

Surya PD798 Ex

World's First IIC Intrinsically Safe Digital Portable Radio



PD798 Ex*

Surya PD798 Ex, fully compliant to DMR open standard of ETSI, comes to be the world's First IIC Atex Digital Portable Radio. FM-2010 standard of North America, IEC, and ATEX standards compliance, 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.


Innovative Design

- ① **Ergonomic Design:**
PD798 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:**
Strictly compliant with FM -2010 standard of North America, IEC & ATEX standards, PD798 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 PD798 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):**
PD798 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:**
PD798 Ex allows multiple IP functions when connected with a PC via IP address.
-  **Various Analog Signaling:**
PD798 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 11 languages, including English, Simplified Chinese, German, Spanish, French, Italian, Polish, Russian and Turkish, allowing you to select as per your needs.

 **Interoperable with public network telephones**

 **Voice & data encryption:**

Besides analog scramble, PD798Ex also supports AES and ARCFour (ARC4) encryption, which secure both digital voice and data communication.

 **Shortcut keys:**

PD798Ex offers shortcut keys for text message sending, voice call and other services.

 **Roaming:**

PD798EX 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	12.5 KHz / 20 KHz / 25 KHz
	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	± 1.5ppm
	Antenna Impedance	50 Ω
	Dimensions (H×W×D) (with standard battery, without antenna)	141X 55 X 39 mm(5.5x2.2x1.5 inch)
Weight(with antenna & standard battery)	495g	
LCD display	160 X 128 pixels, 65535 color1.8-inch, 4 rows	
Anti-explosion levels	CQST(China): Ex ib IIC T4 Gb Ex ib D21 T4 IP6X ATEX/IECEX: II G Ex ib IIC T4 II D Ex ibD A21 IP6x T90°C IP6X Ex ib I M2 FM: Class I, Zone 1 AEx ib IIC T4 Class II, Zone20 AEx tD A21 T120°C Class I, Div 2, Groups ABCD 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 ETSI		60dB @ 12.5 kHz / 70dB @ 20&25 kHz 60dB @ 12.5 kHz / 70dB @ 20&25 kHz
	Intermodulation TIA-603 ETSI		70dB @ 12.5/20/25 kHz 65dB @ 12.5/20/25 kHz
	Spurious Response Rejection TIA-603 ETSI		80dB @ 12.5/20/25 kHz 84dB @ 12.5/20/25 kHz
	S/N		-40dB @ 12.5 kHz -43dB @ 20KHz -45dB @ 25 kHz
	Rated Audio Power Output		0.5W
	Rated Audio Distortion		≤ 3%
	Audio Response		+1 ~ -3dB
	Conducted Spurious Emission		< -57 dBm

Transmitter	RF Power Output	1W
	FM Modulation	11K0F3E @ 12.5 kHz 14K0F3E @ 20 kHz 16K0F3E @ 25 kHz
	4FSK Digital Modulation	12.5kHz Data Only: 7K60FXD 12.5kHz Data & Voice: 7K60FXW
	Conducted/Radiated Emission	-36dBm<1GHz -30dBm>1GHz
	Modulation Limiting	± 2.5kHz @ 12.5 kHz ± 4.0kHz @ 20 kHz ± 5.0kHz @ 25 kHz
	FM Noise	-40dB @ 12.5 kHz -43dB @ 20KHz -45dB @ 25 kHz
	Adjacent Channel Power	60dB @ 12.5 kHz 70dB @ 20/25 kHz
	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°C ~ +50°C
	Storage Temperature	-40°C ~ +85°C
	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
Shock & Vibration	Per MIL-STD-810 C/D/E/F Standard	

GPS*	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.

SURYA TELECOM PVT. LTD.

An ISO 9001:2008 Certified Company

Corporate Office

SCO 36, Sector 3, Panchkula-134 112, Haryana (INDIA)

Tel : +91-172-2565228, 2565229, Fax : +91 172 2574636

Email: sales@suryatel.com, Website : www.suryatel.com

Delhi Office : SF-202, 5A, Pusa Road, Karol Bagh
New Delhi 110 005, INDIA

Works : Plot No. 20A, Industrial Area, Sector-2

Parwanoo : 173 220, Distt. Solan,
Himachal Pradesh, India