WS5100

High performance wireless switch

FEATURES

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

L2 and L3 roaming
Supports inter-subnet roaming without additional client support. Seamless roaming of mobile clients within a simplified wireless network design.

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

Clustering and load balancing
Ensures loads are balanced between access ports to ensure quality application performance; supports multiple levels of redundancy in case of failure.

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.

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, contact us at +1.800.722.6234 or +1.631.738.2400, or visit us on the web at: www.symbol.com/ws5100

WS5100 Specifications

Mobility enablers
Virtual AP, Pre-emptive roaming, transmit power control, power save protocol, self-healing (triggered on loss or disruption of RF coverage). "Virtual AP" provides better control of broadcast traffic and enables multiple mobile and wireless applications with quality of service when network is congested. Pre-emptive roaming ensures Symbol mobile devices roam before signal quality degrades; PSP optimizes battery life; Self-healing provides continuous network coverage in the event of disruption.

Quality of Service (QoS)
Enhanced voice and video capabilities; prioritizes network traffic to minimize latency and provide optimal responsiveness to all users. Wi-Fi Multimedia Extensions (WMM-Power Save with Admission Control) for enhanced multimedia application support; improved battery life and capacity.

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; auto assignment of VLANs (on RADIUS authentication); power save protocol polling; pre-emptive roaming; congestion control
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

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) Access points – AP4131 (L2 deployments only)

WLAN – GRE tunnel mapping

Radio frequency automatic channel select (ACS); transmit power control management (TPC); country code-based RF configuration; 802.11b – 3 non-overlapping channels; 802.11a-11 non-overlapping channels; 802.11g-3 non-overlapping channels

Network Security

Packet filtering/Access control lists (ACLs):	L2/3/4 stateful packet analysis; network address translation (NAT)
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 (support for up to 100 tunnels):	Supports DES, 3DES and AES encryption
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)

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)

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

WS5100-06-WWR	6 Port WS5100 Wireless Switch
WS5100-12-WWR	12 Port WS5100 Wireless Switch (Z-Pak)
WS5100-18-WWR	18 Port WS5100 Wireless Switch (Z-Pak)
WS5100-24-WWR	24 Port WS5100 Wireless Switch (Z-Pak)
WS5100-30-WWR	30 Port WS5100 Wireless Switch (Z-Pak)
WS5100-36-WWR	36 Port WS5100 Wireless Switch (Z-Pak)
WS5100-42-WWR	42 Port WS5100 Wireless Switch (Z-Pak)
WS-100-48-WWR	48 Port WS5100 Wireless Switch (Z-Pak)
WS5100-RS-WWR	Redundant WS5100 Wireless Switch
WS5100-UC-WW	6 Port Upgrade

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