Commuting in reverse—bringing the office to mobile workers

IBM 8235 Dial-In Access to LANs (DIALs) Server Models 031 and 032

Highlights

- ***Fast, responsive access***
- ***Integrated ISDN BRI card***
- ***Expanded multitiered security***
- ***Easy expandability***
- ***No difference in applications***
- ***Improved analog performance with 33.6 Kbps (V.34bis) modems using flash ROM upgrade***
- ***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 filtering and Domain Naming Services (DNS) support***
- ***AppleTalk on Ethernet model***
- ***Transparent access to network resources — anytime, anywhere***
- ***Powerburst option***

Employee benefits—more flexibility, higher productivity, improved morale

With the 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, through either a standard analog network (POTS) or a digital network (ISDN).

Employees who travel or work from home or remote offices can get to any 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 is a compact, stand-alone device that fits easily on a desktop or in a wiring closet. The variety of hardware models are combined with software that offers the features and benefits that users and managers want to create one powerful, affordable package.

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 Information Display System and 5250 Display System, 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 8235's eight ports can operate simultaneously. Special filtering and compression techniques reduce the amount of network traffic. PPP and support for transmission speeds up to 115.2 Kbps also contribute to optimum remote-access performance.



Your choice—ISDN adapter, modem or serial card

The 8235 Models 031 and 032 are designed with space to hold up to four ISDN BRI adapters, eight V.34bis modems or eight serial cards, allowing for a mix of up to eight telephone-line or modem connections. The ISDN BRI adapters provide two B-channels for data and one D-channel for call setup and teardown. The V.34bis modems support V.42bis data compression and V.42 error correction, allowing up to eight simultaneous remote users with reliable asynchronous transmission speeds. The V.34bis modems can be upgraded with flash ROM speed upgrade to 33.6 Kbps.

Serial cards can support port speeds up to 115.2 Kbps. And with the serial cards, you can configure some or all of the ports to attach external modems or asynchronous terminal adapters for digital services like ISDN or Switched 56.

Integrated ISDN—improving performance

The integrated ISDN adapter for the 8235 Models 031 and 032 supports 2B+D channels. The ISDN BRI adapter, when combined with the software that supports ISDN BRI, allows for data-transmission speeds of up to 64 Kbps per B-channel, equaling 128 Kbps per BRI adapter. The ISDN environment has been extended by adding V.120 rate adaption support. The ISDN BRI adapters can be mixed with V.34bis modems and serial cards to meet the needs of any customer environment. A maximum of four ISDN adapters can be installed in Models 031 or 032, with each adapter supporting two telephone lines. Models 031 and 032 can have any combination of ISDN adapters, V.34bis modems and serial cards as long as the total number of lines used does not exceed eight.

In addition to higher transmission speeds, the integrated ISDN adapter and software for Models 031 and 032 include ISDN support for static MLP channel aggregation and virtual connections for IP and IPX applications.

Comprehensive network management and security

The 8235 supports a variety of security applications for dial-in clients that can help ensure that your network is safe, secure and available to only those users you authorize. RADUIS enhancements provide better interoperability with other RADIUS environments and improved information for management and accounting.

Models 031 and 032 also include management software that lets you configure, monitor and upgrade any number of 8235s units from a single local or remote workstation. You can also manage your 8235s using Nways™ Manager, Nways Campus Manager or SNMP manager.

Shell support features for customization of the shell login process, IP filtering and support for Domain Name Services (DNS) ease the network manager's load. Performance can be improved for file-system-based activities and applications through the use of Powerburst acceleration support, an optional feature on all 8235 models.

The management software for the 8235 allows you to keep an activity log that records each incoming call from beginning to end, as well as any error conditions that occur. It also provides complete status information for any 8235 on your network.

The 8235 in the office works with IBM DIALs Client software in OS/2®, DOS and Windows® PCs outside the office, as well as with Windows 95, Windows NT®, SLIP, PPP and terminal emulator dialers. Authorized users simply call an 8235 using ordinary telephone lines or a digital network 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.

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



V.34bis modem



ISDN BRI adapter



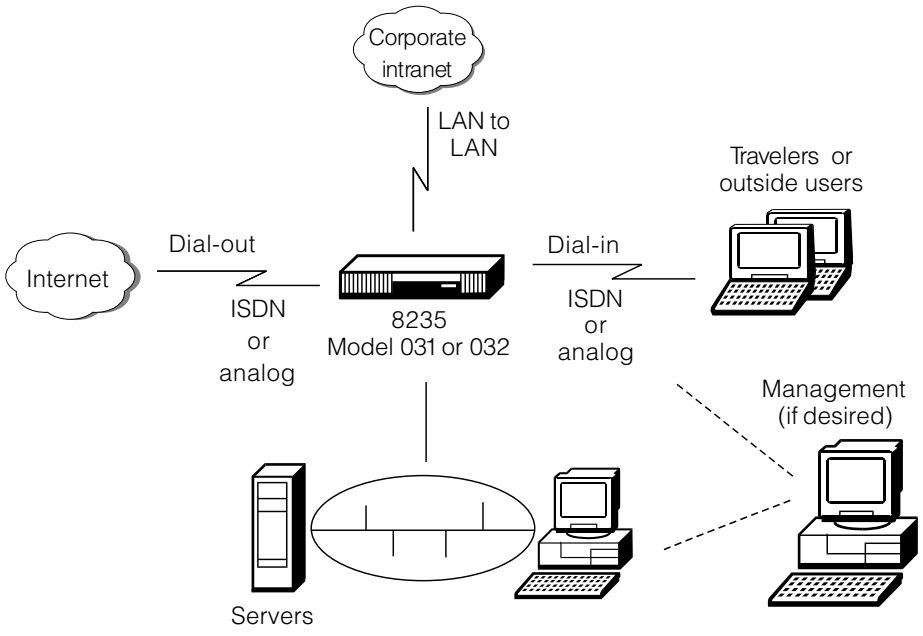
Serial adapter

IBM 8235 DIALs Server Models 031 and 032 at a glance

Part numbers	*Hardware and software** 42H4590: 8235 DIALs Server Model 031 (Token Ring) 42H4600: 8235 DIALs Server Model 032 (Ethernet) *Software only* (chargeable)* 00K5018: 5019 Software Key for Powerburst (optional) for Models 031 and 032
Configuration	• Processor: 25-MHz Motorola 68EC020 • Memory: 2-MB nonvolatile RAM • Adapter ports: 8 internal ports for use with ISDN BRI adapter (P/N 42H4580), V.34 modem (P/N 38H5575) and serial cards (P/N 10H5451). • Supported adapters: ISDN BRI adapter (P/N 42H4580) with S/T interface, 2 B-channels, 1-D channel; V.34bis modem (P/N 38H5575) with 33.6 Kbps, V.42bis error correction and V.42bis data compression; serial cards (P/N 10H5451) with support for external ISDN terminal adapters and modems supporting the EIA 232 V.24/ V.28 digital interface, operating at speeds up to 115.2 Kbps. (For remote networking 9600 Kbps or higher is recommended.) • Supported protocols: NetBIOS, IPX/SPX, TCP/IP, 802.2 (LLC), AppleTalk ARA 2.0 (Model 032), PPP and SLIP
***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 031 and 032 at a glance, continued

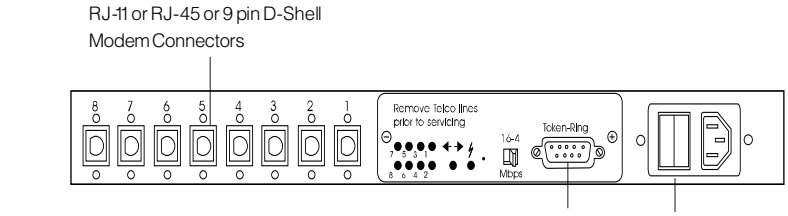
8235 DIALs Server	The 8235 supports dial-in communications for workstations operating with the DIALs Client licensed program, Windows 95, Windows NT 3.5, SLIP, PPP or Telnet dialers. Installation and management of the 8235 are recommended using a WIN-OS/2 window with the IP protocol or a Windows-based 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 2.11 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 7.0 software or higher is supported. (For remote networking the 16550 UART on the client PC serial port is recommended.)
Cabling requirements	*Purchased separately* An RJ-11 cable to connect the 8235 V.34bis modem card to the phone line; a serial cable with a 25-pin, male D-shell connector to connect the 8235 serial card to the phone line; an STP or UTP cable with RJ-45 connectors to connect the 8235 ISDN BRI adapter to the digital network; an IBM Token-Ring Network PC Adapter Cable (P/N 6339098) to connect the Model 031 to the Token-Ring network; STP cable with RJ-45 connectors to connect the Model 032 to a 10BASE-T Ethernet network; a thin coaxial cable with BNCs to connect the Model 032 to a 10BASE2 Ethernet network; an STP drop cable with AUI connectors to connect the Model 032 to a 10BASE5, thick coaxial Ethernet network.
Remote clients	*Supported dialers*: DIALs Clients 3.5 or higher on OS/2, DOS, Windows 3 platforms, SLIP, PPP, AppleTalk ARA 2.0 (Model 032), Windows 95 RAS client, Windows NT RAS client 3.5 and Telnet.
DIALs security	• *Password*: 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.
Management Assistant	• *8235 Management Facility*: The 8235 Management Facility is a Windows-based graphical application that runs in a WIN-OS/2 window using the protocol option or in Windows 95 or in Windows 3.x using the IP or IPX protocols. 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 provided. • *Telnet*: Telnet command shell 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: 60 W Line voltage: 90 to 264 V ac Frequency: 50 to 60 MHz
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°F)
Warranty	1 year



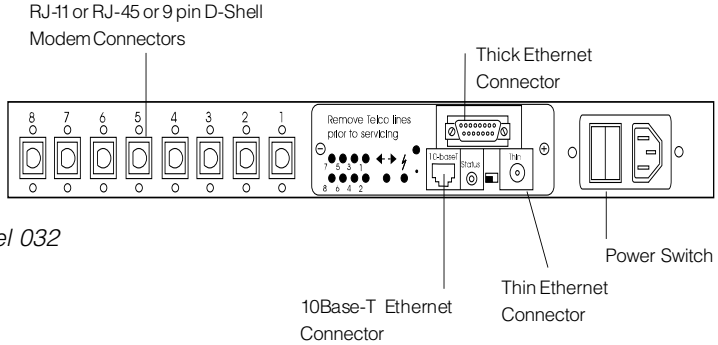
Models 031 and 032 — the best buy

With the 8235 Models 031 and 032 you get the best buy compared to other remote access solutions. In addition to a quality product and IBM's superior service, some of the advantages of the 8235 Models 031 and 032 are:

- *Flexibility*—You can start with presently available phone lines and migrate to ISDN as lines are installed. Both analog modems and ISDN BRI cards can be installed in the same unit.
- *Ease of installation*—Modems and ISDN cards are recognized, preconfigured and ready for installation. Power and cabling are kept to a minimum.
- *Total solution in one box*—There's no need to look elsewhere for modems, ISDN cards, client software, management support or security features.
- *Physical installation*—Analog modems and ISDN cards are internal to the 8235 unit. Modem shelves, power cords or interconnecting cabling is not necessary.
- *Management*—Again, modems and ISDN cards are internal and managed as part of the total installation. There is no need for separate or additional management tools for modems and ISDN cards.



Model 031



Model 032

An expandable solution

The 8235 is a single, compact unit that can be placed on a tabletop 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.

For more information

To find out more about the IBM 8235 DIALs Server 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*

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*



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Department TYCA
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RTP NC 27709

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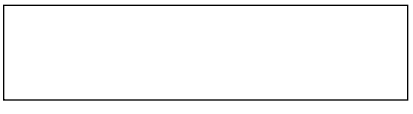
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