



SERIES MD622i

MD622i Two-Way DMR Mobile Radio

UHF and VHF mobile radios that provide cost-effective and easy-to-use radio communications with excellent performance

The MD622i is a cost-effective DMR mobile radio that delivers value with extensive features. Providing long range transmission, robust design, and clear voice transmission, this compact mobile radio can be used in a variety of applications.



- Loud and clear audio
- 256 Channels and 16 Zones
- LCD display
- Emergency alarms
- Analog and Digital modes
- Optional GPS and Bluetooth
- High power for increased range



MD622i Key Features



HIGH QUALITY AUDIO

- Audio equalizer adjusts low, mid, and high frequency gain
- Provides the best audio performance in noisy or quiet environments



RELIABLE AND DURABLE

- The MD622i is compliant with MIL-STD-810 G for impact strength and durability, and IP54 water and dust ingress
- -22°F to +140°F (-30°C to +60°C) operating temperature



INCREASED COVERAGE RANGE

- With a high RF power output up to 50W, the MD612i dramatically extends communication range



GPS POSITIONING

- Enables real-time location tracking for dispatch applications (requires external GPS module and GPS antenna)



BLUETOOTH

- Built-in Bluetooth enables connectivity to Push-to-Talk devices and other wireless accessories (only on MD622i-BT models)



ANALOG & DIGITAL AUTO-DETECT

- Simultaneously monitors analog and digital modes and automatically responds in each mode
- Enables simple and cost-effective migration from analog to digital



ANALOG SIGNALING

- Supports HDC1200 signaling for Caller ID and Emergency Calls in analog mode, and is compatible with MDC1200 signaling used by other analog radios
- The MD622i can decode DTMF tones while in analog mode for Caller ID signaling



PRE-PROGRAMMED TEXT MESSAGING

- One-touch sending of up to ten pre-programmed text messages



EMERGENCY ALARMS

- Emergency Alarms can be sent to other radios via the one touch emergency button
- Improves worker safety and emergency response time



SECURE ENCRYPTION

- End-to-end Encryption ensures private and secure voice and data transmission



UPGRADE FEATURES (Optional)

- Priority Interrupt allows dispatcher to interrupt existing calls with important emergency information
- Remote Monitor allows dispatcher to key the PTT button and listen in an emergency situation
- Stun/Revive enables dispatch and other users to disable/enable a radio if it is stolen, lost, or used maliciously

Systems and Network Features

ROAMING

- Allows radios to seamlessly move between connected repeaters with uninterrupted voice transmission

PSEUDO TRUNK

- This virtual trunking feature automatically uses whichever digital timeslot is free to improve call connectivity and frequency efficiency

DMR TIER II

- The MD622i can be deployed on DMR Tier II systems

RADIO REGISTRATION SERVICE

- RRS allows the MD622i to communicate with dispatch and unified communications applications

Standard Accessories



Optional Accessories



MD622i Mobile Radio Applications

- School Transportation
- Towing
- Taxis
- Ambulance and EMT
- Agriculture
- Construction
- Delivery Services

Specifications

General		
Frequency Range	UHF: 400-470 MHz VHF: 136-174 MHz	
Channel Capacity	256 Channels (128 Analog, 128 Digital)	
Zone Capacity	16 Zones with 16 Channels per Zone	
Channel Spacing	25/12.5kHz	
Operational Voltage	13.6 V ±15%	
Current Drain	Standby	≈0.3A
	Receive	<1A
	Transmit	1W: <3A
		5W: <5A
25W: <8A 45W: <12A		
Weight	1100g (2.4 pounds)	
Dimensions	6 15/32" x 1 11/16" x 1 15/16" (164 x 43 x 150 mm)	
Frequency Stability	± 0.5ppm	
Antenna Impedance	50Ω	
LCD Display	128x64 pixels, 1.5 inch, 4 lines	
Receiver		
Digital Sensitivity	0.3μV (BER 5%)	
Analog Sensitivity	0.22μV (Typical) (12dB SINAD)	
	0.4μV (20dB SINAD)	
	0.3μV (12dB SINAD)	
Adjacent Selectivity	TIA-603: 60dB @ 12.5kHz, 70dB @ 25kHz	
	ETSI: 60dB @ 12.5kHz, 70dB @ 25kHz	
Spurious Response Rejection	TIA-603: 70dB @ 12.5/25kHz	
	ETSI: 70dB @ 12.5/25kHz	
Intermodulation	TIA-603: 70dB @ 12.5/25kHz	
	ETSI: 65dB @ 12.5/25kHz	
Hum and Noise	40dB @ 12.5kHz, 45dB @ 25kHz	
Rated Audio Power Output	Internal (@ 16 ohm load): 4W	
	External (@ 8 ohm load): 8W	
Max. Audio Power Output	Internal (@ 16 ohm load): 6W	
	External (@ 8 ohm load): 12W	
Rated Audio Distortion	≤3%	
Audio Response	+1 to -3dB	
Conducted Spurious Emission	<-57dBm	

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



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Transmitter	
RF Power Output	VHF High Power: 5-50W UHF High Power: 5-45W
FM Modulation	11K0F3E @ 12.5kHz 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 ±5.0kHz @ 25kHz
FM Hum and Noise	40dB @ 12.5kHz, 45dB @ 25kHz
Adjacent Channel Power	60dB @ 12.5kHz, 70dB @ 25kHz
Audio Response	+1 to -3dB
Audio Distortion	≤3%
Digital Vocoder Type	AMBE++
Digital Protocol	ETSI-TS102 361-1,-2,-3
Environmental	
Operating Temperature	-22°F to +140°F (-30°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	IP54 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

Ordering Information

Part Number	Description
MD622i-U1	UHF 400-470 MHz, 5-45W Power
MD622i-BT-U1	UHF 400-470 MHz, 5-45W Power, Bluetooth
MD622i-V1	VHF 136-174MHz, 5-50W Power
MD622i-BT-V1	VHF 136-174MHz, 5-50W Power, Bluetooth



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