Enterprise WLAN Infrastructure

At-a-Glance

A leader in the wireless industry for over 75 years, Motorola offers one of the most market-proven and customer tested wireless portfolios on the market – with over a billion dollars a day transacted over Motorola WLAN infrastructures around the world.

The Motorola WLAN portfolio

No matter what your wireless networking needs may be, Motorola offers a comprehensive integrated portfolio of products designed to meet your needs. And unlike typical point solutions, Motorola's portfolio offers proven interoperability, simplifying and reducing the cost of your mobility deployments. Our portfolio includes:

- Wireless switches and access ports that offer centralized easy-to-manage wireless connectivity.
- Access points designed for use indoors and outdoors, with mesh networking and an Adaptive AP mode, which enables adoption by a wireless switch for centralized and remote management.
- Bridges and client adapters to provide a wireless connection to virtually any device — from handheld and notebook computers to PDAs, printers, scales, point-of-sale devices and more.
- A full suite of RF Management software for simplified and accurate site design and modeling, around-the-clock protection against attacks and unauthorized access, and day-to-day management of your entire mobility solution — from your wireless LAN infrastructure to mobile devices and wireless applications.

Motorola wireless LAN infrastructure

Secure, resilient wireless network solutions that are truly wireless inside and out

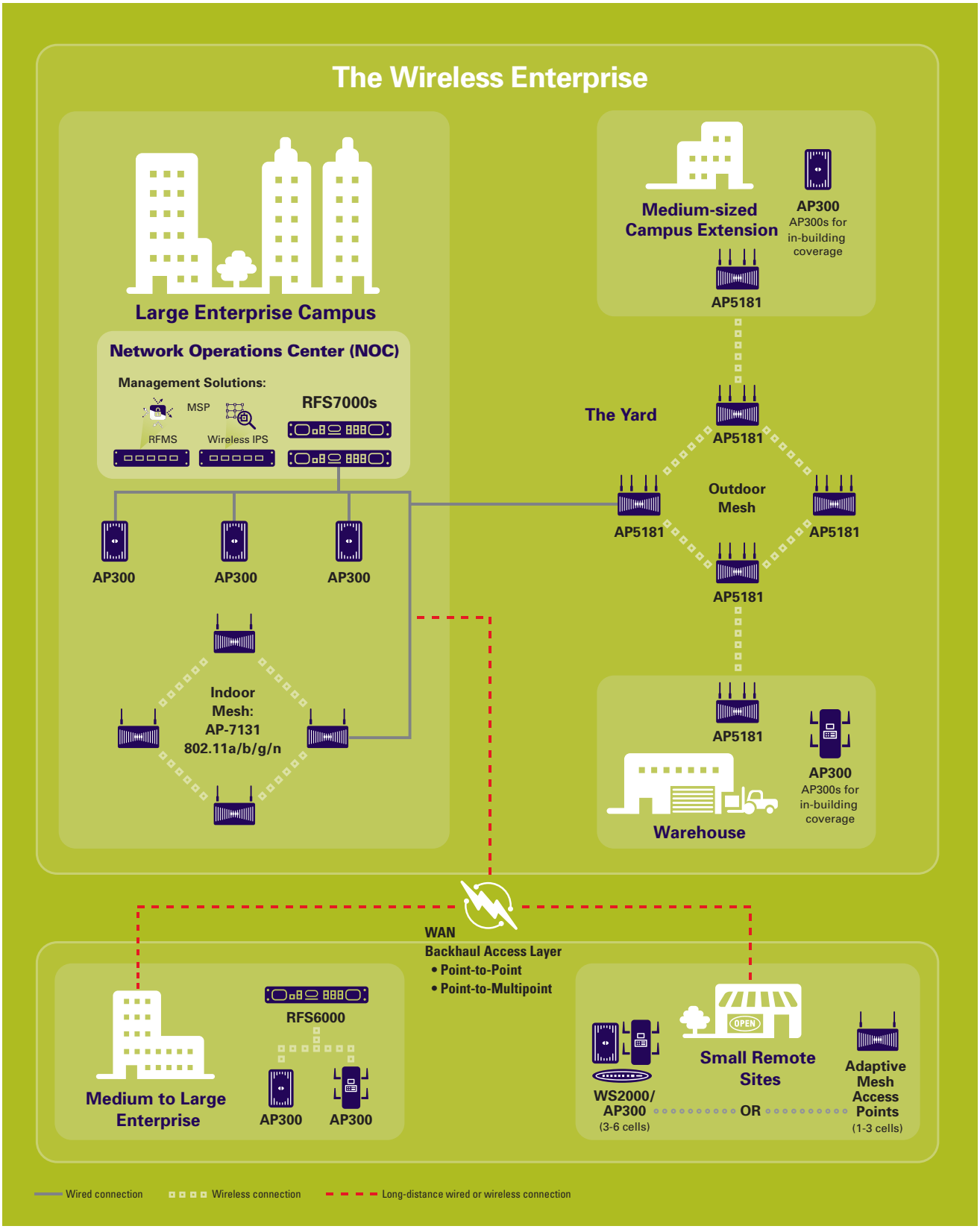
Motorola offers a comprehensive portfolio of wireless LAN (WLAN) infrastructure solutions designed to enable the truly wireless enterprise, regardless of the size of your business — from large enterprises with locations all over the world to branch offices and small businesses. Motorola's Wireless Enterprise portfolio offers resiliency, security and performance equal to or greater than that of a wired network. Indoor and outdoor Mesh capabilities allow for a cable-less installation that substantially reduces network deployment and maintenance costs, and ensure the availability of cost-effective wireless connectivity in every corner of the enterprise — even in hard to wire and outdoor areas. The result is the **truly wireless** enterprise, enabling the cost-effective and secure delivery of high-performance voice and data to employees everywhere — at a fraction of the cost of a traditional wired network.

The Motorola difference

A leader in the wireless industry for over 75 years, Motorola's wireless product portfolio is well tested and customer-proven — with over a billion dollars a day transacted over Motorola WLAN infrastructures around the world. Why do so many businesses around the world choose Motorola WLANs?

- **Mobility with a difference.** As a pioneer in this field, we offer over 100 active wireless LAN technology patents, including preemptive roaming, load-balancing, and power save polling for battery life management — unique features and functionality work hand-in-hand to protect the wireless connection and ensure quality of service for all voice and data services.
- **Network resiliency for always-on availability.** A unified network of clustered wireless switches and indoor adaptive AP mesh networks provide the resiliency required to provide your employees with a highly reliable, high-performance connection to your business systems— even in remote locations.
- **Security that surpasses wired networks.** Our comprehensive suite of security mechanisms provides the end-to-end layered security that enables you to deploy the right level of security, when and where you need it. Robust 802.1X authentication ensures that only authorized users can gain access to your network. WPA2 AES encryption protects data traveling over the WLAN. And Motorola's wireless switches offer built-in intrusion detection — Wireless Intrusion Protection System (IPS) — providing the ability to detect a multitude of network attacks, locate and disassociate wired and wireless rogues from the network and more.
- **Superior voice capabilities.** Motorola's wireless architecture is optimized for superior quality of service, providing the highest quality seamless voice and data-streaming performance available.
- **Ease of use.** Motorola's wireless products offer one of the industry's best out-of-box experiences, customer-proven to enable rapid deployment and simplified management compared to competitive offerings.
- **Scalability for today and tomorrow.** Regardless of how your needs may grow and change, or what new standards may be developed, Motorola wireless LAN infrastructure is designed to grow and change with you. Our scalable wireless operating system is built on a dual-core architecture specifically designed to support network expansion and the adoption of future RF technologies, including 802.11n, RFID, WiMAX, and beyond. And wireless switch adoption capabilities allow you to simplify yet increase the flexibility of your WLAN.

Scalable enterprise wireless infrastructure



Motorola's family of enterprise WLAN infrastructure easily scales to meet the needs of any enterprise. Extend cost-effective wireless voice and data throughout your literal and virtual environment with this diverse portfolio — from large enterprise campus environments to mid-size and smaller remote sites.

Motorola's wireless LAN portfolio

Wireless Switches

				
	WS2000 Wireless Switch	**WS5100 Wireless Switch**	**RFS6000**	**RFS7000 RF Switch**
Description	The WS2000 Wireless Switch offers an easy to manage network-in-a-box solution for small enterprises and remote sites, including an integrated router, gateway, firewall, and Power-over- Ethernet (PoE).	The WS5100 provides robust support for enterprise mobility, including increased security, manageability, L3 roaming capabilities and quality of service (QoS) for medium to large enterprises.	The RFS6000 provides a an integrated wireless LAN communication platform that enables the delivery of highly secure mobile voice and data services inside and outside the enterprise. Designed for medium to large enterprises, the RFS6000 simplifies and reduces the cost associated with converged solutions through a comprehensive feature set that delivers the best in class performance, security, scalability and manageability required to meet the needs of your demanding mission critical business applications.	Designed for large scale, high bandwidth deployments, the RFS7000 provides robust, highly scalable support for enterprise mobility, offering enhanced roaming, security, quality of service and management features.
General Characteristics	• 802.11a/b/g • Supports up to 6 802.11a/b/g access ports • Supports up to 8 WLANs • Supports up to 200 mobile devices • Packet filtering: L2/3/4 Stateful Packet Analysis; Network Address Translation • Hotspot capable • Redundancy – Active: Standby • PCI compliant out-of-the-box	• 802.11a/b/g • Wi-NG architecture • Adaptive AP support (enables adoption of Motorola Adaptive AP Access Points) • Supports up to 48 802.11a/b/g access ports • Supports up to 32 WLANs • Supports up to 2000 mobile devices • Packet filtering: L2/3/4 Stateful Packet Analysis; Network Address Translation • Hotspot capable • Redundancy – Active: Standby; Clustering provides Active:Active; one-to-many availability • PCI Compliant out-of-the-box	• 802.11a/b/g/n • Multicore multithreaded architecture • Adaptive AP support (enables adoption of Motorola Adaptive AP Access Points) • ExpressCard(TM) slot for redundant broadband wireless connection • Supports up to 48 802.11a/b/g dual radio access ports • Supports up to 32 WLANs • Supports up to 2,000 mobile devices • Packet filtering: L2/3/4 Stateful Packet Analysis; Network Address Translation • Hotspot capable • Redundancy – Active: Standby; Clustering provides Active:Active; one-to-many availability • PCI Compliant out-of-the-box	• 802.11a/b/g • Wi-NG architecture • Adaptive AP support (enables adoption of Motorola Adaptive AP Access Points) • Supports up to 256 802.11a/b/g access ports • Supports up to 256 WLANs • Supports up to 8000 devices per switch • Packet filtering: L2/3/4 Stateful Packet Analysis; Network Address Translation • Hotspot capable • Redundancy – Active: Standby; Clustering provides Active:Active; one-to-many availability • PCI Compliant out-of-the-box
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; Integrated AAA server with native support for PEAP and TTLS; Supports LDAP	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	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	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
Encryption Mechanisms	• WEP 40M28 (RC4) • KeyGuard • WPA-TKIP • WPA2-CCMP (AES); WPA2 TKIP	• WEP 40M28 (RC4) • KeyGuard • WPA-TKIP • WPA2-CCMP (AES) • WPA2 TKIP	• WEP 40M28 (RC4) • KeyGuard • WPA-TKIP • WPA2-CCMP (AES) • WPA2 TKIP	• WEP 40M28 (RC4) • KeyGuard • WPA-TKIP • WPA2-CCMP (AES) • WPA2 TKIP
Transport Encryption	WEP 40/128 (RC4), KeyGuard, WPA-TKIP, AES-CCMP; (802.11i WPA2)	WEP 40/128 (RC4), KeyGuard, WPA-TKIP, WPA2-CCMP (AES), WPA2-TKIP	WEP 40/128 (RC4), KeyGuard, WPA-TKIP, WPA2CCMP (AES), WPA2-TKIP	WEP 40/128 (RC4), KeyGuard, WPA-TKIP, WPA2-CCMP (AES), WPA2-TKIP
IPSec VPN Gateway		Supports DES, 3DES and AES encryption	Supports DES, 3DES and AES-128 and AES-256 encryption; supports site-to-site and client-to-site VPN capabilities	Supports DES, 3DES and AES encryption
Wireless Radius Support		• User-based VLANs (standard) • MAC-based authentication (standard) • User-based QoS (Motorola VSA) • Location-based authentication (Motorola VSA) • Allowed ESSIDs (Symbol VSA)	• User-based VLANs (standard) • MAC-based authentication (standard) • User-based QoS (Motorola VSA) • Location-based authentication (Motorola VSA) • Allowed ESSIDs (Symbol VSA)	• User-based VLANs (standard) • MAC-based authentication (standard) • User-based QoS (Motorola VSA) • Location-based authentication (Motorola VSA) • Allowed ESSIDs (Symbol VSA)
NAC support		NAC support with third party systems from Microsoft and Sygate	NAC support with third party systems from Microsoft and Symantec	NAC support with third party systems from Microsoft and Symantec
Optimized Wireless QoS	• Voice prioritization • Wireless bandwidth management • WMM • SpectraLink Voice Prioritization	• Voice prioritization • Wireless bandwidth management • WMM • SpectraLink Voice Prioritization	• Voice prioritization • Wireless bandwidth management • WMM • SpectraLink Voice Prioritization	• Voice prioritization • Wireless bandwidth management • WMM • SpectraLink Voice Prioritization
Value Add Motorola-only Features	• Pre-emptive roaming • Load balancing • Power save polling (PSP) • Virtual AP	• Pre-emptive roaming • Load balancing • Power save polling (PSP) • Virtual AP	• Pre-emptive roaming • Load balancing • Power save polling (PSP) • Virtual AP	• Pre-emptive roaming • Load balancing • Power save polling (PSP) • Virtual AP
Warranty	Hardware – 1 year; Software – 90 days	Hardware –1 year; Software – 90 days	Hardware –1 year; Software – 90 days	Hardware – 1 year; Software – 90 days
Recommended Services	• Service from the Start Advance Exchange Support • Wireless Infrastructure Device Software Support	• Service from the Start Advance Exchange Support • Wireless Infrastructure Device Software Support	• Service from the Start Advance Exchange Support • Wireless Infrastructure Device Software Support	• Service from the Start Advance Exchange Support • Wireless Infrastructure Device Software Support

Access Ports and Points




	AP-5131 Access Point	AP-5181 Access Point	AP-7131 Access Point
Description	Enterprise-class wired and wireless networking for small offices and retail locations, and mesh networking for cost-effective extension of the corporate network in difficult-to-cable areas.	Specifically designed for outdoor use, Motorola's AP-5181 delivers enterprise-class wireless networking in harsh environments. Support of mesh networking enables rapid and inexpensive deployment in difficult-to-cable areas.	An industry first, the AP-7131 802.11a/b/g/n tri-radio Access Point offers the throughput, coverage and resiliency required to replace the wired network, enabling the truly wireless enterprise.
General Specifications	• 802.11a/b/g; DSSS and ODFM • 802.3af Power-over-Ethernet (PoE) • Mesh networking • Adaptive AP support (enables adoption of Motorola Adaptive AP Access Points) • Plenum-rated housing • Up to 127 devices supported • -4°F to 122°F/-20°C to 50°C • Desktop; wall; above drop and under-ceiling • Hotspot capable • PCI Compliant out-of-the-box	• 802.11a/b/g; DSSS and ODFM • 802.3af Power-over-Ethernet (PoE) • Mesh networking • Adaptive AP support (enables adoption of Motorola Adaptive AP Access Points) • Plenum-rated housing; IP56; NEMA 4X • Up to 127 devices supported • -22°F to 131°F/-30°C to 55°C • Wall; pole • Hotspot capable • PCI Compliant out-of-the-box	• 802.11a/b/g/n; DSSS and ODFM • 802.3af and 802.3at draft Power over Ethernet (PoE)) • Mesh networking • Adaptive AP support (enables adoption of Motorola Adaptive AP Access Points) • Plenum-rated housing • -4°F to 122°F/-20°C to 50°C • Desktop; wall; above drop and under-ceiling • Hotspot capable • PCI Compliant out-of-the-box
Security	• 802.11i • WPA2 • WPA • 3DES IP Sec encryption • VPN Client • AAA server • Integrated firewall • DHCP server • Rogue AP detection	• 802.11i • WPA2 • WPA • 3DES IP Sec encryption • VPN Client • AAA server • Integrated firewall • DHCP server • Rogue AP detection	• 802.11i • WPA2 • WPA • 3DES IP Sec encryption • VPN Client • AAA server • Integrated firewall • DHCP server • Rogue AP detection
Optimized Wireless QoS	• Voice prioritization • WMM • QoS	• Voice prioritization • WMM • QoS	• Voice prioritization • WMM • QoS
Accessories	802.3af power injector	Heavy weather mounting kit; surge-protector power tap kit; outdoor dual-band antennas	
Warranty	Hardware — 1 year Software — 90 days	Hardware — 1 year Software — 90 days	Hardware — 1 year Software — 90 days
Recommended Services	• Service from the Start Advance Exchange Support • Wireless Infrastructure Device Software Support	• Service from the Start Advance Exchange Support • Wireless Infrastructure Device Software Support	• Service from the Start Advance Exchange Support • Wireless Infrastructure Device Software Support

	AP300 (Internal and External Antenna Models)
Description	Two models offer greater mounting flexibility. Internal antenna model can be mounted anywhere inside the carpeted space; the external antenna model can be mounted above ceiling tiles.
WLAN	802.11a/b/g and 802.11b/g options
POE	802.3af
Housing	Plenum-rated (external antenna version only)
Operating Temperature	Internal antenna model: 32°F to 104°F/0°C to 40°C External antenna model: 4°F to 122°F/-20°C to 50°C
Wireless Medium	DSSS and ODFM
Security	• 802.11i • WPA2 • WPA • 3DES IP Sec Encryption
Mounting	Internal model: Wall; ceiling (to suspended ceiling T-bars below tile only) External model: Wall; ceiling (above or below tile)
Warranty	Hardware — 1 year Software — 90 days
Recommended Services	• Service from the Start Advance Exchange Support

Motorola's complete portfolio of wireless LAN infrastructure is built on an integrated upgradeable platform, allowing you to cost-efficiently extend wireless networking in your headquarters, mid-size and small branch offices — with ease of integration and manageability.

Bridges and Client Adapters

	CB3000	LA-5127/LA-5137
Description	The CB3000 provides robust, enterprise-class wireless connectivity for Ethernet-enabled devices such as printers, scales and point-of-sale equipment without card slots or native wireless capabilities.	Optimized for embedded mobile applications, these CompactFlash cards deliver the power of wireless connectivity to enterprise devices and industrial equipment.
WLAN	• 802.11a/b/g	• LA-5127: 802.11b/g • LA-5137: 802.11a/b/g
Security	• WEP 40/128 • WPA and AES encryption • 802.1x support with PEAP • EAP/TLA • EAP/TTLS authentication	• WEP • WPA/WPA2 • EAP-TLS • EAP-TLS/MSCHAPv2 • PEAPv0/EAP-MSCHAPv2 • PEAPv1/EAP-GTC • EAP-SIM (802.1x)
Features	• Work group bridge with support for up to 16 client devices • Point-of-Sale support for IBM, NEC, and others • Ad hoc mode (CB3000 to CB3000) for easy sharing of printers and other peripherals • Embedded secure web server for anywhere, anytime management • SNMP v2 support for easy integration with standard management systems	• Robust security for Linux and Windows applications • CompactFlash type I/II form factor with 16-bit PC card interface • Upgradable hard MAC with on-card memory • Comprehensive software development kit for OEM products • Worldwide regulatory approval backed by Motorola service and support
Warranty	Hardware –1 year; Software – 90 days	Hardware –1 year; Software – OEM Development Agreement
Recommended Services	• Service from the Start Advance Exchange Support • Wireless Infrastructure Device Software Support	• Service from the Start — Bronze

Power-over-Ethernet

	802.3af Single Port Power Injector
Description	Delivers power to individual Motorola access ports and access points via standard Ethernet cabling, simplifying installation and eliminating the need — and associated expense — for cabling and power outlets.
Features	• Cost-effective power solution for small site deployments • Supports AP300 Access Ports, AP-5131 and AP-5181 Access Ports • Provides effective independent overload and short circuit protection per port • Sleek interlocking housing provides ability to affix multiple devices in an organized fashion • Desktop or wall mount • AC and Ethernet 10/100 ports • Operating temperature: 32°F to 104°F/0°C to 40°C
Warranty	1 year
Recommended Services	Service from the Start Advance Exchange Support

Motorola RF Management Suite

Motorola's RF Management Suite is a powerful set of integrated applications that enables administrators to easily execute end-to-end design and management of wireless LANs — pre- and post-deployment.

Motorola LANPlanner®

Rapid and accurate design of high performance wireless networks. Ensure that your wireless LAN is designed to deliver maximum performance and value with Motorola LANPlanner — regardless of whether you are adding a new wireless LAN, expanding an existing wireless network or need to plan for the impact of new wireless applications. This comprehensive tool enables the design and deployment of wireless networks that meet the specific capacity, reliability and performance requirements in your environment. The ability to predict and visualize the impact of construction materials, network usage and the potential impact of co-channel interference enables the rapid design of wireless networks that provide superior wireless performance, superior quality of service (QoS) — and superior total cost of ownership (TCO). And post deployment reporting enables validation that the network is performing to expectations.

Wireless Intrusion Protection System (IPS)

Around the clock security monitoring. Proactively protect your wireless network, mobile devices and traffic from attacks and unauthorized access. With built-in forensic support and industry standard reports for PCI, HIPAA, Sarbanes-Oxley, GLBA, FDIC and DOD, Motorola's Wireless Intrusion Protection System (IPS) provides powerful tools for standards compliance, as well as around-the-clock 802.11a/b/g wireless network security in a distributed environment. It allows administrators to identify and accurately locate attacks, rogue devices, and network vulnerabilities in real time and permits both wired and wireless lockdown of wireless device connections.

RF Management Software (RFMS)

Plan, monitor and analyze wireless network performance. Motorola's RF Management Software is a scalable, browser-based tool for Wi-Fi site monitoring and troubleshooting. Providing AutoCAD support through LANPlanner, it also displays RF heat maps and channel maps; suggests probable causes for suspicious statistics and allows users to generate reports and export data easily. Administrators can see the status and location of wireless infrastructure devices and clients, identify and locate rogue APs, and view a single dashboard of key statistics such as RF coverage, load balancing, security threat level and network utilization across all locations, and administrators can use mobile devices to check for service interruptions and security threats.

MSP RF Management Edition Software®

Management of your entire enterprise mobility solution. MSP RF Management Edition provides comprehensive RF management for Motorola Enterprise Wireless LAN infrastructure devices. Scalable up to 2,000 AP's, this solution is a "Manager of Managers", handling multiple Wireless Intrusion Protection System (IPS) servers, displaying alarms in the shared console and providing administrators with visibility into the network at both the NOC and the site level. Used with Motorola's suite of network planning, monitoring and analysis, security and management tools, it incorporates Motorola's RF Management Software to enable site level management, displaying heat maps and channel maps.

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