

AeroMesh™ WMS4500

Outdoor Wireless Mesh Router

Adaptive Wave Routing (AWR)

Faster routing convergence that quickly adapts to mobile topology conditions

End to End QoS

Layer 3 routing offers uninterrupted VoWiFi support from the Client to the POP

Embedded Software Tools

Designed with deployment utilities that reduce the installation investment

AeroMesh delivers unprecedented opportunities to deploy VoWiFi ready networks for corporate, multi-dwelling, and public WiFi access with a fully integrated indoor and outdoor Mesh solution. The WMS4500 is an outdoor Mesh router that combines carrier-grade serviceability and manageability with the industry's most advanced routing protocol for deploying with greater ease, scalability, and reliability. The dual radio platform makes VoWiFi services a reality, even in mobile applications where node topology changes rapidly.



Features and Benefits

Layer 3 Routing - Each WMS4500 is a full Layer 3 router, which enables subnet to subnet roaming and true node-to-node Mesh communications without the inefficiencies of Spanning Tree hierarchy.

Adaptive Wave (AWR) Protocol - A next generation routing protocol purpose-built for wireless networks that speeds routing convergence, reducing network overhead and congestion points.

Dual 802.11a/b/g Radios - Independently configurable radios support 11b/g WiFi Client access and 11a Mesh backhauls from a single device, with dedicated bandwidth capable of multiple hops.

End-to-End Quality of Service (QoS) - Standards based 802.11e QoS is available at each Mesh node providing full end-to-end support for VoWiFi across the wireless Mesh to the wired backbone.

Built-in Failover Intelligence - Embedded software features manage device auto-discovery and auto-restart, along with routing persistence and Mesh self-healing.

RF Planning Optimization - Supports external directional and omni-directional antennas for more efficient RF planning specific to each node site. The result is optimized node spacing that improves RF coverage and offers a more cost effective deployment per square acre of coverage.

Standards-Based Security - Backhaul and Client access links may utilize 802.11i authentication and encryption schemes, and be divided into 802.11q based multi-VLAN / SSID networks.

Specifications

RF Characteristics

5.8GHz Radio:	
Standard	IEEE 802.11a
Modulation	OFDM (BPSK, QPSK, 16/64-QAM)
Frequency	5.725-5.850 GHz
Data Rates	6, 9, 12, 18, 24, 36, 48, 54 Mbps
Output Power	100mW (20dBm)
Rx Sensitivity (dBm)	-89@6Mbps, -87@9Mbps, -85@12Mbps, -84@18Mbps, -82@24Mbps, -80@36Mbps, -76@48Mbps,-71@54 Mbps

2.4GHz Radio:	
Standard	IEEE 802.11g, 802.11b
Modulation	OFDM (BPSK, QPSK, 16/64-QAM) DSSS (CCK, DBPSK, DQPSK)
Frequency	2.40-2.4835 GHz
Data Rates	11b: 1, 2, 5.5, 11 Mbps 11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps
Output Power	100mW (20dBm)
RF Sensitivity	-98@6Mbps, -96dBm@12Mbps, -95@48Mbps, -91@54Mbps

Network Support

Mesh Protocol	Adaptive Wave Routing (AWR)
Wireless Modes	Access Point, WDS repeat / bridge
SSID / BSSID	Multiple support
DHCP	Client, server, relay
DNS	Cache, server
NAT	Supported
Roaming	L2/L3 managed - cross IP subnet roaming supported
Bridging	802.1d
VLAN	802.1q
QoS	802.11e prioritized bandwidth

Security

Wireless Authentication	802.11i 802.1x with RADIUS client
Encryption (per SSID)	EAP-MD5/TLS WPA/WPA2 TKIP, AES, DES, 3DES 64 / 128 / 152 Bit WEP
Access Control	MAC address filtering
Management Access	HTTPs

Regulatory

Electrical	ANSI/IEEE C62.41 UL 1449-2 ed.
FCC	Class B
Warranty	1 year, limited

AeroMesh Models

- WMS4500 Dual Radio Outdoor Mesh Router
- WMS4300 Dual Radio Indoor Mesh Router
- WMS80-NMS AeroMesh NMS Appliance

AeroMesh offers fully integrated indoor and Outdoor Mesh networks for deploying seamless roaming anywhere in the deployment zone.

Management

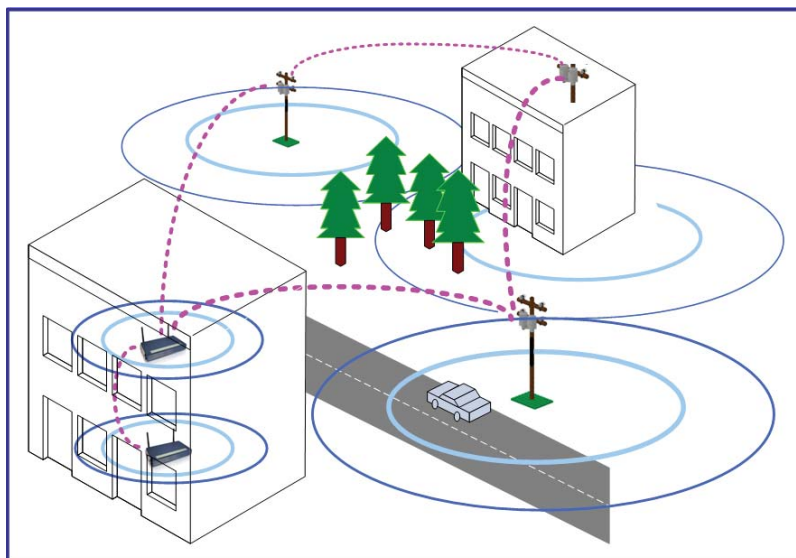
Web Administration	HTTPs (SSL)
Local	CLI, Telnet
Remote	SNMPv1,v3
NMS	Available through AeroMesh NMS
Setup Automation	Auto-discovery Auto-forming Auto-healing Auto-configuration
Topology View	Graphical map overview
Recovery	Persistent configuration file save and restore

Hardware

Ports	Ethernet	Two: 10/100Base-Tx; PoE
	Antennas	Two: N(Female)
	Console	One: RS-232
Enclosure		Die cast; IP67 outdoor rated
Mounting		Mast or wall mount
Dimensions		10.6 x 8.0 x 2.8 inches (268 x 204 x 70 mm)
Weight		5.8 Lbs (2.62 Kg)
Temperature		Operating: -40° to 55° C Storage: -40° to 80° C
Power over Ethernet		External injector module 110-240 VAC, 50/60 Hz 48VDC, 30W output
Antenna Protection		<0.5uJ for 6kV/3kA
Shock and Vibration		ETSI 300-19-2-4 spec T41.E / 4M3

Accessories

Included:	
Mounting Kit	Attachment brackets, hardware
PoE Injector	External module with AC plug
Ethernet Cable	25 meter, PoE
Documentation	Printed and CD-Rom based
Optional:	
5.8 GHz Antennas	Omni, panel, sector models
2.4 GHz Antennas	Omni, panel, sector models



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