Hytera

PROFESSIONAL INTRINSICALLY SAFE DMR PORTABLE RADIO

HP70X/HP78X (UL913)

EMPOWER YOUR OPERATION

Class I, II, III, Division 1, Groups C-G,T4, -30°C to 60°C
Class I, Division 2, Groups A-D, T4, -30°C to 60°C

Submersible IP68

Digital & Analogue mode

www.hytera.com

EMPOWER YOUR OPERATION

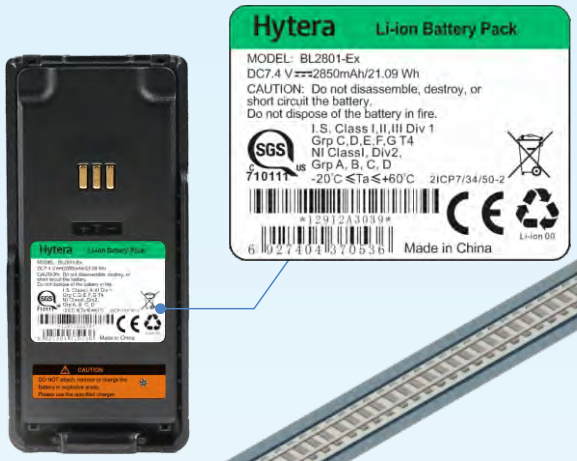
For operatives in the production environment of high risk, safe and efficient instant communications not only keep radio users connected with their team members at all times but also are vital to increasing their productivity.

HP7 (UL913) series is our brand new intrinsically safe digital radio, and represents the future in style and functions that refresh the standards in digital radios, providing more efficient and more reliable communication with loud and clear audio, powerful battery, remarkable portability and ruggedness.

The series radios are specially prepared for users involved in oil and gas, fire and rescue, mining and airport, those who need to work in hazardous environments with potentially explosive gases or flammable dust.

KEY FEATURES

- Digital and analogue modes
- Crystal clear audio
- IP68 submersible
- Extended coverage
- Water-porting design
- Integrated BT
- Compact and highly portable
- Large and distinctive buttons
- Many programmable buttons
- Open API



SECURE ENHANCED

Since the frontline operatives' safety has been seen as paramount, your personnel needs the radio with high security performance to ensure they work safer.
Now the radio to help you manage that is ready here.

UL913, CSA AND TIA4950 CERTIFICATED INTRINSIC SAFETY RADIO

Hytera HP7 intrinsic safety radio is designed upon the requirement of USA UL913, Canada CSA and TIA4950 standards. The radio works safely in the hazardous environments with explosive gas and dust particles.

EXTENDED COVERAGE

The HP7 series intrinsically safe radios have improved sensitivity and extended conventional coverage, allowing the setup of each call, the delivery of each message, and the report of each location in every moment that matters. The increased coverage also improves the user security in a cost-effective way.

CLEAR AND LOUD AUDIO

The ability to clearly communicate in ambient noise riddled places is a key requirement of all radio users. The radios have AI-based noise cancellation technology to filter unwanted background noise, delivering louder and clearer audio in background noise conditions, which was never possible before.

Meanwhile, the radios equip an optimized powerful loudspeaker that can help users to hear clear sounds even in a noisy environment.

SMART EXPLOSION-PROOF BATTERY

The radios support smart Explosion- Proof battery, which makes it easier to monitor the battery status, such as lifetime, charging time, etc.
The Explosion-Proof Battery Identification feature helps users avoid potential safety hazards caused by the use of non-Ex batteries.

HP78X (UL913)

HP70X (UL913)

LARGE AND DISTINCTIVE BUTTONS

The HP7 series intrinsically safe digital radios have tactile PTT button and large emergency button for blind operations in challenging environments, allowing operatives to summon help from their companion or control centers in case of emergency as soon as possible.

SAFETY FEATURES YOU CAN RELY ON

The radios support optional digital mode Lone Worker, Man Down and Emergency Button with call interrupt as programmable features. These safety features ensure an alarm is raised, even if the channel is already busy.

ALWAYS RELIABLE

Being designed to tackle challenges in hazardous environments, the HP7 series offers robust and reliable performance, tough enough for your most action packed days.

COMPATIBLE WITH ANALOGUE

Support analog and digital modes. For those operating on analogue, the power of digital communications is now within reach. The radios let you migrate to digital at your own pace and budget, with simple scalability to add functions and features.

IP68 COMPLIANT

The radios are IP68 rated, and still deliver loud and clear audio after having been submerged in 2-meter deep water for 4 hours. This also makes the HP7 series intrinsically safe digital radios ideal for use in grime ridden, dusty, dirty environments.

WATER-PORTING DESIGN

Water-Porting is designed to continually shed water from the radio's audio pathways, permitting intelligible audio to be transmitted and received even when the radio is exposed to rain or water washing from the hose. Water-porting even allows clear audio immediately after being retrieved from total submersion.

RUGGED AND DURABLE

The radios are MIL-STD-810H certified and resilient to 2-meter drop. The PU painted silicon keypad is used to increase resilience from prolonged use with rough gloves, and use when covered in dirt or grit, or repeated scraping against rough material surfaces.

MORE EFFICIENT

In tough environments, communication efficiency is the lifeline of frontline operatives. The HP7 series intrinsically safe digital radios, in style and functions, are designed to make your organization more efficient and more effective.

LIGHT AND PORTABLE

The radios are in a light and compact form factor, allowing operatives to move freely and comfortably. The screen reads clear in dark or under strong light, and operatives can get the information whenever they need it a simple glance.

SUPPORT VOICE BROADCAST

When operating on channel, contact or programmed buttons or keys, the operations can be confirmed by Voice Broadcast, so that the operatives don't need to look at the screen all the time. This enables them to focus on the mission rather than the radio.

MULTIPLE PROGRAMMABLE BUTTONS

The radios have programmable buttons and keys that allow you to customize the experience with the capabilities and features you need most, then operatives can blindly initiate the customized commands simply by a short or long press when they are in a protective suit or wearing gloves.

4 PROFILES FOR DIFFERENT MISSIONS

The radios have four profiles for different scenarios and missions. The operative can select the profile according to their own needs and configure the corresponding tone, volume, and vibration, for example, use the Outdoor mode with a loud ring and strong vibration in noisy environments.

SPECIFICATIONS

General		
Frequency Range	UHF: 350-470MHz; VHF: 136-174MHz	
Channel Capacity	1024	
Zone Capacity	64	
Zone Channel	256	
Channel Spacing	12.5kHz/20kHz/25kHz	
Operating Voltage	7.4V (rated)	
Battery	2850mAh Li-ion smart anti-counterfeit	
Battery Life(5/5/90 Duty Cycle, Digital, High TX Power)	HP78X UL913: 28h(GNSS off) 24h(GNSS on)	HP70X UL913: 29h(GNSS off) 25h(GNSS on)
Frequency Stability	±0.5ppm	
Antenna Impedance	50Ω	
Dimensions (H x W x D)	132×55×36.5mm	
Weight(with antenna&battery)	HP70X (UL913)	369g
	HP78X (UL913)	389g
Display	HP70X (UL913)	0.91 inch OLED
	HP78X (UL913)	LCD, 320×240 pixel, 262000 colors, 2.4 inch
BT	5.0 BLE+EDR	
Anti-explosion levels	Class I, II, III, Division 1, Groups C-G,T4, -30°C to 60°C Class I, Division 2, Groups A-D, T4, -30°C to 60°C	

Receiver		
Sensitivity	Analog	0.18μV(12dB SINAD) 0.16μV(Typical)(12dB SINAD)
	Digital	0.18μV/BER5%
Selectivity	TIA-603	60dB@12.5kHz / 70dB@20/25kHz
	ETSI	60dB@12.5kHz / 70dB@20/25kHz
Inter-Modulation	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
Rated Audio Distortion		<-57dBm

Transmitter	
RF Power Output	UHF: 4W/1W VHF: 5W/1W
FM Modulation	11K0F3E@12.5kHz; 14K0F3E@20kHz; 16K0F3E@25kHz
4FSK Digital Modulation	12.5kHz Data Only: 7K60FXD
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™/SELP
Digital Protoca	ETSI-TS102 361-1,-2,-3

Environmental Specifications	
Operating Temperature	-30°C*~+60°C
Storage Temperature	-40°C~+85°C
ESD	IEC 61000-4-2 (Level 4) ±8kV (contact); ±15kV (air)
Dust and Water Intrusion	HP70X (UL913): IP68 HP78X (UL913): IP66 IP68
Humidity	MIL-STD-810H
Shock and Vibration	MIL-STD-810H

Location Services	
GNSS	GPS, GLONASS, GPS+GLONASS
TTFF Cold Start	<1 min (Typical)
TTFF Hot Start	<10 sec (Typical)
Horizontal Accuracy	<5m (probable at -130dBm)

*Radio only - Battery -20°C

ACCESSORIES

Standard Optional

2850mAh Li-ion smart anti-counterfeit BL2801-Ex

Power Adapter (12V/1A)

Antenna

Belt Clip

Charger

Strap

Receive-Only Earbud ES-01

Receive-Only Earpiece with Transparent Acoustic Tube ES-02

Carrying case LCY026

Receive-Only Swivel Earpiece with Adjustable Ear hook EH-02

Receive-Only C Style Earpiece EH-01

PTT&MIC cable (used with Receive-Only Earpiece) ACN-02P

3-wire Surveillance Earpiece with Transparent Acoustic Tube EAN21-P

Waterproof Remote Speaker Microphone(IP67) SM26N1-P

Waterproof Remote Speaker Microphone(IP54) SM26N2-P

Heavy Duty Noise-cancelling Headset ECN21-P

C-earset with in-line PTT&MIC EHN26-P

Multi-unit charger

Hytera

Respond & Achieve

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