MOTOROLA

MOTOTRBO™

DGM™ 4100 / DGM™ 4100+ Mobile Radios

KEY FEATURES

Mobile radios available in Numeric Display, GPS and Non-GPS models.

Uses Time-Division Multiple-Access (TDMA) digital technology which doubles the number of users you can have on a single licensed 12.5 kHz channel.

Integrates voice and data to increase operational efficiency.

Supports applications including MOTOTRBO Text Messaging Services and MOTOTRBO Location Services.

Two programmable buttons for easy access to favorite features.

Customizable button tops for easy user understanding.

Emergency button alerts supervisor or dispatcher in emergency situations.

Multi-colored LED indicators for clear, visible feedback of calling, scanning and monitoring features.

GPS models can transmit location coordinates using the Location Services application.

Allows an easy migration from analog to digital with the ability to operate in both modes.

Meets U.S. Military Standards 810 C, D, E, and F, and Motorola standards for durability and reliability.

Utilizes the IMPRES Audio System for enhanced audio functionality.

Compact and ergonomically friendly microphone.

Enhanced call management features include call alert decode, emergency encode, remote monitor decode, push-to-talk ID encode, radio check decode, private call decode, all call, radio disable decode.

Send quick text messaging via programmable buttons.

Shift into Digital.

The next-generation professional two-way radio communications solution is here, with more performance, productivity and value—thanks to digital technology that delivers increased capacity and spectrum efficiency, integrated data communications and enhanced voice communications.

MOTOTRBO offers you a private, standards-based, cost-effective solution that can be tailored to meet your unique coverage and feature needs. This versatile portfolio provides a complete system of portable radios, mobile radios, repeaters, accessories and data applications—a complete solution.

MOTOTRBO DGM 4100 / DGM 4100+ Mobile Radio Specifications

General	VHF	UHF
Channel Capacity	32	
Typical RF Output Low Power High Power	 1-25 W 25-45 W	 1-25 W 25-40 W
Frequency	136 - 174 MHz	403-470 MHz
Dimensions (HxWxL)	2.01 x 6.89 x 8.11 in (51 x 175 x 206 mm)	
Weight	4.0 lbs. (1.8 kg)	
Current Drain: Standby Rx @ Rated Audio Transmit	0.81 A max 2 A max 1-25 W: 11.0 A max 25-40 W: 14.5 A max	
FCC ID	ABZ99FT3083 ABZ99FT3082	ABZ99FT4081 ABZ99FT4080

Receiver	VHF	UHF
Frequencies	136 - 174 MHz	403-470 MHz
Channel Spacing	12.5 kHz / 25 kHz	
Frequency Stability (-30° C, +60° C, +25° C)	+/- 1.5 ppm (without GPS) +/- 0.5 ppm (with GPS)	
Analog Sensitivity (12dB SINAD)	0.3 uV 0.22 uV (typical)	
Digital Sensitivity	5% BER: 0.3 uV	
Intermodulation (TIA603C)	78 dB	75 dB
Adjacent Channel Selectivity TIA603 TIA603C	 65 dB @ 12.5 kHz, 80 dB @ 25 kHz 50 dB @ 12.5 kHz, 80 dB @ 25 kHz	
Spurious Rejection (TIA603C)	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	TIA603C	
Conducted Spurious Emission (TIA603C)	-57 dBm	

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	< 10 meters

Transmitter	VHF	UHF
Frequencies	136 - 174 MHz	403-470 MHz
Channel Spacing	12.5 kHz / 25 kHz	
Frequency Stability (-30° C, +60° C, +25° C)	+/- 1.5 ppm (without GPS) +/- 0.5 ppm (with GPS)	
Power Output Low Power High Power	 1-25 W 25-45 W	 1-25 W 25-40 W
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 (TIA603C)	60 dB @ 12.5 kHz 70 dB @ 25 kHz	
Audio Response	TIA603C	
Audio Distortion	3%	
FM Modulation	12.5 kHz: 11K0F3E 25 kHz: 16K0FE	
4FSK Digital Modulation	12.5 kHz Data Only: 7K60FXD 12.5 kHz Data & Voice: 7K60FXE	
Digital Vocoder Type	AMBE++	
Digital Protocol	ETSI-TS102 361-1	

Quality / Reliability

- Motorola Accelerated Life Test
- Military Standards MIL-SPECS 810 C, D, E, F
- Backed by a two-year Standard Warranty

Military Standards

Applicable MIL-STD	810C		810D		810E		810F	
	Methods	Procedures	Methods	Procedures	Methods	Procedures	Methods	Procedures
Low Pressure	500.1	I	500.2	II	500.3	II	500.4	II
High Temperature	501.1	I, II	501.2	I/A1, II/A1	501.3	I/A, II/A1	501.4	I/Hot, II/Hot
Low Temperature	502.1	I	502.2	I/C3,II/C1	502.3	I/C3,II/C1	502.4	I/C3,II/C1
Temperature Shock	503.1	-	503.2	I/A1C3	503.3	I/A1C3	503.4	I
Solar Radiation	505.1	II	505.2	I	505.3	I	505.4	I
Rain	506.1	I, II	506.2	I, III	506.3	I, II	506.4	I, III
Humidity	507.1	II	507.2	II	507.3	II	507.4	-
Salt Fog	509.1	-	509.2	-	509.3	I	509.4	I
Blowing Dust	510.1	I	510.2	I	510.3	I	510.4	I
Blowing Sand	-	-	510.2	II	510.3	II	510.4	II
Immersion	512.1	I	512.2	I	512.3	I	512.4	I
Vibration	514.2	VIII/F, Curve-W	514.3	I/10, II/3	514.4	I/10, II/3	514.5	I/24
Shock	516.2	I, II	516.3	I, IV	516.4	I, IV	516.5	I, IV

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LE-MTRBO-4100-PS

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

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