

## Optional Accessories



## Specifications

Specifications		
Frequency Range	VHF: 136–174MHz UHF1: 400–470MHz UHF3: 350–400MHz	
Channel Capacity	1024	
Zone Capacity	64(each with a maximum of 16 channels)	
Channel Spacing	25 / 20 / 12.5 KHz	
Operating Voltage	13.6V ± 15%	
Current Drain	Standby	<0.6A
	Receive	<2.0A
	Transmit	<12A (45W/50W) <8A (25W)
Frequency Stability	± 1.5ppm	
Antenna Impedance	50Ω	
Dimensions (HXWXD)	60 X 174 X 200 (mm) / 2.362 X 6.850 X 7.874 Inch	
Weight	1.7 kg / 3.75lbs	
Front Case	PC+ABS	
LCD Display	220X176 pixels, 262000 colors 2.0 inch, 4 rows	

Receiver	
Sensitivity(Analog)	0.3 μV (12dB SINAD) 0.221V (Typical) (12dB SINAD) 0.4 μV (20dB SINAD)
Sensitivity(Digital)	0.3 μV / BER5%
Selectivity TIA-603 ETSI	65dB @ 12.5 kHz / 75dB @ 20/25 kHz 60dB @ 12.5 kHz / 70dB @ 20/25 kHz
Intermodulation TIA-603 ETSI	75dB @ 12.5/20/25 kHz 70dB @ 12.5/20/25 kHz
Spurious Response Rejection TIA-603 ETSI	75dB @ 12.5/20/25 kHz 70dB @ 12.5/20/25 kHz
S/N	40dB @ 12.5 kHz 43dB @ 20 kHz 45dB @ 25 kHz

Rated Audio Power Output	3W
Rated Audio Distortion	≤3%
Audio Response	+1 ~ -3dB
Conducted Spurious Emission	< -57 dBm
GPS (For MD785G Only)	
TTF (Time To First Fix) Cold Start	<1 minute
TTF (Time To First Fix) Hot Start	<10 seconds
Horizontal Accuracy	<10 meters

Transmitter	
RF Power Output	VHF High Power: 50W VHF Low Power: 25W UHF1 High Power: 45W UHF1 Low Power: 25W UHF3: 25W
FM Modulation	11K @ F3E @ 12.5 kHz 14K @ F3E @ 20 kHz 16K @ F3E @ 25 kHz
4FSK Digital Modulation	12.5KHz Data Only: 7K6 @ FXD 12.5KHz Data & Voice: 7K6 @ FXW
Conducted/Radiated Emission	-36dBm < 1GHz -30dBm > 1GHz
Modulation Limiting	± 2.5kHz @ 12.5 kHz ± 4.0kHz @ 20 kHz ± 5.0kHz @ 25 kHz
FM Noise	40dB @ 12.5 kHz 43dB @ 20 kHz 45dB @ 25 kHz
Adjacent Channel Power	60dB @ 12.5 kHz 70dB @ 20/25 kHz
Audio Response	+1 ~ -3dB
Audio Distortion	≤3%
Digital Vocoder Type	AMBE++ or SELP
Digital Protocol	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)
American Military Standard	MIL-STD-810 C/D/E/F
Dust & Water Intrusion	IP54 Standard
Shock & Vibration	Per MIL-STD-810 C/D/E/F Standard
Humidity	Per MIL-STD-810 C/D/E/F Standard

All Specifications are tested according to applicable standards, and subject to change without notice due to continuous development.

### Applicable Military Standards 810C/D/E/F

Environmental Condition	810C		810D		810E		810F	
	Method	Procedure	Method	Procedure	Method	Procedure	Method	Procedure
Low Pressure	500.1	I	500.2	I, II	500.3	I, II	500.4	II
High Pressure	501.1	I, II	501.2	I, II	501.3	I, II	501.4	I, II
High Temperature	502.1	I	502.2	I, II	502.3	I, II	502.4	I, II
Temperature Shock	503.1	I	503.2	I	503.3	I	503.4	I
Solar Radiation	505.1	I	505.2	I	505.3	I	505.4	I
Rain	506.1	II	506.2	II	506.3	I, II	506.4	I, II
Humidity	507.1	II	507.2	II, III	507.3	II, III	507.4	I
Salt Fog	509.1	I	509.2	I	509.3	I	509.4	I
Sand & Dust	510.1	I	510.2	I	510.3	I	510.4	I
Vibration	514.2	VIII, X	514.3	I	514.4	I	514.5	I/2A
Shock	516.2	I, II, V	516.3	I, IV	516.4	I, IV	516.5	I, IV

Hytera



# MD785/MD785G

Versatile Digital Mobile Two-Way Radio

As a product built to the DMR standard, MD785/785G (MD785G is the model with GPS) is endowed with ergonomic design, all-round digital functions and remarkable quality to increase your management efficiency and enable you to be responsive to emergent situations.



- Large-size HD Transflective Color Display
- Superior Digital Voice

DMR  
DIGITAL MOBILE RADIO ASSOCIATION



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## Higher Efficiency Richer Experience



## Product Features >>



### User-centered Design

The large-size color display allows good visibility even under extremely strong light. And the seven programmable keys facilitate your communication in various conditions.

### Reliable Quality

MD785/785G is strictly compliant with MIL-STD-810 C/D/E/F and IP54 standards, ensuring outstanding performance even under harsh environments.

### Superior Voice

With the combined application of narrowband codec and digital error-correction technologies, MD785/785G is capable of ensuring your superior voice under noisy environments or at the edge of the coverage area. In addition, the adoption of the AGC technology also optimizes your voice.



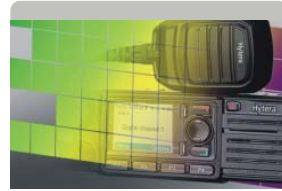
With a built-in 5W speaker, MD785/785G ensures clear and crisp voice communication.

### Higher Spectrum Efficiency, Higher Channel Capacity

Benefiting from the TDMA technology, MD785/785G allows twice the channels based on the same spectrum resource. This is a big help to relieve the stress of increasing shortage in spectrum resource.

### Dual-slot Pseudo Trunk

With this feature, the free slot can be allocated to a member that needs to communicate, effectively enhancing frequency efficiency and allowing you to communicate timely under emergent situations.



### Secure Communication

Besides the intrinsic encryption of the digital technology, MD785/785G provides enhanced encryption capability (such as 256-bit encryption algorithm) and the Scrambler feature (selectable).

### Versatile Services

In addition to conventional communication services, MD785/785G features rich data services and selectable functions such as Message, Scan, Emergency, Emergency Footswitch, Channel Steering, Auto Registration\*, High-speed Data Transmission\* and Lone Worker\*.

### Further Development Port

The reserved port in MD785/785G allows users or any third party to further develop other helpful functions (Message, GPS, Call Control and Telemetry).

\* Indicates functions available in later version.

## Main Functions >>

- ▶ **Dual Modes (Analog+Digital)**  
MD785/785G can operate in either analog or digital mode. It is compatible with the prevalent analog system, ensuring a smooth analog-to-digital transition.
- ▶ **Versatile Voice Calls**  
Intelligent signaling of MD785/785G supports various voice call types, including Private Call, Group Call and All Call.
- ▶ **GPS**  
MD785G supports viewing of GPS positioning information and sending of GPS text message.
- ▶ **IP Service\***  
MD785/785G allows multiple IP functions if connected with a PC via IP address.
- ▶ **Various Analog Signaling Types**  
MD785/785G supports various analog signaling types (HDC1200, DTMF\*, 2-Tone\* and 5-Tone\*), providing higher function expansion capacity.
- ▶ **Multiple Languages**  
MD785/785G supports 10 languages (English, Simplified Chinese, Traditional Chinese, German, Spanish, French, Italian, Polish, Russian and Turkish), allowing you to select as per your needs.
- ▶ **Software Upgradable**  
With this capability, you can enjoy further features without buying a new machine.

\* Indicates functions available in later version.

## Industrial Design Features >>



## Standard Accessories >>

Palm Microphone SM16A1	Microphone Hanger and Screws	Mounting Bracket Kit
GPS Antenna (For MD785G only)	Fuse	Power Cord