

SYSTIMAX[®]

SOLUTIONS

SYSTIMAX[®] AirSPEED[™] Solution

**Enhancing Network Connectivity
with Simple Mobility**



SYSTIMAX[®] Structured Connectivity Solutions

www.systemax.com

Wireless LANs (WLANs) are making significant inroads into the mainstream enterprise driven by advancements in the technology and maturity of the IEEE 802.11 standard. WLANs, also known as WiFi (Wireless Fidelity) networks, are not a novel networking technology to today's business, however there is growing recognition of the benefits of wireless as an extension to the wired network.

A number of factors have contributed to the corporate commercialization of WLAN technology setting the stage for continued growth and a future that promises further advancements in performance, network transparency, and broad adoption:

- Digital convergence driving data, voice, and security to the same enterprise network manager responsible for the network infrastructure
- Awareness of wireless networking in the home and in the public "hot spots" markets, driving corporate users to demand the same flexibility at work – online anywhere, anytime
- Availability of wireless-ready clients, such as PDAs and laptops, supporting high-speed 802.11-based standards, rendering wireless networks more suitable for mainstream business applications
- Successful industry cooperation to address known security issues unique to wireless networks
- Productivity gains associated with continuous access to the network to enable effective workgroup collaboration and seamless communication among knowledge workers
- Technology advancements reducing the level of radio frequency (RF) expertise needed to manage WLANs
- Realization that wireless access points (APs) are another end point device delivering connectivity
- Enterprise class technology giving business the peace of mind to extend enterprise network connectivity with simple mobility.

When business demands for increased productivity and flexibility require extending the network, look to SYSTIMAX® Solutions, the global leader in Structured Connectivity Solutions for enterprise customers.

SYSTIMAX® AirSPEED™ Solution

SYSTIMAX AirSPEED Solution – Delivering Simple Mobility

The wireless access point, or AP, is a device used to extend the existing Ethernet network (structured cabling) to mobile clients, such as laptops and PDAs, enabling mobility, productivity, and flexibility. Mobile clients can connect to a single AP, or move between multiple APs located within the same vicinity while maintaining network connectivity. The AP is another endpoint in the physical infrastructure connecting mobile devices to the wired network.

Certified SYSTIMAX AirSPEED BusinessPartners are trained to design and install the wireless network, virtually eliminating the need for an expensive site survey. These SYSTIMAX BusinessPartners gather customer requirements upfront and analyze building floor plans during the network design phase to ensure optimal placement of the APs. APs are installed and tested based on enterprise requirements including where signal is needed most, bandwidth expectations, and the types of clients that will be operating on the wireless network.

Designed for flexibility of installation in the ceiling (or plenum), on the ceiling, or on the wall, SYSTIMAX Solutions™ recommends installation of APs in the ceiling coupled with antennas for a clear signal throughout the enterprise. Installation in the ceiling also mitigates the risk of tampering with or theft of the device.

Once installed, the APs are integrated with the data network through SYSTIMAX copper solutions to the switch or router. Network initialization, configuration, and management should be performed by the network administrator based on overall network requirements.

Efficiency and Productivity:

Today's Enterprise Competitive Advantage

Operational efficiency and improved productivity are becoming even more valuable assets. The corporate directive to do more with less, which business leaders have been required to address over the past several years, has created pressure to drive gains in productivity.

As a result of this new focus, the lines have been blurred between where and how employees work, with less emphasis on being at a desk in order to work effectively. The virtual workplace is becoming commonplace in today's enterprise, allowing workers to stay connected wherever work occurs.

The answer to the 'more with less' challenge is simple: provide seamless mobility by overlaying a wireless LAN as a complement to the wired network. WLAN provides the enterprise with the broad coverage, flexibility and freedom to drive worker effectiveness. Competitive advantage can then be achieved through higher productivity gains among employees and a greater impact to corporate profitability.



SYSTIMAX AirSPEED Solution

SYSTIMAX Structured Connectivity Solutions provides one of the world's most robust, responsive and reliable network infrastructures. The introduction of the SYSTIMAX AirSPEED Solution continues the legacy with the latest innovation brought to you by SYSTIMAX Labs.

The SYSTIMAX AirSPEED Solution combines state-of-the-art, enterprise class APs with signal enhancing antennas (SEAs) and rack-mounted Power over Ethernet (PoE) devices to enable mobility, productivity, and flexibility in the workplace.

The IEEE 802.11 standard defines three modes of operation for WLANs

- **802.11b** defines an 11 Mb/s data rate, operating at 2.4 GHz, with three non-overlapping channels. 802.11b is the most prevalent WLAN technology deployed today.
- **802.11g** defines a 54 Mb/s data rate, operating at 2.4 GHz, with three non-overlapping channels. 802.11g is backwards compatible with 802.11b.
- **802.11a** defines a 54 Mb/s data rate, operating at 5 GHz, with 13 non-overlapping channels. This technology represents a crucial component for large-scale wireless deployments and the future success of voice over WLANs (VoWLANs).

The SYSTIMAX AirSPEED AP542 and AP541 APs overlay rich features to the 802.11 standard to give enterprises peace of mind when extending mobility to their network. The AP542, the solution's premiere access point, is a dual-band, tri-mode device that simultaneously supports 802.11a, 802.11b, and 802.11g clients for greater deployment flexibility. We believe both APs offer the highest performing wireless technology available on the market and support the most advanced security protocols including Wi-Fi Protected Access (WPA2™). In addition, both support the newly ratified 802.11i standard to include Advanced Encryption Standard (AES), thereby helping to minimize the security concerns of today's enterprise.

• Performance Enterprises Demand from SYSTIMAX Solutions

- Highest data throughput in simultaneous operation of 802.11a and 802.11g
- WMM™ and 802.11e ready for the quality of service (QoS) required for wireless voice and video
- Twice the memory of AP's currently in the market allowing for remote software upgrade capacity

• Advanced Security Features

- 802.11i, including the government approved AES - the latest in encryption technology
- Advanced security protocols support WPA2™ including IEEE 802.1x user authentication and dynamic per-user, per-session rotating keys
- Intra-cell blocking to prevent eavesdropping between devices
- Up to 16 separate VLANs per radio each able to support a different security setting
- Secure management interfaces - SNMPv3, SSL and SSH protect against unauthorized AP changes
- Intelligent rogue AP and client detection and notification

• Additional Features to Simplify Installation and Management

- Secure management via protected web interface (HTTPS) and secure SNMP (SNMPv3)
- Automatic frequency channel selection
- Configurable transmit power setting for cell sizes adjustment, allowing maximum capacity installations
- Support for up to four Signal Enhancing Antennas (SEAs)
- 802.3af standard compliant for Power over Ethernet (PoE)

Installation of the AP in the ceiling (or plenum) coupled with SEAs provides greater flexibility in installation and helps mitigate the risk of tampering or theft. Most important, Dual-band SEAs ensure a clear RF signal where coverage is critical and in environments that might obstruct signal transmission.

Midspan PoE devices are a cost effective alternative to electrical wiring. Leveraging SYSTIMAX copper solutions, midspan PoE devices insert electrical current over existing Category 5e and Category 6 cabling, thereby maximizing the cost efficiency of one installer for power and RF.

Mobile Application Support for the Enterprise

Enterprise customers benefit from extending the wired network with mobility as it enables productivity, security, and greater collaboration among workgroups. Additional value is added by the ability to provide connectivity during moves, adds, and changes, guest access for visiting employees and suppliers, network redundancy, and temporary LANs for classrooms, training, and events.



Wireless networking also benefits vertical markets, such as healthcare, education, and banking - by offering specific applications to address specific needs.

The following are some of the many applications made possible through the use of the SYSTIMAX AirSPEED Solution:

- Brokerage/Banking – Replication of branch office networks, mobile trading
- Hospitals/Medical – Deliver patient information instantly to doctors
- Government – Office buildings, military facilities, disaster recovery
- Education – Campus connectivity, temporary classrooms, flexible registration, access to records
- Manufacturing/Warehousing – Real-time data collection, inventory management, quality control
- Consulting/Accounting – Audit teams or small workgroups, rapid data collection
- Food Services – Mobile order entry
- Retail – Point-of-sale terminals, inventory control, hand-held scanners
- Transportation – Customer check-in, vehicle maintenance yards
- Insurance – Claims assessment, disaster recovery

The Next Generation in WLAN Technology

SYSTIMAX Labs has a long heritage and a proven track record as a global leader in cabling infrastructure design, development, innovation and implementation with the foresight to anticipate future networking demands in the Structured Connectivity market. The SYSTIMAX AirSPEED Solution leverages that expertise to provide a logical extension to the LAN that enables mobility in the enterprise.

The SYSTIMAX Solutions commitment to standards-based technology is evident in the SYSTIMAX AirSPEED Solution. This commitment will continue, as future wireless technology is developed to support evolving wireless enterprise applications:

VoWLAN – delivering Quality of Service required for voice over 802.11 network technology

Building Automation Systems (BAS) – such as access devices, wireless IP cameras, wireless detection of heat, smoke and carbon monoxide

Security – wireless card readers, IP encrypted cameras

Location sensing and identification

Industry-leading Support

SYSTIMAX Solutions believes it is the only company with the depth, reputation and global resources to provide support when and where enterprises demand with global sales facilities, 4-tier technical support and a network of highly trained BusinessPartners on every continent of the world. Every installation of the SYSTIMAX AirSPEED Solution is performed by a Certified SYSTIMAX AirSPEED BusinessPartner to give enterprises peace of mind on network investment.

According to independent researchers, SYSTIMAX structured cabling solutions are the most widely deployed cabling system in the world. Today, SYSTIMAX cabling is being installed at a rate of more than 1,000 miles per day (1,600 km), in more than 90 countries. Why? The answer is simple: We believe SYSTIMAX Solutions builds the best cabling systems and serves enterprises well. So whether business requires the best copper or fiber solutions or a wireless LAN extension to your wired network, we believe SYSTIMAX Solutions delivers the best communications infrastructure in the industry.



Extending Network Connectivity with Simple Mobility

Backed by SYSTIMAX Labs, whose technological expertise brought you SYSTIMAX SCS, your SYSTIMAX AirSPEED Solution provides the same quality and performance as our industry-leading copper and fiber solutions.

To learn more about the SYSTIMAX AirSPEED Solution, please contact your SYSTIMAX Solutions representative who will be glad to explain how SYSTIMAX Solutions has surpassed the expectations of companies large and small around the world and how quickly, easily and cost effectively we can do the same for your business.

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