# **H-SERIES DMR RADIOS EMPOWERED** COMMUNICATIONS



HP602



HP682

## **Hytera HP6 Series**

THE NEW STANDARD OF OUALITY AND PERFORMANCE

Hytera was a founding member of the DMR Association and was the first company to successfully deploy DMR Tier II and Tier III systems. Since then, Hytera has been a leading provider of DMR radios and systems, and has continuously improved products based on customer feedback.

The Hytera H-Series of radios and repeater systems is the culmination of this experience and spirit of innovation. The HP6 Series of DMR handheld radios is the next-generation in creative style and functionality that elevates the industry standard in professional digital two way radios.

The HP602 and HP682 are the new state-of-the-art, providing a more efficient and reliable experience with loud and clear audio, longer battery life, intuitive user interface, extended range, remarkable portability, and ruggedness.



Hytera





#### **Louder and Clearer Audio**

Hytera provides industry-leading audio quality through a large forward-facing speaker, and Albased voice enhancement with deep learning ability that can accurately extract voice from noise in real time and decreases unwanted background noises as loud as 30db.

New water-porting technology quickly drains water out of speaker cavity to maintain audio clarity.

#### **Thinner and Lighter**

An optimized mechanical design with advanced materials, and a lightweight lithium polymer battery delivers a compact radio that weighs less than 10 ounces.



#### **Enhanced Worker Safety**

The HP6 Series radios are designed for worker safety with a programmable emergency button, emergency calling, and priority interrupt. Lone Worker prompts the user to press a key or speak to indicate they are safe. Man Down allows the radio to automatically enter emergency mode when the radio is inclined at a pre-set angle or remains motionless.

-/

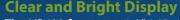
#### **Longer Battery Life**

The latest in lithium polymer technology is used to power the HP6 Series radios for excellent performance. The battery is light and small, achieving a shift life of 20 hours on high transmit power with a duty cycle of 5/5/90.



#### **Higher Level of Ruggedness**

The HP6 Series is fully compliant with the IP67 and MIL-STD-810 G standards. It is dustproof, water resistant, and can stand up to drop shock testing at 2 meters. The HP6 Series anti-magnetic speaker does not attract magnetic metal dust and shavings.



The HP682 features a 1.8" 160x128 LCD display with 65,536 colors and 6 lines of content. The clear and bright LCD display provides a wide variety of status, configuration, and notification information.

The HP602 features a 0.91-inch OLED display that shows the channel, signal strength, power status, and power level.

## THE HP6-SERIES IS THE NEW STANDARD OF RADIO NETWORK PERFORMANCE





#### **Enhanced GPS Location Tracking**

The HP682 and HP602 radios can report current location information to other radios, the dispatcher, or third-party applications in real time, enhancing the efficiency of visualized dispatch applications.

GPS data can be transmitted during voice calls for immediate location targeting, and GPS data can be compressed to increase channel capacity and reduce hardware cost.



#### **Higher Security**

The HP6 Series supports Digital End-to-End and Over-the-Air Encryption for voice and data transmitted on digital channels to prevent eavesdropping.

Hardware encryption is implemented through a built-in encryption card. Software encryption uses the secure and reliable ARC4 and AES encryption algorithms. Radio authentication prevents unauthorized users from accessing the system. If a radio is lost or stolen, the system can Stun or Kill the radio to prevent unauthorized use.

#### Bluetooth

Built-in Bluetooth supports both audio and data, and enables connectivity to wireless accessories.



#### **Multi-System Operation**

The HP6 Series can be deployed in a wide variety of analog and digital radio networks, including Analog and Digital Conventional, MPT and XPT Trunking, DMR Tier II Trunking, IP Multi-Site Connect, and DMR Simulcast Systems.



#### **Extended Coverage and Connectivity**

The HP6 Series extends radio range through increased Tx power, Rx sensitivity, improved antenna gain, and reduced attenuation. This produces a 25% increase in coverage distance and signal penetration through buildings. The enhanced coverage improves efficiency and reduces network infrastructure costs.

Two patented technologies and a voice buffer reduces packet loss during Rx handover for consistently clear calls and fewer dropped words.



#### **Greater Calling Flexibility**

A variety of calling modes provides the flexibility to communicate with any or all users. The HP6 Series supports Individual Calls (radio to radio, radio to dispatcher), Group Calls (one radio to many, dispatcher to many), All Call (broadcast call to all radios, transmit only), and Telephone Calls (requires connectivity to PSTN, PABX or SIP networks).



### THE HP682 IS THE NEW STANDARD OF FUNCTIONALITY AND USER EXPERIENCE



The HP682 features a HD TFT-LCD display that provides easy access to a variety of information and functionality.

The following features are supported on the HP682.

#### **Simplified Navigation**

The app icons are arranged in a six-grid layout, making visual recognition more intuitive. The menu layers are simplified and streamlined so users can easily change settings and adjust features.

#### **Clear Notifications and Information Display**

On the home screen, the HP682 displays time and contact alias/ID, and can display two notifications simultaneously. The radio supports notifications of emergency calls, missed calls, call alerts, and new messages, and users can preview message contents.

The dialing interface supports selection of individual calls, group calls, PSTN / PABX phone dialing, fast dialing, and channel switching (CPS selection configuration).

The call interface displays call status (digital / analog, encryption status, recording status, call transfer, etc.), contact alias / ID, contact address, call duration, and speaker location information.

#### **Multiple User Profiles**

The HP682 supports four User Profiles that can be selected according to the scenario and set the corresponding tone, volume, vibration, and more. For example, profiles can match the environment, such as indoors or outdoors, or in a meeting.

#### **Interface Switcher**

The HP682 interface features an Interface Switcher that allows users to easily to switch between the home screen and up to three frequently used interfaces. This makes it easy to view or perform feature settings on these interfaces for efficient operations and to ensure rapid response in critical situations.

#### **Dynamic Calls**

The HP682 allows users to manually dial without switching the dialing mode. In the dialing interface, users can select a private, group, or PSTN/PABX call. In addition to the contact alias/ID, the radio also displays call status (including call mode, encryption status, recording status, and call forwarding status), contact address, and call duration.

#### **Text Messaging and Conversational SMS**

The HP682 supports sending private and group text messages. Messages can be typed freeform or the user can send and receive a variety of preprogrammed messages.

The short message is displayed in the form of a dialog box, along with the message and sender details. The interactive mode is more intuitive, and the message sending and receiving is simple and efficient.



## **STANDARD ACCESSORIES**

**INCLUDED WITH THE HP602 and HP682** 







PS1014

**Power Adapter** 



CH10L27 **Drop-In Single Unit Charger** 



BP2002 2000mAh Li-Ion Polymer Battery

## **OPTIONAL ACCESSORIES**

#### **COMBINATION EARPIECES**

External earpieces that are used in combination with the ACN-02





ACN-02 Mic and PTT button with VOX and 3.5mm Jack Receive-only Earpiece (IP54)

ES-01 **Receive-Only Earbud** 



ES-02 **Receive-Only Transparent** Acoustic Tube



EH-01 Receive-Only C-Style Earloop



**Receive-Only Swivel Earpiece** 

#### **ALL-IN-ONE EARPIECES AND HEADSET**

External earpieces and microphones that attach directly to the radio

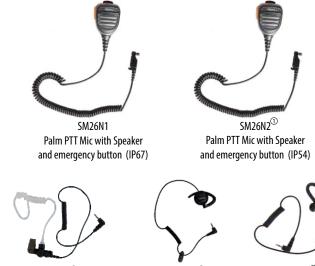


EHN26 C-style Earpiece with microphone and in-line PTT button

EAN24 **Transparent Acoustic Tube** Surveillance Earpiece with microphone and in-line PTT button

#### **REMOTE SPEAKER MICROPHONES**

Remote Speaker Mics provide easy access for audio, are water resistant, and attach directly to the radio.



 $EASO3^{(1)}$ **Receive-Only Transparent** Acoustic Tube Earpiece

EHS17<sup>①</sup> **Receive-Only Adjustable** Earhook with Swivel Speaker

 $\rm EHS18^{(1)}$ Receive-Only C-style Earpiece

0 The SM26N2 features a 2.5mm jack for receive only EAS03, EHS17, and EHS18 earpieces

### **BLUETOOTH AND OTHER ACCESSORIES**



ESW08 **Bluetooth Earpiece with** PTT button and microphone



ESW01 Bluetooth Earpiece with charger (requires PS1030 power adapter)



SM27W2 **Bluetooth Remote** Speaker Microphone (IP67)



PTT Bluetooth Ring



MCI 32 6-Radio Multi-Unit Charger



ECN21 Heavy-duty noise-cancelling headset with PTT and boom microphone





USB programming cable

## SPECIFICATIONS

General		
Frequency Range	UHF 400-527 MHZ , VHF 136-174MHz	
Channel Capacity	1,024 Channels (512 Analog, 512 Digital)	
Zone Capacity	64 Zones with 256 Channels per Zone	
Channel Spacing	12.5kHz / 20kHz / 25kHz	
Operational Voltage	7.7V (Rated)	
Battery	2000mAh Li-Ion Polymer	
Battery Life (5/5/90)	16 Hours with GPS on, 20 Hours GPS disabled	
Weight	HP602: 9.35oz (265g) HP682: 9.88oz (280g)	
Dimensions (H x W x D)	HP602: 43/4" x 25/32" x 13/16" (122 x 55 x 30.5mm) HP682: 43/4" x 25/32" x 17/32" (122 x 55 x 31.5mm) (without antenna)	
Frequency Stability	± 0.5ppm	
Antenna Impedance	50Ω	
Display	HP602: OLED 0.91" Display HP682: LCD 1.8", 160x128, 65,536 colors, 6 rows	
Bluetooth	BT 5.0 BLE+EDR	
GPS (5 Satellites visible at nominal 130dBm)		
Time to First Fix Cold Start	<60 Seconds (Typical TTFF)	
Time to First Fix Hot Start	<10 Seconds (Typical TTFF)	
Horizontal Accuracy	<5 meters	
	Receiver	
Digital Sensitivity	0.18µV (BER 5%)	
Analog Sensitivity	0.16μV (Typical) (12dB SINAD) 0.18μV (12dB SINAD)	
Adjacent Selectivity	TIA-603: 60dB@12.5kHz, 70dB@20/25kHz ETSI: 60dB@12.5kHz, 70dB@20/25kHz	
Spurious Response Rejection	TIA-603: 70dB@12.5/20/25kHz ETSI: 70dB@12.5/20/25kHz	
Intermodulation	TIA-603: 70dB@12.5/20/25kHz ETSI: 65dB@12.5/20/25kHz	
Hum and Noise	40dB@12.5kHz, 43dB@20kHz, 45dB@25kHz	
Rated Audio Power Output	0.5W	
Rated Audio Distortion	≤3%	
Audio Response	+1 to -3dB	
Conducted Spurious Emission		

	Transmitter
RF Power Output	VHF High Power: 5W, VHF Low Power: 1W
	UHF High Power: 4W, UHF Low Power: 1W
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 and Noise	40dB @ 12.5kHz, 43dB @ 20kHz, 45dB @ 25kHz
Adjacent Channel Power	60dB @ 12.5kHz, 70dB @ 25kHz
Audio Response	+1 to -3dB
Audio Distortion	≤3%
Digital Vocoder Type	AMBE+2™
	Environmental
Operating Temperature	-0°F to +140°F (-20°C to +60°C)
Storage Temperature	-40°F to +185°F (-40°C to +85°C)
ESD	IEC 61000-4-2 (Level 4) ±8kV Contact, ±15kV Air
Dust and Water Ingress	IP67 Standard
Humidity	Per MIL-STD-810 C/D/E/F/G Standard
Shock and Vibration	Per MIL-STD-810 C/D/E/F/G Standard

All specifications are subject to change without notice due to continuous development

Ordering Information	
HP602-Um	UHF 400-527MHz (Antenna 400-470MHz), 1-4W
HP602-V1	VHF 136-174MHz (Antenna 147-160MHz), 1-5W
HP602-G-BT-Um	UHF 400-527MHz (Antenna 400-470MHz), 1-4W, with GPS and Bluetooth
HP602-G-BT-V1	VHF 136-174MHz (Antenna 147-160MHz), 1-5W with GPS and Bluetooth
HP682-Um	UHF 400-527MHz (Antenna 400-470MHz), 1-4W
HP682-V1	VHF 136-174MHz (Antenna 147-160MHz), 1-5W
HP682-G-BT-Um	UHF 400-527MHz (Antenna 400-470MHz), 1-4W, with GPS and Bluetooth
HP682-G-BT-V1	VHF 136-174MHz (Antenna 147-160MHz), 1-5W with GPS and Bluetooth



## Hytera North America









Hytera HALD and Hytera are registered trademarks of Hytera Communications Co.,Ltd. ©2021 Hytera Communications Co., Ltd. All Rights Reserved. Hytera retains right to change the product design and specification. Hytera\_HP6\_DS-A