

# EMPOWER YOUR OPERATION HP785

NEXT GENERATION DIGITAL PORTABLE RADIO



# HIGHLIGHTS

## THINNER AND LIGHTER

An optimized mechanical design and a compact lithium polymer battery are discreetly made to fit into the HP785's design, making the radio only 29.5mm in thickness and 290g in weight. This easy to carry and minimalist design benefits officers by allowing them to keep their focus on the critical mission at hand.

## LONGER BATTERY LIFE

The latest in proven lithium polymer technology is used in the standard battery that is supplied with the HP785. The battery is lighter and smaller than ever before, and still delivers a duty cycle of 5/5/90 on achieving a shift life of 26 hours on high transmit power. This powerful battery ensures a full day of delivering key information and calls.

## MORE INTUIVITE AND EFFICIENT

The 2.4-inch colour display gets a brand new intuitive UI to make the HP78X more efficient. It has Quick Access Menu that allows users to set the radio faster. Messages are listed in conversation for quick reading and review. The Interface Switcher is added to the option of programmable buttons, allowing quick switch between up to four frequently accessed interfaces.

## ENHANCED COVAREAGE

The HP785 extends the operational range and improves the talk range through high receiver sensitivity and high transmit power, stretching communications into areas where it simply was not possible before. This enhanced coverage improves the user safety and reduces network cost as much as possible.

## HIGHER LEVEL OF RUGGEDNESS

HP785 is designed as per the MIL-STD-810 G. it is IP68 rated, impervious to water jets and submersible to a depth of 2 meters for 4 hours, and also resilient to 2-meter drops onto concrete. No matter where the mission drives the officer, the HP705 is the partner to count on, because it can stand up to the toughest environments.

## LOUDER AND CLERAER AUDIO

The HP785 has louder and clearer audio through an optimized forward facing speaker and AI-based noise cancellation that decreases the unwanted background noise and howling. Water-porting technology is also used to drain out any water that gets into the speaker cavity, ensuring the audio clarity is maintained.



2.4-inch color display



Loud and clear audio



Superior long battery life



AI based noise cancellation



Water-porting design



BT 5.0 audio and data



Micro SD Card

# NEW TECHNOLOGY, NEW EXPERIENCE, NEW FUTURE

As the leading supplier, Hytera has huge experience in R&D and manufacturing of professional digital radios. Having analyzed and extracted users' need, we perceive that it is not enough to improve the status: the radio needs to be more future ready.

Taking inspiration from the feedback received from our users, we are continuously envisioning and exploring better communication within an eco-system of new standards, new technologies, new products and new applications across the innovation chain. The HP785 is our brand new professional digital radio, and represents the future on style and functions that refreshes the standards in digital radios, providing more efficient and more reliable communication with loud and clear audio, powerful battery, remarkable portability and ruggedness for ease of use across multiple environments and industries.



## FEATURES

### Operating Mode

- Digital Conventional
- Analog Conventional
- Digital Trunking

### Data Services

- Text Message
- Status Message
- Quick Text Message

### Supplementary

- Profiles
- QR Code
- Roaming
- Covert Mode
- Radio Check
- Remote Monitor
- Alert Call

### Voice Service

- Private Call
- Group Call
- All Call
- PSTN/PABX Call
- Broadcast Call
- Emergency Call
- Call Priority

### Connection

- BT Audio
- BT Data
- High Efficiency GNSS
  - GPS
  - GLONASS
- Wide Range of Accessories
- Open API

### Safety

- Emergency
- Man Down
- Lone Worker
- Authentication
- Air Interface Encryption
- End-to-End Encryption
- Scrambler
- Disable/Enable
- Micro SD Card

## APPLICATIONS



# SPECIFICATIONS

| General                                            |                                                                                        |
|----------------------------------------------------|----------------------------------------------------------------------------------------|
| Frequency Range                                    | UHF: 350~470MHz<br>VHF: 136~174MHz                                                     |
| Channel Capacity                                   | 1024                                                                                   |
| Zone Capacity                                      | 64                                                                                     |
| Zone Channel                                       | 256                                                                                    |
| Channel Spacing                                    | 12.5kHz/20kHz/25kHz                                                                    |
| Operating Voltage                                  | 7.7V (rated)                                                                           |
| Battery                                            | 2400 mAh <b>Lithium Polymer</b>                                                        |
| Battery Life<br>(5/5/90 Duty Cycle, High TX Power) | 24h (GNSS disabled)<br>20h (GNSS enabled)                                              |
| Frequency Stability                                | ±0.5ppm                                                                                |
| Antenna Impedance                                  | 50Ω                                                                                    |
| Dimensions (H x W x D)                             | 132 x 55 x 29.5mm                                                                      |
| Weight(with antenna&battery)                       | 310g                                                                                   |
| Display                                            | LCD, 320x240 pixel, 262000 colors, 2.4 inch, 10 rows                                   |
| BT                                                 | BT 5.0 BLE+EDR                                                                         |
| Receiver                                           |                                                                                        |
| Sensitivity                                        | Analog: 0.18μV (12dB SINAD);<br>0.16μV (Typical) (12dB SINAD)<br>Digital: 0.18μV/BER5% |
| Adjacent Channel Selectivity                       | TIA-603: 60dB@12.5kHz / 70dB@20/25kHz<br>ETSI: 60dB@12.5kHz / 70dB@20/25kHz            |
| Intermodulation                                    | TIA-603: 70dB@12.5/20/25kHz<br>ETSI: 65dB@12.5/20/25kHz                                |
| Spurious Response Rejection                        | TIA-603: 70dB@12.5/20/25kHz<br>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<br>14K0F3E@20kHz<br>16K0F3E@25kHz             |
| 4FSK Digital Modulation                                                            | 12.5kHz Data Only: 7K60FXD<br>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 ~ -3dB                                                     |
| Audio Distortion                                                                   | ≤3%                                                           |
| Digital Vocoder Type                                                               | AMBE+2™                                                       |
| Digital Protocol                                                                   | ETSITS102 361-1,-2,-3                                         |
| Environmental                                                                      |                                                               |
| Operating Temperature                                                              | -30°C*~+60°C                                                  |
| Storage Temperature                                                                | -40°C~+85°C                                                   |
| ESD                                                                                | IEC 61000-4-2 (Level 4)<br>±8kV (contact);<br>±15kV (air)     |
| Dust and Water Protection                                                          | IEC60529- IP68                                                |
| Humidity                                                                           | MIL-STD-810 G                                                 |
| Shock and Vibration                                                                | MIL-STD-810 G                                                 |
| Location Services                                                                  |                                                               |
| Accuracy specs are for long-term tracking(5 satellites visible at nominal -130dBm) |                                                               |
| GNSS                                                                               | GPS, GLONASS, BDS                                             |
| TTFF(Time To First Fix) Cold Start                                                 | <1 min (Typical)                                              |
| TTFF (Time To First Fix) Hot Start                                                 | <10 sec (Typical)                                             |
| Horizontal Accuracy                                                                | <5m (probable at -130dBm)                                     |
| *Radio only - Battery -20°C                                                        |                                                               |

## OPTIONAL ACCESSORIES

### Standard

- Charger CH10L27
- Adapter PS1044
- Battery BP2403
- Antenna
- Belt Clip BC39
- Strap RO03

### Optional



Wireless Earphone



Programming Cable  
(USB Port)



Wireless Finger PTT



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