IBM RF Wireless LAN Product Family

Options by IBM: Communications

Highlights

The Options by IBM radio frequency (RF) wireless family allows you to build flexible, economical Local Area Networks (LANs) without cabling. These products–Wireless LAN and Wireless LAN Entry–let you extend your existing hardwired LANs to mobile and desktop PC users without the expense of laying new cable and breaking through walls.

IBM Wireless LAN



IBM Wireless LAN ISA/MicroChannel and PCMCIA Adapter

Supports your users

Up to 50 users[1] can be part of a stand-alone cell, and you can connect multiple overlapping cells across your enterprise within Token-Ring, Ethernet and other environments

Supports your systems

Available in dual-bus ISA/Micro Channel and PCMCIA Type II adapter formats for IBM and non-IBM desktop and mobile PCs

We've got you covered

Cell diameters of up to 1600 feet[2] give you open- and closed-office coverage that is one of the largest in the industry; optional Custom Cable Kit lets you extend antennas 550 feet from wireless base; supports automatic roaming

The speed you need

The system provides robust communications with throughput rates of up to 1.2Mbps

Connect more flexibly

Adapters with antenna module can be configured as wireless bases with source-routing or transparent bridging, IPX routing, LAN server and wireless network management functions; no Access Point required

Knows your NOS

Supports many major Network Operating Systems, including IBM LANServer, Novell® NetWare®; Novell Personal NetWare, Microsoft® Windows for Workgroups, Microsoft LAN Manager and Windows NT, Artisoft LANtastic and more

Higher technology

Advanced Spread Spectrum Frequency Hopping (SSFH) radio technology in the 2.4GHz frequency band plus Time Division Multiple Access (TDMA) provide excellent interference protection and high network capacity; standard features include data encryption

Roam from cell to cell

Lets users move between wireless LAN cells without disrupting their applications; also enables load balancing and cell redundancy

IBM Wireless LAN Entry



8227 Access Point



PCMCIA Type II Extended Card Adapter

Designed for easy installation

Comes as a complete low-cost solution including PCMCIA Type II extended adapter, integrated Network Interface Controller (NIC) and 2.4GHz radio transceiver–includes Artisoft LANtastic Network Operating System

Covers your environment

Up to 30 users[1] can be part of a stand-alone cell; cell coverage can extend to 1200 feet[2]

Fast and flexible

You get a full service LAN solution with data throughput of up to 350Kbps

For industry-standard systems

Industry-standard PCMCIA format supports IBM and non-IBM desktop and mobile PCs

Optimized for Ethernet

8227 Access Point provides transparent MAC bridge program for direct Ethernet attachment

Free to roam

Automatic roaming lets users move between Access Points while maintaining the application session; supports ad hoc workgroups where only Wireless LAN Entry adapters are utilized

Built to go mobile

Wireless LAN Entry provides low power consumption that extends battery life; the unit is compact and lightweight, too

Knows your NOS

Supports many major Network Operating Systems, including IBM LANServer, Novell NetWare, Novell Personal NetWare, Microsoft Windows for Workgroups, Artisoft LANtastic and more

Higher technology

Spread Spectrum Frequency Hopping (SSFH) provides excellent interference resistance and data security

IBM quality, guaranteed

Because Options by IBM products are tested to IBM's high-quality specifications, you can count on high performance and reliable service

The right way to grow

The RF Wireless LAN Product Family comes to you from Options by IBM–an exciting family of high-performance peripherals built to meet IBM's high quality and reliability standards. These products have been tested to be compatible with industry-standard and/or Micro Channel IBM and non-IBM personal computers. In addition to communications, our offerings include accessories, storage, memory, multimedia, PCMCIA and processor upgrade products.

For more information

For more information, or to order Options by IBM products, please contact your IBM marketing representative or your reseller; for the reseller nearest you, please call 1-800-772-2227; To place an order for one of the products you may call IBM PC Direct at 1-800-426-2968; in Canada, please call IBM Direct at 1 800 465-7999. All Options by IBM products include a warranty[3]; setup and support assistance from the IBM PC Company HelpCenter® 24 hours/seven days a week[18] at no charge during warranty[3]–via phone 1-800-772-2227, fax 1 800 426-3395, or bulletin board[22] 1-919-517-0001; 30-day, money-back guarantee.

This document is available via fax as document #3462 by calling 1-800-IBM-4FAX.

RF Wireless LAN Product Family at a glance		
	Wireless LAN Entry	**Wireless LAN**
Part number	• 92G7787 (PCMCIA adapter) • 25H4211 (Access Point, integrated antenna) • 13H5895 (Access Point XR, hemispherical directional antenna)	• 80G1000 (ISA/Micro Channel) • 80G0900 (PCMCIA) • 54G2016 External Antenna Cable (4m) • 80G4320 Custom Cable Kit
Transmission power (max)	100 mw	100 mw
Medium	RF	RF
Band	2.4GHz Industrial, Scientific and Medical (ISM)	2.4GHz ISM
User FCC licensing	None required	None required
RF technology	SSFH (Spread Spectrum Frequency Hopping)	SSFH (Spread Spectrum Frequency Hopping)
Interference management	Intelligent cell hopping pattern modification	Intelligent cell hopping pattern modification
Wireless protocol	Collision Sense Multiple Access/Collision Avoidance	Time Division Multiple Access
Data throughput (average)	350Kbps	500Kbps-1.2Mbps
Users per cell	32 (Access Point); 30 recommended[1] (ad hoc)	50 recommended[1]
Security	Transparent, continuous user verification, access control	Transparent, continuous user verification, data encryption and access control
Maximum recommended overlapping cells	10'	20'
Maximum cell diameter[2]	360m/1200ft.	500m/1600ft.
Network Operating System	IBM LANServer, IBM LAN Program, Novell NetWare, Novell Personal NetWare, Microsoft LAN Manager, Microsoft Windows NT, Microsoft Windows for Workgroups, Artisoft LANtastic and others	IBM LANServer, IBM LAN Program, Novell NetWare, Novell Personal NetWare, Microsoft LAN Manager, Microsoft Windows NT, Microsoft Windows for Workgroups, Banyan VINES, Artisoft LANtastic and others

RF Wireless LAN Product Family at a glance		
	Wireless LAN Entry	**Wireless LAN**
Network management	Central network management by products that use Simple Network Management Protocol (SNMP) such as IBM NetView®/6000, IBM NetFinity,™ Novell Network Management system and others	Central network management by products that use Simple Network Management Protocol (SNMP) such as IBM NetView®/6000, IBM NetFinity,™ Novell Network Management system and others
Wired network topology	• Ethernet (optimized) • Token-Ring (requires bridge) • PC Network	• Token-Ring (optimized) • Ethernet • PC Network
Protocols	802.2 NetBios, IPX/SPX, TCP/IP, IP, SNA/LU6.2	802.2 NetBios, IPX/SPX, TCP/IP, IP, SNA/LU6.2

RF Wireless LAN Product Family at a glance		
	Wireless LAN Entry	**Wireless LAN**
Physical specifications	• PCMCIA Type II extended card adapter: – 54mm (2.1”) W x 145.3mm (5.7”) L x 10.7mm (0.42”) H; extended portion is 11.5mm (0.45”) high – 59g (2.1oz.) – 280mA (average current) • 8227 Access Point: – 21.6cm (8.5”) W x 27.9cm (11.0”) D x 7.6cm (3.0”) H – 30kg (6.6lb.) – 110/220 VAC (switchable) • Both: – $0°$C to $-55°$C ($32°$F to $-131°$F) – 5%-95% relative humidity – $23°$C ($73°$F) wet bulb	• ISA/Micro Channel adapter: – 255mm (10”) W x 21mm (0.8”) D x 95mm (3.7”) H – 0.2Kg (7oz.) – $0°$C to $40°$C ($50°$F to $104°$F) – 8%-80% non-condensing humidity – 3W peak current • PCMCIA Type II adapter: – 86mm (3.4”) W x 54mm (2.1”) D x 5mm (0.2”) H – 70g (2.4oz) – $0°$C to $-55°$C ($32°$F to $-131°$F) – 0% to 95% non-condensing humidity – 700Ma average current • Antenna/radio module: – 112mm (4.4”) W x 66mm (2.6”) D x 28mm (1.1”) H – 150g (5.2oz.) – Meets FCC Class B criteria
Warranty[3]	One year carry-in for 8227 Access Point; three year carry-in for adapter	Three year carry-in for adapters

Installation information		
	Wireless LAN Entry	**Wireless LAN**
Hardware supplied	• PCMCIA Type II RF adapter, 100mW transmission • Integrated antenna • IBM 8227 access point	• ISA/Micro Channel RF adapter, 100mw transmission (works as base or remote station) or • PCMCIA RF adapter (works as a non-bridging base or remote station) • Antenna module • 1.5m antenna cable
Software supplied	• Artisoft LANtastic 6.0 • Access Point bridge code • Diskettes with device drivers and system software • Installation and diagnostics routines	• Diskettes with device drivers and system software • Installation and diagnostics routines
Hardware requirements, base or Access Point	• Any computer with Type II PCMCIA slot available, or PCMCIA Adapter for ISA/MCA • 3.5” diskette drive, if remote initial program is available • If utilizing access point, Ethernet PC Server with 3.5” diskette drive	• IBM compatible PC with ISA or Micro Channel bus and one available slot • 386 or higher processor • 4MB RAM • Hard disk • 3.5” 1.44MB diskette drive • LAN adapter, if attached to wired LAN

Installation information		
	Wireless LAN Entry	**Wireless LAN**
Hardware requirements, remote station	• Any computer with Type II PCMCIA slot (2.1 release level) • 3.5” diskette drive, if remote initial program load is available	• 1 available ISA, Micro Channel or PCMCIA Type II slot • 3.5” 1.44MB diskette drive • Hard disk (optional on ISA and Micro Channel systems if remote initial program load is available)
Software requirements, base or Access Point	• OS/2(R) 2.1 or higher with NTS/2; or TCP/IP; or Novell 3.1 or higher with RPL support or Communications Manager/2 1.0 or higher; or IBM LANServer 2.0, 3.0, or 4.0 or Novell NetWare 3.11 or higher	• OS/2 2.1 or higher and NTS/2 (with TCP/IP stack for multiple wireless cells); or • Novell NetWare 3.11 or higher (with TCP/IP stack for multiple wireless cells) • OS/2 Warp (with MPTS)

Installation information		
	Wireless LAN Entry	**Wireless LAN**
Software requirements, remote station	• DOS 5.0 or higher with Artisoft LANtastic 5.0 or 6.0, DOS 5.0 with Novell 3.11 or 4.1 (client/stations), Novell Personal NetWare, DOS LAN Requester provided with LAN Server 2.0 and 3.0, LAN Support Program 1.35 or higher, IBM Personal Communications/3270 3.0, PC Support/400 2.2, TCP/IP for DOS 2.1, Microsoft LAN Manager 2.2, Microsoft Windows for Workgroups 3.1 or Microsoft Windows 3.1, IBM PCLP 1.34 (client/station), OS/2 or higher and NetWare workstation for OS/2, DOS 5 and above (DOS 6 and above for PCMCIA) and NetWare requester or IBM LAN Support Program 1.33, OS/2 2.1 and NTS with LAPS 2.1 • DOS 5.0 or higher with Novell NetWare 3.11 or 4.0 (client/station) NetWare from IBM 3.11 or 4.01 (client/station), or IBM PCLP 1.34 (client/station)	• Dos 5.0 or higher (6.0 or higher for PCMCIA); and IBM LAN Support Program 1.33 or higher (or equivalent), or NetWare Requestor (NetWare 3.xx or higher) • Microsoft Windows 3.1 or higher with DOS 5.0 or higher (6.0 or higher for PCMCIA); and IBM LAN Support Program 1.33 or higher (or equivalent), or NetWare Requestor (NetWare 3.xx or higher) • OS/2 2.1 or higher and NTS/2 with LAPS 2.1, or OS/2 WARP Connect, or OS/2 WARP and MPTS; and NetWare Requestor for OS/2 (for Novell environment)

© International Business Machines Corporation 1996

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2-96
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[1] Specification data reflects results of product testing conducted in IBM laboratories. Product capabilities may vary from these tested levels.

[2] Actual range will vary with physical environment.

[3] For information regarding the terms and conditions of IBM's limited warranty, and 30-day, money-back guarantee, please call 1 800 772-2227. Copies of IBM's statement of limited warranty are available on request.

[18] Not including certain holidays.

[22] Requires a modem.

IBM reserves the right to alter specifications and other product information without prior notice.

IBM LAN entry is made in Canada; IBM LAN is made in Scotland.