MOTOROLA













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.

DP4800 and DP4801 are available with Roman, Cyrillic or Arabic character keypads

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 clamour – from heavy equipment to the roar of engines.

Bluetooth® audio is embedded in the radio[1], so no adaptor is needed when using wireless accessories. Also, IMPRES™ audio accessories enhance noise suppression and improve voice intelligibility for smarter accessories than ever before.

INDUSTRY-LEADING DATA

DP4000 Series radios feature integrated Bluetooth® data[1], 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[1] enables location tracking of mobile work teams and text messaging enables communication when voice isn't feasible. Models are available to support text entry using Roman, Cyrillic or Arabic character sets. 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 customized 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.

RICH FUNCTIONALITY

DP4000 Series radios offer plenty of features businesses seek – including enhanced call signalling, basic and enhanced privacy-scrambling, option board expandability and the transmit interrupt suite to prioritize critical communication the moment you need it. Programmable button features appear on the display for easy viewing and quick access[1]. 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 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 both 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 Standard 810 C, D, E, F, & G for exceptional durability. DP4000 radios have a two-year Standard Warranty with 1-year warranty for batteries and accessories. In addition, Service from the Start provides multi-year peace of mind with fast repair turnaround times, expert telephone technical support and access to the latest software releases[2]; all backed by Motorola's globally integrated services infrastructure, highly qualified support technicians and certified repair facilities.



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 centralized communication
- **Email gateways** to connect to email from your radio
- **Network monitoring** to maximize system utilization
- **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

		DP4800 / DP4801			DP4600 / DP4601		DP4400 / DP4401		
		VHF	UHF	300MHz[5]	VHF	UHF	VHF	UHF	300MHz[5]
Channel Capacity			1000			1000		32	
Frequency		136-174 MHz	403-527 MHz	300-360 MHz 350-400 MHz	136-174 MHz	403-527 MHz	136-174 MHz	403-527 MHz	300-360 MHz 350-400 MHz
NiMH (1400mAh) battery	(HxWxL)	130.3 x 55.2 x 38.7 mm (5.13 x 2.17 x 1.52 inch)			130.3 x 55.2 x 38.7 mm (5.13 x 2.17 x 1.52 inch)		130.3 x 55.2 x 37.2 mm (5.13 x 2.17 x 1.46 inch)		
	Weight	425.5 g (15.01 oz)			426.5 g (15.04 oz)		393 g (13.86 oz)		
Li-ion (1400mAh) battery	(HxWxL)	130.3 x 55.2 x 41.1 mm (5.13 x 2.17 x 1.62 inch)			130.3 x 55.2 x 41.1 mm (5.13 x 2.17 x 1.62 inch)		130.3 x 55.2 x 39.6 mm (5.13 x 2.17 x 1.56 inch)		
	Weight	365.5 g (12.93 oz)			366.5 g (12.93 oz)		333 g (11.75 oz)		
IMPRES Li-ion Slim (1650mAh) battery	(HxWxL)	130.3 x 55.2 x 35.8 mm (5.13 x 2.17 x 1.41 inch)			130.3 x 55.2 x 35.8 mm (5.13 x 2.17 x 1.41 inch)		130.3 x 55.2 x 34.3 mm (5.13 x 2.17 x 1.35 inch)		
	Weight	335.5 g (11.83 oz)			336.5 g (11.87 oz)		303 g (10.69 oz)		
IMPRES Hi-Cap Li-ion (2250mAh) battery	(HxWxL)	130.3 x 55.2 x 41.1 mm (5.13 x 2.17 x 1.62 inch)			130.3 x 55.2 x 41.1 mm (5.13 x 2.17 x 1.62 inch)		130.3 x 55.2 x 39.6 mm (5.13 x 2.17 x 1.56 inch)		
	Weight	355.5 g (12.54 oz)			356.5 g (12.58 oz)		323 g (11.39 oz)		
IMPRES Hi-Cap Li-ion FM (2350mAh) battery	(HxWxL)	130.3 x 55.2 x 41.1 mm (5.13 x 2.17 x 1.62 inch)			130.3 x 55.2 x 41.1 mm (5.13 x 2.17 x 1.62 inch)		130.3 x 55.2 x 39.6 mm (5.13 x 2.17 x 1.56 inch)		
	Weight	365.5 g (12.89 oz)			366.5 g (12.93 oz)		333 g (11.75 oz)		
IMPRES Hi-Cap Li-ion TIA4950 (2500mAh) battery	(HxWxL)	130.3 x 55.2 x 41.1 mm (5.13 x 2.17 x 1.62 inch)			130.3 x 55.2 x 41.1 mm (5.13 x 2.17 x 1.62 inch)		130.3 x 55.2 x 39.6 mm (5.13 x 2.17 x 1.56 inch)		
	Weight	410 g (14.5 oz)			411 g (14.5 oz)		378 g (13.3 oz)		
IMPRES Hi-Cap Li-ion (2800mAh) battery	(HxWxL)	130.3 x 55.2 x 41.1 mm (5.13 x 2.17 x 1.62 inch)			130.3 x 55.2 x 41.1 mm (5.13 x 2.17 x 1.62 inch)		130.3 x 55.2 x 39.6 mm (5.13 x 2.17 x 1.56 inch)		
	Weight	385.5 g (13.59 oz)			386.5 g (13.63 oz)		353 g (12.45oz)		
Power Supply					7.5 V (Nominal)				
Operating Temperature					-30 ~ +60 °C[3]				

BATTERY

Average Battery Life	5/5/90 duty cycle with carrier squelch and transmitter in high power[4]		
NiMH (1400mAh) battery	Analogue: 6.7 hrs/ Digital: 9.8 hrs	Analogue: 7 hrs/ Digital: 10.2 hrs	Analogue: 7 hrs/ Digital: 10.2 hrs
Li-ion (1400mAh) battery	Analogue: 9 hrs/Digital: 11.5 hrs	Analogue: 9 hrs/Digital: 12.5 hrs	Analogue: 9 hrs/Digital: 12.5 hrs
IMPRES Li-ion Slim (1650mAh) battery	Analogue: 7.7 hrs/Digital: 11.3 hrs	Analogue: 8 hrs/Digital: 11.8 hrs	Analogue: 8 hrs/Digital: 11.8 hrs
IMPRES Hi-Cap Li-ion (2250mAh) battery	Analogue: 11.1 hrs/Digital: 16.2 hrs	Analogue: 11.5 hrs/Digital: 17 hrs	Analogue: 11.5 hrs/Digital: 17 hrs
IMPRES Hi-Cap Li-ion FM (2350mAh) battery	Analogue: 11.9 hrs/Digital: 17.3 hrs	Analogue: 12.3 hrs/Digital: 18.1 hrs	Analogue: 12.3 hrs/Digital: 18.1 hrs
IMPRES Hi-Cap Li-ion TIA4950 (2500mAh) battery	Analogue: 15 hrs/Digital: 20 hrs	Analogue: 16 hrs/Digital: 21 hrs	Analogue: 16 hrs/Digital: 21 hrs
IMPRES Hi-Cap Li-ion (2800 mAh) battery	Analogue: 18 hrs/Digital: 23.5 hrs	Analogue: 19 hrs/Digital: 25 hrs	Analogue: 19 hrs/Digital: 25 hrs

RECEIVER

	VHF	UHF	300MHz[5]
Frequencies	136-174 MHz	403-527 MHz	300-360 MHz 350-400 MHz
Channel Spacing	12.5/20/25kHz		
Frequency Stability (-30°C, +60°C, +25°C Ref)	± 0.5 ppm		
Analogue Sensitivity	0.3 µV (12 dB SINAD) 0.22 µV (Typical)(12 dB SINAD)		
Digital Sensitivity	5% BER : 0.25 µV 0.19 µV (Typical)		
Intermodulation (TIA603D)	70 dB		
Adjacent Channel Selectivity (TIA603A)-1T	60dB @ 12.5 kHz / 70dB @ 20/25kHz		
Adjacent Channel Selectivity (TIA603D)-2T	45dB @ 12.5 kHz / 70dB @ 20/25kHz		
Spurious Rejection (TIA603D)	70 dB		
Rated Audio	0.5W		
Audio Distortion @ Rated Audio	5% (3% typical)		
Hum and Noise	-40dB @ 12.5 kHz / -45dB @ 20/25kHz		
Audio Response	TIA603D		
Conducted Spurious Emission (TIA603D)	-57dBm		

TRANSMITTER

	VHF	UHF	300MHz[5]
Frequencies	136-174 MHz	403-527 MHz	300-360 MHz 350-400 MHz
Channel Spacing	12.5/20/25kHz		
Frequency Stability (-30°C, +60°C, +25°C Ref)	± 0.5 ppm		
Low Power Output	1W		
High Power Output	5W	4W	4W
Modulation Limiting	± 2.5kHz @ 12.5 kHz / ±4.0kHz @ 20kHz / ± 5.0kHz @ 25 kHz		
FM Hum and Noise	-40dB@ 12.5 kHz / -45dB@ 20/25kHz		
Conducted/Radiated Emission	-36 dBm < 1GHz / -30 dBm > 1GHz		
Adjacent Channel Power	60dB @ 12.5 kHz / 70dB @ 20/25kHz		
Audio Response	TIA603D		
Audio Distortion	3%		
4FSK Digital Modulation	12.5 kHz Data: 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		

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 metres

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 metres

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.

TIA 4950 APPROVALS

MOTOTRBO DP4000 Series portable radios have been certified by UL to the ANSI/TIA 4950 standard for use in Division 1, Class I Groups C, D; Class II Groups E, F, G; Class III T3C when properly equipped with a relevant Motorola battery option.

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-30° C / +60°C[3]
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

Testing completed using portable radio with attached battery and antenna.

[1] Optional feature only supported on selected radio models

[2] Software release covers patches and maintenance releases of the current version to the operating system i.e. that shipped with the terminal.

[3] Radio only - Li-Ion battery -10C

[4] Actual battery runtime observed may vary based on the use of certain features such as GPS, Bluetooth, and Expansion Card based applications.

[5] 300MHz frequency bands are available on DP4801 and DP4401 models only. 300MHz models support 12.5/25kHz channel spacing and are not FM/TIA approved.

MILITARY STANDARD

	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, II/5
Shock	516.2	I, II	516.3	I, IV	516.4	I, IV	516.5	I, IV	516.6	I, IV, V, VI

For more information on how to strengthen your portable voice, visit www.motorolasolutions.com/mototrbo or find your closest Motorola representative or authorised Partner at www.motorolasolutions.com/contactus

MOTOTRBO
DIGITAL
REMASTERED.

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Availability is subject to individual country law and regulations. All specifications shown are typical unless otherwise stated and are subject to change without notice.

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