function integrated into the IBM 2212 Access Utility, network computing moves beyond the host and end user to deliver high-performance, distributed-load boot and runtime caching where and when it’s needed.

The IBM 2212 Access Utility’s Thin Server function acts as a proxy for a master server to deliver bring-up code and applications to network stations. Each network station accesses the nearest Thin Server rather than the master server.

The Thin Server maintains file concurrency with the master server. For security, cryptographic algorithms encrypt each user’s password before transmission to the master server.

The Thin Server is designed to reduce the WAN costs and host cycles traditionally associated with network computing. The IBM 2212 Access Utility Thin Server enhances performance and central application management.

1. Primary server
2. Internet/intranet
3. IBM 2212 Access Utility
4. Network station

**Benefits**

- Improves boot-up time for local or remote network stations
- Reduces the network load at the main site
- Reduces WAN traffic
- Removes the need for a remote server
- Requires only one server to be at the latest network station support level

# Product Overview

The IBM 2212 Access Utility is a branch office in a box. The 2212 Access Utility makes it easy to connect local area networks (LANs) to your mobile workforce via remote LANs, or branch offices to the Internet or to the company backbone, using advanced multiprotocol VPNs. The 2212 Access Utility provides cost-effective computing across a broad range of remote locations as well as the flexibility to grow in meeting tomorrow's networking needs.

The 2212 Access Utility unit can operate using flash memory or the hard drive, and the system card will be available as either a standard or high-performance option. All models of the IBM 2212 Access Utility have 64 MB of DRAM and, in flash-based models, 48 MB of flash memory, allowing even the most advanced applications to operate effectively. Models 10H and 10F have one CPCI adapter slot. Models 40H and 40F have four CPCI adapter slots that enable future adapter additions, encompassing long-term networking needs and applications like RLAN, voice integration and VPN encryption.

Models with a hard drive are ideal for applications utilizing permanent data media, such as Network Station Thin Server function and Permanent Topology Database of APPN/HPR protocol. Choose the hard drive option when the IBM 2212 Access Utility acts as an SNA/APPN node. The hard drive offers a considerable problem management advantage by allowing traces to be stored without using an external trace file server.

The PowerPC-based system card is available as a Standard System Card and a High-Performance Card is previewed. Both system cards come equipped with a standard slot for Ethernet or Token-Ring PMC card.

Encryption in the VPN concentration points requires high performance from the IBM 2212 Access Utility because all of the secured IP tunnels demand simultaneous encryption/decryption. Encryption and compression can be improved even further in very demanding environments by using the Encryption/Compression CPCI Adapter.

## VPN security in robust networking software

IBM Access Integration Services (AIS) software maximizes the power of your existing network and opens up connectivity possibilities to keep pace with upcoming network expansions. AIS is preloaded on the IBM 2212 Access Utility at the time of manufacture and includes a Configuration Program to assist in deploying the IBM 2212 Access Utility.

AIS provides security, scalability, and availability. AIS software is also engineered to enable the use of virtual private networks for cost-conscious, high-performance networking on public IP backbones.

Virtual private networks can be deployed as an extension of your corporate intranet across a public network to create a secure connection through an encrypted tunnel. Once built, virtual private networks use IP-based networks, such as the Internet, as dedicated transmission lines, offering encryption and firewall technologies that prevent unauthorized access. IBM envisions three broad applications for virtual private network technology:

- For the remote user who needs access to the corporate intranet from remote locations using the Internet, or another TCP/IP network
- For branch-office connection to a central corporate intranet without leasing or installing dedicated optical-fiber, copper, or coaxial cable

- For business partners or suppliers who need access to internal corporate data without the benefit of a trusted, dedicated connection

In all three applications, virtual private networks use the Internet for secure connectivity and data transfer. Encryption is used for packet transmission and hosts use firewall technologies to prevent unauthorized access. Most importantly, based upon research conducted by Infonetics Research, Inc., virtual private networks can reduce WAN networking costs by as much as 20 to 47% and remote access networking costs by as much as 60 to 80%.

## Encryption Performance

Virtual private networks are based on encrypted, secure IP tunnels. Encryption combines both performance- and memory-intensive functions. The High Performance System Card and Encryption/Compression CPCI Adapter offer the performance that is needed in the concentration points in virtual private networks.

## Hardware and software for dependable routing solutions

When equipped with one of the many available ISDN adapters, the IBM 2212 Access Utility and AIS are dependable ISDN solutions. The BRI adapters offer increased bandwidth and provide backup capability without requiring more expensive Primary Rate ISDN (PRI) service. With the Point-to-Point Protocol multilink tool—supplied with the IBM 2212 Access Utility—bandwidth can be increased dynamically by grouping the B-channels and other media. And for even greater bandwidth administration, rely on IBM's award-winning Bandwidth Reservation System (BRS) to manage traffic priority over Frame Relay, PPP, and dial connections.

### Network Dispatcher for scalable servers

The Network Dispatcher function allows system administrators to build and manage scalable Web servers. It provides load balancing and high availability to users in environments with multiple servers, high traffic volume and many clients. Superior to Domain Name Servers' round-robin queuing, it enables large numbers of individual servers to be linked into large, virtual-server clusters for efficient management.

### Branch Extender for APPN/SNA growth

IBM Branch Extender technology, a component of AIS, enables a single Advanced Peer-to-Peer Networking® (APPN®) SNA network to scale up to thousands of branch locations. With Branch Extender, the IBM 2212 Access Utility can service many branch locations and eliminate the need for more network nodes. This reduces overall topology and routing traffic and improves bandwidth use.

### Permanent APPN/HPR Topology Database support

The native APPN/HPR function offers high traffic performance without protocol conversion. For network startup, the IBM 2212 Access Utility supports APPN/HPR Permanent Topology Database on the hard drive. The IBM 2212 Access Utility hard drive option offers the required permanent data media. Permanent Topology Database is important when the IBM 2212 Access Utility is used as the concentration APPN/HPR router in front of AS/400 servers and other APPN servers. The 2212 Access Utility does not have to learn the network topology from the network, and this significantly expedites the network startup.

### DIALs for LAN connection

For even greater flexibility in network access, the IBM Dial-In Access to LANs (DIALs) feature allows remote users to dial into a LAN and access resources, emulating a local attachment. DIALs also allows LAN-attached users to dial out to a WAN. The remote LAN access functions offered by the 2212 broaden its compatibility with the IBM 8235 DIALs Servers featuring the same DIALs support.

### TCP/IP network-ready

The IBM 2212 Access Utility was designed to take advantage of the latest enhancements and standards offered by the Internet Engineering Task Force (IETF). Enhancements to each protocol and link type improve security, administration, reliability and network efficiency. Among the IBM 2212 Access Utility's innovative features are increased X.25 scalability, X.25 Closed User Group facilities, and X.25 local support over TCP/IP. The IBM 2212 Access Utility also provides the following benefits:

- Broadened remote concentration to encompass a full complement of link types (Frame Relay (SVC/PVC), PPP, SDLC, SDLC relay, BSC, V.25bis, X.25, and V.34) for the WAN ports on the system card and 4-port WAN CPCI adapters.
- IP routing includes ICMP, TCP, UDP, RIP, OSPF V2, BGP-4, static routes, Multicast Extensions to OSPF (MOSPF), ARP, RSVP, InARP, IP Access Controls, and IP Version 6 support.
- Advanced SNA support with APPN Network Node (NN), APPN Intermediate Session Routing (ISR), High Performance Routing (HPR), Dependent LU Requester (DLUR), Version 2-compliant Data Link Switching (DLSw) including NetBIOS support, Branch Extender, Boundary Access Node (BAN), and LAN Network Manager. Permanent APPN/HPR Topology Database is supported on the hard drive. APPN/HPR can be used with flash.
- TN3720E server support enables IP access to SNA host applications. Distributed TN3270E servers across an IP, subarea, or APPN network to provide:
  - Better availability by eliminating a single point of failure with a central gateway
  - Scalability with incremental capacity per IBM 2212 Access Utility site instead of a large, central-site, server gateway
- The Enterprise Extender function with Class of Service (CoS) and SNA priority capabilities provides better service levels than DLSw to SNA users running over an IP backbone.
- IETF Layer 2 Tunneling Protocol (L2TP) standard support enables the tunneling of multiprotocol PPP traffic across intranets, extranets or the Internet.
- BAN support to enable end stations attached to the IBM 2212 Access Utility to make a direct connection through Frame Relay to a front-end controller such as the IBM 3745 Communication Controller or the IBM 3746 Nways Multiprotocol Controller. A similar, direct connection can also be established between the IBM 2212 Access Utility and an IBM AS/400 system.
- HPR to provide high-speed, native SNA transport with nondisruptive routing around failed connections, and adaptive rate-based congestion control.
- DLUR to enable 3270 traffic to utilize HPR and APPN transports.
- APPN Network Node support to provide routing and directory services to Ethernet, Token-Ring, and SDLC-attached end nodes.
- APPN ISR to provide the forwarding of session data to the next node along the path.



### Thin Server support

In the new world of network computing, a Network Station (NS) must get its boot image from the network. A typical storage place for this boot image to reside would be on the host (such as an AS/400 host), acting as the server for the NS. One problem that can occur is if there are too many NSs attached to the same host and all of them are activated in the same short timeframe. This will cause an overload of traffic to and from the host serving the boot images to the NSs. Another potential problem can arise when the NSs are located at a remote branch office and must get the load images over low-speed WAN lines. The solution is the placement of the Thin Server function in the branch office router, which reduces network load and increases availability. Benefits include:

- NSs at remote sites are not dependent on slow-speed WAN connections.
- NS startup is faster and availability is better.
- Power outage demands are not visible to the central site.
- It is easy to configure.
- When the hard drive option is used, the Thin Server function is not dependent on uplink connection availability after power on.

### Standards-based interoperability

AIS is based on open industry standards, vendor specifications, and protocol implementations that conform to current Internet Engineering Task Force (IETF) RFC levels. IBM participates in industry initiatives such as the IETF, ATM Forum, IEEE, APPN Implementers Workshop (AIW), and the Network Interoperability Alliance. The protocol implementations in AIS provide a full set of features to ensure network reliability, security and interoperability.

### Invest today—grow tomorrow

All models of the IBM 2212 Access Utility are shipped preloaded with AIS licensed software. These software tools offer the flexibility to accommodate future networking requirements.

If you are considering the increased use of dial services for backup and for remote offices with only occasional network access, you can use the ISDN BRI and PRI adapters and asynchronous external modems.

### Remote installation—quickly and easily

Extending the corporate network to small, remote offices typically means that skilled technical personnel at a central location must install routers at distant locations that lack skilled personnel. The IBM 2212 Access Utility is designed to meet that challenge.

All IBM 2212 Access Utility models also contain a service port supporting asynchronous communication for configuration and maintenance. All models support the industry's open network management standard, SNMP. Management of the system can be accomplished using SNMP managers. Management application support is provided by many of IBM's management programs, including the Nways Enterprise Manager and the Campus Manager LAN for AIX® products. You can also use IBM Nways Workgroup Manager for Windows NT® for smaller networks.

# IBM 2212 Access Utility Specifications

## IBM 2212 Access Utility

Dimensions	Model 40F	Model 40H	Model 10F	Model 10H
Width	<ul style="list-style-type: none"> <li>• 440 mm (17.3 in.) without rack-mounting frame</li> <li>• 480 mm (18.9 in.) with rack-mounting frame</li> </ul>	<ul style="list-style-type: none"> <li>• 440 mm (17.3 in.) without rack-mounting frame</li> <li>• 480 mm (18.9 in.) with rack-mounting frame</li> </ul>	<ul style="list-style-type: none"> <li>• 440 mm (17.3 in.) without rack-mounting frame</li> </ul>	<ul style="list-style-type: none"> <li>• 440 mm (17.3 in.) without rack-mounting frame</li> </ul>
Depth	305 mm (12 in.)	305 mm (12 in.)	305 mm (12 in.)	305 mm (12 in.)
Height	89 mm (3.5 in.)	89 mm (3.5 in.)	44.4 mm (1.75 in.)	44.4 mm (1.75 in.)
Weight	6.61 kg (15.8 lb)	7.71 kg (17 lb)	4.54 kg (10 lb)	4.54 kg (10 lb)
<b>Serial interfaces</b>	EIA 232-D/V.24/V.28, V.35, V.36 and X.21 <i>Note: Dial support provided using V.25bis and V.34.</i>			
<b>LAN interfaces</b>	Ethernet: IEEE 802.3 10/100 Mbps auto-sensing Connections: AUI and 10BASE-T (RJ-45) Token Ring: IEEE 802.5 at 4 or 16 Mbps Connections: 9-pin D-connector and RJ-45			
<b>Memory features</b>	32-MB DRAM expansion 64-MB DRAM expansion			
<b>Electrical requirements</b>	Automatically senses line voltage within an input range of 110 to 240 V ac at 50 to 60 Hz (U.S. power cord included with every 2212 model.)			
<b>Operating environment</b>	Temperature 10° to 40.6°C (50° to 105°F) Relative humidity 8% to 80% Maximum wet-bulb temperature 27°C (80°F)			
<b>Certifications</b>	Safety certifications: EN 60950, UL 1950, CSA 950 Electromagnetic compliance certification: <ul style="list-style-type: none"> <li>• FCC Class A (U.S.A.)</li> <li>• VCCI Class A (Japan)</li> <li>• ICES-003 Class A (Canada)</li> </ul> European Community Mark of Conformity (CE Mark), for Class B CISPR 22 / European Standard EN 55022			
<b>Warranty</b>	One year			
<b>Installation</b>	All models can be placed on a flat surface or mounted in a rack in a wiring closet.			
<b>ISO 9000</b>	The IBM 2212 Access Utility was developed and is manufactured by IBM under a registered ISO 9000 quality management system.			

**IBM 2212 Access Utility continued****IBM Access Integration Services***Routing protocols*

TCP/IP  
 IPX  
 AppleTalk 2  
 Banyan VINES  
 DECnet IV  
 DECnet V/OSI

*SNA*

APPN NN  
 PPN ISR  
 HPR  
 DLUR  
 Branch Extender  
 DLSw (RFC 1795 and 2166) including NetBIOS support  
 SDLC primary and secondary  
 SDLC Multiple SNA PU support

*BAN and Boundary Network Node (BNN)*

LAN Network Manager (LNM)  
 Extended Border Node

*Bridging*

Source-route bridging (SRB)  
 Transparent bridging (TB)  
 Source-route transparent bridging  
 SRB-TB translational bridging  
 IP bridging tunnel

**Software***Switched networks*

V.25bis (PPP)  
 ISDN BRI and PRI (PPP or Frame Relay)  
 WAN restoral (PPP)  
 WAN reroute from Frame Relay, PPP, or X.25 link failures  
 Dial on demand  
 V.34 for remote LAN access

*WAN data link controls*

Frame Relay (RFC 1490) including BAN support, SVC and PVC  
 PPP  
 Multilink PPP over mixed media  
 X.25 including QLLC and X.25 DTE Transport (XTP) for X.25 over a TCP/IP network  
 SDLC  
 BSC

*Virtual private networking*

IP Security  
 AAA security  
 Layer 2 Tunneling Protocol (L2TP)  
 Bandwidth Reservation System  
 Interactive Network Dispatcher  
 Enterprise Extender  
 TN3270E Server  
 Dial-In/Dial-Out Access for LANs (DIALs) remote LAN access  
 Secure ID  
 Network Address Translation (NAT)  
 IP Address Pooling  
 Virtual Connections IP/IPX

## IBM 2212 Access Utility models at a glance

Model <sup>1</sup>	Adapters CCPI+PMC	System Card	Memory Media	SW preload <sup>2</sup>
10F	1 + 1	Standard	Flash	Standard <sup>2</sup>
10H	1 + 1	Standard	Hardfile	All
40F	4 + 1	Standard	Flash	Standard <sup>2</sup>
40H	4 + 1	Standard	Hardfile	All

Notes:

<sup>1</sup> Model Naming Convention

First character: Number of adapter slots outside system card

Second character: System card type, 0=Standard, 5=High Performance

Third character: Memory media type, F=Flash, H=Hardfile

<sup>2</sup> Standard = all except Thin Server, APPN/HPR and TN3270E. Other code are loads available on the Internet code server without additional charge.

### Ordering information

Description	Country	Feature code/Part number
<b>Models</b>		
1-PMC, 1-CPCI, Hardfile (10H)	Worldwide	85H4661
1-PMC, 1-CPCI, Compact flash (10F)	Worldwide	85H4663
1-PMC, 4-CPCI, Hardfile (40H)	Worldwide	85H4662
1-PMC, 4-CPCI, Compact flash (40F)	Worldwide	85H4664
<b>Accessories</b>		
32-MB SIMM additional DRAM	Worldwide	3132/85H4408
64-MB SIMM additional DRAM	Worldwide	3133/85H4409
<b>Adapters</b>		
1-port Token-Ring PCC Adapter	Worldwide	3101/85H4721
1-port 10/100 Ethernet PMC Adapter	Worldwide	3102/85H4722
2-port Token-Ring CPCI Adapter	Worldwide	3110/85H4717
2-port 10/100 Ethernet CPCI Adapter	Worldwide	3111/85H4735
4-port WAN CPCI Adapter	Worldwide	3103/85H8836
2-port ISDN BRI-S/T CPCI Adapter	AP, EMEA	3105/85H4726
2-port ISDN BRI-U CPCI Adapter	U.S., Canada	3104/85H4725
1-port ISDN PRI T1/J1 CPCI Adapter	U.S., Japan, Canada	3106/85H4727
1-port ISDN PRI E1 CPCI Adapter	AP, EMEA	3107/85H4728
2-port ISDN PRI T1/J1 CPCI Adapter	U.S., Japan, Canada	3108/85H4680
2-port ISDN PRI E1 CPCI Adapter	AP, EMEA	3109/85H4682
<b>Power cords</b>		
AS 3112-1981, NZS 198, 10A-250V, 2.7 m (9 ft)	AP, LA	8845/13F9948
NEMA WD-1, 5-15P, 10A-250V, 1.8 m (6 ft)	AP	8848/13F9968
CEE7 VII, 10A-250V, 2.7 m (9 ft)	AP, LA, EMEA	8838/13F9988
NORMBLAD 4, 10A-250V, 2.7 m (9 ft)	EMEA	8839/14F0006
SABS 164, BS 563, 10A-250V, 2.7 m (9 ft)	AP, EMEA	8843/14F0024
BS 1363, 10A-250V, 2.7 m (9 ft)	AP, EMEA	8840/14F0042
SEV 24507, 10A-250, 2.7 m (9 ft)	EMEA	8842/14F0060
CEI 23-16, 10A-250V, 2.7 m (9 ft)	LA, EMEA	8844/14F0078
SII-32-1971, 10A-250V, 2.7 m (9 ft)	EMEA	8841/14F0096
NEMA WD-1, 6-15P, 10A-250V, 2.7 m (9 ft)	U.S., AP, LA, Canada	8846/1838578
NEMA WD-1, 6-15P, 10A-250V, 1.8 m (6 ft)	U.S.	8837/1838579
NEMA WD-1, 5-15P, 10A-125V, 2.7 m (9 ft)	U.S.	8835/6952303
NEMA WD-1, 5-15P, 10A-125V, 1.8 m (6 ft)	U.S.	8836/6952304

**Ordering information**

Description	Country	Feature code/Part number
<b>Data cables</b>		
EIA-232 Modem attach	Worldwide	2321/55H7756
EIA-232 DTE	Worldwide	2322/60G3901
V.35 Modem cable	Worldwide	2351/60G3902
V.35 Direct attach	Worldwide	2352/60G3903
V.36 Cable	Worldwide	2361/60G3904
X.21 Cable	Worldwide	2211/60G3906
X.21 DTE Cable	Worldwide	2212/10H5591
RJ-45 Category 5 cable	Worldwide	2391/41H9082
V.35 French DCE cable	EMEA	2703/1749352
RJ-45 Cat 5, 4m ISDN BRI Australia	AP	2318/86H0774
ISDN PRI E1 cable for Australia	AP	2325/30L6529
ISDN PRI J1	U.S., AP, Canada	2323/30L6523
ISDN PRI E1 cable	AP, EMEA	2324/30L6524
<b>Service</b>		
Service Wrap Plug Kit	Worldwide	2533/30L6530

## Supplementary Information

The following sales tools are available for the IBM 2212 Access Utility:

- Specification sheet:  
*IBM 2212 Access Utility, G224-4576*
- Information on the IBM 2212 Access Utility is available at:  
[www.networking.ibm.com/netprod.html](http://www.networking.ibm.com/netprod.html)