RFS6000

Wireless LAN Switch

Unified wireless voice and RF management platform
Simplify the architecture and reduce the cost of mobility with one platform for wireless voice, data and RF technologies, including Wi-Fi, 802.11n, and RFID

Adaptive AP: extending the enterprise
Enables centralized management of access points/mesh access points at remote sites as well as site survivability of those remote locations

Wi-NG — Motorola's Wireless Next Generation architecture
Enables seamless campus-wide roaming, more robust failover capabilities, enhanced security, improved mobile client battery life and increased voice capacity

ExpressCard™ Slot
User accessible slot enables easy addition of a redundant broadband wireless connection

Wireless LAN switching and voice communications platform for medium to large enterprises

The RFS6000 extends Motorola's' presence in the wireless enterprise by offering an integrated Wireless LAN communication platform that delivers highly secure, robust data and voice services. Comprehensive capabilities include support for multiple locationing technologies such as Wi-Fi, RFID and UWB; 3G/4G wireless broadband backhaul services; and high data rate connectivity through 802.11n. With the enterprise class RFS6000, business will enjoy the best in class performance, security, scalability and manageability required to meet the needs of demanding mission critical business applications.

Maximize benefits and minimize costs — inside and outside the enterprise

Motorola's Wi-NG architecture reduces installation and maintenance costs by providing a single infrastructure for mobile voice and data inside and outside the enterprise. This complete solution includes an integrated IPSEC VPN, AAA Radius Server, and Firewall with Stateful Packet Inspection capability, reducing the need to purchase and manage additional infrastructure. Quality of Service (QoS) ensures superior performance for voice and video services. The RFS6000 security feature set enables easy and cost-effective compliance with industry standards such as PCI, SOX and HIPAA.

Adaptive AP for increased network flexibility — and site survivability

The RFS6000 delivers a new capability that simplifies and reduces the cost of extending mobility to remote, branch, small and home offices. Motorola's AP-51X1 access points can be deployed at remote locations yet centrally managed in the Network Operations Center (NOC) through the RFS6000. An IPSec VPN tunnel secures all traffic between the access points and the wireless switch. Remote Site Survivability (RSS) enables access points and mesh access points to deliver uninterrupted wireless service — even if the connection to the RFS6000 is lost.

Cost-effective comprehensive high-performance voice services

Support for VoWLAN provides cost-effective voice services throughout campus environments, enabling push-to-talk and more for employees inside the four walls as well as in outside areas such as the yard. A rich feature set provides granular control over the many wireless networking functions required to deliver high performance persistent clear connections with desk phone-like voice quality. In addition, the FMC ready RFS6000 provides support for future services, including the extension of the desk phone to mobile devices over the WLAN and WWAN. Employees will enjoy one number and one voicemail box simplicity as well as seamless roaming between the enterprise walls and the field.

L2 and L3 roaming
Seamless roaming of mobile clients across even complex distributed networks

Comprehensive layered security
Exceptional level of data and network protection without sacrificing fast roaming, including: including WPA2-CCMP (with 802.11i fast roaming options), integrated RADIUS Server, IPSec VPN Gateway, Secure Guest Access Provisioning and advanced wireless intrusion detection
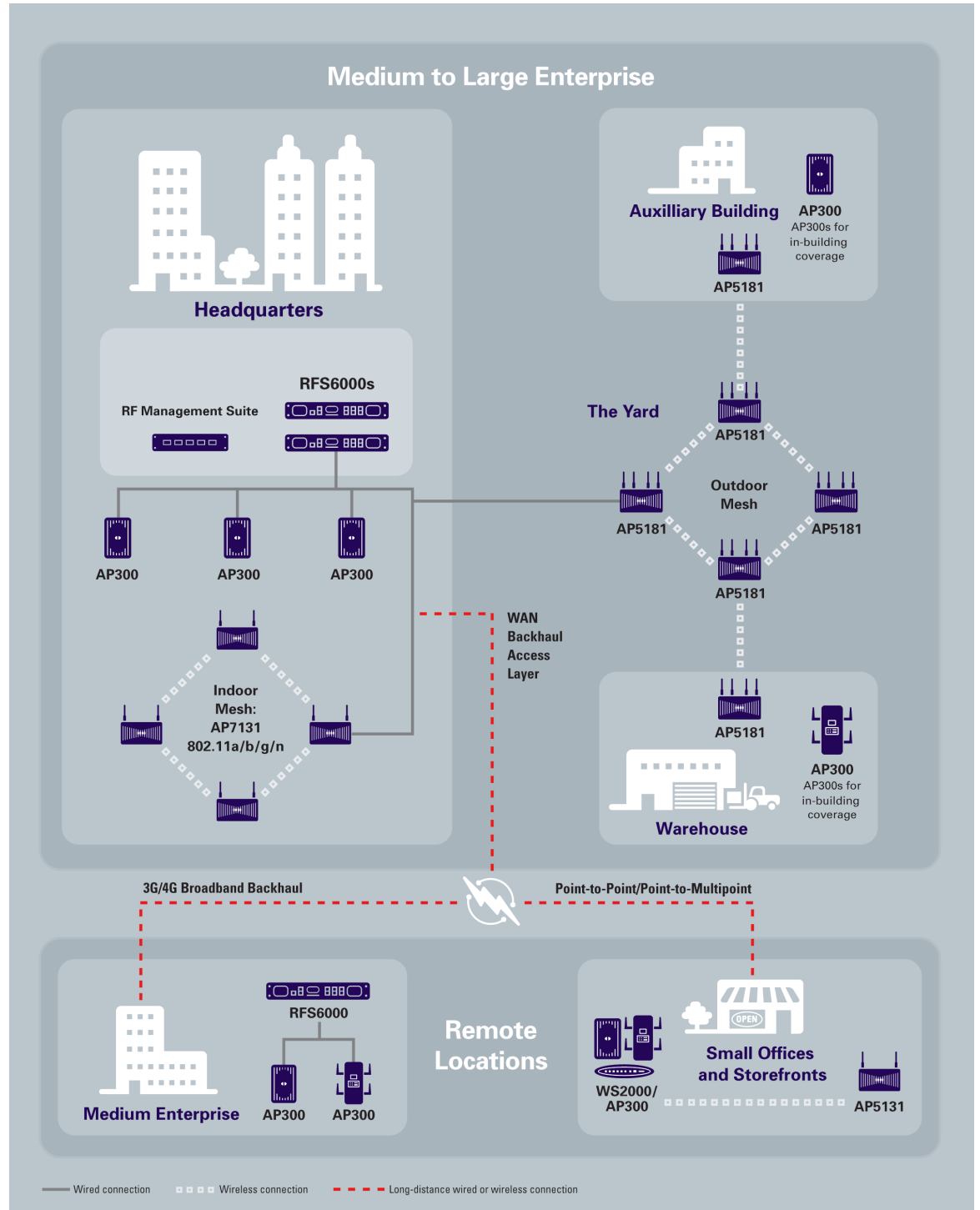
Centralized architecture
A single point of entry that can be centrally managed, easily secured, and lowers the overall cost of deployment and management

Clustering and load balancing
Ensures loads are balanced between access ports to ensure quality application performance; ensures an "always-on" highly available network for superior performance; supports multiple levels of redundancy and failover capabilities

RFS6000 network architecture

The RFS6000 offers the comprehensive functionality necessary to serve as the foundation to extend wireless voice and data access inside a large enterprise — as well as to remote locations such as branch offices.

Medium to Large Enterprise

Headquarters

RF Management Suite

RFS6000s

AP300   AP300   AP300

Indoor Mesh:
AP7131
802.11a/b/g/n

WAN Backhaul Access Layer

Auxilliary Building   AP300
AP300s for in-building coverage

AP5181

The Yard

AP5181

Outdoor Mesh

AP5181   AP5181

AP5181

AP5181   AP300
AP300s for in-building coverage

Warehouse

3G/4G Broadband Backhaul

Point-to-Point/Point-to-Multipoint

RFS6000

Remote Locations

Medium Enterprise   AP300   AP300

WS2000/AP300

Small Offices and Storefronts

AP5131

Wired connection   Wireless connection   Long-distance wired or wireless connection

Enterprise security — for voice and data

Comprehensive network security features keep wireless transmissions secure and provide constant compliance with government regulations such as HIPAA and PCI. The wide range of industry standards-based security mechanisms enables enterprises to create a layered security strategy to meet the needs of virtually any application, including: integrated MAC-based authentication, enhanced intrusion detection, AAA/Radius server (for WPA/WPA2 termination on the box); hotspot provisioning capabilities for secure guest access, a stateful packet inspection firewall, an IPSec VPN and more.

Extensible and scalable — a true platform for today and tomorrow

A user accessible ExpressCard™ Slot allows the addition of a broadband card (3G/4G) for a redundant wireless WAN backhaul connection, increasing resilience for remote branch offices. The ability to cluster up to 12 RFS6000 RF Switches provides the high level of scalability required for large enterprise deployments.

Raising the bar on enterprise class performance

Designed to support large scale high bandwidth enterprise deployments, the RFS6000 offers a multicore multithreaded CPU-based architecture that is capable of supporting 2,000 to 20,000 mobile devices and up to 48 dual radio 802.11 a/b/g access ports. In addition, the 802.11n ready device offers the failover capabilities and cluster management required to ensure high availability.

Cost effective centralized management

Motorola provides the tools you need to simplify and minimize the costs associated with day-to-day management of mobility solutions. The RFS6000 provides unified management of network hardware, software configuration, and network policies, complete with built-in process monitors and troubleshooting tools. In addition, the RF Management Suite is a valuable modular software offering that provides centralized control over the entire lifecycle of your Motorola mobility solution — allowing you to simply plan, deploy, monitor and secure your wireless network.

End-to-end support

As an industry leader in mobility, Motorola offers the experience gained from deploying mobility solutions all over the globe in many of the world's largest enterprises. Leverage this expertise through Motorola Enterprise Mobility Services, which provides the comprehensive support options you need to get and keep your RFS6000 up and running at peak performance. Motorola recommends protecting your investment with Service from the Start Advance Exchange Support, a multi-year program that provides the next-business-day device replacement you need to keep your business running smoothly and productively. This service also includes Comprehensive Coverage, which covers normal wear and tear, as well as internal and external components damaged through accidental breakage — significantly reducing your unforeseen repair expenses.

For more information, visit us on the web at www.motorola.com/rfs6000 or access our global contact directory at www.motorola.com/enterprise/contactus

True mobility

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 Motorola mobile devices roam before signal quality degrades; Power Save Protocol optimizes battery life; Self-healing provides continuous network coverage in the event of loss or disruption of RF coverage

Quality of Service (QoS)

Enhances 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) enhances multimedia application support and improves battery life and capacity

RFS6000 Specifications

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 with Bandwidth Management; VLAN Pooling
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 802.11a/b/g and AP7131 802.11a/b/g/n Access Points in Adaptive Mode for remote site and branch office solutions
Power-over-Ethernet:	Integrated; up to 29.7 watts per Ethernet Port, up to a maximum of 180 watts for simultaneous operation
Layer 2 or Layer 3 deployment of Access Ports and Adapative AP AP51X1 802.11a/b/g and AP7131 802.11a/b/g/n Access Points	
Layer 3 Mobility (Inter-Subnet Roaming)	

Supported access ports and access points:	AP300 (802.11a/b/g); L2 and L3 deployments with static IP support; AP51X1 802.11a/b/g Adaptive AP mode and AP7131 802.11a/b/g/n Adaptive Mode Access Points
Radio frequency automatic channel select (ACS); transmit power control management: (TPC); country code-based RF configuration; 802.11b, 802.11g, 802.11a, and 802.11n Ready	

Network Security	
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	

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, EAP-PEAP (includes a built in user name/password database; supports LDAP), and EAP-SIM
Transport encryption:	WEP 40/128 (RC4), KeyGuard, WPA—TKIP, WPA2-CCMP (AES), WPA2-TKIP
IPSec VPN gateway:	Supports DES, 3DES and AES-128 and AES-256 encryption; supports site-to-site and client-to-site VPN capabilities
Secure Guest Access (HotSpot Provisioning)	Local Web Based Authentication; URL Redirection for User Login; Customizable Login/Welcome Pages; Support for external Authentication/Billing Systems
Wireless 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 Symantec

Optimized Wireless QoS

RF priority:	802.11 traffic prioritization and precedence
Wi-Fi multimedia extensions:	WMM-power save with Admission Control; WMM U-APSD
Classification and marking:	Layer 1-4 packet classification; 802.1p VLAN priority; DiffServ/TOS

System Resiliency & Redundancy

Active:Standby; Active:Active and N+1 redundancy with access port and MU load balancing; self healing (on detection of RF interference or loss of RF coverage)

Dual Firmware bank supports Image Failover capability

System Extensibility

ExpressCard™ Slot:	Optional EVDO/HSPDA card available for Broadband Backhaul Services in the future

PCI-X Interface

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:	1U Rack Mount
Dimensions:	HxWxD = 44.45mm x 440mm x 390.8mm
Weight:	14lbs./6.35kg

Physical interfaces:	1x Uplink Port -10/100/1000 Cu/ Gigabit SFP interface 8x 10/100/1000 Cu Ethernet Ports with 29.7 Watts PoE, 802.3af" and "802.3at Draft 1x 10/100 Management Interface (OOB port) 1x USB 2.0 Host 1x ExpressCard™ Slot (in USB mode) 1x Express Card: 1X PCI-X Interface 1x Serial Port (RJ45 style)
MTBF:	>65,000 Hours

Power Requirements

AC input voltage:	90 – 264 VAC 50/60Hz
Max AC input current:	6A@115 VAC, 3A@230 VAC
Input frequency:	47 Hz to 63 Hz

User Environment

Operating temperature:	0°C to 40°C
Storage temperature:	-40°C to 70°C
Operating humidity:	5% to 85% (w/o condensation)
Storage humidity:	5% to 85% (w/o condensation)
Heat dissipation:	665 BTU per hour

Regulatory

Product Safety:	UL / cUL 60950-1, IEC / EN60950-1
EMC Compliance:	FCC (USA), Industry Canada, CE (Europe), VCCI (Japan), C-Tick (Australia/New Zealand)

Recommended Enterprise Mobility Services

Customer Services:	Service from the Start Advance Exchange Support

Part Numbers

RFS-6010-100R0-WR:	Zero Port Wireless Switch
RFS-6010-10010-WR:	8 Port Wireless Switch
RFS-6010-10030-WR:	24 Port Wireless Switch
RFS-6010-10060-WR:	48 Port Wireless Switch
RFS-6010-UC-08-WR:	8 Port RFS6000 Series Upgrade Certificate

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