



# WS2000

All-in-one wired and wireless switch for small to medium-sized business and branch offices



## FEATURES

### Switch-based centralized upgradeable architecture

Enhanced performance and functionality; simplified deployment/management, investment protection; low TCO

### 802.11a/b/g compatibility

Lower cost; broad, flexible radio support

### Wi-Fi Multimedia (WMM) extensions support

Enables voice/video applications with wired QoS extension support

### SIP Call Admission Control

Controls the number of active SIP sessions that are initiated by a wireless VoIP phone

### Enterprise-class security: 802.1X/EAP Kerberos, WPA2 (802.11i)

Enterprise-class authentication and encryption; ensures privacy of data during transmission

## Simple, cost-effective wired and wireless networking for enterprise branch offices

The WS2000 Wireless Switch is a powerful all-in-one solution that simplifies and helps reduce the costs of managing wired and wireless (802.11a/b/g) networks in enterprise branch offices. The integrated router, gateway, firewall, Power-over-Ethernet (PoE) and more eliminate the cost of purchasing and the complexity of managing multiple pieces of equipment. Support for Wi-Fi Multimedia extensions (WMM) and SIP Call Admission Control enables the WS2000 to provide peak performance for even the most demanding applications, including voice and video. The ability to easily and cost-effectively scale to meet growing needs, as well as upgrade to support new security, radio and other standards provides the assurance that the WS2000 will meet your needs today and tomorrow. The WS2000 — enterprise-class networking functionality, priced for the small to medium-sized business or enterprise branch office.

## End-to-end enterprise-class security

End-to-end enterprise-class security keeps your network and data secure with support for WPA2, an integrated AAA (authentication, authorization and accounting) server for authenticating users, rogue access port/point (AP) detection, stateful packet inspection firewall, IP filtering and more. Your network resources are protected — only authorized users are granted access to your network. With the WS2000, your network perimeter and your resources are more secure.

## Easy to manage and deploy

The WS2000 offers a level of management simplicity and flexibility that eliminates the need and cost for onsite IT personnel to manage the wireless networks. Fewer technical onsite staff in restaurants, retail stores, warehouses and healthcare clinics can easily manage the wired and wireless network through an intuitive web-based interface and centralized management and control of access ports. For larger corporations deploying the WS2000 in branch offices, secure remote management capabilities (with SSH and SNMP v3 support) and auto deployment capabilities (with DHCP options) enable staff in the centralized network operations or data center to easily control and manage devices anywhere in the world. Implementation is fast and easy: the plug-and-play WS2000 automatically detects and configures access ports with the best channel. And tight integration with the wired network simplifies the extension of wired virtual LANs (VLANs), improving network performance as well as providing added protection against unauthorized access.

## Ideal for hotspots

The WS2000 is uniquely suited for hotspots, enabling hotels, airports, lounges, restaurants and more to offer visitors convenient anywhere anytime access to the Internet, email, and corporate applications. Support for authentication and Radius accounting enables organizations and service providers to offer secure wireless public access, either as a complimentary service, or an additional revenue stream.

## SPECIFICATION SHEET

WS2000

All-in-one wired and wireless switch for small to medium businesses and branch offices

### Active/standby configuration

Robust network redundancy through multiple links

### AAA integrated server: verifies identity of users and administrators

Eliminates the cost/need for a separate RADIUS server

### Integrated secure gateway: routing, DHCP, NAT, Stateful Packet Inspection Firewall and WAN uplink (with PPPoE)

Eliminates need to purchase and manage additional equipment; simplifies provisioning of network services

### IP Filtering

Provides flexibility in defining access policies

### Comprehensive features to enable public hot spots

Provides secure public access — complimentary or service-based

### Rogue AP detection

Identifies and reports unauthorized access ports and points

### IPSec VPN

Cost-effective secure point-to-point communications

### 802.3af Power-over-Ethernet (PoE) support:

Eliminates need and expense to power access ports and points

### Lower Total Cost of Ownership (TCO)

The WS2000 reduces the complexities and costs associated with deploying, managing, securing, upgrading and scaling your wired and wireless network — delivering outstanding investment protection and a lower TCO. Motorola Enterprise

Mobility Services provide the comprehensive support and technical expertise you need to design, deploy and maintain the most successful mobility solutions. For more information on the WS2000, contact us at +1.800.722.6234 or +1.631.738.2400, or visit [motorola.com/ws2000](http://motorola.com/ws2000)

## WS2000 Series Specifications

|   |  |
|---|--|
| <b>Packet Forwarding</b>  |  |
| 802.1D-1999 Ethernet Bridging; 802.11-802.3 Bridging  |  |
| <b>Wireless Networking</b>  |  |
| Wireless LAN:   | Supports 8 WLANs; Virtual AP - Multi-ESS/BSSID traffic segmentation; Pre-emptive Roaming; Automatic Load Balancing   |
| VLAN Support:   | Wireless LAN to VLAN mapping; auto assignment of VLANs based on user authentication  |
| Access Port Radios:   | Supports 1-6 802.11a/b/g access ports; Automatic Access Port Adoption with ACLs; Auto Channel Selection capability   |
| Radio and Frequency Management:   | Dynamic Frequency Selection and Transmit Power Control (TPC); country code based RF Configuration  |
| <b>Network Security</b>   |  |
| 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), Tunnelled Transport Layer Security (TTLS), Protected EAP (PEAP); Kerberos; Integrated AAA server with native support for PEAP and TTLS |
| Transport Encryption:   | WEP 40/128 (RC4), KeyGuard, WPA—TKIP, AES—CCMP; (802.11i WPA2)   |
| Key Exchange Management:  | Extensible Authentication Protocol (EAP); Kerberos   |
| Rogue AP Detection:   | AP scanning on one or all channels; Motorola mobile client assist  |
| IP Filtering:   | Configurable incoming and outgoing IP filtering policies on packets within the same subnet/WLAN and between wired and wireless hosts   |
| <b>Optimized Wireless QoS</b>   |  |
| Voice Prioritization; wireless bandwidth management; Power Save Protocol (PSP) integration; Wi-Fi Multimedia Extensions (WMM) and SIP Call Admission Control  |  |
| <b>Management</b>   |  |
| ECommand Line Interface (Serial, Telnet, SSH); Admin authentication via Radius server; Java Applet (HTTP, Secure HTTP); Syslog; Text-Based Configuration Files; Remote configuration and firmware update (via TFTP, FTP); automatic update of configuration and firmware via DHCP options; SNMP v1/v2/v3; MIBs—MIB-II, Ping MIB, TraceRoute MIB, Motorola MIB |  |

|  |   |
|--|---|
| <b>High Availability</b>                                     |   |
| Active/standby configuration support                         |   |
| <b>Physical Characteristics</b>                              |   |
| Form Factor:   | Standard 1RU  |
| Dimensions:  | 1.75 in. H x 11.25 in. W x 8 in. D<br>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<br>7 - 10/100 Ethernet ports (including 1 WAN uplink port), 4 Ports support 802.3af Power-over-Ethernet CF Card (for storage)                   |
| MTBF:  | >50,000 Hours   |
| RoHS Compliant:  | Yes   |
| <b>Power Requirements</b>                                    |   |
| 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  |
| <b>User Environment</b>                                      |   |
| Operating Temp:  | 32°F to 104°F/0°C to 40°C   |
| Storage Temp:  | -40°F to 158°F/-40°C to 70°C  |
| Operating Humidity:  | 5% - 95% (w/o condensation)   |
| Storage Humidity:  | 5% - 95% (w/o condensation)   |
| Operating Altitude:  | 50 ft. to 8,000 ft./16 m to 2,438 m   |
| Storage Altitude:  | 50 ft. to 12,000 ft./16 m to 3,658 m  |
| <b>Regulatory</b>  |   |
| Safety Certifications:                                       | UL, cUL (60950-1), EN60950-1, TUV/GS  |
| EMI Compliance:  | FCC (Part 15 Subpart B), VCCI, EN 55024, EN 61000-3-2, EN 61000-3-3, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11 |
| <b>Part Numbers</b>  |   |
| WS-2000-SME-WWR  |   |
| WS-2000-1C-ABG-WWR (WS2000 and 1 AP300 (802.11a/b/g) bundle) |   |
| WS-2000-2C-ABG-WWR (WS2000 and 2 AP300 (802.11a/b/g) bundle) |   |
| WS-2000-2C-BG-WWR (WS2000 and 2 AP300 (802.11b/g) bundle)    |   |



**MOTOROLA**

[motorola.com](http://motorola.com)

Part number SS-WS2000. Printed in USA 05/07. MOTOROLA and the Stylized M Logo are registered in the US Patent & Trademark Office. Symbol is a registered trademark of Symbol Technologies, Inc. All other product or service names are the property of their respective owners. ©Motorola, Inc. 2007. All rights reserved. For system, product or services availability and specific information within your country, please contact your local Motorola office or Business Partner. Specifications are subject to change without notice.