wi4 Mesh

MOTOMESH™ Duo

Two Radio Meshed WiFi Network with 4.9GHz for Public Safety

MOTOMESH Product Advantage

The MOTOMESH 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, MOTOMESH 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. MOTOMESH Duo operates 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, Duo'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

MOTOMESH Duo 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

MOTOMESH Duo supports complete, end-to-end security. It provides WEP, WPA and WPA2 encryption on client access. Motorola's own SecureMesh 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

MOTOMESH Duo 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 MOTOMESH Duo 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. MOTOMESH Duo 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.

Software Highlights

The MOTOMESH Duo solution 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 Duo'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.

MOTOwi4

SPECIFICATION SHEET

MOTOMESH Duo
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

MOTOwi4

MOTOMESH Duo is part of the MOTOwi4 family of broadband access technologies, a comprehensive platform of wireless broadband solutions, applications and services. Designed to complement and complete wireless networks, MOTOwi4 solutions address a broad range of applications across municipal, enterprise, and operator segments. The comprehensive MOTOwi4 portfolio creates a true end-to-end ecosystem of complementary products, services and solutions that provide high speed connectivity enabling a broad range of applications in fixed, nomadic, portable or mobile environments. Working together, wi4 Mesh solutions combined with other MOTOwi4 access technologies deliver ubiquitous, metro-wide (community-wide, campus-wide) wireless broadband coverage.

Why Motorola

Motorola is uniquely positioned to address the wireless broadband market through the MOTOwi4 vision. Motorola has aligned its business units and roadmaps to provide a comprehensive, end-to-end solution covering all aspects of the broadband wireless access deployment. With our deep and extensive patent portfolio, over a decade of R&D investment, and our experience as a global supplier of broadband wireless access solutions, Motorola is primed to deliver its best in class wireless networks. Motorola is committed to leading the industry with end-to-end wi4 Mesh solutions addressing the full scope of the operator's deployment needs including access, core, devices, network management and services.

MOTOMESH DUO • 4300-49 RADIO CHARACTERISTICS

IEEE 802.11b/g Radio (20MHz Channel)	2.400 to 2.483GHz
IEEE 802.11a Radio (10MHz 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
Antenna Type	N-Type • Two (2) omnidirectional: 8dBi for 2.4GHz and 11dbi for 4.9GHz

ROUTING

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

NETWORK

Network Management Software	EMS on Linux OS via SNMPv1, SNMPv2c or secure SNMPv3 Web Interface via HTTPS (SSL) 802.11 and MOTOMESH 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

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

POWER

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 Canopy PoE, or 802.3af Standard PoE device

PHYSICAL

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

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	Canopy Connect or IEEE 802.3af PoE

ONE YEAR PARTS & LABOR WARRANTY

MOTOROLA

Motorola, Inc. www.motorola.com/mesh