

PRODUCT DATA SHEET

MOTOTRBO™ DGP™ 8000e/DGP™ 5000e SERIES
DIGITAL TWO-WAY RADIOS



MOTOTRBO™ DGP™ 8000e AND DGP™ 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 DGP™ 8000e and DGP™ 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

The MOTOTRBO DGP™ 8000e and DGP™ 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 DGP™ 8000e and DGP™ 5000e Series radios summons help with one touch, using Transmit Interrupt to pre-empt other workers when necessary. An integrated accelerometer senses if you've fallen, and can automatically call for assistance. The radio is tested to military standards and is waterproof to IP68: it won't let you down.

PRODUCTIVE

Text messaging and Work Order Ticketing simplify complex communications, and data capabilities support advanced applications. Featuring a redesigned audio amplifier, these radios deliver louder, clearer speech, with industrial noise cancellation for better intelligibility. The latest energy technology delivers up to 27 hours of battery life for 3-shift working, and an improved receiver boosts range by up to 8%.



WHAT'S NEW IN THESE NEXT GENERATION RADIOS

SAFER

- Integrated accelerometer for optional Man Down feature
- 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
- Upgraded audio for greater clarity at high volume
- Improved expandability for future features

MORE EFFECTIVE

- New energy technology for up to 27 hours battery life
- Improved receiver for up to 8% greater range
- IP68 rating (2 meters, 2 hours) to shrug off dust and water

PRODUCT DATA SHEET

MOTOTRBO™ DGP™ 8000e/DGP™ 5000e SERIES
DIGITAL TWO-WAY RADIOS



| | Full Keypad (FKP) Model | | | | No Keypad (NKP) Model | | | |
|--|---------------------------------------|-----------------|-------------|--------------------------|---------------------------------------|-----------------|-------------|--------------------------|
| Model Number | DGP™ 8550e*, DGP™ 5550e | | | | DGP™ 8050e*, DGP™ 5050e | | | |
| Band | VHF | 350 | UHF | 800 | VHF | 350 | UHF | 800 |
| GENERAL SPECIFICATIONS | | | | | | | | |
| Frequency | 136-174 MHz | 350-400 MHz | 403-527 MHz | 806-825 MHz, 851-870 MHz | 136-174 MHz | 350-400 MHz | 403-527 MHz | 806-825 MHz, 851-870 MHz |
| High Power Output | 5 W | 4 W | 4 W | 2.5 W | 5 W | 4 W | 4 W | 2.5 W |
| Low Power Output | 1 W | 1 W | 1 W | 1 W | 1 W | 1 W | 1 W | 1 W |
| Channel Spacing | 12.5, 20, 25 kHz | | | | | | | |
| Channel Capacity | 1000 | | | | 64 | | | |
| Dimensions (H x W x D), Radio + Slim Battery | 130 x 55 x 36 mm (5.1 x 2.2 x 1.4 in) | | | | 130 x 55 x 34 mm (5.1 x 2.2 x 1.3 in) | | | |
| Weight, Radio + Slim Battery | 315 g (11 oz) | | | | 290 g (10 oz) | | | |
| Dimensions (H x W x D), Radio + High Capacity Battery | 130 x 55 x 41 mm (5.1 x 2.2 x 1.6 in) | | | | 130 x 55 x 40 mm (5.1 x 2.2 x 1.6 in) | | | |
| Weight, Radio + High Capacity Battery | 347 g (12 oz) | | | | 322 g (11 oz) | | | |
| FCC Description | AZ489FT7066 | - | AZ489FT7065 | AZ489FT7067 | AZ489FT7066 | - | AZ489FT7065 | AZ489FT7067 |
| Digital / Analog Battery Life ¹ , Slim 1650 mAh Battery | 16.0 / 12.0 hrs | 15.5 / 11.5 hrs | | 15.5 / 12.0 hrs | 16.0 / 12.0 hrs | 15.5 / 11.5 hrs | | 15.5 / 12.0 hrs |
| Digital / Analog Battery Life ¹ , High Capacity 2250 mAh Battery | 22.0 / 16.5 hrs | 21.0 / 16.0 hrs | | 21.0 / 17.5 hrs | 22.0 / 16.5 hrs | 21.0 / 16.0 hrs | | 21.0 / 17.5 hrs |
| Digital / Analog Battery Life ¹ , High Capacity LV 3000 mAh Battery | 29.0 / 22.0 hrs | 28.0 / 21.5 hrs | | 28.0 / 23.0 hrs | 29.0 / 22.0 hrs | 28.0 / 21.5 hrs | | 28.0 / 23.0 hrs |
| Power Supply (Nominal) | 7.5 V | | | | | | | |
| RECEIVER SPECIFICATIONS | | | | | | | | |
| Analog Sensitivity (12dB SINAD) | 0.16 uV | | 0.22 uV | | 0.16 uV | | 0.22 uV | |
| Digital Sensitivity (5% BER) | 0.14 uV | | 0.19 uV | | 0.14 uV | | 0.19 uV | |
| Frequency Stability | ± 0.5 ppm | | | | | | | |



PRODUCT DATA SHEET

MOTOTRBO™ DGP™ 8000e/DGP™ 5000e SERIES
DIGITAL TWO-WAY RADIOS

ALL MODELS

TRANSMITTER SPECIFICATIONS

| | |
|--|--|
| Hum and Noise | -40 dB (12.5 kHz channel), -45 dB (25 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 (25 kHz channel) |
| Conducted Spurious Emissions (TIA603D) | -57 dBm |
| Intermodulation (TIA603D) | 70 dB |
| Adjacent Channel Selectivity, (TIA603A)-1T | 60 dB (12.5 kHz channel), 70 dB (25 kHz channel) |
| Adjacent Channel Selectivity, (TIA603D)-2T and (TIA603C)-2T | 45 dB (12.5 kHz channel), 70 dB (25 kHz channel) |
| Spurious Rejection (TIA603D) | 70 dB |

AUDIO SPECIFICATIONS

| | |
|---------------------------------|---------|
| Digital Vocoder Type | AMBE+2™ |
| Audio Response | TIA603D |
| Rated Audio | 0.5 W |
| Audio Distortion at Rated Audio | 3% |

NOTES

1: Typical battery life, 5/5/90 profile at maximum transmitter power with GPS, Bluetooth, Wi-Fi and Option Board applications disabled. Actual observed runtimes may vary.
2: Specialized low-temperature battery required for operation below 14 °F (-10 °C).

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

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 NKP Models) |

ENVIRONMENTAL SPECIFICATIONS

| | |
|------------------------------------|--|
| Operating Temperature ² | -22° F to 140° F (-30° C to +60° C) |
| Storage Temperature | -40° F to 185° F (-40° C to +85° C) |
| Thermal Shock | Per MIL-STD table |
| Humidity | Per MIL-STD table |
| Electrostatic Discharge | IEC 61000-4-2 Level 3 |
| Dust and Water Intrusion | IEC 60529 - IP68, 6.6 ft (2 m) for 2 hrs |
| Salt Fog | Per MIL-STD table |
| Packaging Test | MIL-STD 810D and E |

HAZLOC CERTIFICATION

| | |
|----------|---|
| TIA-4950 | UL-Approved for use in Hazardous Locations, Division 1, Class I, II, III, Groups C, D, E, F, G; Division 2, Class1, Groups A, B, C, D when properly equipped with Motorola UL-Approved battery. |
|----------|---|

*Option board and GPS ready in DGP8550e and DGP8050e.
**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 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/A1 |
| 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/C1 |
| Temperature 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 | II/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/F, W, XI | 514.3 | I/10, II/3 | 514.4 | I/10, II/3 | 514.5 | I/24, II/5 | 514.6 | I/24, II/5 |
| Shock | 516.2 | II | 516.3 | I, IV | 516.4 | I, IV | 516.5 | I, IV | 516.6 | I, IV |

CONNECTION

- VHF Band, 5 W
- UHF Band, 4 W
- 350 Band, 4W
- 800 Band, 2.5 W
- FKP models: Colour screen, full keypad, 1000 channels
- NKP models: No screen or keypad, 32 channels
- Analog and Digital
- Voice and Data
- Integrated Wi-Fi
- Canned Text Messaging
- Freeform Text Messaging (FKP models)
- Work Order Ticketing
- Multi-constellation GNSS
- High Efficiency GNSS
- Event-Driven Location Update
- Bluetooth Audio
- Bluetooth Data
- Bluetooth Permanent Discovery Mode (optional)
- Bluetooth Indoor Location Tracking
- Voice Announcement
- Text to Speech (optional)
- Option Board
- Home Channel Reminder

AUDIO

- Intelligent Audio
- IMPRES Audio
- SINCR+ Noise Cancellation (optional)
- Acoustic Feedback Suppressor
- Microphone Distortion Control
- User-Selectable Audio Profiles
- Switch Speaker
- Trill Enhancement

CUSTOMIZATION

- Customized Accessories
- Multi-Button PTT (optional)
- 5 Programmable Buttons (3 for NKP model)
- Emergency Button

MANAGEMENT

- Radio Management (optional)
- OTAP (optional)
- IMPRES Energy
- IMPRES Battery Management (optional)
- Over the Air Battery Management (optional)

SAFETY

- Integrated Accelerometer
- Man Down (optional)
- Lone Worker
- Basic Privacy
- Enhanced Privacy
- AES Encryption (optional)
- Transmit Interrupt
- Emergency
- Emergency Search Tone
- Remote Monitor
- Radio Disable / Enable
- HazLoc certification (optional)
- Waterproof to IP68
- Rugged to MIL-STD

SYSTEMS

- Dual Capacity Direct Mode
- Conventional
- IP Site Connect
- Capacity Plus Single Site (optional)
- Capacity Plus Multi-Site (optional)
- Capacity Max (optional)
- Connect Plus (optional)

PRODUCT DATA SHEET

MOTOTRBO™ DGP™ 8000e/DGP™ 5000e SERIES
DIGITAL TWO-WAY RADIOS

BLUETOOTH

Connect to your radio without wires, for extra comfort and safety. A full portfolio of Bluetooth headsets and earpieces is available.



REMOTE SPEAKER MICROPHONE

Improve usability with a Remote Speaker Microphone (RSM). Choose from standard, heavy duty and noise-cancelling models, with or without secondary earpiece connector.



SMART ENERGY

Motorola's patented IMPRES™ Energy technology gives you smart batteries to keep your radio powered for longer. Choose from a range of batteries, chargers, and management tools.



EARPIECES

For all-day comfort, choose from our range of earpieces. Lightweight or heavy duty, discreet or rugged, with or without built-in hearing protection.



CARRY SOLUTIONS

However you choose to wear or carry your radio, we have a solution for you. From leather cases to belts and belt clips to bags, straps and pouches.



HEADSETS

In a noisy workplace, you need to protect your workers' hearing. Whether it's heavy duty noise reduction or innovative temple transducer technology, our headsets can help.



SCREEN PROTECTORS

In ultra-harsh environments, your radio's screen can get scratched and abraded. Keep it clear and readable with these durable pre-cut screen protectors.



VIBRATING BELTCLIP

When it's unacceptable to miss calls in a noisy environment, equip your radios with a powerful vibrating belt clip for an extra physical alert.



To get connected with MOTOTRBO, please contact your local Motorola representative or visit motorolasolutions.com/MOTOTRBO

MOTOROLA, MOTO, MOTOROLA SOLUTIONS and the Stylized M Logo are trademarks or registered trademarks of Motorola Trademark Holdings, LLC and are used under license. All other trademarks are the property of their respective owners. ©2020 Motorola Solutions, Inc. All rights reserved. 09-2020

MOTOTRBO
REINVENTING
DIGITAL