

WS 2000

Wireless Switch



Wireless Switch System

INTEGRATED WIRED AND WIRELESS LAN



Integrated Wired and Wireless Networking for Branch Office and Small/Medium Enterprises

The WS 2000 Wireless Switch from Symbol Technologies is a single system that delivers the security, management, and mobility capabilities needed to create and manage enterprise-class Ethernet and Wi-Fi (IEEE 802.11b, 802.11a) wireless networks. This elegant all-in-one network solution includes a secure gateway for simplicity in provisioning network services such as Network Address Translation, (NAT), DHCP Server, and a firewall. Onboard support for Power over Ethernet (PoE) ensures flexible low-cost installation.

Priced and designed to meet the needs of small to medium enterprises and branch offices, the WS 2000 delivers Symbol's award-winning next-generation WLAN technology to retail stores, warehouses, restaurants, healthcare clinics, satellite offices and more.

Next Generation WLAN: the Power of Switch-Based Centralized Intelligence

The WS 2000 delivers Symbol's award-winning next-generation wireless LAN technology. A wireless switch, the WS 2000 centralizes intelligence for mobility and provides unprecedented power and control—and reduced deployment and management costs. The WS 2000 delivers connectivity through low cost Access Ports, which are 'zero configuration' devices operational right out of the box, and can be mounted almost anywhere—even inside ceiling tiles.

Enterprise-Class Security

A layered security model provides end-to-end enterprise-class security. Robust authentication and encryption mechanisms validate user identity, authorize network access, and ensure privacy of data during transmission. The Stateful Packet Inspection firewall protects against a wide range of attacks, including Denial of Service, and enables traffic-filtering based on protocols and ports.

Easy to Upgrade, Manage and Scale

Additional capacity and new functionality can be added to the network easily and less expensively than an access point-based wireless LAN. New features and standards (such as forthcoming 802.11i security standard) are loaded into the WS 2000, the central point of management. The WS 2000 automatically configures Access Ports—eliminating the need and the associated costs to configure and manage individual access points. Support for secure HTTP, Command Line Interface (CLI) and SNMP enables flexible anytime, anywhere remote management. Easy to scale, each WS 2000 supports up to 6 Access Ports and 3 wireless LANs, each with its own security and network policies.

Features	Benefits
Switch-based architecture with centralized intelligence	Delivers unparalleled functionality, performance and simplicity of implementation and management
Upgradeable to support future 802.11 standards	Delivers outstanding investment protection—no rip-and-replace required to support new standards
Works in conjunction with Symbol's family of next-generation Access Ports—AP 100 (802.11b) and AP 200 (802.11a/b); supports 2.4 GHz and 5 GHz frequencies	Lower cost and increased functionality offers broadest and most flexible radio technology support; easy to upgrade to support new standards; provides maximum flexibility in wireless network design
Easily scaleable—each WS 2000 supports up to 6 Access Ports	Enables fast, easy and cost-effective expansion to meet growing company needs
Enterprise Class Security (ACLs, 802.1X, Kerberos, WEP, WPA-TKIP)	Provides authentication and encryption mechanisms to validate user identity and authorize network access, and ensure privacy of data during transmission
Integrated Secure Gateway	Provides a self-contained, one box network solution with integrated Routing (RIP v1, v2, Static Routes), DHCP (client and server) NAT (1-1, 1-Many, Port Forwarding), Stateful Packet Inspection Firewall and WAN Uplink (with PPPoE support)
Integrated 802.3af Ethernet ports	Eliminates the need to run expensive power lines and install outlets to provide power to Access Ports
Symbol wireless mobility enhancements	Delivers true enterprise mobility through Symbol value-add features including voice prioritization, Power Save Protocol, load balancing and pre-emptive roaming, multiple BSSID support ("Virtual AP") for wireless broadcast domain separation, automatic channel selection and transmit power control
Supports secure HTTP, Command Line Interface (CLI) and SNMP	Remote management for flexible anytime, anywhere management and troubleshooting

Lower Total Cost of Ownership (TCO)—
Outstanding Investment Protection
The WS 2000 provides a centralized architecture and all-in-one design that not only simplifies and reduces the cost of deploying, managing, upgrading and scaling a wired and

wireless network, but also provides the flexibility to support the standards of today and tomorrow. The result is a lower TCO, and outstanding investment protection.

For more information on the WS 2000, visit
www.symbol.com/ws2000

WS 2000 Specification Highlights

Packet Forwarding	
802.1D-1999 Ethernet Bridging	
802.11-802.3 Bridging	
Wireless Networking	
Wireless LAN:	Supports 3 WLANs Multi-ESS/BSSID traffic segmentation Pre-emptive Roaming Virtual AP support Access Port Load Balancing
Access Port Radios:	Supports 1-6 Access Ports Automatic Access Port Adoption with ACLs Access Port Load Balancing
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
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	
Voice Prioritization	
Power Save Protocol (PSP) integration	
Management	
Command Line Interface (Serial, Telnet)	
Web Based GUI	
Telnet Server	
SNMP v1/v2/v3	
Syslog	
TFTP Client/Server	
FTP Client/Server	
Text-Based Configuration Files	
MIBs: MIB-II, Ping MIB, TraceRoute MIB, Symbol MIB	

Physical Characteristics	
Form Factor:	Standard 1RU
Dimensions:	1.75 in. H x 11.25 in. W x 8 in. D 44.5 mm H x 286 mm W x 203 mm D
Weight:	1.41 lb/0.64 kg
Physical Interfaces:	1 - RS232 serial console port 7 - 10/100 Ethernet ports (including 1 WAN uplink port), 4 Ports support 802.3af Power-over-Ethernet
MTBF:	>50,000 Hours
Power Requirements	
AC Input Voltage:	100-250 VAC
Max AC Input Current:	3A@230 VAC
Max Power Consumption:	120 W
Input Frequency:	47 Hz to 63 Hz
User Environment	
Operating Temperature:	0°C to 40°C (50°F to 95°F)
Storage Temperature:	-40°C to 70°C (40°F to 149°F)
Operating Humidity:	8% - 95% (w/o condensation)
Storage Humidity:	5% - 95% (w/o condensation)
Operating Altitude:	16 m to 3,048 m (50 ft to 8,000 ft)
Storage Altitude:	16 m to 10,600 m (50 ft to 12,000 ft)
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-2000-SME-WW	

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