

Specifications

General	Frequency Range	250-270MHz	
	Channel Capacity	1024	
	Zone Capacity	64 (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: VHF3: 11h 10h (G) Digital: VHF3: 13.5h 12h (G)	
	Frequency Stability	± 1.5ppm	
	Antenna Impedance	50	
	Dimensions (H x W x D) (with standard battery, without antenna)	125 X 55 X 37mm	
Weight (with antenna & standard battery)	355g		
LCD Display	160 x 128 pixels, 65536 colors, 1.8 inch, 4 rows		
Receiver	Sensitivity	Analog	0.3 μ V (12dB SINAD); 0.22 μ V (Typical) (12dB SINAD) 0.4 μ V (20dB SINAD)
		Digital	0.3 μ V /BER5%
	Selectivity TIA-603 ETSI		60dB @ 12.5KHz / 70dB @ 20/25KHz 60dB @ 12.5KHz / 70dB @ 20/25KHz
		Intermodulation TIA-603 ETSI	70dB @ 12.5/20/25KHz 65dB @ 12.5/20/25KHz
	Spurious Response Rejection TIA-603 ETSI		70dB @ 12.5/20/25KHz 70dB @ 12.5/20/25KHz
		Blocking TIA-603 ETSI	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	High Power: 5W; 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 ~ +60
	Storage Temperature	-40 ~ +85
	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)	
	TTFF (Time To First Fix) Cold Start	<1 minute
	TTFF (Time To First Fix) Hot Start	<10 seconds
Horizontal Accuracy	<10 meters	

GPS (For PD785 only)	Accuracy specs are for long-term tracking(95th percentile values>5 satellites visible at a nominal -130dBm signal strength)	
	TTFF (Time To First Fix) Cold Start	<1 minute
	TTFF (Time To First Fix) Hot Start	<10 seconds
	Horizontal Accuracy	<10 meters

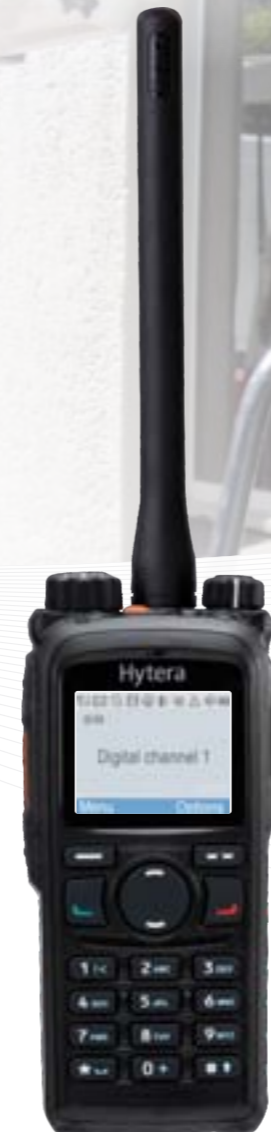
* This frequency band is available for both DMR trunking mode and MPT trunking mode.

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

Optional Accessories

Remote Speaker Microphone (IP57) SM18N2	C-Earset EHN16	Swivel Earset EHN17	Earbud ESN12	3-Wire Surveillance Earpiece with Transparent Acoustic Tube (beige) EAN17	Six-Unit Switching Power PS7002	Carrying Case (for thick battery) (leather) (swivel) LCY003	Programming Cable (USB Port) PC38	2500mAh Li-Ion Battery BL2503
Battery Optimizing System MCA05	MCU Multi-unit Charger (for Thick Battery) MCA08	3-wire Surveillance Earpiece with Transparent Acoustic Tube(Black) EAN18	Receive-only Earpiece ESS07	Receive-only Earpiece ESS08	2-wire Earpiece with Wireless Earphone and Neck Loop(Beige) EWN06			

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



PD785/785G

Versatile Digital Portable Two-Way Radio

- Large-size HD Transflective Color Display
- Superior Digital Voice



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PD785/785G

Higher Efficiency,
Richer Experience

As a product built to the DMR standard, PD785/785G (PD785G is the model with GPS) is endowed with ergonomic design, all-round digital functions and remarkable quality to increase your management efficiency and enable you to be responsive to emergent situations.

Product Features

- Ergonomic Design**
 The large-size color display allows good visibility even under extremely strong light. The globally patented industrial design and antenna design ensure convenient operation and remarkable GPS performance.
- Reliable Quality**
 PD785/785G 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, PD785/785G 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, PD785/785G ensures clear and crisp voice communication.
- Durable Battery**
 Compared with an analog radio, PD785/785G can obtain an extra 40% operation time.
- Higher Spectrum Efficiency, Higher Channel Capacity**
 Benefiting from the TDMA technology, PD785/785G 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, PD785/785G provides enhanced encryption capability (such as 256-bit encryption algorithm) and the Scrambler feature (selectable).
- Versatile Services**
 In addition to conventional communication services, PD785/785G 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 PD785/785G allows users or any third party partner to further develop other helpful applications to extend the radio functionalities!
- Option Board Interface**
 PD785/785G 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)**
 PD785/785G 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 PD785/785G supports various voice call types, including Private Call, Group Call, All Call and Emergency Call.
- GPS**
 PD785G supports viewing of GPS positioning information and sending of GPS text message.
- Data Services**
 PD785/785G supports data capabilities of sending Private, Group text message. It also supports Third Party to control the radio via Third party API (GPS, Radio Registration Services, Radio and Call Control, Telemetry, Data Transfer), via Telemetry control to radio.
- Various Analog Signaling Types**
 PD785/785G supports various analog signaling types (HDC1200, DTMF phone, 2-Tone and 5-Tone), various squelch control types (CTCSS/CDCSS), thus providing higher function expansion capacity to the analog world.
- Supplementary Services**
 PD785/785G supports supplementary services of Radio Check, Remote Monitor, Call Alert, Radio Enable and Radio Disable.
- Multiple Languages**
 PD785/785G supports 15 languages, including English, English, Simplified Chinese, Traditional Chinese, Thai, Arabic, Farsi, Korean, Portuguese, Italian, Russian, Polish, Turkish, French, Spanish and German, allowing users to select it per their needs.
- One Touch**
 PD785/785G supports One Touch features that comprise of Text Message, Voice Calls and Supplementary Services.
- Scan**
 PD785/785G 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**
 PD785/785G supports automatic roaming of all sites in a IP Multi-site Connect system.
- Privacy of Voice and Data**
 PD785/785G 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)**
 PD785/785G 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**
 Upgrade software enables new features without buying a new radio; PD785/785G could also be switched into MPT and DMR trunking modes with corresponding license applied in the same hardware.

Applications

Public Safety
Forest Industry

Public Utilities
Business

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



Standard Accessories

Li-Ion Battery
Power Adapter

MCU Rapid-rate Charger
Belt Clip

Leather Strap
Antenna