



## PD70X/70XG

Versatile Digital Portable Two-Way Radio

- Superior Digital Voice
- IP67 Rating





**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. These features improve your experience and enable you to be responsive to emergent situations.

## Applications

Public Safety  
 Forest Industry

Public Utility  
 Business

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



## Product Highlights

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- **Ergonomic Design**

The globally patented industrial 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 narrowband codec and digital error-correction technologies, PD70X/70XG delivers superior voice under noisy environments.

The AGC technology maintains a suitable voice volume,

and the built-in 1W speaker further ensures clear and crisp voice.

- **Durable Battery**

Compared with an analog radio, PD70X/70XG can obtain an extra 40% operation time.

- **Dual-slot Pseudo Trunk**

The free slot can be allocated to enhance frequency efficiency and timely response under emergency.

- **Secure Communication**

PD70X/70XG provides advanced encryption (such as 256-bit encryption algorithm) and scrambler features to secure communication.

- **Versatile Services**

In addition to voice services, PD70X/70XG offers data services and selectable features, such as Text Message, Scan, Emergency, Man Down (optional), Vibration, Auto Registration, High-speed Data Transmission, Lone Worker etc.

- **Secondary Development**

The third party partner can develop applications via accessory port to extend radio functionality.

- **Option Board Interface**

PD70X/70XG supports option board interface. This allows third party partner to develop various applications to interconnect with the radio. They could control the radio to expand its functionalities including voice recording, encryption etc. Please refer to the API Partner Programmed for more information.

## Features

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- **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**

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 signals (HDC1200, DTMF phone, 2-Tone and 5-Tone), various squelch signals (CTCSS/CDCSS), providing higher expansion capacity to the analog system.

- **One Touch**

PD70X/70XG supports One Touch features to transmit 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 among all sites in a IP Multi-site Connect system.

- **Voice and Data Safety**

PD70X/70XG supports analog scrambling, and digital encryption using Advanced Encryption Standard (AES) and ARCFOUR (ARC4) encryption methodology to secure both voice and data services.

- **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.

- **Software Upgradable**

New features can be enabled via software upgrade. Moreover, PD70X/70XG can switch to DMR or MPT trunking mode through license.

## Standard Accessories

Li-Ion Battery  
Power Adapter

MCU Rapid-rate Charger  
Belt Clip

Leather Strap  
Antenna

# Specifications

|  |  |   |   |
|--|--|---|---|
| General                                  | Frequency Range  | UHF1: 400-470MHz UHF2: 450-520MHz<br>UHF3: 350-400MHz |   |
|  | Channel Capacity   | 1024  |   |
|  | Zone Capacity  | 16  |   |
|  | Channel Spacing  | 12.5kHz / 20kHz / 25kHz                               |   |
|  | Operating Voltage  | 7.4V (rated)  |   |
|  | Battery  | 2000mAh(Li-Ion)(Standard) 2500mAh(Li-Ion)(Optional)   |   |
|  | Battery Life<br>(5-5-90 Duty Cycle, High TX Power)                 | Digital:<br>20 Hours                                  | Analog:<br>15.5 Hours                               |
|  | Frequency Stability  | ±0.5ppm   |   |
|  | Antenna Impedance  | 50Ω   |   |
|  | Dimensions (H×W×D)<br>(with standard battery,<br>Weight (antenna)) | 125 x 55 x 35 mm                                      |   |
| Weight (with antenna & standard battery) | 335g   |   |   |
| Receiver                                 | Sensitivity  | Analog  | 0.22μV (12dB SINAD)<br>0.18μV (Typical)(12dB SINAD) |
|  |  | Digital   | 0.22μV / BER5%                                      |
|  | Selectivity<br>TIA-603   | 60dB @ 12.5kHz / 70dB @ 20/25kHz                      |   |
|  | FM Modulation<br>TIA-603   | 70dB @ 12.5/20/25kHz                                  |   |
|  | Spurious Response Rejection<br>TIA-603                             | 65dB @ 12.5/20/25kHz                                  |   |
|  | ETS1<br>Hum and Noise  | 70dB @ 12.5/20/25kHz                                  |   |
|  |  | 70dB @ 12.5/20/25kHz                                  |   |
|  | ETS1<br>Hum and Noise  | 40dB @ 12.5kHz; 43dB @ 20kHz;<br>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: 1W/4W<br>UHF5:1W/3W(806-870MHz)<br>UHF5:1W/2.5W(896-941MHz)<br>VHF: 1W/5W |
|                              | FM Modulation               | 11K0F3E @ 12.5kHz; 14K0F3E @ 20kHz<br>16K0F3E @ 25kHz                                     |
|                              | 4FSK Digital Modulation     | 12.5kHz Data Only: 7K60FXD<br>12.5kHz Data & Voice: 7K60FXW                               |
|                              | Conducted/Radiated Emission | -36dBm≤1GHz; -30dBm>1GHz  |
|                              | Modulation Limiting         | ±2.5kHz @ 12.5kHz; ±4.0kHz @ 20kHz;<br>±5.0kHz @ 25kHz                                    |
|                              | FM Hum & Noise              | 40dB @ 12.5kHz; 43dB @ 20kHz;<br>45dB @ 25kHz   |
|                              | Adjacent Channel Power      | 60dB @ 12.5kHz; 70dB @ 20/25kHz   |
|                              | Audio Response              | +1 ~ -3dB   |
|                              | Audio Distortion            | ≤3%   |
|                              | Digital Vocoder Type        | AMBE+2™, SELP   |
| Environmental Specifications | Digital Protocol            | ETSI-TS102 361-1,-2,-3  |
|                              | Operating Temperature       | -30°C ~ +60°C   |
|                              | Storage Temperature         | -40°C ~ +85°C   |
|                              | ESD                         | IEC 61000-4-2 ( level 4 )<br>±8kV (contact) ±15kV (air)                                   |
|                              | American Military Standard  | MIL-STD-810 C/D/E/F/G   |
|                              | Dust & Water Protection     | IP67  |
|                              | Humidity                    | Per MIL-STD-810 C/D/E/F/G   |
|                              | Shock & Vibration           | Per MIL-STD-810 C/D/E/F/G   |

|                          |  |             |
|--------------------------|--|-------------|
| GPS<br>(For PD700G only) | Accuracy specs are for long-term tracking<br>(5 satellites visible at nominal -130dBm) |             |
|                          | TTFF (Time To First Fix) Cold Start  | <1 minute   |
|                          | TTFF (Time To First Fix) Hot Start   | <10 seconds |
| Accuracy                 | <5 meters  |             |

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

## Optional Accessories

|   |  |   |  |  |                                |   |   |                                     |
|---|--|---|--|--|--------------------------------|---|---|-------------------------------------|
|   |  |   |  |  |                                |   |   |                                     |
| Remote Speaker<br>Microphone (IP57)<br>SM18N2 | C-Earset<br>EHN16                                      | Swivel Earset<br>EHN17  | Earbud<br>ESN12  | 3-Wire Surveillance<br>Earpiece with Transparent<br>Acoustic Tube (beige)<br>EAN17 | Receive-only Earpiece<br>EAS03 | Carrying Case (for thick<br>battery) (leather) (swivel)<br>LCY003 | Programming Cable<br>(USB Port)<br>PC38 | 2500mAh<br>Li-Ion Battery<br>BL2503 |
|   |  |   |  |  |                                |   |   |                                     |
| Battery Optimizing<br>System MCA05            | MCU Multi-unit Charger<br>(for Thick Battery)<br>MCA08 | 3-wire Surveillance<br>Earpiece with Transparent<br>Acoustic Tube(Black)<br>EAN18 | 2-wire Earpiece with<br>Wireless Earphone and<br>Neck Loop(Beige)<br>EWN09 | Receive-only<br>Earpiece<br>ESS10  |                                |   |   |                                     |

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



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