

## Specifications

General	Frequencies	UHF1: 400-470MHz; UHF2: 450-520MHz UHF3: 350-400MHz; VHF: 136-174MHz	
	Channel Capacity	32	
	Zone Capacity	3 (each with a maximum of 16 channels)	
	Channel Spacing	12.5KHz / 20KHz / 25KHz	
	Operating Voltage	7.4V (rated)	
	Battery	2000mAh (Li-Ion)	
	Battery Life (5-5-90 Duty Cycle, High TX Power) High-capacity 2000mAh Li-Ion Battery	Analog: UHF1: 13.5h 12h (G) UHF2: 12.5h 11h (G) UHF3: 12.5h 11h (G) VHF: 11h 10h (G)	Digital: UHF1: 15.5h 14h (G) UHF2: 14.5h 12.5h (G) UHF3: 4.5h 12.5h (G) VHF: 13.5h 12h (G)
	Frequency Stability	± 0.5ppm	
	Antenna Impedance	50 Ω	
	Dimensions (H x W x D) (with standard battery, without antenna)	125 X 55 X 35mm	
Weight (with antenna & standard battery)	335g		
Receiver	Sensitivity	Analog	0.3 μV (12dB SINAD); 0.22 μV (Typical) (12dB SINAD) 0.4 μV (20dB SINAD)
		Digital	0.3 μV /BER5%
	Selectivity TIA-603	60dB @ 12.5KHz / 70dB @ 20/25KHz	
		60dB @ 12.5KHz / 70dB @ 20/25KHz	
	Intermodulation TIA-603	70dB @ 12.5/20/25KHz	
		65dB @ 12.5/20/25KHz	
	Spurious Response Rejection TIA-603	70dB @ 12.5/20/25KHz	
		70dB @ 12.5/20/25KHz	
	Blocking TIA-603	80dB	
		84dB	
Hum and Noise	40dB @ 12.5KHz; 43dB @ 20KHz;		
	45dB @ 25KHz		
Rated Audio Power Output	0.5W		
Rated Audio Distortion	≤ 3%		
Audio Response	+1 ~ -3dB		
Conducted Spurious Emission	< -57dBm		

Transmitter	RF Power Output	UHF1/UHF2/UHF3 High Power: 4W UHF1/UHF2/UHF3 Low Power: 1W VHF High Power: 5W; VHF Low Power: 1W		
	FM Modulation	11K0F3E @ 12.5KHz; 14K0F3E @ 20KHz 16K0F3E @ 25KHz		
	4FSK Digital Modulation	12.5KHz Data Only: 7K60FXD 12.5KHz Data & Voice: 7K60FXW		
	Conducted/Radiated Emission	-36dBm<1GHz; -30dBm>1GHz		
	Modulation Limiting	± 2.5KHz @ 12.5KHz; ± 4.0KHz @ 20KHz; ± 5.0KHz @ 25KHz		
	FM Hum & Noise	40dB @ 12.5KHz; 43dB @ 20KHz; 45dB @ 25KHz		
	Adjacent Channel Power	60dB @ 12.5KHz; 70dB @ 20/25KHz		
	Audio Response	+1 ~ -3dB		
	Audio Distortion	≤ 3%		
	Digital Vocoder Type	AMBE++or SELP		
Digital Protocol	ETSI-TS102 361-1,-2,-3			
Environmental Specifications	Operating Temperature	-30°C ~ +60°C		
	Storage Temperature	-40°C ~ +85°C		
	ESD	IEC 61000-4-2 ( level 4 ) ± 8kV (contact) ± 15kV (air)		
	American Military Standard	MIL-STD-810 C/D/E/F/G		
	Dust & Water Intrusion	IP67 Standard		
	Humidity	Per MIL-STD-810 C/D/E/F/G Standard		
	Shock & Vibration	Per MIL-STD-810 C/D/E/F/G Standard		
	Accuracy specs are for long-term tracking(95th percentile values>5 satellites visible at a nominal -130dBm signal strength)			
	GPS (for PD70XG only)	TTFF (Time To First Fix) Cold Start	<1 minute	
		TTFF (Time To First Fix) Hot Start	<10 seconds	
Horizontal Accuracy		<10 meters		

All Specifications are tested according to applicable standards, and subject to change without notice due to continuous development.



# PD70X/70XG

Versatile Digital Portable Two-Way Radio

- Superior Digital Voice
- Submersible with IP67 Rating



## Standard Accessories

Li-Ion Battery  
Power Adapter

MCU Rapid-rate Charger  
Belt Clip

Leather Strap  
Antenna

## Optional Accessories



Pictures above are for reference only and may vary from actual products.







## Product Features

- **Ergonomic Design**  
The globally patented industrial design and antenna design ensure convenient operation and remarkable GPS performance.
- **Reliable Quality**  
PD70X/70XG is strictly compliant with MIL-STD-810 C/D/E/F/G and IP67 standards, ensuring outstanding performance even in harsh environments.
- **Superior Voice**  
With the combined application of narrowband codec and digital error-correction technologies, PD70X/70XG is capable of ensuring you superior voice in noisy environments or at the edge of the coverage area. In addition, the adoption of the AGC technology also optimizes your voice. With a built-in 1W speaker, PD70X/70XG ensures clear and crisp voice communication.
- **Durable Battery**  
Compared with an analog radio, PD70X/70XG can obtain an extra 40% operation time.
- **Higher Spectrum Efficiency, Higher Channel Capacity**  
Benefiting from the TDMA technology, PD70X/70XG allows twice the channels based on the same spectrum resource. This is a big help to relieve the stress of increasing shortage in spectrum resource.
- **Dual-slot Pseudo Trunk**  
With this feature, the free slot can be allocated to a member that needs to communicate, effectively enhancing frequency efficiency and allowing you to communicate timely under emergency situations.
- **Secure Communication**  
Besides the intrinsic encryption of the digital technology, PD70X/70XG provides enhanced encryption capability (such as 256-bit encryption algorithm) and the Scrambler feature (selectable).
- **Versatile Services**  
In addition to conventional communication services, PD70X/70XG features rich data services and selectable functions such as Text Message, Scan, Emergency, Man Down (optional), vibration Auto Registration, High-speed Data Transmission\* and Lone Worker.
- **Further Development Port**  
The reserved side port in PD70X/70XG allows users or any third party partner to further develop other helpful applications to extend the radio functionalities!
- **Option Board Interface**  
PD70X/70XG supports option board interfaces to radio, allowing third party partner to develop various applications to interconnect with radios to control the radio to expand its functionalities! Among the supported features are voice recording, encryption\* etc. Please refer to the API Partner Programmed for more information!

## Main Functions

- **Dual Modes (Analog+Digital)**  
PD70X/70XG can operate in either analog or digital mode. It is compatible with the prevalent analog system, ensuring a smooth analog-to-digital transition.
- **Versatile Voice Calls**  
Intelligent signaling of PD70X/70XG supports various voice call types, including Private Call, Group Call, All Call and Emergency Call.
- **Various Analog Signaling Types**  
PD70X/70XG supports various analog signaling types (HDC1200, DTMF\*, 2-Tone and 5-Tone), various squelch control types (CTCSS/CDSCS), thus providing higher function expansion capacity to the analog world.
- **One Touch**  
PD70X/70XG supports One Touch features that comprise of Text Message, Voice Calls and Supplementary Services.
- **Scan**  
PD70X/70XG supports scanning of pure Analog voice and signaling, pure Digital voice and data, and also mix mode scan that comprise of Analog and Digital activities.
- **Roaming**  
PD70X/70XG supports automatic roaming of all sites in a IP Multi-site Connect system.
- **Privacy of Voice and Data**  
PD70X/70XG supports analog scrambling, and digital encryption using Advanced Encryption Standard (AES) and ARCFOUR (ARC4) encryption methodology to both voice and data.
- **Analog/Digital Telephone Interconnect (via DTMF signaling)**  
PD70X/70XG supports simplex voice communications between radio and telephone users. It allows a radio user to make a telephone call; or a telephone user to make either a Group or Private call to radio users. This feature utilizes the Commercial Off The Shelf (COTS) Analog Phone Patch boxes and a Plain Old Telephone Service (POTS) line to connect the radio users to the Corporate Office Phone System (PBX) or Public Switched Telephone Network (PSTN).
- **Software Upgradable**  
With this capability, you can enjoy firmware upgrade without purchasing a new piece of radio hardware!

\* indicates functions available in later version.

**PD70X/70XG**  
Higher Efficiency,  
Richer Experience

As a product built to the DMR standard, PD70X/70XG (PD70XG is the model with GPS) is endowed with ergonomic design, all-round digital functions and remarkable quality to refresh your experience and enable you to be responsive to emergent situations.

## Applications

Public Safety  
Forest Industry

Public Utilities  
Business

Transportation (port, airport, railway, etc.)  
Manufacturing

