



**YOUR VOICE JUST GOT STRONGER**

# MOTOTRBO™ DP4000 SERIES DIGITAL TWO-WAY PORTABLE RADIOS



From the factory worker building components to the road crew making repairs, MOTOTRBO™ can transform your enterprise and make employee interactions smarter and safer. Our best-in-class audio and unrivaled data capabilities empower people like never before.

Versatile and powerful, MOTOTRBO combines the best of two-way radio functionality with the latest digital technology. DP4000 Series radios integrate voice and data seamlessly, offer enhanced features that are easy to use, and deliver business-critical advantages like integrated Bluetooth® and Intelligent Audio.

The DP4000 Series can remaster your workplace and the way people collaborate to help you achieve even greater efficiency.

## AUDIO BEYOND EXPECTATIONS

When it comes to exceptional audio clarity, the quality of digital can't be denied. DP4000 Series portables give you digital audio performance throughout your coverage area 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 disturb others when they move into quiet areas. Increased background noise suppression helps filter out unwanted external clamor – from heavy equipment to the roar of engines.

Bluetooth® audio is embedded right in the radio, so no adapter is needed when using wireless accessories. Also, IMPRES™ audio accessories enhance noise suppression and improve voice intelligibility for smarter accessories than they've ever experienced before.

## INDUSTRY-LEADING DATA

DP4000 Series radios feature integrated Bluetooth® data, so rather than waiting until the end of a shift, busy work crews can send real time information back to the office, saving valuable hours and enabling better decision making. Integrated GPS enables location tracking of mobile work teams and text messaging enables communication when voice isn't feasible. And the large, full-colour, 5-line display operates in day or night mode, for easy viewing of contact lists, text messages and work order tickets even in bright sunlight.

MOTOTRBO's Application Developer Program offers customised data applications so you can adapt your radios to your business challenges. With the largest developer program in the industry, data applications help meet 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. When it comes to battery performance, MOTOTRBO radios operate up to 40 percent longer between recharges compared to analogue.

## OPTIONAL CITIZEN BAND FUNCTIONALITY

Extend the functionality of MOTOTRBO two-way radios for both private licensed band and citizen band operation. With 80 CB channels, compliant with ACMA standards, you can support communications across your workforce without the need for annual licensing fees or contracts. #

## RICH FUNCTIONALITY

DP4000 Series radios offer plenty of features businesses seek – including enhanced call signaling, basic and enhanced privacy-scrambling, option board expandability and the transmit interrupt suite to prioritise critical communication the moment you need it. Programmable button features appear on the display for easy viewing and quick access. And when workers can't be distracted, customisable 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 workforce is hard at work every day – picking up loads, making road repairs, providing security, responding to guest requests or restoring power after a storm.

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 having to add new frequencies. Linked Capacity Plus combines the expanded capacity of Capacity Plus with the wide area coverage of IP Site Connect, delivering a high capacity, wide area, and cost effective multi-site trunking solution. So whether you want coverage at a single site or across multiple ones, MOTOTRBO can be scaled to your business and budget.

## MIGRATE AT YOUR OWN PACE

Keeping operations running smoothly during a change in communication systems is vital to any business. It's easy to migrate to digital with DP4000 Series radios because they operate in analogue and digital mode. To ease the transition even further, the dynamic mixed mode repeater functionality streamlines automatic switching between analogue and digital calls. So you can begin using MOTOTRBO radios and repeaters on your existing analogue system, and when your time and budget allow, move to digital at your own pace.

## DAY-IN, DAY-OUT DURABILITY

DP4000 Series radios meet the most demanding specs, including IP57 for water submersibility and U.S. Military 810 C, D, E, F, & G standards for exceptional durability. The radio is also "intrinsically safe" when purchased and equipped with an intrinsically safe (FM) battery, for use in environments where flammable gas, vapors or combustible dust may be present. And it's backed by a two-year Standard Warranty, and 1-year warranty for batteries and accessories.



### KEEP YOUR BUSINESS RUNNING SMOOTHLY WITH BUSINESS APPLICATIONS:

 **Location tracking:** Monitor the whereabouts of mobile workers so they can respond immediately; in an emergency, you can pinpoint security personnel and send the nearest to the scene

 **Integrated Bluetooth®** for sharing data wirelessly and instantly between devices

 **Dispatch consoles** for centralised communication

 **Email gateways** to connect to email from your radio

 **Network monitoring** to maximise system utilisation

 **Man-down applications** so radios call for help when workers can't

 **Telephony** for communication between radios and landline or mobile phones

 **Text messaging** for quick and discreet communication

 **Work order tickets** for faster customer response

## DP4000 SERIES SPECIFICATIONS

| GENERAL SPECIFICATIONS                              |         |                              |             |                |                           |                              |             |                |             |      |       |
|-----------------------------------------------------|---------|------------------------------|-------------|----------------|---------------------------|------------------------------|-------------|----------------|-------------|------|-------|
| DISPLAY DP4800/DP4801/DP4600/DP4601                 |         |                              |             |                | NON DISPLAY DP4400/DP4401 |                              |             |                |             |      |       |
|                                                     |         | VHF                          | 350*        | UHF#           | 800**                     |                              |             | VHF            | 350*        | UHF# | 800** |
| Channel Capacity                                    |         | 1000                         |             |                |                           | 32                           |             |                |             |      |       |
| Frequency^                                          |         | 136-174 MHz                  | 350-400 MHz | 403-527 MHz    | 806-870 MHz               | 136-174 MHz                  | 350-400 MHz | 403-527 MHz    | 806-870 MHz |      |       |
| IMPRES Hi-Cap Li-ion 2150 mAh Battery (PMNN4409)    | (HxWxL) | 130.3 mm / 55.2 mm / 41.1 mm |             |                |                           | 130.3 mm / 55.2 mm / 39.6 mm |             |                |             |      |       |
|                                                     | Weight  | 355.5 g                      |             |                | 350 g                     | 323 g                        |             |                | 318 g       |      |       |
| Slim IMPRES Li-ion 1500 mAh Battery (PMNN4407)      | (HxWxL) | 130.3 mm / 55.2 mm / 35.8 mm |             |                |                           | 130.3 mm / 55.2 mm / 34.3 mm |             |                |             |      |       |
|                                                     | Weight  | 335.5 g                      |             |                | 330 g                     | 303 g                        |             |                | 298 g       |      |       |
| IMPRES Hi-Cap Li-ion FM 2300 mAh Battery (NNTN8129) | (HxWxL) | 130.3 mm / 55.2 mm / 41.1 mm |             |                |                           | 130.3 mm / 55.2 mm / 39.6 mm |             |                |             |      |       |
|                                                     | Weight  | 365.5 g                      |             |                | 360 g                     | 333 g                        |             |                | 328 g       |      |       |
| Power Supply                                        |         |                              |             |                | 7.5 V (Nominal)           |                              |             |                |             |      |       |
| Operating Temperature                               |         |                              |             |                | -30 ~ +60 °C¹             |                              |             |                |             |      |       |
| FCC Description                                     |         | ABZ99FT3085                  | -           | ABZ99FT4086    | -                         | ABZ99FT3085                  | -           | ABZ99FT4086    | -           |      |       |
| IC Description                                      |         | 109AB-99FT3085               | -           | 109AB-99FT4086 | -                         | 109AB-99FT3085               | -           | 109AB-99FT4086 | -           |      |       |

| BATTERY                                  |                                                                                   |                                      |
|------------------------------------------|-----------------------------------------------------------------------------------|--------------------------------------|
| Average Battery Life                     | 5/5/90 duty cycle with carrier squelch and transmitter in high power <sup>2</sup> |                                      |
| Slim IMPRES Li-ion 1500 mAh Battery      | Analogue: 7.7 hrs/ Digital: 11.3 hrs                                              | Analogue: 8 hrs/ Digital: 11.8 hrs   |
| IMPRES Hi-Cap Li-ion 2150 mAh Battery    | Analogue: 11.1 hrs/Digital: 16.2 hrs                                              | Analogue: 11.5 hrs/Digital: 17 hrs   |
| IMPRES Hi-Cap Li-ion FM 2300 mAh Battery | Analogue: 11.9 hrs/Digital: 17.3 hrs                                              | Analogue: 12.3 hrs/Digital: 18.1 hrs |

| RECEIVER                                         |                                   |             |             |             | TRANSMITTER                 |                                               |             |             |             |
|--------------------------------------------------|-----------------------------------|-------------|-------------|-------------|-----------------------------|-----------------------------------------------|-------------|-------------|-------------|
|                                                  | VHF                               | 350         | UHF         | 800         |                             | VHF                                           | 350         | UHF         | 800         |
| Frequencies                                      | 136-174 MHz                       | 350-400 MHz | 403-527 MHz | 806-870 MHz | Frequencies                 | 136-174 MHz                                   | 350-400 MHz | 403-527 MHz | 806-870 MHz |
| Channel Spacing                                  | 12.5/25kHz                        |             |             |             | Channel Spacing             | 12.5/25 kHz                                   |             |             |             |
| Frequency Stability<br>(-30°C, +60°C, +25°C Ref) | ± .5 ppm                          |             |             |             | Frequency Stability         | ± .5 ppm                                      |             |             |             |
| Analogue Sensitivity<br>(12dB SINAD)             | 0.3uV (0.22uV typical)            |             |             |             | Low Power Output            | 1W                                            | 1W          | 1W          | 1W          |
| Digital Sensitivity                              | 0.25 uV (0.19 uV typical)         |             |             |             | High Power Output           | 5W                                            | 4W          | 4W/2.5W     | 4W/2.5W     |
| Intermodulation (TIA603D)                        | 70 dB                             |             |             |             | Modulation Limiting         | ± 2.5kHz @ 12.5 kHz / ± 5.0kHz @ 25 kHz       |             |             |             |
| Adjacent Channel Selectivity<br>(TIA603A)-1T     | 60dB @ 12.5 kHz / 70dB @ 25 kHz   |             |             |             | FM Hum and Noise            | -40dB@ 12.5 kHz / -45dB@ 25 kHz               |             |             |             |
| Adjacent Channel Selectivity<br>(TIA603D)-2T     | 45dB @ 12.5 kHz / 70dB @ 25 kHz   |             |             |             | Conducted/Radiated Emission | -36 dBm < 1GHz / -30 dBm > 1GHz               |             |             |             |
| Spurious Rejection (TIA603D)                     | 70 dB                             |             |             |             | Adjacent Channel Power      | 60dB @ 12.5 kHz / 70dB @ 25 kHz               |             |             |             |
| Rated Audio                                      | 0.5W                              |             |             |             | Audio Response              | TIA603D                                       |             |             |             |
| Audio Distortion @ Rated Audio                   | 5% (3% typical)                   |             |             |             | Audio Distortion            | 3%                                            |             |             |             |
| Hum and Noise                                    | -40dB @ 12.5 kHz / -45dB @ 25 kHz |             |             |             | 4FSK Digital Modulation     | 12.5 kHz Data: 7K60F1D & 7K60FXD              |             |             |             |
| Audio Response                                   | TIA603D                           |             |             |             |                             | 12.5 kHz Voice: 7K60F1E & 7K60FXE             |             |             |             |
| Conducted Spurious Emission<br>(TIA603D)         | -57dBm                            |             |             |             |                             | Combination of 12.5 kHz Voice & Data: 7K60F1W |             |             |             |
|                                                  |                                   |             |             |             | Digital Vocoder Type        | AMBE+2™                                       |             |             |             |
|                                                  |                                   |             |             |             | Digital Protocol            | ETSI TS 102 361-1, -2, -3                     |             |             |             |

# Citizen Band available in DP4600, DP4601, DP4800 and DP4801 (wideband)

\*350-400MHz DP4801 and DP4401 only.

\*\*806-870MHz DP4800, DP4801 and DP4401 only.

<sup>^</sup>Availability subject to country type approval and licence requirements.

<sup>1</sup> Radio only - Li-Ion battery -10C

<sup>2</sup> Actual battery runtime observed may vary based on the use of certain features such as GPS, Bluetooth, and Expansion Card based applications.  
Please contact your Motorola sales representative for battery runtime expectations based on your specific radio configuration.

## PRODUCT SPEC SHEET

### MOTOTRBO™ DP4000 SERIES PORTABLE RADIOS

#### GPS

Accuracy specs are for long-term tracking (95th percentile values > 5 satellites visible at nominal -130 dBm signal strength)

TTFF (Time To First Fix) - Cold Start < 60 seconds

TTFF (Time To First Fix) - Hot Start < 10 seconds

Horizontal Accuracy < 5 meters

#### BLUETOOTH

Version Supports Bluetooth® 2.1 + EDR Specification

Range Class 2, 10 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 IEC 60529 - IP57

Packaging test MIL-STD 810D and E

Testing completed using portable radio with attached battery and antenna.

#### FACTORY MUTUAL APPROVALS

MOTOTRBO™ DP4000 Series portable radios have been certified by FM in accordance with U.S. Codes as intrinsically safe for use in Class I, II, III, Division 1, Groups C, D, E, F, G, when properly equipped with a Motorola FM approved battery option. They are also approved for use in Class I, Division 2, Groups A, B, C, D.

#### MILITARY STANDARDS

| APPLICABLE MIL-STD | 810C   |                 | 810D   |             | 810E   |             | 810F   |               | 810G   |            |
|--------------------|--------|-----------------|--------|-------------|--------|-------------|--------|---------------|--------|------------|
|                    | 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, 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         |
| 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  | II/5       |
| Shock              | 516.2  | I, II           | 516.3  | I, IV       | 516.4  | I, IV       | 516.5  | I, IV         | 516.6  | I, IV, VI  |

For more information on how to strengthen your portable voice, visit [motorolasolutions.com.au](http://motorolasolutions.com.au)

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

Radio meets applicable regulatory requirements.

#### Motorola Solutions Australia Pty Limited

The information presented herein is to the best of our knowledge true and accurate. No warranty or guarantee expressed or implied is made regarding the capacity, performance or suitability of any product. MOTOROLA, MOTO, MOTOROLA SOLUTIONS and the Stylised 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. © 2014 Motorola Solutions, Inc. All rights reserved. BTB/MA693-DP4000 11/14

**MOTOTRBO**  
DIGITAL  
REMASTERED.

