MOTOTRBO™

DGP™ 4150 / DGP™ 4150+ Portable Radios

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.

Key Features

Portable radios available in Non-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 data applications including MOTOTRBO Text Messaging Services and MOTOTRBO Location Services.

Provides clearer voice communications over a greater range than comparable analog radios.

Emergency button alerts supervisor or dispatcher in an emergency situation.

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

Enhanced privacy

Ability to roam in IP Site Connect System

VOX, ability for hands-free radio transmissions with selected radio accessories

Send quick text messages via programmable buttons.

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, IP57 for submersibility and Motorola standards for durability and reliability.

Accessory connector meets IP57 submersibility specifications and incorporates RF, USB and enhanced audio capability.

Utilizes the IMPRES Energy and Audio Systems to automate battery maintenance, optimize battery life cycle, maximize battery talk time, and enhance audio functionality.

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

GENERAL

	VHF	UHF
Channel Capacity	32	
Frequency	136 - 174 MHz	403-470 MHz / 450-512 MHz
Dimensions (HxWxL) w/NiMH Battery	131.5 x 63.5 x 35.2 mm	
Weight (with Li-Ion non-FM Battery)	11.63 oz (330 g)	
(with Li-Ion FM Battery)	11.98 oz (340 g)	
(with NiMH Battery)	14.9 oz (400 g)	
Power Supply	7.5V nominal	
FCC Description	AZ489FT3815	AZ489FT4876 / AZ489FT4884
	Average battery life at 5/5/90 duty cycle with battery saver enabled in carrier squelch and transmitter in high power.	
IMPRES Li-Ion Battery	Analog: 8 hrs Digital: 13 hrs	
IMPRES FM Li-Ion Battery	Analog: 8.5 hrs Digital: 12 hrs	
NiMH Battery	Analog: 8 hrs Digital: 11 hrs	

RECEIVER

	VHF	UHF
Frequencies	136 - 174 MHz	403-470 MHz / 450-512 MHz
Channel Spacing	Digital 12.5 kHz & Analog 12.5 kHz / 25 kHz	
Frequency Stability	+/- 1.5 ppm (without GPS)	
(-30° C, +60° C, +25° C)	+/- 0.5 ppm (with GPS)	
Analog Sensitivity (12dB SINAD)	0.35 uV 0.22 uV (typical)	0.3 uV 0.22 uV (typical)
Digital Sensitivity	5% BER: 0.3 uV	
Intermodulation (TIA603C)	70 dB	
Adjacent Channel Selectivity		
TIA603	60 dB @ 12.5 kHz, 70 dB @ 25 kHz	
TIA603C	45 dB @ 12.5 kHz, 70 dB @ 25 kHz	
Spurious Rejection (TIA603C)	70 dB	
Rated Audio	500 mW	
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	

TRANSMITTER

	VHF	UHF
Frequencies	136 - 174 MHz	403-470 MHz / 450-512 MHz
Channel Spacing	Digital 12.5 kHz & Analog 12.5 kHz / 25 kHz	
Frequency Stability	+/- 1.5 ppm (without GPS)	
(-30° C, +60° C, +25° C)	+/- 0.5 ppm (with GPS)	
Power Output		
Low Power	1 W	1 W
High Power	5 W	4 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	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	

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	< 2 minutes
TTFF (Time to First Fix) Hot Start	< 10 seconds
Horizontal Accuracy	< 10 meters

FACTORY MUTUAL APPROVALS

MOTOTRBO DGP Portable series radios have been certified by FM Approvals 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.

Quality / Reliability

- Motorola Accelerated Life Test
- Military Standards MIL-STD-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

MOTOROLA

motorola.com/radiosolutions

LE-MTRBO-4150-PS-8-08

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