Features

Base Information
- Full Keypad, Color Screen, 1024 Channels
- Analog and Digital Dual Mode
- Bluetooth (4.0) Audio
- Bluetooth (4.0) Data*
- Integrated GPS
- Integrated GLONASS
- Pre-programmed Text Messaging
- Freeform Text Messaging
- Option Board
- Roaming
- Scan
- Voice Notification

Audio
- Auto Gain Control
- Acoustic Feedback Suppressor
- Loudness Quality Optimization
- Multi Band Equalization*
- Noise Reduction Technology

Safety
- Explosion-proof
- Emergency Alarm
- Dedicate Emergency Button
- Alert Call
- Man Down
- Lone Worker
- Basic Encryption
- Enhanced Encryption(40bit)
- Enhanced Encryption(128/256bit)
- Multiple Key Encryption
- Priority Interrupt
- Remote Monitor
- Radio Enable/Disable
- Radio Check
- IP68 Dust and Waterproof
- Vibration
- GPS SMS
- GPS Location check

Systems
- Analog Conventional
- DMR Conventional
- IP Site Connect
- MPT-1327
- DMR Simulcast System
- XPT Trunking
- DMR Trunking

Advance Features
- Pseudo Trunk
- Telemetry
- Rent
- Phone Interconnect
- Full Duplex Call (DMR Tier 3 System)*
- Full Duplex Call (DMR Conventional System)*
- Single Frequency Repeater Mode*
- Micro SD Card*
- Smart Battery*
- RTC Clock

NOTES
* Those feature will be available later by software upgrade
- Standard feature
- Optional feature

PD98X UL913 Highlight
Hardware Advantages

⚙ **Better Sensitivity and Frequency Stability**

Advanced technology improves receiving performance to enhance communication distance and reliability.

💧 **IP68 Protection**

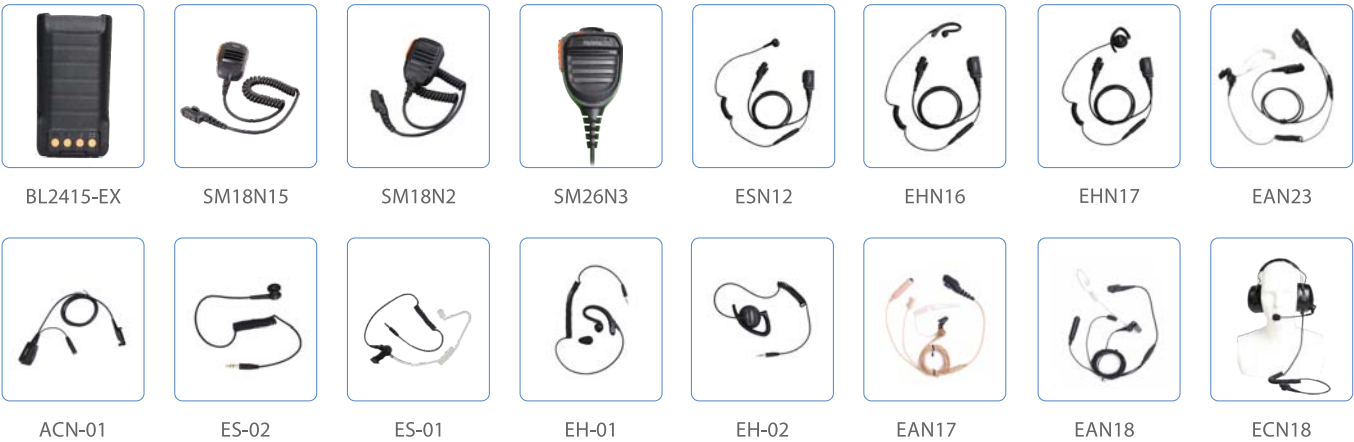IP68 Dust and Waterproof Standards ensures outstanding performance even in harsh environments.

Enhanced Voice Quality

Maximum 2.5W output speaker and new noise cancelling technology ensures clear and loud voice communication.

🔋 **Longer Battery Life**

PD98X UL913 adopts new battery saving technology to guarantee longer communication time.

◉ **360 Degree Stepless Channel Knob**

With this kind of knob user can change channel and zone easily and comfortably.

Specifications

General		
Frequency Range	UHF:350-527MHz VHF:136-174MHz	
Channel Capacity	1024	
Zone Capacity	64 (maximum of 256 channels per zone)	
Channel Spacing	12.5kHz / 20kHz / 25kHz	
Operating Voltage	7.4V (rated)	
Battery	2400mAh (Li-ion Anti-fake or Smart Battery)	
Battery Life (5-5-90 Duty Cycle, High TX Power)	Digital: 21 Hours @2400mAh	Analog: 16.5 Hours @2400mAh
Frequency Stability	±0.5ppm	
Antenna Impedance	50Ω	
Dimensions (H × W × D) (with standard battery, without antenna)	131 x 54.5 x 42 mm (2400mAh)	
Weight (with antenna & standard battery)	350g (2000mAh), 361g (2500mAh), 366g (3000mAh)	
LCD Display	160 x 128 pixels, 65536 colors 1.8 inch, 6rows	

Receiver		
Sensitivity	Analog	0.22μV (12dB SIN AD), 0.22μV (Typical) (12dB SIN AD) 0.4μV (20dB SIN AD)
	Digital	0.22μV /BER5%
Selectivity TIA-603 ETSI		60dB @ 12.5kHz / 70dB @ 20/25kHz (TIA-603) 60dB @ 12.5kHz / 70dB @ 20/25kHz (ETSI)
Spurious Response Rejection TIA-603 ETSI		70dB @ 12.5/20/25kHz (TIA-603) 70dB @ 12.5/20/25kHz (ETSI)
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	UHF High Power: 4W; UHF 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	
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 SELPor NVOC	
Digital Protocol	ETSI-TS102 361-1,-2,-3	

Environmental Specifications		
Operating Temperature	-30℃ ~ +55℃	
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	IP68 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	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	<5 meters	

Optional Accessories

BL2415-EX | SM18N15 | SM18N2 | SM26N3 | ESN12 | EHN16 | EHN17 | EAN23

ACN-01 | ES-02 | ES-01 | EH-01 | EH-02 | EAN17 | EAN18 | ECN18

PD98X UL913

Intrinsically Safe Powerful Digital Radio
UL/TIA4950 Certified explosion-proof DMR Portable
Tow-way Radio

PD98X UL913

As the most compacted explosion-proof digital two-way radio Today, safety is the most important thing we are asking for in every aspect of life and work. Hytera understands the challenges in hazardous environments and is dedicated to designing and developing safer radios for more and more customers. Hytera believes it is rather urgent to provide an intrinsic safety radio to commercial market. Build a radio with the classic housing to provide a small and light product. Design a radio to pass UL913 certification for most dangerous areas with explosive gas and combustible dusts. Introduce a cost-effective radio with much more features for enterprises and commercial users.

Target market

Oil & Gas, Refinery, Chemical Industry, Fire Fighting

Manufacturing	Chemical industry	Food and feedstuffs industry
Refinery	Pharmaceutical industry	Firefighting

PD98X UL913 in this document are intrinsically safe, they are different from the conventional types.

UL913/TIA4950 Certificate

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

Gas types by group:
A: Acetylene   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

Class I II III   DIV 1   Group C-G   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

Temperature class*(maximum device surface temperature):*
T1: 450℃	T3A: 180℃	T4: 135℃
T2: 300℃	T3B: 165℃	T5: 100℃
T3: 200℃	T3C: 160℃	T6: 85℃

Centered Antenna
Integrated GPS and RF antenna, more accurate positioning and receiving.

360 Degree Stepless Channel Knob

IP68 Protection

Enhanced Voice Quality

18' High Definition Display
Displaying clear contents.

Better Sensitivity and Frequency Stability

Explosion-proof High capacity Li-ion Battery

| Bluetooth 4.0 | Micro SD Card | Single Frequency Repeater Mode | Full Duplex Call | RTC Clock | Smart Battery |

Brand New Features

01
Micro SD Card

Based on micro SD storage technology, PD98X UL913 helps customer to record and store critical voice call or data.
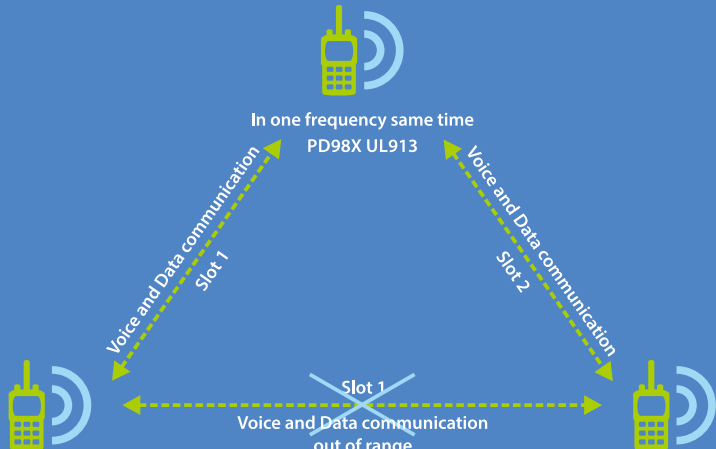
PD98X UL913 supports maximum 32G micro SD card, to record up to 576 hours digital/ analog voice.

02
Single Frequency Repeater Mode

Based on Interference cancellation technique, PD98X UL913 can use one slot to receive signal and another slot to transmit it in the same frequency at the same time in DMO mode to extend communication distance.

In one frequency same time
PD98X UL913

Voice and Data communication
Slot 1

Voice and Data communication
Slot 2

Slot 1
Voice and Data communication
out of range

03
Bluetooth 4.0

PD98X UL913 has built in Bluetooth 4.0, which not only supports audio transmission, but also allows data transmission, such as programming via Bluetooth etc.

04
Full Duplex Call

PD98X UL913 can make full duplex call with PD98X UL913, telephone or cell phone.

05
RTC Clock

RTC clock feature allows customers to check the accurate time of received message and call.

06
Smart Battery

PD98X UL913 support smart battery, which makes it easier to monitor the battery status, such as battery life time and remaining charge time by smart battery charge. This also reduces the charging time dramatically.