



# VMM6300

Vehicle Mounted Modem • for 2.4GHz MEA

The VMM6300 turns any vehicle into a mobile office, offering secure and reliable wireless connectivity to a 2.4GHz MEA network.

The Vehicle Mounted Modem (VMM) supports up to 6 Mbps burst data rates while moving at speeds in excess of 150 mph. A standard RJ-45 Ethernet port gives Mobile Data Terminals (MDT), IP video cameras, and other IP-ready devices access to the 2.4GHz MEA mobile broadband network. Remote database inquiries, on-scene report submission, multi-megabyte file transfers and remote monitoring of dashboard video will help make field personnel more efficient.

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.

#### **Symmetric Burst Data Rates of Up to 6 Mbps**

Unlike other mobile broadband technologies that provide limited uplink speeds, the VMM supports up to 6 Mbps burst rates for uploads and downloads. Photographs and live video from vehicles in the field can be remotely monitored by other users or remote operations centers.

#### **End-to-End Industry Standard IP Support**

MEA networks support end-to-end, standards-based Internet Protocol (IP). IP-based applications or IP capable devices work seamlessly in the MEA network, including FIPS-140-2 compliant VPNs. The VMM supports three IP addresses, allowing a network of in-vehicle devices to be addressed and managed wirelessly.

#### **Create Peer-to-Peer Networks Anywhere**

Vehicles can instantly form peer-to-peer networks with other mesh-enabled devices. A high-speed, broadband network will automatically form between users, even in places where no MEA network infrastructure exists.

#### **Engineered for Data on the Move**

Designed for heavy duty use in commercial and public vehicles, this rugged and compact device is made to withstand heat, shock and vibration. The VMM operates on 12 VDC nominal (9 to 16 VDC), and can be mounted in any orientation for maximum placement flexibility.

#### **Position Location and Navigation Services**

The Vehicle Mounted Modem offers position location capabilities without relying on costly Global Positioning Systems (GPS). Depending on network configuration, location determination can be quicker and more accurate than consumer GPS, and is available in places GPS is limited, such as parking garages and urban canyons. Motorola provides location data in a standard GPS format, allowing applications that operate with GPS data to interact seamlessly with the VMM6300.

#### **Over-the-Air Network Management**

Every MEA product is a managed element within the network. New features and services can be added via over-the-air software uploads. End-to-end IP support also enables IT managers to download and update client software wirelessly, greatly simplifying software maintenance procedures.

## VMM6300 RADIO CHARACTERISTICS

Output Power	Up to 25 dBm
RF Modulation	QDMA
Operating Frequency (GHz)	2.4 - 2.4835 (2nd ISM Band)
Maximum Burst Data Rate	6 Mbps
Spectrum Used	60 MHz
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	5.0 to 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	2.0 lbs (0.9kg)
Packaging	IP54 industrial PC enclosure

## ENVIRONMENTAL

Temperature Range	-35 to 55 °C
Humidity	0 to 100%, non-condensing
General Certifications	FCC Part 15, RSS-210
Safety Certifications	IEC 60950, EN 60950, EN 60215, CSA C22.2 No. 60950-00010
CE Mark	ETSI EN 301 489-1, ETSI EN 301 489-17
Vibration	<b>MIL:</b> 810F, Method 514.5 Procedure 1, Category 24 <b>TIA:</b> TIA/EIA-603, Paragraph 3.3.4

## AVAILABLE OPTIONS

Antenna	Omnidirectional, 0 dBi and 3 dBi
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# 2.4GHz MEA Additional Network Features

- 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
- Firmware Upgrades via Trivial File Transfer Protocol (TFTP)



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