

**PRODUCT DATA SHEET**

MOTOTRBO™ DGM™ 8000e AND DGM™ 5000e SERIES  
DIGITAL TWO-WAY RADIOS



# MOTOTRBO™ DGM™ 8000e AND DGM™ 5000e SERIES

**YOU'RE COMPLETELY CONNECTED**



With this dynamic evolution of MOTOTRBO digital two-way radios, you're better connected, safer and more productive. The DGM™ 8000e and DGM™ 5000e Series is designed for the skilled professional who refuses to compromise. With high performance integrated voice and data, and advanced features for efficient operation, these next-generation radios deliver complete connectivity to your organization.

### CONNECTED

MOTOTRBO DGM™ 8000e and DGM™ 5000e Series is a family of DMR standard digital radios that delivers operations-critical voice and data. Bluetooth® audio lets you talk without wires, integrated Wi-Fi enables remote management, and indoor and outdoor location-tracking capabilities give you total visibility of your resources. With support for trunking as well as legacy analog technology, you can keep your organization connected as it grows.

### SAFE

Safeguard your staff with responsive push-to-talk technology. The prominent emergency button on MOTOTRBO DGM™ 8000e and DGM™ 5000e Series radios summons help with one touch, using Transmit Interrupt to

pre-empt other workers when necessary. A range of safe driving accessories allow your workers to communicate hands-free, and Text-to-Speech technology helps your drivers keep their eyes on the road.

### PRODUCTIVE

Text messaging and Work Order Ticketing simplify complex communications, and data capabilities support advanced applications. Featuring a high power audio amplifier, these radios deliver loud, clear speech, with background noise cancellation for better intelligibility. MOTOTRBO DGM™ 8000e and DGM™ 5000e Series radios are also ideal as a dispatch solution, with desktop microphones and a rugged, durable design for everyday use.

### WHAT'S NEW IN THESE NEXT GENERATION RADIOS

#### SAFER

- Bluetooth® 4.0 with indoor location tracking capability
- Multi-constellation GPS for increased location accuracy

#### MORE EFFICIENT

- Integrated Wi-Fi with over-the-air firmware update capability
- Improved expandability for future features

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Model Number	Alphanumeric Model					Numeric Model				
	DGM 8500e*, DGM 5500e			DGM™ 8500e		DGM 8000e*, DGM 5000e			DGM™ 8000e	
Band	VHF	UHF Banda 1	UHF Banda 2	350	800/900	VHF	UHF Banda 1	UHF Banda 2	350	800/900
<b>GENERAL SPECIFICATIONS</b>										
Frequency	136-174 MHz	403-470 MHz	450-527 MHz	350-400 MHz	806-825 MHz 851-870 MHz 896-902 MHz 935-941 MHz	136-174 MHz	403-470 MHz	450-527 MHz	350-400 MHz	806-825 MHz 851-870 MHz 896-902 MHz 935-941 MHz
Low Power Model	1-25 W	1-25 W		1-25 W	-	1-25 W	1-25 W	-	1-25 W	-
High Power Model	25-50 W	25-45 W	25-45 W	1-45 W	10-35 W (800) 10-30 W (900)	25-50 W	25-45 W	25-45 W	-	10-35 W (800) 10-30 W (900)
Channel Spacing	12.5, 20, 25 kHz									
Channel Capacity	1000					64				
Dimensions (H x W x D)	2.1 x 6.9 x 8.1 in (53 x 175 x 206 mm)									
Weight	3.9 lb (1.8 kg)									
Power Supply (Nominal)	13.8V +/-20%									
Max Current Drain, Standby	0.8 A									
Max Current Drain, Receive	2 A									
Max Current Drain, Transmit (Low Power)	11 A	-	-	11 A	-	11 A	-	-	11 A	-
Max Current Drain, Transmit (High Power)	14.5 A		12 A	14.5 A	12 A	14.5 A		12 A	14.5 A	12 A
FCC Description (Low Power)	AZ492FT7082	AZ492FT7080	-	-	AZ492FT7083	AZ492FT7082	AZ492FT7080	-	-	AZ492FT7083
FCC Description (High Power)	AZ492FT7081	AZ492FT7079	AZ492FT7076	-	AZ492FT7083	AZ492FT7081	AZ492FT7079	AZ492FT7076	-	AZ492FT7083
Frequency Stability	± 0.5 ppm									



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**ALL MODELS**

**TRANSMITTER SPECIFICATIONS**

Hum and Noise	-40 dB (12.5 kHz channel), -45 dB (251 kHz channel)
Conducted Spurious Emissions (TIA603D)	-57 dBm
4FSK Digital Modulation	12.5 kHz Data: 7K60F1D and 7K60FXD 12.5 kHz Voice: 7K60F1E and 7K60FXE Combination of 12.5 kHz Voice and Data: 7K60F1W
Digital Protocol	ETSI TS 102 361**
Conducted/Radiated Emissions (TIA603D)	-36 dBm < 1GHz, -30 dBm > 1GHz
Adjacent Channel Power	60dB (12.5 kHz channel), 70dB (25 kHz channel)

**RECEIVER SPECIFICATIONS**

Hum and Noise	-40 dB (12.5 kHz channel), -45 dB (251 kHz channel)
Conducted Spurious Emissions (TIA603D)	-57 dBm
Analog Sensitivity (12dB SINAD)	0.3 uV (0.22 uV typical)
Digital Sensitivity (5% BER)	0.25 uV (0.19 uV typical)
Intermodulation (TIA603D)	VHF: 78dB UHF1, UHF2, 350, 800/900: 75dB
Adjacent Channel Selectivity, (TIA603A)-1T	VHF: 65 dB (12.5 kHz channel), 80 dB (25 kHz channel) UHF1, UHF2, 350, 800/900: 65 dB (12.5 kHz channel), 75 dB (25 kHz channel)
Adjacent Channel Selectivity, (TIA603D)-2T & (TIA603C)-2T	VHF: 50 dB (12.5 kHz channel), 80 dB (25 kHz channel) UHF1, UHF2, 350, 800/900: 50 dB (12.5 kHz channel), 75 dB (25 kHz channel)
Spurious Rejection (TIA603D)	VHF: 80 dB UHF1, UHF2, 350, 800/900: 75 dB

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

**AUDIO SPECIFICATIONS**

Digital Vocoder Type	AMBE+2™
Audio Response	TIA603D
Rated Audio	3 W (internal speaker), 7.5 W (external 8 ohm speaker), 13 W (external 4 ohm speaker)
Audio Distortion at Rated Audio	3%

**BLUETOOTH SPECIFICATIONS**

Version	4.0
Range	Class 2, 33 ft (10 m)
Supported Profiles	Bluetooth Headset Profile (HSP), Serial Port Profile (SPP), Motorola fast push-to-talk.
Simultaneous Connections	1 x audio accessory and 1 x data device
Permanent Discoverable Mode	Optional

**GPS SPECIFICATIONS**

Constellation Support	GPS
Time To First Fix, Cold Start	< 60 s
Time To First Fix, Hot Start	< 10 s
Horizontal Accuracy	< 16.5 ft (< 5 m)

**Wi-Fi SPECIFICATIONS**

Standards Supported	IEEE 802.11b, 802.11g, 802.11n
Security Protocol Supported	WPA, WPA-2, WEP
Maximum Number of SSIDs	128 (64 for Numeric Models)

**ENVIRONMENTAL SPECIFICATIONS**

Operating Temperature	-22° F to 140° F (-30° C to +60° C)
Storage Temperature	-40° F to 185° F (-40° C to +85° C)
Electrostatic Discharge	IEC 61000-4-2 Level 3
Dust and Water Intrusion	IEC 60529 - IP54
Packaging Test	MIL-STD 810C, D, E, F, and G

\*Option board and GPS ready in DGM 8500e and DGM 8000e only  
 \*\*DMR Operation Modes - Tier II / III

**MILITARY STANDARDS**

	MIL-STD 810C		MIL-STD 810D		MIL-STD 810E		MIL-STD 810F		MIL-STD 810G	
	METHOD	PROCEDURE	METHOD	PROCEDURE	METHOD	PROCEDURE	METHOD	PROCEDURE	METHOD	PROCEDURE
Low Pressure	500.1	I	500.2	II	500.3	II	500.4	II	500.5	II
High Temp	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/A1
Low Temp	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/C1
Temp Shock	503.1	I	503.2	A1/C3	503.3	A1/C3	503.4	I	503.5	I-C
Solar Radiation	505.1	II	505.2	I/Hot-Dry	505.3	I/Hot-Dry	505.4	I/Hot-Dry	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/Hot-Humid	507.3	II/Hot-Humid	507.4	-	507.5	I/Hot-Humid
Salt Fog	509.1	I	509.2	I	509.3	I	509.4	-	509.5	-
Dust	510.1	I, II	510.2	I, II	510.3	I, II	510.4	I, II	510.5	I, II
Vibration	514.2	VIII/CatF/ CurveW	514.3	I/Cat10, II/Cat3	514.4	I/Cat10, III/Cat3	514.5	I/Cat24, II/Cat5	514.6	I/Cat24, II/Cat5
Shock	516.2	I, II	516.3	I, IV	516.4	I, IV	516.5	I, IV	516.6	I, V, VI

**CONNECTION**

- Alphanumeric Model: Color Screen, 1000 Channels
- Numeric Model: Numeric Display, 32 Channels
- Analog and Digital
- Voice and Data
- Integrated Wi-Fi
- Canned Text Messaging
- Freeform Text Messaging (Requires Keypad Mic)
- Work Order Ticketing
- Indoor Location-Tracking
- Event-Driven Location Update
- Bluetooth Audio
- Bluetooth Data
- Voice Announcement
- Text to Speech
- Option Board
- Home Channel Reminder

**AUDIO**

- Intelligent Audio
- IMPRES Audio
- Acoustic Feedback Suppressor
- Microphone Distortion Control
- User-Selectable Audio Profiles
- Trill Enhancement
- SINC+ Noise Cancellation

**PERSONALIZATION**

- Wide Range of Accessories
- Multi-Button PTT
- 4 Programmable Buttons

**MANAGEMENT**

- Radio Management
- Over-the-Air Software Update

**SAFETY**

- Lone Worker
- Basic Privacy
- Enhanced Privacy
- Transmit Interrupt
- Digital Emergency
- Emergency Search Tone
- Remote Monitor
- Radio Disable / Enable
- Waterproof to IP54
- Rugged to MIL-STD 810

**SYSTEMS**

- Dual Capacity Direct Mode
- Conventional
- IP Site Connect
- Capacity Plus
- Capacity Max
- Connect Plus

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### LONG RANGE WIRELESS MOBILE MICROPHONE

Designed for customers who depend on their high power mobile radio but must work outside of their vehicle, the Long Range Wireless Mobile Microphone keeps you connected and communicating up to 330 ft (100 m) from your vehicle. With instant touch pairing and in-vehicle charging cradles, you can maintain critical communications even on remote job sites.



### HANDHELD CONTROL HEAD

When space is tight, and you need the flexibility to operate your radio from anywhere in the vehicle, opt for the Handheld Control Head. Its color screen, full keypad and extendable cord gives you complete control within 8 m (26 ft) of the radio.



### BLUETOOTH AUDIO

Improve the mobility of your work teams without wires getting tangled. Your delivery driver can sort through packages on the back of the delivery truck, your bus driver can check students in the back of the bus, and your limousine driver can open the door for their passengers and stay connected.



### CONNECT AND COORDINATE EFFORTLESSLY

IMPRES™ Smart Audio accessories communicate with the radio to suppress ambient noise, improve voice intelligibility and amplify loudness. Choose from a range of standard and heavy duty microphones, with or without keypads and navigation buttons.



### INTERACT SAFELY WITHOUT DISTRACTIONS

To help your drivers keep their eyes on the road, you can customize your installation with the IMPRES Visor Microphone and Remote Push-to-Talk.



To get connected with MOTOTRBO, please contact your local Motorola representative or visit [motorolasolutions.com/mototrbo](http://motorolasolutions.com/mototrbo)

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REINVENTING  
DIGITAL