Hytera

PD50X/PD56X UL913
Intrinsic Safe DMR Radio

- UL Certified DMR radio
- Analog & Digital Dual Modes
- Compact design
- Clear voice

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Safety is the first priority for those who work in hazardous environments with explosive gas and combustible dusts, where using regular radios could be unsafe. Hytera understands the challenges and is dedicated to designing and delivering safe communication solutions.

Hytera believes it is rather urgent to provide an intrinsic safety radio to commercial market. The PD5 series two-way portable radio is small, light and feature-rich. It is UL913 certified and can secure safe in most dangerous areas.

UL913 Certificate

Class I II III-Division 1, Group C-G, -30℃ to 55℃, T4
Class I- Division 2, Group A-D

Atmosphere:
Class I-Gas, vapors;
Class II-Dust;
Class III-Fibers, Flyings

Operating Temperature

Temperature Class
(Maximum device surface temperature)

T1-450℃	T3C-160℃
T2-300℃	T4-135℃
T3-200℃	T5-100℃
T3A-180℃	T6-85℃
T3B-165℃	

Class I II III Division 1 Group C-G -30℃ to 55℃ T4

Area Classification: (Flammable material present time) NEC 500
Division 1: Gas/Dust normally present in explosive amounts
Division 2: Gas/Dust not normally present in explosive amounts

Gas Types by Group:
A-Acetyene
B-Hydrogen
C-Ethylene and related products
D-Propane and alcohol products

Dust Types by Group:
E-Metal dust
F-Coal dust
G-Grain and non-metallic dust

Features

Small, Sleek, Light

The radio is 115 X 54 X 35mm (PD50X UL913)/115 X 54 X 37mm (PD56X UL913) and 298g (PD50X UL913)/311g (PD56X UL913), and uses dual-color injection.

Long Battery Life

In digital mode, the radio operates up to 20 hours under a duty cycle of 5-5-90.

Rugged & Reliable

The radio complies with MIL-STD-810 C/D/E/F/G and IP54.

One Touch Call/Text

The radio supports One Touch Call/Text features to transmit call or text message via the programmed key.

Supplementary Features (optional)

The radio supports radio enable, radio disable, remote monitor, alert call and radio check.

Dual Modes (Analog & Digital)

The radio can work in both analog and digital modes for a smooth analog-to-digital migration.

Radio Registration Service

In Smart Dispatch system or SmartOne Dispatch system, RRS is used to check if the radio is online.

A&D Mixed Scan

Analog channels and digital channels can be added in one scan list. This is more convenient for analog-to-digital migration.

Secure Communication

The radio supports basic encryption in digital mode and scrambler feature in analog mode.

Advanced Signaling

The radio can transmit various analog signals, including HDC1200, 2-tone and 5-tone, for better communication with analog users.

Emergency Alarm

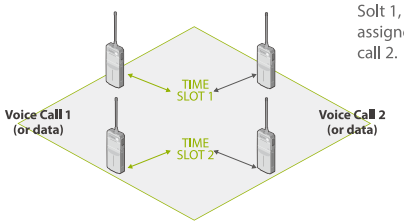
The radio can transmit emergency alarm to other radios via the programmable key to establish an emergency call. This makes the response to the emergency more quickly.

XPT Trunking (optional)

The radio can work in Hytera XPT Trunking system, which is cost-effective and can dynamically assign voice and data services.

Pseudo Trunk

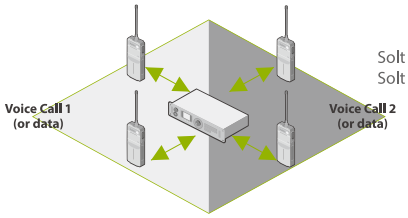
The free slot can be allocated to enhance frequency efficiency and timely response under emergency.



Solt 1, Solt 2 are automatically assigned to voice call 1 or voice call 2.

Dual Capacity in TMO

Hytera provides 2-slot solution in Repeater Mode.
The radio can use both slots for the communication.



Solt 1 used for voice call 1
Solt 2 used for voice call 2

Highlights

- UL Certified DMR radio
- Ergonomic User-Friendly Design
- Light & Durable
- Compact Size & Clear Voice
- Cost-effective

Target Markets

Manufacturing

Some flammable metal, mineral, or other dusts, existing in the factory's air, may give rise to explosion.

Chemical Industry

Flammable substances are converted and processed. These processes may give rise to explosive mixtures.

Food and feedstuffs industry

Explosive dusts may arise during transport and storage of grain, sugar, etc.

Refinery

The hydrocarbons processed in refineries are all flammable and may give rise to explosive atmospheres depending on their flash point.

Pharmaceutical industry

Alcohols are often used as solvents in the production of pharmaceuticals. Agents and auxiliary materials may give rise to dust explosions.

Firefighting

Fire environment often comes with strong smoke, flammable matter and high temperature.

Accessories

Versatile UL certified
Accessories for Specific Tasks

Adapter PS1026(for non-hazardous area only)
Strap Ro03
PC63 Data Cable (USB Port)
NCN011 Nylon Carrying Case (half-folded) (non-swivel) (black)

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

Specifications

General		
Frequency Range		UHF: 350-400MHz，400-470MHz； VHF: 136-174MHz
Channel Capacity		256(PD50X)/512 (PD56X)
Zone Capacity		16 (PD50X)/32 (PD56X)
Channel Spacing		25/20/12.5KHz
Operating Voltage		7.4V
Battery		2000mAh (Li-Ion)
Battery Life (5/5/90)		Analog/Digital: about 15.3 Hours/20 Hours
Weight		298g(PD50X UL913)/311g(PD56X UL913)
Dimensions		115 X 54 X 35mm (PD50X UL913) 115 X 54 X 37mm (PD56X UL913)
Frequency Stability		±0.5ppm
Antenna Impedance		50Ω
Receiver		
Sensitivity (Digital)		0.22μV / BER 5%
Sensitivity (Analog)		0.3μV (12dB SIN AD) 0.22μV (Typical) (12dB SIN AD) 0.4μV (20dB SIN AD)
Adjacent Selectivity	TIA-603	60dB @ 12.5KHz/70dB @ 20 & 25KHz
	ETSI	60dB @ 12.5KHz/70dB @ 20 & 25KHz
Spurious Response Rejection	TIA-603	70dB @ 12.5/20/25KHz
	ETSI	70dB @ 12.5/20/25KHz
Inter-modulation	TIA-603	70dB @ 12.5/20/25KHz
	ETSI	65dB @ 12.5/20/25KHz
Hum & 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	UHF: 1/4W VHF: 1/5W
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+2™
Digital Protocol	ETSI-TS102 361-1,-2,-3
Environmental	
Operating Temperature	-30℃~ +55℃
Storage Temperature	-40℃~ +85℃
ESD	IEC 61000-4-2 (Level 4) ±8kV (Contact) ±15kV (Air)
Dustproof & Waterproof	Ip54
Humidity	Per MIL-STD-810 G
Shock & Vibration	Per MIL-STD-810 G

PD50X/PD56X UL913, X=0, 2, 5,6 or 8, model number varies geographically. For details, please contact our regional sales representatives.

All specifications are subject to change without notice due to continuous development.

Hytera
Respond & Achieve

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