

PRODUCT SPEC SHEET

MOTOTRBO DGM™8000 / DGM™5000 SERIES MOBILE RADIOS



YOUR MOBILE VOICE JUST GOT STRONGER

MOTOTRBO™ DGM™8000 / DGM™5000 SERIES DIGITAL TWO- WAY MOBILE RADIOS

From the delivery driver crisscrossing the city to the sanitation crew clearing streets, MOTOTRBO™ can transform your enterprise and make employee interactions smarter and safer. Our best-in-class audio and exceptional data capabilities empower people like never before.

Versatile and powerful, MOTOTRBO combines the best of two-way radio functionality with the latest digital technology. DGM™8000 / DGM™5000 Series radios integrate voice and data seamlessly, offer enhanced features that are easy to use, and deliver operations-critical advantages like integrated Bluetooth® and Intelligent Audio.

The DGM™8000 / DGM™5000 Series can remaster your workplace and the way people collaborate to help you achieve even greater efficiency.

FEATURES

Best-in-class audio

Loud front-facing speaker and Intelligent Audio feature automatically adjusts the radio volume according to the environment's noise level

Large, full color display

Enhanced 5-line display features a flexible menu-driven interface. Icons and large easy-to-use navigation buttons ease message reading and menu navigation

Personalized voice announcements

Voice announcement verbally calls out channel or zone changes as well as programmable button features

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AUDIO BEYOND EXPECTATIONS

When it comes to exceptional audio clarity, the quality of digital can't be denied. With the DGM™8000 / DGM™5000 Series mobiles, you get digital quality plus unique features to help your employees hear and speak clearly, wherever they work.

With Intelligent Audio, the radio volume automatically adjusts to compensate for background noise so workers don't have to adjust their radio volume to avoid missing a call in loud situations or disturbing others when they move into quiet places. Increased background noise suppression filters out unwanted external clamor – from road traffic to the roar of engines.

Bluetooth® audio, embedded right in the radio, provides voice communication with exceptional clarity – giving your people the freedom to move without wires. Also, IMPRES™ audio accessories enhance noise suppression and improve voice intelligibility for smarter audio than they've ever experienced before. All legacy accessories are fully compatible with our new MOTOTRBO radios.

INDUSTRY-LEADING DATA

DGM™8000 Series radios feature integrated GPS that enables location tracking of mobile work teams and text messaging to enable communication when voice isn't feasible and the large, full-color display operates in day or night mode, for easy viewing of contact lists, text messages and work order tickets even in bright sunlight. These radios also feature integrated Bluetooth®, enabling the radio to wirelessly interface with Bluetooth®-enabled devices such as barcode scanners and magnetic card readers to facilitate the collection of critical information in the field.

MOTOTRBO's Application Developer program offers customized data applications that allow you to adapt your radios to your business challenges. With the industry's largest developer program, data applications answer your objectives—from work order ticket management to telephony integration, and more.

HIGH-POWERED PERFORMANCE

Because MOTOTRBO uses TDMA digital technology, you get integrated voice and data, twice the calling capacity and clearer voice communications. Also, the smart IMPRES™ technology in our high-powered accessories enables easier communications – everywhere your people travel.

RICH FUNCTIONALITY

DGM™8000 / DGM™5000 Series radios offer plenty of features your business seeks – including enhanced call signaling, basic and enhanced privacy-scrambling, option board expandability, the transmit

interrupt suite to prioritize critical communication the moment you need it and compatibility with SCADA solutions for utility and public service monitoring and alarms. Programmable button features appear on the display for easy viewing and quick access. And when workers can't be distracted, customizable voice announcement provides audible confirmation of channel and zone changes as well as programmable button features, eliminating the need to view the display.

EXPANDED CAPACITY AND COVERAGE

Your work crews are on the go – picking up loads, dropping off cargo, repairing roads or restoring power after a storm. That's why you need the far-reaching performance of MOTOTRBO.

IP Site Connect helps to dramatically improve customer service and productivity by using the Internet to extend coverage to create a wide area network, enhance single site coverage or link geographically dispersed locations. Capacity Plus single-site trunking expands capacity to over 1,000 users without adding new frequencies. Linked Capacity Plus leverages the high capacity of Capacity Plus, with the wide area coverage capabilities of IP Site Connect to keep your staff at up to 15 sites connected with an affordable wide area trunking solution. And Connect Plus provides a solution for operations that require a high-volume, wide-area system. So whether you want expanded coverage at a single site or across multiple ones, MOTOTRBO can be scaled to your needs.

MIGRATE AT YOUR OWN PACE

Keeping operations running smoothly during a change in communication systems is vital to business. It's easy to migrate to digital with DGM™8000 / DGM™5000 Series radios because they operate in analog and digital mode while the dynamic mixed mode repeater functionality streamlines automatic switching between analog and digital calls. So you can begin using MOTOTRBO radios and repeaters on your existing analog system, and when your time and budget allow, move to digital at your own pace.

DAY-IN, DAY-OUT DURABILITY

DGM™8000 / DGM™5000 Series mobile radios are backed by a two-year Standard Warranty.



"With Motorola's technology providing first-class GPS tracking, fleet localization and a voice communication network among vehicles, the Cooperativa de Transporte Público located in Ciudad de Milagro was able to put together a fleet with optimized operations to meet the demands of its partners", said Mr. Carlos Hurtado, Chairman of the Cooperativa de Transporte Urbano Ciudad de Milagro.

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DGM™ 8000 / DGM™ 5000 SERIES SPECIFICATIONS

FULLY COMPATIBLE WITH LEGACY MOTOTRBO RADIOS.

GENERAL SPECIFICATIONS											
		DGM™8500/DGM™5500			DGM™8500		DGM™8000/DGM™5000			DGM™8000	
		VHF	UHF Band 1	UHF Band 2	350/400	800/900	VHF	UHF Band 1	UHF Band 2	350/400	800/900
Channel Capacity		Up to 1,000			Up to 1,000	Up to 1,000	99			99	99
Typical RF Output	Low Power	1-25 W	1-25 W	N/A	1-25 W	N/A	1-25 W	1-25 W	N/A	1-25 W	N/A
	High Power	25-45 W	25-40 W	1-40 W	25-40 W	806-870 MHz: 10-35 W 896-941 MHz: 10-30 W	25-45 W	25-40 W	1-40 W	25-40 W	806-870 MHz: 10-35 W 896-941 MHz: 10-30 W
Dimensions (H x W x L)		2.1 x 6.9 x 8.1 in (53.3 x 175.3 x 205.7 mm)									
Weight		3.9 lbs (1.8 kg)									
Maximum Current Drain	Standby	0.81 A									
	Receive (Rated Audio)	2 A									
	Transmit	1-25 W: 11.0 A 25-45 W: 14.5 A	1-25 W: 11.0 A 25-40 W: 14.5 A			12 A	1-25 W: 11.0 A 25-45 W: 14.5 A	1-25 W: 11.0 A 25-40 W: 14.5 A			12 A
FCC Description	1-25 W: ABZ99FT3086	1-25 W: ABZ99FT4087	1-40 W: ABZ99FT4085	1-25 W: ABZ99FT4087	AZ492FT5862	1-25 W: ABZ99FT3086	1-25 W: ABZ99FT4087	1-40 W: ABZ99FT4085	1-25 W: ABZ99FT4087	AZ492FT5862	
	25-45 W: ABZ99FT3087	25-40 W: ABZ99FT4088		25-40 W: ABZ99FT4088		25-40 W: ABZ99FT4088	25-40 W: ABZ99FT4088				
IC Description	1-25 W: 109AB-99FT3086	1-25 W: 109AB-99FT4087	1-40 W: 109AB-99FT4085	1-25 W: 109AB-99FT4087	109U-92FT5862	1-25 W: 109AB-99FT3086	1-25 W: 109AB-99FT4087	1-40 W: 109AB-99FT4085	1-25 W: 109AB-99FT4087	109U-92FT5862	
	00 25-45 W: 109AB-99FT3087 0	25-40 W: 109AB-99FT4088		25-40 W: 109AB-99FT4088		25-40 W: 109AB-99FT4088	25-40 W: 109AB-99FT4088				

RECEIVER					
	VHF	350/400	UHF Band 1	UHF Band 2	800/900
Frequencies	136-174 MHz	403-470 MHz	403-470 MHz	450-512 MHz	806-870 MHz 896-941 MHz
Channel Spacing	12.5 kHz / 25 kHz*				806-870 MHz 12.5/25 kHz* 896-941 MHz: 12.5 kHz
Frequency Stability (-30°C, +60°C, +25°C Ref)	± 0.5 ppm				
Analog Sensitivity (12dB SINAD)	0.3uV, 0.22uV (typical)				
Digital Sensitivity	5% BER @ 0.25uV (0.19uV typical)				5% BER @ 0.3uV
Intermodulation (TIA603D)	78 dB				75 dB
Adjacent Channel Selectivity (TIA603D)	50 dB @ 12.5 kHz 80 dB @ 25 kHz*	50 dB @ 12.5 kHz 75 dB @ 25 kHz*			
Spurious Rejection (TIA603D)	80 dB	75 dB			
Rated Audio	3 W (Internal), 7.5 W (External - 8 ohms) 13 W (External - 4 ohms)				
Audio Distortion @ Rated Audio	3% (typical)				
Hum and Noise	-40 dB @ 12.5 kHz/-45 dB @ 25 kHz*				
Audio Response	TIA603D				
Conducted Spurious Emission (TIA603D)	-57dBm				

TRANSMITTER					
	VHF	350/400	UHF Band 1	UHF Band 2	800/900
Frequencies	136-174 MHz	403-470 MHz	403-470 MHz	450-512 MHz	806-870 MHz 896-941 MHz
Channel Spacing	12.5 kHz / 25 kHz*				806-870 MHz: 12.5/25 kHz* 896-941 MHz: 12.5 kHz
Frequency Stability (-30°C, +60°C, +25°C Ref)	± 0.5 ppm				
Low Power Output	1-25 W				
High Power Output	25-45 W	1-40 W			806-870MHz 10-35W 896-941MHz 10-30W
Modulation Limiting	± 2.5 kHz @ 12.5 kHz/± 5.0 kHz @ 25 kHz*				
FM Hum and Noise	-40 dB @ 12.5 kHz/-45 dB @ 25 kHz*				
Conducted/Radiated Emission	-36 dBm < 1 GHz/-30 dBm > 1 GHz				
Adjacent Channel Power	60 dB @ 12.5 kHz/70 dB @ 25 kHz*				50 dB @ 12.5 kHz/ 60 dB @ 25 kHz*
Audio Response	TIA603D				
Audio Distortion	3%				
FM Modulation	12.5 kHz: 11K0F3E / 25 kHz*: 16K0F3E				
4FSK Digital Modulation	12.5 kHz Data Only: 7K60F1D & 7K60FXD				
	12.5 kHz Voice: 7K60F1E & 7K60FXE				
	Combination of 12.5 kHz Voice & Data: 7K60F1W				
Digital Vocoder Type	AMBE+2™				
Digital Protocol	ETSI TS 102 361-1, -2, -3				

*25 kHz is NOT available in the USA. FCC narrowbanding rules do not allow operation of this model on 25 kHz configuration in Part 90 VHF/UHF frequencies

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MILITARY STANDARDS										
	810C		810D		810E		810F		810G	
APPLICABLE MIL-STD	METHOD	PROCEDURES	METHOD	PROCEDURES	METHOD	PROCEDURES	METHOD	PROCEDURES	METHOD	PROCEDURES
Low Pressure	500.1	I	500.2	II	500.3	II	500.4	II	500.5	II
High Temperature	501.1	I, II	501.2	I/A1, II/A1	501.3	I/A1, II/A1	501.4	I/Hot, II/Hot	501.5	I/A1, II
Low Temperature	502.1	I	502.2	I/C3, II/C1	502.3	I/C3, II/C1	502.4	I/C3, II/C1	502.5	I/C3, II
Temperature Shock	503.1	-	503.2	I/A1/C3	503.3	I/A1/C3	503.4	I	503.5	I/C
Solar Radiation	505.1	II	505.2	I	505.3	I	505.4	I	505.5	I/A1
Rain	506.1	I, II	506.2	I, II	506.3	I, II	506.4	I, III	506.5	I, III
Humidity	507.1	II	507.2	II	507.3	II	507.4	-	507.5	II - Aggravated
Salt fog	509.1	-	509.2	-	509.3	-	509.4	-	509.5	-
Dust	510.1	I	510.2	I	510.3	I	510.4	I	510.5	I
Vibration	514.2	VIII/F, Curve-W	514.3	I/10, II/3	514.4	I/10, II/3	514.5	I/24	514.6	I/24
Shock	516.2	I, II	516.3	I, IV	516.4	I, IV	516.5	I, IV	516.6	I, IV, V, VI

GPS	
Accuracy specs are for long-term tracking (95th percentile values > 5 satellites visible at a nominal -130 dBm signal strength)	
TTFF (Time To First Fix) Cold Start	< 1 minute
TTFF (Time To First Fix) Hot Start	< 10 seconds
Horizontal Accuracy	< 5 meters

ENVIRONMENTAL SPECIFICATIONS	
Operating Temperature	-30° C / +60° C
Storage Temperature	-40° C / +85° C
Thermal Shock	Per MIL-STD
Humidity	Per MIL-STD
ESD	IEC 61000-4-2 Level 3
Dust and Water Intrusion	IP54, MIL-STD
Packaging test	MIL-STD 810C, D, E, F, and G

Specifications subject to change without notice. All specifications shown are typical.

Radio meets applicable regulatory requirements. Version 1 07/11

BLUETOOTH	
Version	Supports Bluetooth® 2.1 + EDR Specification
Profiles Supported	Bluetooth Headset Profile (HSP), Serial Port Profile (SPP), Motorola fast push-to-talk.
Devices Supported	Radio supports 1 Bluetooth audio accessory and 1 Bluetooth data device simultaneously
Range	Class 2, 10 meters

For more information on how to strengthen your mobile voice, visit www.motorolasolutions.com/mototrbo

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MOTOTRBO
REINVENTING
DIGITAL

