

Wireless Switch WS5100

High Performance Overlay Wireless Switch

WIRELESS LANS

The Power of Centralized Intelligence

The Wireless Switch WS5100 from Symbol Technologies delivers security and scalability, manageability, availability, reliability and total cost of ownership (TCO) savings.

End-to-End Layered Security

Our comprehensive security mechanisms including access-control, authentication, and encryption can be deployed at various locations in the enterprise network: the perimeter, the network, the servers, and client devices. With support for the wireless security standards of today and the ability to easily upgrade to tomorrow's standards, the WS5100 is the wireless gatekeeper for your enterprise network.

Centralized Management

The WS5100 provides unified management of hardware, software configuration, and network policies. Centralized management also enables the automatic configuration of all Access Ports eliminating the need and the associated costs to configure and manage each access point.

Scales and Grows Easily

Adding capacity and new functionality is easier and less expensive than an access point-based wireless LAN. The slim 1RU form factor fits easily into any standard network equipment rack. Each WS5100 supports up to 48 Access Ports and 32 WLANs.

Reliability

The low risk and high business value of multi-layer network designs is extended to wireless networks with the flexible overlay architecture of Symbol's Wireless Switch WS5100. The WS5100 is designed to be integrated with the reliable approach of multi-layer networking to enable predictable and high performance wireless networks, while preserving network integrity. In addition, the WS5100 can be implemented using the standard networking best practices of modularity.

Lower Total Cost of Ownership

The WS5100 removes the overhead and complexity of first generation access point-based wireless LANs. Extensive functionality, expandability, and centralized management eliminates time and management costs associated with access point-based solutions, providing a lower total cost of ownership and outstanding investment protection.

Symbol Enterprise Mobility Services offers comprehensive support and technical expertise to design, deploy and maintain successful mobility solutions.

For more information, contact Symbol at +1.800.722.6234 or +1.631.738.2400, or visit us on the web at: www.symbol.com



FEATURES

- Secure architecture:** Designed for maximum network security
- Security with mobility:** 802.11i and Symbol's mobility features ensure security—and performance
- Encryption:** WEP, WPA-TKIP, KeyGuard™ MCM, WPA2 and WTLS VPN
- Authentication:** Access Control Lists (ACLs), 802.1X, Kerberos and Certificate Based Public Key Infrastructure (PKI)
- Upgradeable Access Ports:** Add new functionality quickly and easily via the WS5100
- Automatic Channel Selection:** Automatically selects the best channel based on noise and signal properties
- Load Balancing and Pre-emptive Roaming:** Ensures devices roam before connection quality erodes
- Per Device, Bandwidth Allocation-Weighted Fair Queuing:** "Virtual AP", Power Save Protocol and more
- Virtual AP:** VLAN support provides complete control of broadcast traffic
- Flexible software architecture:** Supports a heterogeneous device environment
- Radio support:** 2.4 GHz/5 GHz frequencies, frequency hopping, direct sequence, OFDM encoding techniques and 802.11a/b/g
- Upgradeable standards support:** Ability to easily and cost-effectively support future 802.11 standards

BENEFITS

- A single point of entry that can be easily secured
- Highest level of data and network protection without sacrificing fast roaming
- Complete encryption suite ensures privacy of data during transmission
- Complete authentication suite validates user identity and authorizes network access
- Cost-effective implementation of the latest features
- Reduces installation costs by eliminating the need for manual configuration of Access Ports
- Ensures loads are balanced between Access Ports to ensure quality application performance
- Enables multiple mobile and wireless applications with quality of service when network is congested
- Ensures broadcast traffic reaches only intended devices
- Delivers secure application-specific wireless network access with quality of service
- Supports the broadest and most flexible radio technology; ability to accommodate new coverage, radio types, channels and spectrum
- Delivers outstanding investment protection—no forklift upgrade required to implement new standards and expanding infrastructure

WS5100 Specification Highlights

Packet Forwarding

802.1D-1999 Ethernet Bridging; 802.11-802.3 Bridging ; 802.1Q VLAN Tagging & Trunking; Proxy ARP; IP packet steering-redirection

Wireless Networking

Wireless LAN:	Supports 32 WLANs; Multi-ESS/BSSID traffic segmentation; VLAN to ESSID mapping; Power Save Protocol Polling; Pre-emptive Roaming; Congestion control with bandwidth allocation
Access Port Radios:	Supports 1-48 Access Ports; Automatic Access Port Adoption with ACLs; Access Port Load Balancing; Frequency Hopping Access Point-to-Access Port Conversion; Direct Sequence Access Point-to-Access Port Conversion
Supported Access Ports and Access Points:	Access Ports — AP100 (802.11b); AP200 (802.11a/b); AP300 (802.11a/b/g ready) Access Points — AP3021; AP4121
Radio & Frequency Management:	Automatic Channel Select (ACS); Transmit Power Control (TPC); Country Code based RF Configuration; 802.11b – 3 Non-overlapping channels; 802.11a—11 Non-overlapping channels; 802.11g—3 Non-overlapping channels (ready)

Network Security

Packet Filtering:	L2/3/4 Stateful Packet Analysis; Network Address Translation (NAT)
Authentication Mechanisms:	Access Control Lists (ACLs); Pre-Shared Keys (PSK); 802.1x/EAP—Transport Layer Security (TLS), Tunneled Transport Layer Security (TTLS), Protected EAP (PEAP); Kerberos
Transport Encryption:	WEP 40/128 (RC4), KeyGuard, WPA—TKIP, AES
Key Exchange and Management:	Extensible Authentication Protocol (EAP) Kerberos

Optimized Wireless QoS

Per Device Weighted Fair Queuing:	8 queues per device; Bandwidth management controls; Power Save Protocol (PSP) integration
RF Priority:	802.11 traffic prioritization and precedence
Classification & Marking:	Layer 1-4 Packet Classification; 802.1p VLAN Priority; DiffServ/TOS

System Resiliency & Redundancy

Redundant Warm-Standby Switch ; Access Port Load Balancing; Hardware based watchdog timer

Management

Command Line Interface (Serial, Telnet); Secure Web Based GUI (SSL); Telnet Server; SNMP v1/v2; SNMP Traps—40+ user configurable options; Syslog; TFTP Client; Simple Network Time Protocol (SNTP); Text-Based Switch Configuration Files; DHCP (Client/Server/Relay, Switch Auto-Configuration with DHCP options); Authentication (Radius Client, Kerberos Authentication Server); MIBs (MIB-II, Etherstats, Wireless Switch specific monitoring and configuration)

Physical Characteristics

Form Factor:	Standard 1RU
Dimensions:	1.73 in. H x 16.89 in. W x 15.93 in. D 43.9 mm H x 429 mm W x 404.6 mm D
Weight:	13.75 lbs./6.25 kg
Physical Interfaces:	RS232 serial console port; 10/100/1000 Ethernet ports
MTBF:	>75,000 Hours

Power Requirements

AC Input Voltage:	100-240 VAC
Max AC Input Current:	6A@115 VAC, 3A@230 VAC
Max Power Consumption:	100-240 VAC, 50/60 Hz, 3A, 240 VAC, 50/60 Hz, 1.5A
Input Frequency:	47 Hz to 63 Hz

User Environment

Operating Temperature:	50°F to 95°F/10°C to 35°C
Storage Temperature:	40°F to 149°F/-40°C to 65°C
Operating Humidity:	5%-85% (w/o condensation)
Storage Humidity:	5%-95% (w/o condensation)
Operating Altitude:	50 ft. to 10,000 ft./16 m to 3,048 m
Storage Altitude:	50 ft. to 35,000 ft./16 m to 10,600 m

Regulatory

Safety Certifications:	FCC (Art.15, part B), Industry Canada, CE, VCCI, C-Tick, BSMI
EMI Compliance:	UL 1950, cUL (Canada), VDE GS, DENAN (Japan), CB Cert

Part Numbers

WS-5100-R140-06-WW	6 Port WS5100 Wireless Switch
WS-5100-R140-12-WW	12 Port WS5100 Wireless Switch (Z-Pak)
WS-5100-R140-18-WW	18 Port WS5100 Wireless Switch (Z-Pak)
WS-5100-R140-24-WW	24 Port WS5100 Wireless Switch (Z-Pak)
WS-5100-R140-30-WW	30 Port WS5100 Wireless Switch (Z-Pak)
WS-5100-R140-RS-WW	Redundant WS5100 Wireless Switch
WS-5100-UC-WW	6 Port Upgrade

About Symbol Technologies

Symbol Technologies, Inc., The Enterprise Mobility Company™, is a recognized worldwide leader in enterprise mobility, delivering products and solutions that capture, move and manage information in real time to and from the point of business activity. Symbol enterprise mobility solutions integrate advanced data capture products, radio frequency identification technology, mobile computing platforms, wireless infrastructure, mobility software and world-class services programs under the Symbol Enterprise Mobility Services brand. Symbol enterprise mobility products and solutions are proven to increase workforce productivity, reduce operating costs, drive operational efficiencies and realize competitive advantages for the world's leading companies. More information is available at www.symbol.com



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