Empower Your Enterprise with Reliable, Robust Wireless Voice and Data Communications

Spectrum24®

802.11, FREQUENCY HOPPING, 2 Mbps WIRELESS LAN

EDITOR’S CHOICE
Symbol’s Spectrum24 2 Mbps Wireless LAN: Enabling Mobile Voice and Data Communications in Demanding Enterprise Environments

Instant communication throughout the enterprise. Real-time supply chain management. Immediate response to customers. Improved access to information. These are the capabilities needed by today’s fast-paced organizations.

Symbol Technologies’ award-winning Spectrum24 2 Mbps wireless local area network (WLAN) solution enables these business-critical capabilities. Based on radio frequency (RF) technology, Spectrum24 transmits and receives data wirelessly, extending the reach of your enterprise network to the point of activity—the shop floor, point of sale, warehouse, patient bedside. Combining instant data connectivity, real-time in-campus voice communications, and complete user mobility, Spectrum24 liberates your workforce with high-performance, easy-to-install, scalable wireless connectivity that fully integrates with your existing enterprise network.

Designed to the IEEE 802.11 open interoperability standard for frequency hopping wireless LANs, Spectrum24 was the first interoperable wireless solution on the market. Today, this proven technology empowers mobile workers with innovative solutions for application-specific mobile voice and data communications—from the floor of the New York Stock Exchange to large-scale retail, manufacturing, healthcare, education and other environments.

Supported by a global network of services professionals and business partners, Symbol brings you the best in wireless LAN technologies with Spectrum24.
AP 3021 Ethernet Access Point
At the heart of the Spectrum24 solution lies the AP 3021 Access Point, designed for instantaneous wireless networking in indoor and outdoor environments. Advanced algorithms prioritize voice and data transmission for uninterrupted service, including clear voice-over-IP communications based on the ITU H.323 standard. An embedded HTTP server allows administrators to use a Web browser to monitor performance, change configurations and run diagnostics on an AP 3021 from anywhere on the network. It automatically selects data rates to optimize range and maintain continuous coverage. A wide selection of antennas for environmental and application requirements enable the AP 3021 to provide secure, reliable data and voice communications at ranges of up to 2,000 ft./606 m. A single AP 3021 will support up to 256 clients.

LA 3021 PC Card and LA 3026 ISA Card Client Adapters
The LA 3021 wireless network interface card (NIC) fits into any laptop or other device with a PC card slot, enabling full mobility while still connected to the wired LAN. Its support for the ITU H.323 standard provides voice-over-IP connectivity for applications – such as Microsoft’s NetMeeting – running on voice-enabled devices, including many laptop and desktop computers.

The LA 3026 ISA “plug and play” card has a semi-slot form factor that easily fits into cash registers, desktop PCs, point-of-sale systems, and other PC-compatible devices with limited space and ISA bus interfaces. It is designed to quickly and accurately configure and connect to the Spectrum24 network, saving time and cutting cost when deploying temporary, seasonal, ad hoc, and kiosk networking.

Both the LA 3021 and 3026 feature:

- Driver support for Windows 95/98/2000; NT 4.0, 3.51; CE 2.0, 2.11 (LA 3021)
- Industry-standard ODI and NDIS drivers for reduced programming time and efficient network management
- Fast software upgrade via FLASH memory for simplified card maintenance
- Very low power consumption to extend battery life

CB 1000 Client Bridge
The Spectrum24 CB 1000 Client Bridge extends wireless networking capabilities to printers, scales, medical equipment, manufacturing machinery, bar code readers, POS and other devices with RS-232 serial or Ethernet ports. The flexible, durable case design features an accessible slot for inserting your choice of Symbol wireless LAN radio adapters: Spectrum24 Frequency Hopping or Spectrum24 High Rate Direct Sequence.

SpectrumSoft Wireless Network Management
The SpectrumSoft Wireless Network Management System (WNMS) suite of software eases installation by enabling users to configure and manage the Spectrum24 wireless LAN and its clients through the same tools used to manage an existing enterprise network. As a stand-alone system or with platforms such as OpenView, Tivoli, and Unicenter, companies seamlessly integrate wired and wireless systems, synchronizing administration across networks while providing a familiar environment for network managers.

Voice and Data on One Wireless LAN
The Spectrum24 wireless LAN supports voice-over-IP communications, offering simultaneous voice and data support on the same wireless backbone. Symbol's NetVision Phone and Data Phone appliances – offering voice, paging, intercom, data capture, and even bar code scanning capabilities – integrate both Spectrum24 wireless LAN and H.323 communications. Symbol's telephony alliances extend your solution further by providing PBX and PSTN connectivity. By combining voice communications into the Spectrum24 wireless infrastructure, your organization cost-effectively realizes the value of verbal communications essential to real-time decision-making, problem-solving and customer service.
### Features vs. Benefits

<table>
<thead>
<tr>
<th>Feature</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency hopping up to 2 Mbps</td>
<td>Robust, reliable radio frequency transmission technology</td>
</tr>
<tr>
<td>IEEE 802.11 compliant</td>
<td>Fully interoperable wireless networking</td>
</tr>
<tr>
<td>Support of H.323 standard</td>
<td>Converged voice/data communications over the same wireless network</td>
</tr>
<tr>
<td>Operation within the ISM 2.4 to 2.5 GHz bands</td>
<td>Worldwide acceptance is ideal for multinational users</td>
</tr>
<tr>
<td>Output up to 500 mW U.S./100 mW international</td>
<td>Extends range indoors and outdoors</td>
</tr>
<tr>
<td>Automatic data rate selection of 1 or 2 Mbps</td>
<td>Optimized range and throughput</td>
</tr>
<tr>
<td>Support for mobile IP</td>
<td>Seamless roaming between cells</td>
</tr>
<tr>
<td>Support for international roaming</td>
<td>Worldwide communications using the same hand-held device</td>
</tr>
<tr>
<td>Software upgrade via FLASH memory</td>
<td>Fast and easy access point maintenance and upgrades</td>
</tr>
<tr>
<td>Network management, configuration, and diagnostic tools</td>
<td>Straightforward administration of your wireless network</td>
</tr>
<tr>
<td>SNMP compliant</td>
<td>Allows integration with popular enterprise network management systems such as Tivoli, CA Uni-center TNG, and HP OpenView</td>
</tr>
<tr>
<td>Wired Equivalent Privacy (WEP) encryption and decryption</td>
<td>Powerful data security at 64 bits</td>
</tr>
<tr>
<td>Driver support for all popular network operating systems</td>
<td>Reduces programming time and enables fast integration with enterprise systems</td>
</tr>
<tr>
<td>Wide temperature range and robust mechanical design</td>
<td>Reliable performance in the most demanding environments</td>
</tr>
</tbody>
</table>
Application-Specific Mobile Computing Devices

Symbol's extensive, award-winning line of Spectrum24-ready mobile computing devices provides you with a selection of devices best suited for your specific application. Running on standard platforms including Palm Computing®, Microsoft Pocket PC, Windows CE and DOS, they feature ruggedized, splash-resistant designs that are optimized for pen, touch, and key input. Many devices also integrate 1- and 2-D bar code scanning capabilities. This array of devices communicates wirelessly over the same Spectrum24 network that also supports laptops, PCs, cash registers, voice-over-IP devices—anything with a Spectrum24 client adapter.

More Features, More Benefits

Spectrum24 includes a number of features designed to enhance wireless LAN operations in any business environment.

Secure Data Transmission

Wired Equivalent Privacy (WEP) encryption combined with access control lists and domain identification features provides powerful user authentication and data encryption/decryption capabilities for security-critical environments. Wireless clients may also opt to use 40-bit WEP encryption featuring the RC4 algorithm to further encrypt data during wireless transmission.

Scaling to Grow with Your Organization

Spectrum24 is designed to be highly scalable—simply adding another access point expands your network’s range, coverage, and number of supported clients. Plus, Symbol’s 2 Mbps solution is fully backward-compatible with Symbol’s 1 Mbps wireless LAN.

Mobile IP: Advanced Mobility for Seamless Roaming

Symbol’s Spectrum24 Access Points support mobile IP functionality, allowing seamless roaming across routers. This ensures uninterrupted connectivity as clients physically move from one Spectrum24 subnet to another.

International Roaming

Spectrum24 devices automatically adjust to each country’s wireless frequency as national borders are crossed, allowing employees of multinational companies to access the installed LAN of any corporate campus worldwide.
**Efficient Power Management**

All Spectrum24 devices provide a Power Save or “Sleep” mode to help conserve batteries and improve productivity for mobile client devices.

**Selection of Antennas**

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

**SymbolCare**: Value-Added Services

Symbol offers the industry's most comprehensive selection of wireless services, including RF site surveys, network analysis and design, complete equipment installation, and preventive maintenance. Options for ongoing support contracts range from repair in Symbol's service centers to on-site network troubleshooting, remote management and repair. Symbol services information and support can also be conveniently accessed through a customized Web interface.

**Leveraging Symbol Experience to Extend Your Information Wirelessly**

Based on more than 25 years of experience, Symbol Technologies provides customers with an unmatched depth of real-world expertise across a broad range of industries. Our consultants, professional service providers, developers, and engineers are all drawn directly from the industries we serve. Based on our extensive expertise and experience in the wireless industry, Symbol protects your investment with its commitment to open standards, carefully planned migration paths, and options for scaling to meet your growing organization's needs.

With more than 70,000 wireless LAN sites installed, Symbol’s global wireless industry leadership brings you a unique combination of benefits that enables your organization's end-to-end networking strategy and optimizes the capture, computing, and communication of data crucial to today's business decision making and success.

For more information, visit our website: www.symbol.com/wireless