


MOTOROLA WIRELESS BROADBAND

Mesh Wide Area Network IAP 4300

Two Radio Meshed WiFi Network with 4.9GHz for Public Safety


Software Highlights

The MWAN IAP 4300 offers a multitude of software features for enhancing your network experience. With Peer-to-Peer Communication Blocking ISPs (Internet Service Providers) now have an effective way to manage billing applications and client tracking scenarios. With the combination of the IAP 4300's VLAN support and standard 802.11e QoS, ISPs can create differentiated services that will allow them to offer tiered packages. Finally, historical, comprehensive statistics are now available for future reference and review.

Mesh Wide Area Network

The Mesh Wide Area Network (MWAN) product series makes wireless cities a reality with robust and future-proof wireless broadband technologies. Whether providing wireless access to a campus, business, neighborhood or city, MWAN delivers real-time data to your first responders, residents, employees, and customers, enabling vital wireless broadband applications.

Dual Mesh Operation

Public safety agencies require data traffic that is separate and secure from public access. MWAN 4300 products operate as a dual mesh, with the licensed 4.9GHz system providing client access to first responders, as well as meshed backhaul to create a private and secure network. Furthermore, the IAP 4300's 10MHz and 20MHz channel support for 4.9GHz allows channel flexibility within the Public Safety Network. The 2.4GHz system provides meshed radio links, and client access to business and residential users, keeping the two systems separated.

Proven Mesh Routing

MWAN IAP 4300 leverages MeshConnex™ routing technology, using real-time congestion management and link control to automatically select the best data route on a per-request basis. This dramatically reduces hop latency, to better deliver real-time voice and multimedia services. Today, MeshConnex powers large-scale Motorola mesh networks of more than 1,000 nodes.

Carrier-Class Security

The IAP 4300 supports complete, end-to-end security. It provides WEP, WPA and WPA2 encryption on client access. Motorola's own Secure Mesh ensures the highest data security within the meshed WiFi network. Finally, users can create access lists that can block particular clients from accessing the network.

Compact Form Factor

The small profile, light weight form factor, and slim-line aesthetics increase mounting location flexibility and community acceptance.

Advanced Network Management

The 4300 series utilizes Motorola's One Point Wireless Manager to manage and visualize a multitude of capabilities for small to large networks and all of these capabilities are controllable from a single suite of software. By completing one profile, a large number of devices can be configured easily, reducing the time required to provision individual devices and complete on-going adjustments. Once the network is up and running, the Wireless Manager is a flexible and powerful tool that monitors the health of the network's components for quick detection and resolution of problems that can impact network performance and user satisfaction.

Flexible & Adaptable Gateways

Every 4300 series access point unit is capable of being an Intelligent Access Point (IAP) or Mesh Wireless Router (MWR), reducing the cost of storing excess inventory and simplifying deployment. Additionally, gateway nodes immediately adapt to backhaul loss by becoming wireless routers, routing traffic to an alternate gateway in the network. This automatic, self-healing ability minimizes service interruptions and ensures continuous connectivity.

Quality of Service (QoS)

Delay-sensitive applications like video and voice services require different data priorities. The IAP 4300 supports IEEE 802.11e based traffic prioritization. It constantly monitors node congestion, and automatically tunes its QoS parameters to optimize route selections to support latency sensitive applications.

Motorola, Your End-to-End Solution Provider

Motorola's wireless broadband portfolio offers an array of access and backhaul technologies for complete end-to-end wireless initiatives. Motorola's Fixed Point-to-Multipoint and Point-to-Point solutions provide reliable, high-capacity Internet backhaul links to Motorola's mesh networks. MeshPlanner and MeshScanner enable detailed network planning and optimization capabilities. Additionally, Motorola's ecosystem of applications offers a wide range of validated solutions to garner multiple benefits from your wireless network.

SPECIFICATION SHEET

MWAN IAP 4300
Two Radio Meshed WiFi Network
with 4.9GHz for Public Safety

Benefits

- Best-in-class radio performance
- Reliable coverage
- Best-in-class throughput
- Robust security

Motorola Wireless Broadband

Motorola's comprehensive portfolio of reliable and cost-effective wireless broadband solutions together with our EWLAN solutions provide and extend coverage both indoors and outdoors. The Motorola Wireless Broadband portfolio offers high-speed Point-to-Point, Point-to-Multipoint, Mesh, Wi-Fi and WiMAX networks that support data, voice and video communications, enabling a broad range of fixed and mobile applications for public and private systems. With Motorola's innovative software solutions, customers can design, deploy and manage a broadband network, maximizing uptime and reliability while lowering installation costs.

MWAN IAP 4300 • 4300-49 RADIO CHARACTERISTICS

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|--|--|
| IEEE 802.11b/g Radio (20MHz Channel) | 2.400 to 2.483GHz |
| IEEE 802.11a Radio (10MHz and 20MHz Channel) | 4.940 to 4.990GHz |
| RF Modulation | CCK (802.11b), OFDM (802.11a/g) |
| Transmit Power (Maximum) | 35dBm EIRP (802.11b/g), 34 dBm EIRP (802.11a) • Settable in 1dB increments |
| Receive Sensitivity | 802.11b: -92dBm @ 11 Mbps to -100dBm @ 1 Mbps 802.11g: -78dBm @ 54 Mbps to -95dBm @ 6 Mbps 802.11a: -77dBm @ 27 Mbps to -93dBm @ 3 Mbps 802.11j: -78dBm @ 5.4 Mbps to -95dBm @ 6 Mbps |
| Antenna Type | N-Type • Two (2) omnidirectional: 8dBi for 2.4GHz and 11dbi for 4.9GHz |

ROUTING

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|------------|---|
| Technology | MeshConnex routing with Layer 1 situational-awareness |
| Protocol | Patented, Layer 2, hybrid proactive/reactive routing |

NETWORK

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|-----------------------------|--|
| Network Management Software | SNMPv1, SNMPv2c or secure SNMPv3 via One Point Wireless Manager Web Interface via HTTPS (SSL) 802.11 and MWAN MIBs |
| Network Interface | Weatherized 10/100 Base-T Ethernet (RJ-45) port with surge suppression |
| Network Segmentation | 16 VAPs (Multiple SSIDs with VLAN mapping) |
| Quality of Service (QoS) | 802.11e, weighted fair queuing and IP precedence bits (ToS) supported via DSCP |

SECURITY

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|---------------------------|--|
| Client Encryption Support | WEP, WPA (TKIP) and WPA2 (AES, 802.11i) |
| Intra-Mesh Encryption | Secure Mesh with AES |
| Authentication | 802.1X (Infrastructure/Client) and MAC address hardware authentication |
| TCP/IP Filtering | Broadcast storm and port filtering |

POWER

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|---------------------------|--|
| Power Input | 90-264 VAC (with +/- 20% variation at 47-63Hz) or Optional 10.8-14VDC (2.5A Max) |
| Power Connector | Weatherized NEMA 5-15 power cord • 12 ft (3.66m) |
| Power Consumption | 15W to 30W (with PoE device) |
| Power over Ethernet (PoE) | Support for Point-to-Multipoint PoE, or 802.3af Standard PoE device |

PHYSICAL

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|------------|--|
| Dimensions | 9"x 6"x 3.5" (23.1cm x 15.2cm x 8.9cm) • 189in ³ (3097cm ³) |
| Weight | 4.5 lbs (2.04kg) |
| Packaging | Outdoor, all-weather enclosure (NEMA 4 / IP54) |
| Mounting | 3" (7.62cm) diameter post mounting |

ENVIRONMENTAL & REGULATORY

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|---------------------------|---|
| Temperature Range | -30 to 60 °C (-22 to 140 °F) |
| Humidity | 0 to 95%, non-condensing at 50 °C (122 °F) |
| Regulatory Certifications | FCC Part 15 & 90, CE, MET Mark / CSA / UL, RoHS / CMM / WEEE, Industry Canada |

AVAILABLE OPTIONS & ACCESSORIES

| | |
|------------------------------------|--|
| Mounting | Lamp post mount bracket assembly |
| Antennas | 4 or 6dBi omnidirectional for 2.4GHz |
| Power Plug Adapters | AC photo cell adapter and US, EU, and AU Power Plug Adapters |
| Power Over Ethernet (PoE) Adapters | Point-to-Multipoint Connect or IEEE 802.3af PoE |



Motorola, Inc. www.motorola.com/mesh

ONE YEAR PARTS & LABOR WARRANTY

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