Commuting in reverse—bringing the office to mobile workers

IBM 8235 Dial-In Access to LANs (DIALs) Server Models 021 and 022

Highlights

- ***Fast, responsive access***
- ***Multitiered security***
- ***Easy expandability***
- ***More than 120 preconfigured options for easy installation***
- ***No difference in applications for mobile users***
- ***Centralized configuration and management, including status and activity monitoring***
- ***RADIUS accounting management***
- ***Support for LAN applications using popular NetBIOS, IPX, IP and SNA protocols***
- ***IP featuring Domain Naming Service (DNS) support***
- ***Connections over regular, analog or digital phone networks***
- ***Powerburst option***

Employee benefits—more flexibility, higher productivity, improved morale

With the IBM 8235 Dial-In Access to LANs (DIALs) Server, your remote users can get to their office Ethernet or Token-Ring network from any location that has dial-up phone service.

Employees who travel or work from home or remote offices can get to any of the information they need, just as if they were using the workstation back in the office. Mobile workers—sales and service representatives, agents and others—can get to product data, inventories, prices and work schedules from home, a customer location or while they're traveling.

The 8235 DIALs Server is a compact, stand-alone device that fits easily on a desktop or in a wiring closet. The variety of hardware models is combined with software that offers the features and benefits that users and managers want to create one powerful, affordable package.

Refer to *8235 Dial-In Access to LANs (DIALs) Software* (G224-4440) for more information about the software supporting the 8235 DIALs Server.

External terminal adapters—asynchronous or digital data transmission

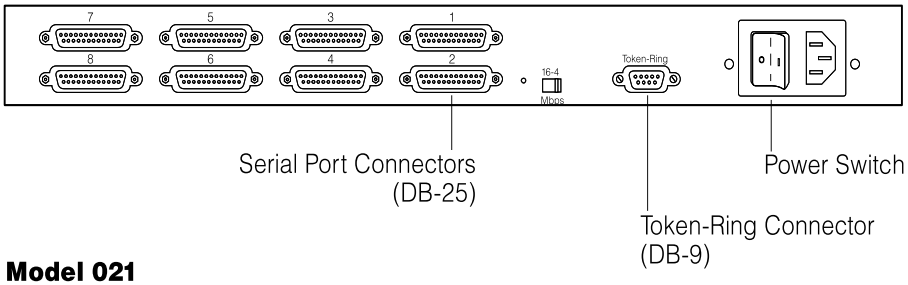
The 8235 Models 021 and 022 are designed with eight serial ports to which you can connect modems or external, asynchronous terminal adapters. High performance can be achieved with high-speed V.34bis modems with 4x compression, either through the modem or through the compression supported by the 8235 with the DIALs Client software, or with asynchronous terminal adapters attached to high-speed digital networks.

Multiuser, multiprotocol, multifunction

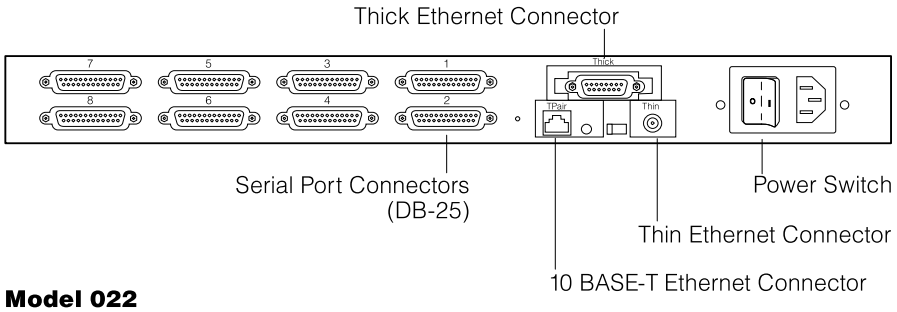
With routing and bridging support for multiple protocols such as NetBIOS for LAN servers, IPX for NetWare, 802.2 LLC for the 3270 and 5250, IP for TCP/IP applications on both Token-Ring and Ethernet models, and AppleTalk on Ethernet with ARA 2.0 clients, a user can remotely access a variety of applications. And the 8235 supports dial-up LAN-to-LAN routing and dial-out modem- and line-pooling.



All of the ports can operate simultaneously, using special filtering and compression techniques to reduce the amount of network traffic. PPP and support for transmission speeds up to 115.2 Kbps over analog phone networks also contribute to optimum, remote-access performance.



Model 021



Model 022

Protect your network with multitiered security

The 8235 gives you a variety of convenient security options that can help ensure that your network is safe, secure and available to only those users whom you authorize. In addition to the Security Pack for Windows® 95, the DIALs software offers integrated support for the RADIUS management and accounting protocol, SecurID card and the ACE Server, AssureNet Pathways Security Server, Terminal Access Controller Access Control System (TACACS and TACACS+) and the Blockade Mainframe Security Server.

Transparent access to network resources—anytime, anywhere

The 8235 DIALs Server in the office works with IBM DIALs Client software in OS/2®, DOS and Windows workstations outside the office. Authorized users simply call an 8235 using analog or digital telephone lines and get connected to their office network. They can transfer files, print documents, use e-mail and other client or server applications and access databases. There are no new commands or complicated procedures to learn.

Network managers can also use the 8235 as a dial-up router between locations for LANs connected by IP or IPX protocols, and as a modem-pooling device for access to services like CompuServe and the Internet. Having remote access, dial-up routing and modem-pooling in a single device is simpler and less costly than having multiple devices.

Shell support features for customization of the shell login process, IP filtering and support for DNS ease the network manager's load.

Dial-in performance has been improved for file-system-based activities and applications through the use of Powerburst acceleration support, an optional feature on all 8235 models.

Comprehensive management

The 8235 DIALs Server includes Windows software that lets you configure, monitor and upgrade any number of 8235 units from a single local or remote workstation. You can also manage your 8235s using an Nways™ Manager, Nways Campus manager or SNMP manager. You can keep an activity log that records each incoming call from beginning to end, as well as any error conditions that exist. The activity log can be easily exported to another application for more detailed analysis. The management software also provides complete status information on all 8235s on your network.

An expandable solution

The 8235 DIALs Server is a single, compact unit that can rest on a table or be mounted in a standard 19-inch rack. To extend your network to additional users, simply add more 8235s to the network, without overcrowding your wiring closet.

What you get

Included with each 8235 DIALs Server package are the following features:

8235 Management Facility Dial-In Client software for:

- OS/2
- DOS
- Windows 3.1 or 3.11
- Security Pack for Windows 95

Dial-Out Client software for:

- OS/2
- DOS
- Windows 3.1 or higher
- Windows 95 Client or Windows NT® Client.

LAN-to-LAN Connect software for OS/2 and Windows 3.1 or higher

An online user's guide for each client software package

Refer to *8235 Dial-In Access to LANs (DIALs) Software* (G224-4440) for more information about the software supporting the 8235 DIALs Server.

IBM 8235 DIALs Server Models 021 and 022 at a glance

Part numbers	*Hardware and Software** 42H4560: 8235 DIALs Server Model 021 (Token Ring) 42H4570: 8235 DIALs Server Model 022 (Ethernet) *Software only (chargeable)* 00K5018: 5018 Software Key for Powerburst (optional)
Configuration	• Processor: 25-MHz Motorola 68EC020 • Memory: 2-MB nonvolatile RAM • Serial ports: 8 DB-25 (EIA 232) serial port connectors • Supported modems: The 8235 Models 021 and 022 are compatible with asynchronous analog modems, including V.34bis modems, or ISDN terminal adapters supporting the EIA 232 V.24/V.28 digital interface, operating at speeds between 2.4 Kbps and 115.2 Kbps per port, including modem data compression. (For remote networking 9600 Kbps or higher is recommended.) • Supported protocols: NetBIOS, IPX/SPX, TCP/IP, 802.2 (LLC), AppleTalk ARA 2.0 (Model 022), PPP and SLIP
8235 DIALs Server	The 8235 supports dial-in communications for workstations operating with the DIALs Client licensed program, Windows 95, Windows NT® 3.5, SLIP, PPP or Telnet dialers. Installation and management of the 8235 are recommended using a WIN-OS/2 window with the IP protocol or a Windows-based workstation with IP or IPX loaded with the included 8235 management software.
Hardware requirements	Any PC or PS/2® computer with a 386 or higher processor and OS/2 2.0 or higher or Windows 3.1 or higher, or a 286 or higher processor and DOS 3.3 . Any Macintosh Plus or later model computer with 4 MB of RAM and a hard disk running ARA 2.0 dial-in support on System Software 7.0 or higher is supported. (For remote networking the 16550 UART on the client PC is recommended.)
Cabling requirements	*Purchased separately* Modem or asynchronous terminal adapter cables with a 25-pin, male D-shell connector to connect the 8235 to the modem; an IBM Token-Ring Network PC Adapter Cable (P/N 6339098) to connect the Model 021 to a Token-Ring network; an STP cable with RJ-45 connectors to connect the Model 022 to a 10BASE-T Ethernet network; thin coaxial cables with BNCs to connect the Model 022 to a 10BASE2 Ethernet network; an STP drop cable with AUI connectors to connect the Model 022 to a 10BASE5, thick coaxial Ethernet network.
Remote clients	Supported dialers: DIALs Clients 3.5 or higher on OS/2, DOS, Windows 3.1 or higher platforms, SLIP, PPP, AppleTalk ARA 2.0 (Model 022), Windows 95 RAS Client, Windows NT RAS Client 3.5 and Telnet.
DIALs security	• *Passwords*: IDs and encrypted passwords in the 8235, date-timed and user-upgradable. • *Call-back*: Call-back can be to a specified number or a roaming number. • *Third party*: SecurID Ready, Novell NetWare 3.0 Bindery Services, AssureNet Pathways Defender, Blockade Systems, RADIUS authentication and accounting. A number of third-party hardware devices (for example AssureNet Pathways and SecurID) are supported.
***Note**	The software and publications are also available on the Web at http://www.networking.ibm.com/nes/neshome.html

IBM 8235 DIALs Server Models 021 and 022 at a glance, continued

Management	• *8235 Management Facility*: The 8235 Management Facility is a Windows-based graphical application that runs in a WIN-OS/2 window using the IP protocol option or in Windows 3.x. Compatible with other 8235 models. • *Nways*: Nways Manager for Windows or Nways Campus Manager LAN • *SNMP*: MIB II can be managed from an SNMP manager. BootP server support is provided. • *Telnet*: Telnet command shell is supported.
Physical specifications	Width: 432 mm (17 in.) Depth: 254 mm (10 in.) Height: 43.7 mm (1.72 in.) Weight: 2.8 kg (6.2 lb)
Electrical requirements	Power: 40 W Line voltage: 90 to 264 V ac Frequency: 50 to 60 Hz
Environmental requirements	Operating temperature: 10° to 40°C (50° to 104°F) Storage temperature: 0° to 50°C (32° to 122°F) Relative humidity: 8% to 80% Maximum wet-bulb temperature: 27°C (80.6°F)
Warranty	1 year

For more information

To find out more about the IBM 8235 DIALs Servers 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 the following document numbers:

5953: *IBM 8235 Model I40 Dial-In Access to LANs Switch*

6210: *IBM 8235 Dial-In Access to LANs Server Software Release*

5697: *IBM 8235 Dial-In Access to LANs Server Models 031 and 032*

6218: *IBM 8235 Dial-In Access to LANs Server Models 021 and 022*

5952: *IBM 8235 Dial-In Access to LANs Server Models 051 and 052*

© International Business Machines Corporation 1997

IBM Corporation
Department TYCA
PO Box 12195
RTP NC 27709

Printed in the United States of America
3-97

All Rights Reserved

References in this publication to IBM products or services do not imply that IBM intends to make them available in all countries in which IBM operates.

Copying or downloading the images contained in this document is expressly prohibited without the written consent of IBM.

® IBM, OS/2 and PS/2 are registered trademarks of International Business Machines Corporation.

™ Nways is a trademark of International Business Machines Corporation.

® Windows and Windows NT are registered trademarks of Microsoft Corporation.

All other company names or products are trademarks or registered trademarks of their respective companies.

Printed on recycled paper

G224-4416-02