wi4 Mesh

IAP7300

Intelligent Access Point • for MOTOMESH Quattro

The IAP7300 is the wireless gateway between a MOTOMESH Quattro mobile broadband network and the greater wired world.

The Intelligent Access Point (IAP) acts as the transition point from the wireless network to the wired world. Each IAP offers a maximum burst data rate of up to 6 Mbps for voice, video and data communications. If greater network capacity is required, additional IAPs can be easily deployed – without the need for extensive RF or site planning. The location of IAPs is not critical due to the self-forming, self-healing and self-balancing nature of the MOTOMESH network.

Licensed 4.9GHz and Unlicensed 2.4GHz

The IAP7300 contains two standards compliant, 802.11 (Wi-Fi) radios and two of Motorola's widely acclaimed Mobility Enabled Access (MEA) mobile broadband radios. One set of Wi-Fi and MEA radios operate in the unlicensed, 2.4GHz band and the other set operate in the licensed, 4.9GHz public safety band.

Public Safety, Public Works and Public Access can all be given separate and dedicated wireless broadband access due to MOTOMESH's multi-radio, multi-frequency architecture. The IAP's dual, independent backhaul connections deliver public safety users added security by providing physical network separation from public and other, unrelated backhaul networks.

Easy to Install and Deploy

Flexible mounting hardware enables the IAP to be mounted on utility poles, traffic signals, billboards, buildings, etc. Innovative, weatherproof power and network connectors make reliable deployments quick and easy. IAPs automatically power up and integrate themselves into the MOTOMESH network, saving money and time.

Stationary & Mobile Wireless Broadband

When configured with its full complement of four radios, each IAP delivers maximum, continuous, symmetrical data rates ranging from 900 Kbps for mobile, 4.9GHz MEA users to 20 Mbps for stationary, 2.4GHz Wi-Fi users. Motorola's exclusive, MEA radio technology supports seamless, mobile, broadband connectivity in both the licensed 4.9GHz and unlicensed 2.4GHz bands – even at speeds in excess of 150 mph.

Fast and Accurate Position Location

Depending on network configuration, every MEA radio can provide quick and accurate position location information that does not require the use of GPS satellites. Location information is provided in standard NMEA0183 format, or through the MEA API. This location information can assist in the deployment of resources, creating a visual map of asset positions at an incident or across an entire city.

Network Management and Monitoring

MeshManager software allows the IAP7300 to be managed and upgraded over-the-air (OTA). The MeshManager application provides a single, comprehensive network management suite for controlling security policies, network provisioning, client administration and performance monitoring of all the components of a MOTOMESH network.

A Total End-to-End Solution

Motorola's wireless broadband portfolio offers an array of access and backhaul technologies for complete end-to-end municipal wireless initiatives. Motorola wi4 Fixed Point-to-Multipoint and Point-to-Point solutions can provide reliable, high-capacity Internet backhaul links to Motorola mesh networks. MeshPlanner and MeshScanner enable detailed network planning and optimization capabilities. Additionally, Motorola's MOTOwi4 Ready Applications Ecosystem offers a wide range of validated solutions to generate immediate benefit from your wireless network.

MOTOwi4

SPECIFICATION SHEET

MOTOMESH Quattro
Four Radio Meshed WiFi Network
with Mobility Enabled Access

BENEFITS

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

MOTOwi4

MOTOMESH Quattro 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 QUATTRO • IAP7300 RADIO CHARACTERISTICS

	2.4GHz 802.11b/g	2.4GHz MEA	4.9GHz 802.11	4.9GHz MEA
Output Power	21 dBm	24 dBm	24 dBm	24 dBm
RF Modulation	CCK / OFDM	QDMA	OFDM	QDMA
Operating Frequency (GHz)	2.4 - 2.4835	2.4 - 2.4835	4.94 - 4.99	4.94 - 4.99
Maximum Burst Data Rate	54 Mbps	6 Mbps	18 Mbps	6 Mbps
Spectrum Used	20MHz	60MHz	10MHz	20MHz
Antenna Type	Omni, 8 dBi	Omni, 8 dBi	Omni, 11 dBi	Omni, 11 dBi
Antenna Connector	N-Type	N-Type	N-Type	N-Type
Default System Configuration	Standard	Software Key	Software Key	Software Key

NETWORK

Network Management Software	MeshManager EMS on Linux OS or Windows 2003 Server via SNMPv1, SNMPv2c or secure SNMPv3 • Web Interface via HTTPS (SSL) • 802.11 and MOTOMESH MIBs
Network Interface	Two (2) weatherized 10/100 Mbps Ethernet (RJ-45) ports, with surge protection

SECURITY

Virtual Private Network (VPN)	Supports FIPS-140-2 encryption (Motorola Multi-Net Mobility)
Client Encryption Support	For 802.11b/g only: WEP, AES, TKIP, WPA and WPA2 (802.11i)
Authentication	**MEA**: 802.1X (Infrastructure/Client and Client/Client) **802.11**: 802.1X (Infrastructure/Client)

POWER

Power Requirements	90 to 264 VAC, 47 - 63Hz single phase
Power Connector	AC, NEMA 5-15 power cord • 6 ft (1.83m)
Power Consumption	30W to 35W (with Canopy PoE)

PHYSICAL

Dimensions	7" x 8" x 10" (17.8cm x 20.3cm x 25.4cm)
Weight	12 lbs (5.4kg)
Packaging	NEMA 4 environmental enclosure for indoor or outdoor deployment
Mounting	3" (7.62cm) diameter post mounting

ENVIRONMENTAL

Temperature Range	-35 to 55 °C
Humidity	0 to 100%, non-condensing
General Certifications	FCC Part 15 and 90, UL, CSA
Safety Certifications	UL / CSA

AVAILABLE OPTIONS

Mounting	Lamp post mount bracket assembly
Power	AC photo cell power adapter
DC Input	IAP6300 with 10-18 VDC input

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Motorola, Inc. www.motorola.com/mesh

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