Mesh Wide Area Network 6300 Series

High Performance in Harsh Environments

About Motorola Wireless Network Solutions

Motorola delivers seamless connectivity that puts real-time information in the hands of users, giving customers the agility they need to grow their business or better protect and serve the public. Working seamlessly together with its world-class devices, Motorola's unrivaled wireless network solutions include indoor WLAN, outdoor wireless mesh, point-to-multipoint, point-to-point networks and voice over WLAN solutions. Combined with powerful software for wireless network design, security, management and troubleshooting, Motorola's solutions deliver trusted networking and anywhere access to organizations across the globe.

All RF environments are not created equal. Industrialized locations like busy ports, airports, railroad yards, construction sites and mining operations can present the ultimate test of wireless communications performance and reliability. Mesh Wide Area Network (MWAN) 6300 series solutions are proven the world over to deliver exceptional data, voice and video communications under some of the harshest, most challenging RF environments on earth. MWAN 6300 solution productivity benefits include:

• **Client Router Architecture.** Mesh 6300 series networks enable each client device to act as a router/repeater and dynamically extends the networks to reach into dead spots and RF canyons.

• **Dynamic Frequency Assignment.** Mesh 6300 series networks offer four simultaneous 20 MHz channels and dynamic routing to detect and actively avoid interference.

• **Resynchronization.** Mesh 6300 series networks survive difficult RF conditions using advanced forward error correction and by sending resynchronization packets every 250 microseconds.

• **Multipath Capabilities.** MWAN MEA (Mobility Enabled Access) devices incorporate advanced rake receivers to gather energy from different reception paths and synchronize them together into a coherent signal.

• **High Power.** MWAN 6300 MEA cards transmit at 300 milliwatts into the antenna.

• **Secure High Speed Handoffs.** Mesh 6300 series networks provide reliable broadband connectivity and fast handoffs to support routing changes between vehicles.

• **Multicast/Broadcast Support.** With the removal of the IP proxy a single code base is used across the MWAN 6300 and 4300 product lines resulting in product enhancements that benefit a number of different solutions. In addition, the various MWAN solutions are now interoperable and can reside on the same network.

• **Automatic Re-Routing.** The MWAN 6300 product compensates for the loss of the wired backhaul by automatically re-routing traffic to help ensure no dead spots occur and data reaches its desired destination.

• **Enterprise Grade Management Tools.** Motorola's integrated One Point Wireless Suite provides automated network planning, deployment, monitoring and management of a Mesh network from a single suite of software centrally located on a computer console.

• **Virtual LANs (VLANs).** Provides up to 16 VLANs per access point enabling multiple Virtual Private Networks (VPNs).

The Mesh Wide Area Network 6300 Series Purpose-Built Equipment Portfolio

Motorola's Mesh 6300 Enetwork solution is powered by a purpose-built equipment portfolio that offers an exceptional combination of cost-effectiveness, ruggedness and reliability in challenging RF environments. The product line includes:

IAP 6300 Intelligent Access Point serves as a transition point from the wireless network to the wired world or provides the functions of an enhanced wireless router by providing wireless network access to one or more IP devices via built-in Ethernet.

MWR 6300 Mesh Wireless Router provides extended network mobility and coverage in the 2.4 GHz frequency band.

WSM 6300 Wireless Serial Modem consists of a small compact router with a serial interface for machine-to-machine operations such as remote sensor, controller or signal connectivity.

VMM 6300 Vehicle Mounted Modem supports 6 Mbps burst data rates at speeds in excess of 200 mph.

WMC 6300 Wireless Modem Card enables high bandwidth data and video, position location and voice services from most devices with a PCMCIA card slot.

MWAN 6300 SERIES

Radio Characteristics	Output Power	Up to 25 dBm @ the transimitter
	RF Modulation	QDMA
	Operating Frequency	2.4 - 2.4835 (2nd ISM Band)
	Maximum Burst Data Rate	6 Mbps
	Spectrum	40 - 80 MHz (customer selectable)
	Channels	1 20 MHz Control Channel and 3 20 MHz Data Channels
Network	Network Management Software	One Point Wireless Manager
	Network Interface	10/100 Mbps Ethernet RJ45 Connector
	IP Network Address	DHCP or Statically Provisioned
Security	Authentication	RADIUS 802.1x, EAP -TLS (Intra-Mesh)
Power	Power Requirements	90 to 264 VAC
	Power Consumption	5 to 14 VDC
		IAP/MWR: 8W Maximum at 120 VAC
		MWR: 5W Maximum at 120 VAC
		WMC: 3.3W Transmit/1.5W Receive
Physical	Dimensions	IAP/EWR: 6.25" x 6.25" x 4" (15.9 cm x 15.9 cm x 10.2 cm)
		MWR: 3" x 4.25" x 5.75" (7.6 cm x 11.5 cm x 14.6 cm)
		WSM: 4.5" x 3.5" x 1.25" (11.4 cm x 8.9 cm x 3.2 cm)
		VMM/PWR: 8" x 5.5" x 2" (20.3 cm x 13.9 cm x 5.1 cm)
		WMC: 3.4" x 2.1" x 0.2" (8.6 cm x 5.4 cm x 0.5 cm)
	Weight	IAP/EWR: 4.4 lbs (1.99 kg)
		MWR: 2.6 lbs (1.18 kg)
		WSM: 14 oz (0.4 kg)
		VMM/PWR: 2 lbs (0.9 kg)
		WMC: 1.1 oz (0.3 kg)
	Packaging	IAP/EWR/MWR/WSM: NEMA 4 Environmental Enclosure for Indoor or Outdoor Deployment
		VMM/PWR: IP33 Industrial Mountable Enclosure
		WMC: Standard PCMCIA form factor
Environmental	Temperature Range	-35° to +60° C
	Humidity	IAP/EWR/MWR/WSM/VMM/PWR: 0 to 100% Non-Condensing
		WMC: 0 to 90% Non-Condensing
	Wind Load	Withstands Category 5 hurricane wind speeds of 156 mph
		Wind survivability: > 156 mph
		Wind loading (156 mph): < 45 lbs
	Certifications	FCC, MET Labs, CE, CMM, RoHS, EPP
	Vibration	VMM/PWR Only:
		MIL: 810F, Method 514.5 Procedure 1, Category 24
		TIA: TIA/EIA-603, Paragraph 3.3.4

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