



PROFESSIONAL INTRINSICALLY SAFE DMR PORTABLE RADIO

Empower Your Operation



- Class I, Division 1, Group C-D, T4;
Class II, Class III, Division 1, Group E-G, T135°C;
Class I, Division 2, Groups A - D, T4;
Ta: -20°C to 60°C
- Explosion-proof Battery Identification
- AI-based Noise Cancellation Technology
- Universal Type-C port



When your people are working in potentially explosive environments such as chemical factory, oil refinery, firefighting and mining field, their safety is always your paramount concern. Hytera HP50X intrinsically safe digital portable radio is the right solution for your needs.

From inside to outside, the HP50X can confront any harsh conditions and offer reliable one-to-one or one-to-many communications, without compromising ease of use. Meanwhile, it delivers louder and clearer audio, extended coverage, and longer battery life. So the HP50X empowers your people to work safely and efficiently even in the most demanding environments.

Features

- Explosion-proof Battery Identification
- AI-based Noise Cancellation
- USB Type-C port
- Analog-digital Compatibility
- Extended Communication Distance
- Longer-lasting Battery
- Light and Compact
- IP67
- Programmable Keys



Application Scenarios



Chemical Factory



Oil Refinery



Mining



Firefighting

Reliability is reliable.



Rugged design
Perform well in the extreme

The radio is built to withstand the harsh conditions that come with all kinds of industry fieldwork. The radio housing is made of flame retardant polycarbonate with excellent abrasion resistance. And the texture on the back of the radio is non-slip design. More importantly, this tough radio is IP67-rated and meets stringent MIL-STD-810H military standards for protecting against dust, water, vibrations, 1.5-meter drops, extreme temperatures, and more.



Longer-lasting battery
Meet multiple shifts on one charge

The radio comes with a standard 2,400 mAh Li-ion battery and boasts the best-in-class power saver technology innovated by Hytera Energy-efficient Lab*, so the radio can work up to 23 hours in digital mode and high power mode on a 5-5-90 duty cycle. Longer-lasting battery means that the radio can work for your people all the time to keep them connected, and further keeping connected is keeping safe.

* Hytera Professional Lab.



Ease-of-use is everywhere.



Lightweight
Easy to carry

The radio gives you an easy and comfortable carrying experience, thanks to the lightweight design (just 300 g) and the quick-release belt clip by Hytera UX Design Lab.



USB Type-C
Easy to program, upgrade and charge

The USB Type-C port fits all of your needs in the non-explosion-proof area — programming, upgrading and charging. So it greatly facilitates you to manage and use the radio.



Purpose-built
Easy to operate

The enlarged LED indicator shows your people radio status more intuitively. The BT 5.3 allows the radio to connect to other BT explosion-proof accessories. The mobile app—HyTool Radio Manager—allows your people to program the radio with the Android smartphone over BT. Everything is made for convenience.



Safety that thinks ahead.



UL913 Intrinsically safe Peace of mind in hazardous area

Certified by the SGS agency and in strict compliance with the UL913 and TIA4950 standards, the radio is specifically designed for use in dangerous conditions with potentially combustible dust, flammable liquids, and explosive gas. No matter how extreme the working environment is, the radio can always provide reliable and efficient communications.



Multiple safety mechanisms Prepare for the unexpected

The radio has a suite of proactive approaches to safety. It can intelligently detect whether the battery is anti-counterfeiting and explosion-proof, preventing the risk of fire and explosion posed by the use of non-anti-counterfeiting and non-explosion-proof battery. Also this radio provides Lone Worker and Emergency Alarm to make your people call for help quickly in case of an emergency, and the radio can send its location to the command center at the same time so that your people can be easily and accurately pinpointed thanks to the GPS and GLONASS positioning systems.



Superior audio quality Make voice heard and heard, clearly

From high-power speaker to AI-based noise cancellation, as innovated and tested by Hytera Audio Lab*, the radio makes your people hear and be heard clearly even in noisiest environments. The AI-based noise cancellation technology helps the radio filter out the ambient noise including breathes, extract the human voice, and eliminate the annoying howling occurred by radios that are 30 cm away from each other.

* Hytera Professional Lab.



High RX sensitivity Stay connected, stay safe.

With enhanced RF solution from Hytera RF&Antenna Lab* adopted, the receiving sensitivity of every frequency band is improved up to $0.18 \mu\text{V}$ (-122 dBm). No matter whether the radio is in the area with weaker signal strength or at long range, it can always provide reliable communications for individuals or groups across your team to enhance safety and efficiency.

* Hytera Professional Lab.



SPECIFICATIONS

General	
HP50X	
Frequency Range	400-470MHz 136-174MHz
Channel Capacity	256
Zone Capacity	16
Zone Channels	16
Channel Spacing	12.5kHz/20kHz/25kHz
Operating Voltage	7.4V (rated)
Battery	2,400 mAh Li-ion
Battery Life (5/5/90)	Digital: 23h (GPS off) Digital: 21h (GPS on)
Frequency Stability	±0.5ppm
Antenna Impedance	50Ω
Dimensions (H x W x D)	119 mm x 55 mm x 33.5 mm
Weight (with antenna & battery)	300g (±5g)
BT	BT 5.3
Receiver	
Sensitivity	Analog: 0.18μV (12dB SINAD); 0.16μV (Typical) (12dB SINAD) Digital: 0.18μV/BER5%
Adjacent Channel 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: 70dB@12.5/20/25kHz ETSI: 70dB@12.5/20/25kHz
Blocking	TIA-603: 80dB ETSI: 84dB
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: 1W/4W VHF: 1W/5W
FM Modulation	11K0F3E@12.5kHz 14K0F3E@20kHz 16K0F3E@25kHz
4FSK Digital Modulation	12.5kHz Data Only: 7K60FXD 12.5kHz Data and 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 to -3dB
Audio Distortion	≤3%
Digital Vocoder Type	AMBE+2™/SELP
Environmental	
Operating Temperature	-20°C* ~ +60°C
Storage Temperature	-40°C~ +85°C
ESD	IEC 61000-4-2 (Level 4) ±8kV (contact); ±15kV (air)
Dustproof & Waterproof	IEC60529-IP67
Humidity	MIL-STD-810H
Shock and Vibration	MIL-STD-810H
Location Services	
GNSS	GPS, GLONASS
TTFB(Time To First Fix) Cold Start	<1minute
TTFB(Time To First Fix) Hot Start	<10seconds
Horizontal Accuracy	<5meters
Accuracy specs are for long-term tracking (95th percentile values>5 satellites visible at a nominal -130dBm signal strength)	

ACCESSORIES

● Standard ● Optional



● Charger
CH10L30



● Adapter(12V/1A)
PS1014



● Li-ion battery
2400mAh
BL2301-Ex



● Antenna



● Belt clip
BC48



● Strap
RO03



● Waterproof Remote
Speaker Microphone(IP67)



● Heavy duty
Noise-cancelling Headset



● Programming cable
(USB port)



● 2-wire Surveillance
Earpiece with Transparent
Acoustic Tube(Black)



● Multi-unit charger



Hytera Communications Canada

Address: Unit 11, 100 Leek Crescent, Richmond Hill, ON L4B 3E6

Tel: 1 905 305 7545

www.hytera.ca info@hytera.ca

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