

Hytera PD79X Ex

World's First IIC Intrinsically Safe Digital Portable Radio











PD79X Ex*

Innovative Design

- ① **Ergonomic Design:**
PD79X Ex adopts a 1.8-inch high resolution color transfective LCD display, allowing crystal-clear visibility even under outdoor strong light. Big keypad ensures precise and convenient operation even with gloves on.
- ② **Durability:**
PD79X Ex passes one-month series tests in simulated harsh environments. MIL-STD-810C/D/E/F compliance and IP67 protection ensure outstanding and reliable performance in demanding environments.
- ③ **Error-prevention Design:**
Automatic alarm will be triggered when batteries or accessories of lower security level are applied, thus avoiding accidents of this kind.
- ④ **Plastic-encapsulated technology:**
The plastic-encapsulated technology is applied to the radio unit and battery, isolating their internal circuits from dangerous gas and dusts outside. This technology is applied in PD79X Ex at the cost of lower production efficiency due to the challenging demands in design and manufacturing, which is always worthy as Hytera sees it.
- ⑤ **IP67 Protection:**
One-meter submersion up to 30 minutes.
- ⑥ **Anti-static shell:**
The rugged and durable shell dissipate static electricity, thus preventing sparks.
- ⑦ **High-strength LCD protective len:**
The high-strength LCD protective len minimizes scratch and withstands the impact of 1KG hammer.
- ⑧ **Innovative battery latch:**
The patented battery latch design keeps the battery in place when the radio falls from a height.
- ⑨ **Non-slip design:**
The non-slip design delivers strong grab-hold, also comfortable operation.





Other features

-  **GPS:**
The built-in GPS module supports GPS data transmission.
-  **Dual-mode (Analog & Digital):**
PD79X Ex operates in either analog or digital mode. It is compatible with the current analog system, ensuring a smooth analog-to-digital migration.
-  **Versatile Voice Calls:**
The DMR intelligent signaling supports various voice calls, including Private Call, Group Call and All Call.
-  **Vibration:**
This feature is helpful in alerting you to reception of any voice call or message under noisy conditions.
-  **IP Service:**
PD79X Ex allows multiple IP functions when connected with a PC via IP address.
-  **Various Analog Signaling:**
PD79X Ex supports various analog signaling (HDC1200, DTMF, 2-Tone and 5-Tone), providing more expansion capacity.
-  **Software Upgradable:**
Enable new features without buying a new radio.
-  **Multilingual interface:**
The radio supports up to 13 languages, including English, Simplified Chinese, Traditional Chinese, German, Spanish, French, Italian, Polish, Russian, Turkish, Greece, Portuguese and Korean, allowing you to select as per your needs.

Hytera PD79X Ex, fully compliant to DMR open standard of ETSI, comes to be the world's First IIC Intrinsically Safe Digital Portable Radio. Plastic-encapsulated technology, error-prevention design, and IP67 protection ensure intrinsically safe and reliable communication in hazardous scenes with explosive gas and combustible dusts.



* Mode number varies geographically.

-  Interoperable with public network telephones
-  Voice & data encryption:
Besides analog scramble, PD79X Ex also supports AES and ARCFOUR (ARC4) encryption, which secure both digital voice and data communication.
-  Shortcut keys:
PD79X Ex offers shortcut keys for text message sending, voice call and other services.
-  Roaming:
PD79X Ex allows automatic roaming among all the sites in the IP connection network.

Specifications

General	Frequency Range(MHz)	UHF1: 400-470MHz
	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	1800mAh (Li-Ion)
	Battery Life(5-5-90 Duty Cycle, High TX Power)High-capacity 1800mAh Li-Ion Battery	Analog: Above 14.5 H / 13 H (GPS) Digital: Above 17 H / 15 H (GPS)
	Frequency Stability	±0.5ppm
	Antenna Impedance	50 Ω
	Dimensions (H×W×D) (with standard battery, without antenna)	141X 55 X 39 mm
	Weight(with antenna & standard battery)	495g
	LCD display	160 X 128 pixels, 65535 color1.8-inch, 4 rows
	Anti-explosion levels	COST(China): Ex ib IIC T4 Gb Ex ibD 21 T4 IP6X

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		60dB @ 12.5KHz / 70dB @ 20 & 25KHz
	ETSI		60dB @ 12.5KHz / 70dB @ 20 & 25KHz
	Intermodulation TIA-603		70dB @ 12.5/20/25KHz
	ETSI		65dB @ 12.5/20/25KHz
	Spurious Response Rejection TIA-603		80dB @ 12.5/20/25KHz
	ETSI		84dB @ 12.5/20/25KHz
	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

Transmitter	RF Power Output	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 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	-20℃ ~ +50℃
	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
	Dust & Water Intrusion	IP67 Standard
	Humidity	Per MIL-STD-810 C/D/E/F Standard
GPS*	Shock & Vibration	Per MIL-STD-810 C/D/E/F Standard
	TTFF (Time To First Fix) Cold Start	<1 minute
	TTFF (Time To First Fix) Hot Start	<10 seconds
	Horizontal Accuracy	<10 meters

*Accurate long-term track (95% value>trackable for 5 satellites in rated-130dBm signal strength)

For details about the accessories, please visit: www.hytera.com

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



Hytera Communications Corporation Limited

Address: HYT Tower, Hi-Tech Industrial Park North, Beihuan Rd.,
Nanshan District, Shenzhen, China
Tel: +86-755-2697 2999 Fax: +86-755-8613 7139 Post: 518057
Http: //www.hytera.com Stock Code:002583.SZ

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