

# 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
- $-22^{\circ}$ F to  $+140^{\circ}$ F ( $-30^{\circ}$ C to  $+60^{\circ}$ 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



## IIIIIII 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
		UHF: 400-470 MHz
Frequency Range		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 Sensitiv	ity	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		
Spurious Respo	onse Rejection	TIA-603: 70dB @ 12.5/25kHz ETSI: 70dB @ 12.5/25kHz
Spurious Respo		
	n	ETSI: 70dB @ 12.5/25kHz TIA-603: 70dB @ 12.5/25kHz
Intermodulatio	n	ETSI: 70dB @ 12.5/25kHz  TIA-603: 70dB @ 12.5/25kHz  ETSI: 65dB @ 12.5/25kHz
Intermodulatio	n e wer Output	ETSI: 70dB @ 12.5/25kHz  TIA-603: 70dB @ 12.5/25kHz  ETSI: 65dB @ 12.5/25kHz  40dB @ 12.5kHz, 45dB @ 25kHz  Internal (@ 16 ohm load): 4W
Intermodulatio Hum and Noise Rated Audio Po	n e wwer Output ver Output	ETSI: 70dB @ 12.5/25kHz  TIA-603: 70dB @ 12.5/25kHz  ETSI: 65dB @ 12.5/25kHz  40dB @ 12.5kHz, 45dB @ 25kHz  Internal (@ 16 ohm load): 4W External (@ 8 ohm load): 8W  Internal (@ 16 ohm load): 6W
Intermodulatio Hum and Noise Rated Audio Po Max. Audio Pov	n wer Output ver Output	ETSI: 70dB @ 12.5/25kHz  TIA-603: 70dB @ 12.5/25kHz  ETSI: 65dB @ 12.5/25kHz  40dB @ 12.5kHz, 45dB @ 25kHz  Internal (@ 16 ohm load): 4W  External (@ 8 ohm load): 8W  Internal (@ 16 ohm load): 6W  External (@ 8 ohm load): 12W



## **MYRO Inc.**

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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 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