

# 4121 Access Point

**symbol**<sup>®</sup>

802.11b Ethernet-Speed  
Price-Performance  
Wireless Networking

**Spectrum24<sup>®</sup> High Rate**

802.11b, 11 Mbps WIRELESS LAN

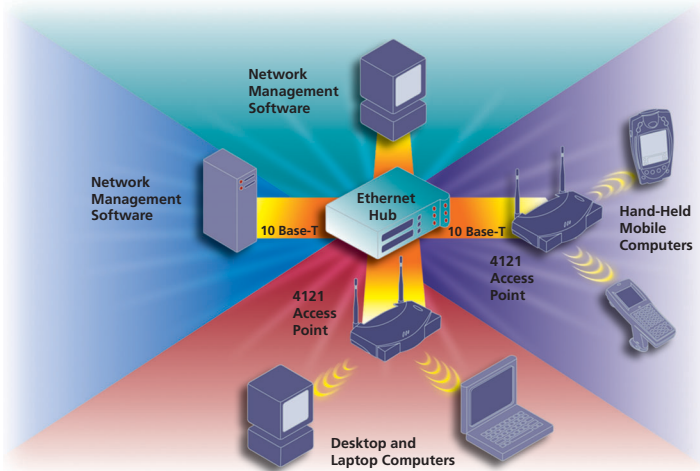


**Wi-Fi**<sup>™</sup>  
The Standard for  
Wireless Fidelity.

# Mobilize Your Workplace with Standards-Based High-Performance Wireless Networking

Symbol Technologies' Spectrum24® High Rate 4121 Access Points strategically placed throughout the enterprise are the wireless connectivity point to an Ethernet network, or the hub of a standalone wireless network.

Operating in the 2.4 GHz band at speeds up to a fast 11 Mbps, Spectrum24 High Rate wireless connectivity mobilizes today's fast-paced workforce with instant, untethered secure access to vital network resources including corporate intranets, the Internet, information databases, e-mail and other productivity and service applications. And it eliminates the expense and time of wiring when IS requirements call for temporary, ad hoc, small office and kiosk networking.



Spectrum24 High Rate Access Points communicate with any number of devices equipped with Spectrum24 client adapters, including Symbol mobile computing devices.

## Scalable Connectivity for Laptops, PDAs, Desktop and Mobile Clients

The Spectrum24 High Rate 4121 Access Point supports up to 127 clients with Wi-Fi™ certified 802.11b client cards, including Symbol's PC and CompactFlash™ format Wireless Networker™ cards for laptops and PDAs, and Spectrum24 High Rate

Universal Serial Bus for desktop and other USB-enabled equipment. Mobile voice and data devices with embedded wireless connectivity cards also communicate with the Spectrum24 High Rate 4121 Access Point. Adding more access points scales your Spectrum24 High Rate wireless LAN to support additional users.

## Multi-Option Security Protects Data

The 4121 Access Point features multi-mode security options to meet data protection requirements: industry-standard 40 and 128 bit WEP encryption; Kerberos V5 based mobile security; or a combination of these choices.

## Dynamic Rate Scaling, High-Speed Roaming for Maximum Range and Throughput

The Spectrum24 High Rate 4121 Access Point dynamically rate scales, transmitting data at 11 Mbps then automatically scaling to 5.5 Mbps, 2 Mbps, and 1 Mbps to ensure best range and throughput. As signal strength decreases the transmit rate also decreases, ensuring maximum range while maintaining data integrity. High-speed roaming additionally ensures Spectrum24 High Rate clients seek the best possible data rate for fastest throughput.

## Mobile IP, International Roaming

Mobile IP functionality allows the 4121 to seamlessly roam across routers as clients physically move from one subnet to another. This ensures uninterrupted connectivity as associates move throughout your facility. Support of the IEEE 802.11d standard for international roaming enables simple, easy operation for international use—the access point automatically adjusts to local country and regulatory requirements.

## Easy Administration and Network Management

The Spectrum24 High Rate 4121 Access Point is administered using SNMP and a number of bundled management tools for quick install, maintenance, and upgrade. In addition, you can manage your entire WLAN installation using Symbol's suite of wireless management tools, including software for monitoring and controlling network activity and performance.

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Features	Benefits
11 Mbps direct sequence (DS) high data rate transmission	Supports bandwidth-demanding applications and high-speed data transmission
IEEE 802.11b compliant; Wi-Fi certified	Ensures interoperability among other Wi-Fi certified wireless systems for investment protection and system architecture flexibility
High-Speed Roaming	Clients seek Access Point with best signal and lowest data traffic for fastest throughput
Automatic Data Rate of 11, 5.5, 2 and 1 Mbps	Optimized throughput, range and connectivity
Multi-mode security: industry-standard WEP 40 and 128 bit encryption; Kerberos V5 based mobile security; or combination	Security options to meet data and network protection requirements
Kerberos V5 Open Security Standard based on the Network Authentication Protocol developed by MIT	Supports an enhanced level of security for mobile environments; easy to implement; operating system and application independent
IEEE 802.11d International Roaming	Simple, easy operation for international use—simply select the country of operation and the 4121 Access Point automatically adjusts to local country and regulatory requirements
Point-to-Point Wireless Bridging	Seamless bridging between separate Ethernet networks which enables connectivity without cables
Automatic Transmit Power Control	Control of transmitted power to minimize interference in smaller cells
Mobile IP	Enables multiple users to roam across routers/subnets and between cells for uninterrupted connectivity
System-wide upgrades from a single access point, via Flash memory accessible by HTTP, serial, Telnet	Fast and easy access point maintenance and upgrades
Event logging, data packet tracing, SNMP alarm generation, operating statistics, protocol and bandwidth filters for optimum network management	Diagnostic capabilities for simplified, optimal network management
Output up to 100 mW worldwide; range up to 1,500 ft./450 m outdoors and up to 295 ft./90 m indoors	Extended high-speed communications and range indoors and out
Support for up to 127 clients on a single access point; scalable	Single access point provides support for multiple mobile clients and device types; adding an access point expands coverage and capacity
Auto Channel Select	Ease of deployment and reliability: access point automatically selects the best available channel for RF communications



## Cost-Effective, Easy-to-Deploy Power for Wireless Access Points

The Power-over-Ethernet Hub from Symbol Technologies delivers operating power and data to 4121 Access Points via standard Category 5

Ethernet cable, eliminating the need for 110/220 volt AC cable and power converters at each access point location.

This significantly reduces cabling and outlet requirements. A single-port power connector is also available for small site deployments.



## Selection of Antennas

Symbol's selection of high-performance omni-directional (360°) and directional (20° to 90°) antennas provide different coverage patterns to meet site, application and power requirements.

## End-to-End Wireless Mobility—Just Add Symbol. And Go.

The Spectrum24 High Rate family is the industry's leading, comprehensive end-to-end wireless LAN solution. Only Symbol combines access points, client connectivity cards, ruggedized mobile voice and data devices and network management software as well as wireless mobility planning and deployment services for high-performance mobility solutions. This unique combination of benefits enables your organization's end-to-end wireless mobile computing strategy and optimizes the capture, computing and communication of data crucial to business decision-making and success. All you have to do is Add Symbol. And Go.

## 4121 Access Point Specification Highlights

### Radio Characteristics

Frequency Range:	Worldwide product covering 2.4 to 2.5 GHz, programmable for different country regulations
Data Rate:	11 Mbps per channel maximum
Maximum Output Power:	100 mW worldwide
Power Management:	Continuous Aware Mode and Power Saving Polling Mode
Range:	Data throughput scaled to support up to 1,500 ft./450 m outdoors and up to 295 ft./90 m indoors
TX Maximum Radiated EIRP:	FCC regulations part 15.247 in U.S.; ETS 300 328 in Europe; RCR STD-33 in Japan
Modulation:	Direct Sequence Spread Spectrum (DSSS) with BPSK (1 Mbps), QPSK (2 Mbps), and CCK (5.5 and 11 Mbps)
TX Out-of-Band Emissions:	FCC regulations part 15.247, 15.205, 15.209 in U.S.; ETS 300 328 in Europe; RCR STD-33 in Japan
Operating Temperature:	-4° to 158° F/-20° to 70° C
Storage Temperature:	-22° to 176° F/-30° to 80° C
Client Support:	Up to 127 clients

### Network Characteristics

Driver Software Support:	Microsoft® Windows® 95/98, Windows NT 4.0, Windows CE 2.11 (only for Symbol's PPT 2740), Windows 2000, Windows ME; NDIS 4 AND 5
Access Protocol:	CSMA/CA
Roaming:	Virtually instantaneous



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