

Specifications
















General	Frequency Range		250-270MHz	
	Channel Capacity		1024	
	Zone Capacity		64(each with a maximum of 16 channels)	
	Channel Spacing		12.5 KHz / 20 KHz / 25 KHz	
	Operating Voltage		13.6 V ± 15%	
	Current Drain	Standby	< 0.6A	
		Receive	< 2.0A	
		Transmit	5W	< 5A
	25W		< 8A	
	Frequency Stability		± 1.5ppm	
Antenna Impedance		50		
Dimensions (H × W × D)		60 × 174 × 200 mm		
Weight		1.7Kg		
LCD Display		220 × 176 pixels, 262000 colors, 2.0 inch, 4 rows		
Receiver	Sensitivity	Analog	0.3 μ V (12dB SINAD); 0.22 μ V (Typical) (12dB SINAD) 0.4 μ V (20dB SINAD)	
		Digital	0.3 μ V /BER5%	
	Selectivity TIA-603 ETSI	65dB @ 12.5KHz / 75dB @ 20/25KHz ^d 60dB @ 12.5KHz / 70dB @ 20/25KHz ^d		
	Intermodulation TIA-603 ETSI	75dB @ 12.5/20/25KHz ^d 70dB @ 12.5/20/25KHz ^d		
	Spurious Response Rejection TIA-603 ETSI	75dB @ 12.5/20/25KHz ^d 70dB @ 12.5/20/25KHz ^d		
	Blocking TIA-603 ETSI	90dB 84dB		
	Hum and Noise	40dB @ 12.5KHz; 43dB @ 20KHz; 45dB @ 25KHz ^d		
	Rated Audio Power Output	Internal (@20 ohm load)	3W	
		External (@8 ohm load)	7.5W	
	Max Audio Power Output	Internal (@20 ohm load)	8W	
		External (@8 ohm load)	20W	
	Rated Audio Distortion		3%	
	Audio Response		+1 ~ -3dB	
	Conducted Spurious Emission		< -57dBm	

Transmitter	RF Power Output		Low Power: 5-25W
	FM Modulation		11K0F3E @ 12.5KHz; 14K0F3E @ 20KHz 16K0F3E @ 25KHz ^d
	4FSK Digital Modulation		12.5KHz Data Only: 7K60FXD 12.5KHz Data & Voice: 7K60FXW
	Conducted/Radiated Emission		-36dBm<1GHz; -30dBm>1GHz
	Modulation Limiting		± 2.5KHz @ 12.5KHz; ± 4.0KHz @ 20KHz; ± 5.0KHz @ 25KHz ^d
	FM Hum & Noise		40dB @ 12.5KHz; 43dB @ 20KHz; 45dB @ 25KHz ^d
	Adjacent Channel Power		60dB @ 12.5KHz; 70dB @ 20/25KHz ^d
	Audio Response		+1 ~ -3dB
	Audio Distortion		3%
	Digital Vocoder Type		AMBE++or SELP
Environmental Specifications	Digital Protocol		ETSI-TS102 361-1,-2,-3
	Operating Temperature		-30 ~ +60
	Storage Temperature		-40 ~ +85
	ESD		IEC 61000-4-2 (level 4) ± 8kV (contact) ± 15kV (air)
	American Military Standard		MIL-STD-810 C/D/E/F/G
	Dust & Water Intrusion		IP54 Standard
	Humidity		Per MIL-STD-810 C/D/E/F/G Standard
	Shock & Vibration		Per MIL-STD-810 C/D/E/F/G Standard

(for MD785G only)	Accuracy specs are for long-term tracking(95th percentile values>5 satellites visible at a nominal -130dBm signal strength)		
	TTFF (Time To First Fix) Cold Start	<1 minute	
	TTFF (Time To First Fix) Hot Start	<10 seconds	
	Horizontal Accuracy	<10 meters	

* This frequency band is available for both DMR trunking mode and MPT trunking mode
All Specifications are tested according to applicable standards, and subject to change without notice due to continuous development.

Optional Accessories

									
External Speaker SM09D1	Desktop Microphone SM10A1	320W External Power Supply PS22002	Programming Cable (USB Port) PC37	Data Cable PC40	Keypad Microphone SM19A1	Antenna	GPS Antenna	1DIN vehicle mounting bracket	Adaptor cable for repeater accessory pin
									
Dispatch cable	Mobile Radio Remote Mount Kit	Cabinet Power Supply PS16001	Palm Microphone (IP67) SM16A2	Telephone Style Headset SM20A1	DB26 Connector Dispatching Cable PC43	Programming Cable PC47			

Pictures above are for reference only
and may vary from actual products.



MD785/785G
Versatile Digital Mobile Two-Way Radio

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



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MD785/785G

Higher Efficiency,
Richer Experience

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.

Applications

Public Safety Forest Industry	Public Utilities Business	Transportation (port, airport, railway, etc.) Manufacturing

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/G 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 you 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 4W 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 emergency 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 Text Message, Scan, Emergency, Channel Steering, Auto Registration and Lone Worker.
- Further Development Port**
The reserved front and rear port in MD785/785G allows users or any third party partner to further develop other helpful applications to extend the radio functionalities!
- Option Board Interface**
MD785/785G supports option board interfaces to radio, allowing third party partner to develop various applications to interconnect with radios to control the radio to expand its functionalities! Among the supported features are voice recording, encryption etc. Please refer to the API Partner Programmed for more information!

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 , All Call and Emergency Call.
- GPS**
MD785G supports viewing of GPS positioning information and sending of GPS text message.
- Data Services**
MD785/785G supports data capabilities of sending Private, Group text message. It also supports Third Party to control the radio via Third party API (GPS, Radio Registration Services, Radio Call Control, Telemetry, Data Transfer), via Telemetry control to radio.
- Accessory Expansion**
MD785/785G supports third party to develop accessories expansion via front and rear port of the mobile. (Check out that features as channel steering, emergency footswitch has been supported via the back port!)
- Various Analog Signaling Types**
MD785/785G supports various analog signaling types (HDC1200, DTMF phone , 2-Tone and 5-Tone), various squelch control types (CTCSS/CDCSS), thus providing higher function expansion capacity to the analog world.
- Supplementary Services**
MD785/785G supports supplementary services of Radio Check, Remote Monitor, Call Alert, Radio Enable and Radio Disable.
- Multiple Languages**
MD785/785G supports up to 15 languages, including English, Simplified Chinese, Traditional Chinese, Thai, Arabic, Farsi, Korean, Portuguese, Italian, Russian, Polish, Turkish, French, Spanish and German, allowing users to select it per their needs.
- One Touch**
MD785/785G supports One Touch features that comprise of Text Message, Voice Calls and Supplementary Services.
- Scan**
MD785/785G supports scanning of pure analog voice and signaling, pure Digital voice and data, and also mix mode scan that comprise of Analog and Digital activities.
- Roaming**
MD785/785G supports automatic roaming of all sites in a IP Multi-site Connect system.
- Privacy of Voice and Data**
MD785/785G supports analog scrambling, and digital encryption using Advanced Encryption Standard (AES) and ARCFOUR (ARC4) encryption methodology to both voice and data.
- Analog/Digital Telephone Interconnect (via DTMF signaling)**
MD785/785G supports simplex voice communications between radio and telephone users. It allows a radio user to make a telephone call; or a telephone user to make either a Group or Private call to radio users. This feature utilizes the Commercial Off The Shelf (COTS) Analog Phone Patch boxes and a Plain Old Telephone Service (POTS) line to connect the radio users to the Corporate Office Phone System (PBX) or Public Switched Telephone Network (PSTN).
- Software Upgradable**
Upgrade software enables new features without buying a new radio; MD785(G) could also be switched into MPT and DMR trunking modes with corresponding trunking license applied in the same hardware.

Standard Accessories

Palm Microphone Power Cord	Microphone Hanger Fuse	Microphone Hanger Screws GPS Antenna (for MD785G only)	Mounting Bracket
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