MWR7300

Mesh Wireless Router • for MOTOMESH

MOTOROLA

The MWR7300 extends coverage and connectivity in a MOTOMESH network by meshing access points and users together.

By allowing data and video to hop through one or more Mesh Wireless Router (MWR), MOTOMESH enables robust, non-line-of-sight communications between users and the network. Mesh Wireless Routers also act as reference points for position location of users and vehicles within the MOTOMESH network. The MWR7300 requires only a power connection to operate, as data is transmitted 100% wirelessly between nodes. Direct network connectivity can also be provided to colocated IP devices, like video cameras or sensors, via two, built-in, Ethernet ports.

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 MWR7300 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.

Easy to Install and Deploy

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

Fast and Accurate Position Location

Depending on network confirguration, every MEA radio can provide position location information that does not require the use of GPS satellites. MEA location information can assist in the deployment of resources, creating a visual map of asset positions at an incident, or across an entire city. Location information is generated quickly and accurately.

Multiple IP Address Support

The MWR features two high-speed Ethernet ports and supports a total of six IP addresses (three addresses per port). This allows a network of IP enabled devices to be directly addressed, accessed and managed over the MOTOMESH network. Additional devices can be supported by simply linking the connected devices through a NAT capable router.

Network Management and Monitoring

MeshManager software allows the MWR7300 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.

MWR7300 RADIO CHARACTERISTICS

	2.4 GHz 802.11 b/g	2.4 GHz MEA	4.9 GHz 802.11	4.9 GHz MEA
Output Power	23 dBm	24 dBm	23 dBm	24 dBm
RF Modulation	CCK/OFDM	QDMA	OFDM	QDMA
Operating Frequency (GHz)	2.412 - 2.462	2.40 - 2.48	4.945 - 4.85	4.50 - 4.65
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 Managament Software	MeshManager via SNMP
Network Interface	2 port 10/100 Mbps Ethernet, ruggedized RJ-45 connector with surge suppression

SECURITY

Virtual Private Network (VPN)	Support for FIPS-140-2 compliant encryption (Padcom, RadioIP and NetMotion)
Encryption Support	AES, WEP and WPA (802.11 b/g only)
Authentication	**MEA:** 802.1X (Infrastructure/Client and Client/Client) **802.11:** 802.1X (Infrastructure/Client)

POWER

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

PHYSICAL

Dimensions	7" x 8" x 10" (17.8cm x 20.3cm x 25.4cm)
Weight	12 lbs (5.4kg)
Packaging	Outdoor, all-weather enclosure
Mounting	3" (7.62cm) diameter post mounting

ENVIRONMENTAL

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

AVAILABLE OPTIONS

Mounting	Lamp post mount bracket assembly
Power	AC photo cell adapter

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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