



WS5100

High performance wireless switch
for mid to large enterprises



FEATURES

Adaptive AP: extending the enterprise

Enables centralized management of mesh access points at remote sites including automatic firmware upgrades as well as site survivability of those remote locations

Centralized architecture

A single point of entry that can be centrally managed, easily secured, and lowers the overall cost of deployment and management

Comprehensive layered security

Exceptional level of data and network protection without sacrificing fast roaming, including: WPA2-CCMP (with 802.11i fast roaming options), integrated RADIUS Server, IPSec VPN Gateway, Secure Guest Access Provisioning and advanced wireless intrusion detection

L2 and L3 roaming

Seamless roaming of mobile clients even across complex distributed networks

Moving at the speed of business

The WS5100 Wireless Switch from Motorola provides enhanced support for enterprise mobility and multimedia applications, as well as increased security and manageability. Based on Motorola's Wi-NG (Wireless Next Generation) architecture, the WS5100 enables seamless campus-wide roaming, more robust failover capabilities, enhanced security, improved mobile client battery life, and increased voice capacity. Robust security features include integrated intrusion detection, an IPSec VPN gateway, and secure guest access provisioning. Automatic configuration and firmware updates, built-in process monitors, troubleshooting tools and a simple user interface make network deployment and management easy.

Robust enterprise mobility

Business needs should dictate network coverage, not the other way around. That's why the Motorola WS5100 allows you to deploy "thin" access ports in Layer 3 network designs, and enables campus-wide roaming of mobile clients across Layer 3 boundaries — without requiring additional client software or hardware. Used in concert with Motorola handheld devices, the WS5100 further enhances the fast roaming capabilities and extends client battery life. WMM (Wi-Fi Multimedia) with "power save" extensions also provides additional voice capacity. Supporting mobile workers has never been so easy. With the adaptive AP support, Enterprise Mobility is taken a step further, providing capabilities to extend the enterprise to remote/branch locations with the advantages of centralized manageability.

End-to-end layered security

The WS5100's comprehensive security includes integrated features such as intrusion detection, an IPSec VPN gateway, AAA/Radius server (for WPA/WPA2 termination on the box) and "hotspot" provisioning capabilities for secure guest access. The stateful packet inspection firewall offers protection against denial of service attacks while optimizing network traffic. With support for the wireless security standards of today and the ability to easily upgrade to tomorrow's standards, the WS5100 delivers true value.

Simplified, centralized management

The WS5100 provides unified management of network hardware, software configuration, and network policies, and has built-in process monitors and troubleshooting tools. Motorola's Mobility Services Platform (sold separately) provides both device level management capabilities and centralized management of the WS5100 infrastructure in distributed locations. With active/active failover and clustering capabilities, as well as mobile unit load balancing, the WS5100 maximizes network uptime while minimizing network latency. Each WS5100 supports up to 48 access ports and 32 WLANs.

For more information, visit us on the web at www.motorola.com/ws5100 or access our global contact directory at: www.motorola.com/enterprisemobility/contactus

SPECIFICATION SHEET

WS5100

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Real Time Locationing System (RTLS)

Provides rich locationing services to enable real-time enterprise asset-tracking through support for 802.11, RFID and third party locationing solutions — including industry leaders AeroScout, Ekahau, and Newbury Networks. Standards-based support for EPC Global ALE interface for processing and filtering data from all active and passive tags; and EPC Global LLRP interface for passive RFID tag support

Clustering and failover features

Supports multiple levels of redundancy and failover capabilities to ensure network availability

True mobility

Many Motorola-unique features combine to extend mobile device battery life and enable seamless roaming throughout your campus environment

Quality of Service (QoS)

Enhances voice and video capabilities; prioritizes network traffic to minimize latency and provide optimal responsiveness to all users; improves battery life and capacity; enables granular control of bandwidth at the mobile device level

WS5100 Specifications

Packet Forwarding

802.1D-1999 Ethernet bridging; 802.11-802.3 bridging; 802.1Q VLAN tagging & trunking; proxy ARP; IP packet steering-redirect

Wireless Networking

Wireless LAN: Supports 32 WLANs; multi-ESS/BSSID traffic segmentation; VLAN to ESSID mapping; auto assignment of VLANs (on RADIUS authentication); power save protocol polling; pre-emptive roaming; VLAN Pooling

Bandwidth management: Congestion control per WLAN; per user based on user count or bandwidth utilization

Access ports: Supports 1-48 "thin" access ports; automatic access port adoption with ACLs; access port load balancing; direct sequence access point-to-access port conversion

Adaptive AP: Supports 1-48 adoption of the Independent Motorola AP51X1 Access Point in Adaptive Mode for remote site and branch office solutions

Layer 2 or Layer 3 deployment of access ports

Layer 3 mobility (inter-subnet roaming)

Supported access ports and access points: Access ports – AP100 (802.11b) (L2 deployment only); AP300 (802.11a/b/g ready) (L2 or L3 deployments) with Static IP support
Access points – AP51X1 – Adaptive AP mode; AP4131 (L2 deployments only)

Network Security

Radio frequency automatic channel select (ACS); transmit power control management (TPC); country code-based RF configuration; 802.11b, 802.11g, 802.11a

Authentication: Access Control Lists (ACLs); pre-shared keys (PSK); 802.1x/EAP-transport layer security (TLS), tunneled transport layer security (TTLS), protected EAP (PEAP); Kerberos Integrated AAA/RADIUS server with native support for EAP-TTLS and EAP-PEAP (includes a built in user name/password database; supports LDAP)

Transport encryption: WEP 40/128 (RC4), KeyGuard, WPA-TKIP, WPA2-CCMP (AES), WPA2-TKIP

IPSec VPN gateway

Stateful Inspection Firewall

Access Control Lists (ACLs): L2/3/4 ACLs

Wireless IDS: Multi-mode rogue AP detection, client blacklisting, excessive authentication /association; excessive probes; excessive disassociation/deauthentication; excessive decryption errors; excessive authentication failures; excessive 802.11 replay; excessive crypto IV failures (TKIP/CCMP replay)

Anomaly Analysis: Source Media Access Control (MAC) = Dest MAC; Illegal frame sizes; Source MAC is multicast; TKIP countermeasures; all zero addresses

Wireless IPS via RF Management Suite

Secure guest access (Hotspot provisioning): Local Web-based authentication; URL redirection for user login; customizable login/welcome pages; support for external authentication/billing systems

RADIUS support (standard and Motorola vendor specific attributes):

- User-based VLANs (standard)
- MAC-based authentication (standard)
- User-based QoS (Motorola VSA)
- Location-based authentication (Motorola VSA)
- Allowed ESSIDs (Motorola VSA)

NAC support with third party systems from Microsoft and Sygate

Locationing

RSSI based triangulation for Wi-Fi assets

Tags supported: Ekahau, Aeroscout, Newbury, Gen 2 Tags

RFID support: Compliant with LLRP protocol. Built-in support for the following Motorola RFID readers: fixed (XR440, XR450, XR480); mobile (RD5000); and handheld (MC9090-G RFID)

Optimized Wireless QoS

RF priority: 802.11 traffic prioritization and precedence

Wi-Fi multimedia extensions: WMM-power save with admission control

Classification & marking: Layer 1-4 packet classification; 802.1p VLAN priority; DiffServ/TOS

System Resiliency & Redundancy

Active: Standby, Active:Active and 1:Many redundancy with access port and MU load balancing; self healing (on detection of RF interference or loss of RF coverage); critical resource monitoring

Dual firmware bank supports Image Failover capability

Management

Command line interface (serial, telnet, SSH); secure Web-based GUI (SSL); SNMP v1/v2/v3; SNMP traps-40+ user configurable options; Syslog; TFTP Client; secure network time protocol (SNTP); text-based switch configuration files; DHCP (client/server/relay), switch auto-configuration and firmware updates with DHCP options; multiple user roles (for switch access); Syslog; 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-5100-06-WWR 6 Port WS5100 Wireless Switch

WS-5100-12-WWR 12 Port WS5100 Wireless Switch

WS-5100-18-WWR 18 Port WS5100 Wireless Switch

WS-5100-24-WWR 24 Port WS5100 Wireless Switch

WS-5100-30-WWR 30 Port WS5100 Wireless Switch

WS-5100-36-WWR 36 Port WS5100 Wireless Switch

WS-5100-42-WWR 42 Port WS5100 Wireless Switch

WS-5100-48-WWR 48 Port WS5100 Wireless Switch

WS-5100-RS-WWR Redundant WS5100 Wireless Switch

WS-5100-UC-WW 6 Port Upgrade



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