

The HP785 DMR handset with large screen and AI noise cancellation 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 24 hour battery, remarkable portability and IP68 ruggedness for ease of use across multiple environments and industries.



## Specifications

General	
Frequency Range	<b>UHF:</b> 350~470MHz <b>VHF:</b> 136~174MHz
Channel Capacity	1024
Zone Capacity	64
Zone Channels	256
Channel Spacing	12.5kHz/20kHz/25kHz
Operating Voltage	7.7V (rated)
Battery	2400mAh Li-polymer
Battery Life (5/5/90 Duty Cycle, High TX Power)	24 Hours (GNSS disabled) 20 Hours (GNSS enabled)
Frequency Stability	±0.5ppm
Antenna Impedance	50Ω
Dimensions (HxWxD)	132 x 55 x 29.5mm
Weight (with antenna and battery)	310g
Display	LCD, 329x249 pixel, 262000 colors, 2.4 inch, 10 rows
BT	BT 5.0 BLE+EDR

Receiver	
Sensitivity	<b>Analog:</b> 0.18μV (12dB SINAD); 0.16μV (Typical) (12dB SINAD) <b>Digital:</b> 0.18μV/BER5%
Selectivity	<b>TIA-603:</b> 60dB@12.5kHz / 70dB@20/25kHz <b>ETSI:</b> 60dB@12.5kHz/ 70dB@20/25kHz
Intermodulation	<b>TIA-603:</b> 70dB@12.5kHz/20/25kHz <b>ETSI:</b> 65dB@12.5/20/25kHz
Spurious Response Rejection	<b>TIA-603:</b> 70dB@12.5/20/25kHz <b>ETSI:</b> 70dB@12.5/20/25kHz
Blocking	<b>TIA-603:</b> 80dB <b>ETSI:</b> 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	<b>UHF:</b> 1W/4W <b>VHF:</b> 1W/5W
FM Modulation	11K0F3E@12.5kHz 14K0F3E@20kHz 16K0F3E@25kHz
4FSK Digital Modulation	<b>12.5kHz Data Only:</b> 7K60FXD <b>12.5kHz Data and Voice:</b> 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	ETSI-TS102 361-1,-2,-3

Environmental	
Operating Temperature	-30°C*~+60°C*
Storage Temperature	-40°C*~+85°C*
ESD	IEC 61000-4-2 (Level 4) ±8kV (contact); ±15kV (air)
Dustproof & Waterproof	IEC60529-IP68
Humidity	Per MIL-STD-810 G Standard
Shock and Vibration	Per MIL-STD-810 G Standard

Location Services	
GNSS	GPS, GLONASS, BDS
TTFB(Time To First Fix) Cold Start	<1minute (Typical)
TTFB(Time To First Fix) Hot Start	<10seconds (Typical)
Horizontal Accuracy	<5meters (probable at -130dBm)

Accuracy specs are for long-term tracking  
(5 satellites visible at a nominal -130dBm signal strength)

\*Radio only - Battery -20°C

## Accessories

### Standard



**CH10L27**  
Single-unit Charger for Li-ion polymer battery



**PS1044**  
Universal Standard Switching Power Adapter



**BP2403**  
Li-polymer battery



**BC39**  
Spring Belt Clip



**RO03**  
Nylon wrist strap

### Optional



**ESW01**  
Wireless Headset with Boom Microphone (for helmet).



**PC45**  
Programming cable (USB to Serial) for handheld radios in PD6 and X1 series



**POA121**  
Bluetooth Ring PTT

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