

momentum™

HDP100 Portable

VHF, UHF

The HDP100 portable is a multimode, software defined radio (SDR) that integrates a no-frills user interface with durable construction to support analog and digital communication requirements and applications.

Standards-based Technology

The HDP100 and the Momentum family of products use Digital Mobile Radio (DMR) standards-based technology to provide reliable, cost effective, open architecture communications solutions. DMR is one of the fastest growing LMR technologies in the world.

FCC Narrowband Compliant

The HDP100 portable radio meets FCC and IC (Industry Canada) requirements for 12.5 kHz or 6.25 kHz equivalent spectrum efficiency. In analog mode the HDP100 operates on 12.5 kHz channels. While in digital, DMR, mode the HDP100 provides 2-slot TDMA on a 12.5 kHz channel. This allows two simultaneous voice and/or data transmissions on a 12.5 kHz channel.

Three-year warranty



Secure Communications

Communications security is ensured by the air interface encryption algorithms defined in the DMR standard and implemented in the radio. Advanced Encryption Standard (AES) options and the Scrambler/Encrypt features are available for increased communications security.

Durable Design

The HDP100 features large on/off/volume and channel selector knobs, a large speaker for superior audio, tri-colored LED to indicate transmit and receive status, and user-defined "softkeys".

Feature Rich

Integrated GPS, Voice Annunciation, Group and Individual Calls, Vibrate Alert, Remote Enable/Disable, Remote Monitor, and various analog signaling types, including MDC 1200, make this radio a leader in performance and flexibility.

GENERAL

Frequency Range VHF 136-174 MHz UHF1 400-470 MHz UHF2 450-520 MHz	Operating Voltage 7.4V (rated)
Channel Capacity 32	Frequency Stability ±1.5 ppm
Zone Capacity 3 (Each with a maximum of 16 channels)	Antenna Impedance 50Ω
Channel Spacing 25/20/12.5 KHz	Dimensions (HxWxD) (With std. battery, without antenna) 125 x 55 x 35 mm / 4.9 x 2.2 x 1.4 in
Batteries 2000mAh (Li-Ion) std. 2500mAh (Li-Ion)	Weight (With antenna & std. battery) 11.2 oz (318 g)
Battery Life (5-5-90 Duty Cycle, HighTX Power) (With std. battery) Analog Above 10.5 Hours Digital Above 14 Hours	

RECEIVER

Sensitivity (Analog) 0.3µV (12dB SINAD) 0.22µV (Typical) (12dB SINAD) 0.4µV (20dB SINAD)	Hum and Noise -40dB @ 12.5 kHz -43dB @ 20 kHz -45dB @ 25 kHz
Sensitivity (Digital) 0.3µV / BER 5%	Rated Audio Power Output 0.5W
Selectivity TIA-603 60dB @ 12.5 kHz / 70dB @ 20/25 kHz ETSI 60dB @ 12.5 kHz / 70dB @ 20/25 kHz	Rated Audio Distortion ≤3%
Intermodulation TIA-603 70dB @ 12.5/20/25 kHz ETSI 65dB @ 12.5/20/25 kHz	Rated Audio Response +1~-3dB
Spurious Response Rejection TIA-603 70dB @ 12.5/20/25 kHz ETSI 70dB @ 12.5/20/25 kHz	Conducted Spurious Emission <-57 dBm

REGULATORY DATA

Frequency Range (MHz)	RF Output (W)	FCC Type Acceptance Number	Applicable FCC Rules	Industry Canada Certification Number	Applicable Industry Canada Rules
136-174	5W	OWDTR-0092-E	90	3636B-0079	RSS-119
400-470	4W	OWDTR-0093-E	90	3636B-0081	RSS-119
450-520	4W	OWDTR-0082-E	90	-	-

TRANSMITTER

RF Power Output VHF High Power 5W VHF Low Power 1W UHF High Power 4W UHF Low Power 1W	FM Hum and Noise -40db @ 12.5 kHz -43db @ 20 kHz -45db @ 25 kHz
FM Modulation 11K0F3E @ 12.5 kHz 14K0F3E @ 20 kHz 16K0F3E @ 25 kHz	Adjacent Channel Power 60dB @ 12.5 kHz 70dB @20/25kHz
4FSK Digital Modulation 12.5 kHz Data Only: 7K60FXD 12.5 kHz Data & Voice: 7K60FXW	Audio Response +1~-3dB
Conducted/Radiated Emission -36dBm<1GHz -30dBm>1GHz	Audio Distortion ≤3%
Modulation Limiting ±2.5 kHz @ 12.5 kHz ±4.0 kHz @ 20 kHz ±5.0 kHz @ 25 kHz	Digital Vocoder Type AMBE++ or SELP
	Digital Protocol ETSI-TS102 361-1, 2&3

GPS

TTF (Time To First Fix) Cold Start < 1 minute	Horizontal Accuracy < 10 meters (32.8 feet)
TTF (Time To First Fix) Hot Start < 10 seconds	

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature -22 to +140°F (-30 to +60°C)	American Military Standard MIL-STD-810 C/D/E/F
Storage Temperature -40 to +185°F (-40 to +85°C)	Dust and Water Intrusion IP57 Standard
ESD IEC 61000-4-2 (Level 4) 8kV (Contact) 15kV (Air)	Humidity Per MIL-STD-810 C/D/E/F Standard
	Shock and Vibration Per MIL-STD-810 C/D/E/F Standard

APPLICABLE MILITARY STANDARDS

Test Items	810C Methods & Procedures	810D Methods & Procedures	810E Methods & Procedures	810F Methods & Procedures
Low Pressure	500.1; 1	500.2; 1, 2	500.3; 1, 2	500.4; 2
High Temperature	501.1; 1, 2	501.2; 1, 2	501.3; 1, 2	501.4; 1, 2
Low Temperature	502.1; 1	502.2; 1, 2	502.3; 1, 2	502.4; 1, 2
Temperature Shock	503.1; 1	503.2; 1	503.3; 1	503.4; 1
Solar Radiation	505.1; 1	505.2; 1	505.3; 1	505.4; 1
Rain	506.1; 2	506.2; 2	506.3; 1, 2	506.4; 1, 2
Humidity	507.1; 2	507.2; 2, 3	507.3; 2, 3	507.4
Salt Fog	509.1; 1	509.2; 1	509.3; 1	509.4; 1
Sand and Dust	510.1; 1	510.2; 1	510.3; 1	510.4; 1
Vibration	514.2; 8, 10	514.3; 1	514.4; 1	514.5; 1/2/4
Shock	516.2; 1, 2, 5	516.3; 1, 4	516.4; 1, 4	516.5; 1, 4

Technical specifications are subject to change without notice.
Product sales are subject to applicable U.S. export control laws.

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