PD7 Series (UL913)
UL Certified Intrinsically Safe Digital Portable Radio

- UL / CSA / CQST Certified Explosion-Proof
- GPS, Man Down and Integration with Data Applications

PD782 UL913

PD702 UL913

DMR DIGITAL MOBILE RADIO ASSOCIATION   UL   CSA   **RATED IP67**

www.hytera.us

PD7 Series UL913

The PD7 Series UL913 is specially designed for those who work in environments with explosive gas and combustible dusts, where using regular radios could be unsafe. A portable explosion-proof DMR radio with ergonomic and rugged design, easy to use, long battery life and UL913-rated for safety. The PD7 Series UL913 enable your workers to communicate safely and efficiently even in hazardous environments.

Applications

Oil & Gas   Mining   Pharmaceutical   Manufacturing   Firefighters   Refineries

Product Features

- **Ul913 and CSA Certificated Explosion-Proof Safety**
  These intrinsically safety radios are developed and tested with the requirements of USA UL913 and Canada CSA standard. They are designed to work safely in most hazardous environments with explosive gas and dust particles. The IS Battery must be used to ensure intrinsically safe certification.

- **Rugged & Reliable**
  Complies with MIL-STD-810 C/D/E/F/G standards. The Ingress Protection reaches IP67 (6: Totally protected against dust; 7: Protected against the effects of immersion up to 1m for 30 minutes). It's the highest IP level for land-based wireless radio application.

- **Superior Voice**
  With the adoption of the AGC technology in combination with the application of narrowband codec and digital error correction technologies, The PD7 Series UL913 radios are capable of ensuring your voice is clear and crisp even in noisy environments or at the edge of the coverage area. The intelligent signaling of the radios support various voice call types, including Private Call, Group Call , All Call and Emergency Call. Along with Automatic roaming of all sites in an IP Multi-site Connect system.

- **User Friendly 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. The large PTT, volume, channel knobs and programmable buttons, PD78XG/PD70XG are easy to operate even when wearing gloves.

- **Larger Li-Ion Battery capacity, longer cycle life**
  Equipped with 2400mAh and UL913 / CSA certificated Li-Ion battery, lasting approximately 21 hours under 5-5-90 duty cycle. The battery life-span is also longer as the charge/discharge cycles reduced. To ensure intrinsically safe certification the IS Battery must be used.

- **Pseudo Trunk**
  This virtual trunking feature allocates a free timeslot for urgent communications. This effectively enhances frequency efficiency and allows you to communicate in a timely manner in emergency situations.

- **GPS Positioning**
  The PD782G supports viewing of GPS positioning information and sending of GPS text message.

- **One Touch Call/Text**
  Supports One Touch features that comprise of Preprogrammed Text Messages, Voice Calls and Supplementary Features

- **Secure Communication**
  Besides the encryption inherent to digital technology, The PD7 Series UL913 radios provide enhanced encryption capabilities (such as 256-bit encryption algorithm). It has analog scrambling, and digital encryption using Advanced Encryption Standard (AES) and ARCFOUR (ARC4) encryption methodology to both voice and data.).

- **Data Features**
  The PD7 Series UL913 Supports data capabilities of sending Private and Group text messages. It also supports a Third Party to control the radio via Third party API (GPS, Radio Registration Services, Radio Call Control, Telemetry, Data Transfer), via Telemetry control to radio.

- **Various Analog Signaling Types**
  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.

- **Multifaceted Features**
  In addition to conventional communication services, the PD7 Series radios are capable of Text Message, Scan, Emergency, Man Down (optional), vibration Auto Registration, High-speed Data Transmission, Lone Worker, Radio Check, Remote Monitor, Call Alert, Radio Enable, and Radio Disable

- **Dual Mode: Analog & Digital**
  Dual mode (analog & digital) operation ensures a smooth analog to digital migration.

- **Higher Spectrum Efficiency, Higher Channel Capacity**
  The TDMA technology allows twice the channels based on the same spectrum resource. This relieves the stress of increasing shortage in spectrum resource.

- **Scan**
  Capable of scanning of pure analog voice and signaling, pure Digital voice and data, and also mix mode scan that comprise of Analog and Digital activities.

- **Software Upgradeable**
  Upgradeable software enables new features without buying a new radio; The PD7 Series UL913 radios can also be switched into DMR trunking modes with corresponding trunking license applied in the same hardware.

- **Expansion Ports**
  This allows third parties to develop accessory and applications via front and rear port of the mobile. (Features such as voice recording, encryption).

Accessories

Included
- Li-Ion Battery (IS rated)
- MCU Rapid-rate Charger
- Power Adapter
- Antenna
- Belt Clip
- Leather Strap

See website for full list

Optional

| Remote Speaker Microphone (IP57) SM18N2 | MCU Multi-Unit Charger (For Thick Battery) MCA08 | Programming Cable (USB Port) PC38 | Earset Swivel EHN17 |

Specifications

General	Frequency Range (UHF5 only for DMR Trunking)		VHF: 136 - 174MHz ; UHF1: 400 - 470MHz UHF2: 450-520MHz ; UHF5: 806-941MHz
	Channel Capacity		1024
	Zone Capacity		64
	Channel Spacing		25 / 20 / 12.5KHz (6.25e)
	Operating Voltage		7.4V (rated)
	Battery		2400mAh (Li-Ion)
	Battery Life (5-5-90 Duty Cycle, High TX Power) (Range of hrs depends on Frequency and GPS)	Analog	Approx. 8 - 12hrs
		Digital	Approx. 11 - 15hrs
	Frequency Stability		±0.5ppm
	Antenna Impedance		50 Ω
	Dimensions (HxWxD)	PD702	4.9 x 2.17 x 1.38 inches
		PD782	4.9 x 2.17 x 1.46 inches
	Weight	PD702	11.82 oz
		PD782	12.52 oz
	LCD Display (PD782 / PD762)		160 128 pixels, 65535 colors 1.8 inch, 4 rows
	FCC ID		See website for full list
	Industry Canada ID		See website for full list

UL913	Atmosphere	Class I II III	Class I - Gas, vapors ; Class II - Dust ; Class III-Fibers, Flyings
	Area Classification (Flammable material present time)	DIV 1	Division 1: Gas/Dust normally present in explosive amounts
	Gas Types by Group:	Group C	C- Ethylene and related products
	Dust Types by Group:	Group G	G - Grain and non-metallic dust
	Operating Temperature	-30 to 55	-22ºF to 131ºF
	Temperature Class (Maximum device surface temperature)	T4	T4-275ºF

Environmental Specs	Storage Temperature	-40º F ~ +185º F
	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

GPS	TTFF (Time To First Fix) Cold Start	<1 minute
	TTFF (Time To First Fix) Hot Start	<10 seconds
	Horizontal Accuracy	<10 meters

Transmitter	RF Power Output		VHF: High 5W - Low 1W UHF: High 4W - Low: 1W
	FM Modulation (Analog Emissions Designator)		11K φF3E @ 12.5KHz ; 14KφF3E @ 20KHz ; 16KφF3E @ 25KHz
	4FSK Digital Modulation (Digital Emissions Designator)		12.5KHz Data Only: 7K6φFXD 12.5KHz Data & Voice: 7K6φFXW
	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

Receiver	Sensitivity	Analog	0.3μ V (12dB SINAD) ; 0.22μ V (Typical) (12dB SINAD); 0.4μ V (20dB SINAD)
		Digital	0.3μ V/BER5%
	Selectivity TIA-603 ETSI		60dB @ 12.5KHz / 75dB @ 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
	S/N		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

Your Local Dealer

20KHz / 25KHz will not be available on new equipment in the U.S. after January 1st , 2011

Hytera reserves the right to change product designs or specifications at any time. If you have any questions regarding the accuracy of this information please contact your local sales representative or Hytera directly.

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