

IAP7300

Intelligent Access Point • for MOTOMESH



The IAP7300 is the wireless gateway between a MOTOMESH 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.

Motorola's mesh networking technology enables users to wirelessly access critical broadband applications seamlessly – any time, and anywhere. Whether utilizing predeployed infrastructure, or an instant, ad hoc, broadband network formed with other users, Motorola's mesh networking technology delivers real-time data to detect, prevent, respond.

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 Mesh Enabled Architecture (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.

VMM7300 RADIO CHARACTERISTICS

Output Power	24 dBm
RF Modulation	QDMA
Operating Frequency (GHz)	4.94 - 4.99
Maximum Burst Data Rate	6 Mbps
Spectrum Used	20MHz
Antenna Type	Omnidirectional, 7 dBi (magnetic mount antenna for vehicles)
Antenna Connector	N-Type

NETWORK

Network Management Software	MeshManager via SNMP
Network Interface	10/100 Mbps Ethernet, RJ-45 connector
Configurable Network Devices	3 assignable IP addresses – hub needed to connect more than one device

SECURITY

Virtual Private Network (VPN)	Support for FIPS-140-2 compliant encryption (Padcom, RadiolP and NetMotion)
Authentication	802.1X (Infrastructure/Client and Client/Client)

POWER

Power Requirements	5-15VDC
Power Connector	12VDC power cable with in-line fuse • 15ft (4.57m)
Power Consumption	10W maximum

PHYSICAL

Dimensions	8" x 5.5" x 2" (20.3cm x 13.9cm x 5.1cm)
Weight	1.8 lbs (0.8kg)
Packaging	IP54 industrial PC enclosure

ENVIRONMENTAL

Temperature Range	-35 to 55 °C
Humidity	0 to 100%, non-condensing
Certifications	FCC Part 15 & 90, UL, CSA
Vibration	MIL: 810F, Method 514.5 Procedure 1, Category 24 TIA: TIA/EIA-603, Paragraph 3.3.4

AVAILABLE OPTIONS

Antenna	Omnidirectional, 0 dBi and 3 dBi
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MOTOMESH

Additional Network Features

- Advanced Encryption Standard (AES) Support for Wi-Fi Clients
- Layer 2 Multicast Support
- Network Time Protocol (NTP) support
- Differentiated Services using IP Quality of Service (QoS) Support
- Over-the-Air Software Upgrade Support
- MAC Access Control lists
- Web (HTTP) based management interface
- SNMP agent for remote management
- Telnet interface with command-line management
- Firmware Upgrades via Trivial File Transfer Protocol (TFTP)



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