



# MD78X/78XG

The Powerful Digital Mobile Two-way Radio

- Excellent voice transmission
- Large Colorful Display with High Visibility
- Remote Control Head
- Full Duplex Call/ Single Frequency Repeater





## MD78Xi Series

As a product built to the DMR standard, MD78Xi Series is endowed with ergonomic design, all-round digital functions and remarkable quality. These features improve your management efficiency and enable you to be responsive to emergent efficiency. The MD78Xi Series is the ideal solution for in-vehicle or desktop communication requirements.



## PROFESSIONAL AND SIMPLE TO USE



### User Friendly

The large colorful display offers a clear display even under strong sunlight. The large keyboard and seven ergonomic programmable keys facilitate efficient and productive communications in various conditions.



### Reliable & Durable

MD78Xi Series is strictly compliant with MIL-STD-810 C/D/E/F/G and IP54 standards, ensuring outstanding performance even under harsh environments.



### Remote Control Head

The remote control kit offers you great flexibility. You can install the control console and the main units at separate locations based on actual requirements.



### Full Duplex Call (Optional)

Hytera MD78Xi can make full duplex calls with PD98X, MD78Xi, telephones or cell phones in DMO or RMO mode.



### Telemetry

Telemetry is helpful for real-time remote monitor. It is used to check the device running status and control devices if operators are far from them.



### Positioning

With the positioning chipset, MD78Xi uploads its location to AVL applications in real time.



### Enlarge Communication Range

With 50W transmit power and higher RX sensitivity, MD78Xi Series enlarge the communication range to reduce your network investment.



### Smooth Migration

The MD78Xi Series can operate in analogue and digital modes, ensuring a smooth and seamless migration between the two technologies. Simple, Smooth, and Cost-effective.



### Single Frequency Repeater Mode (Optional)

When SFR is enabled, MD78Xi use one slot to receive voice and data, and forwards them on the other, extending the communication range in DMO mode



### Analog Signaling

MD78Xi Series support DTMF, 5 tone, HDC1200 and 2 tone signaling.



### Secure Communication

MD78Xi Series support basic and advanced encryption technology, which provides a high security protection for your voice and data communication.



### Roaming

MD78Xi Series support automatic roaming among all sites in an IP Multi-site Connect system.



### Text Message

This feature is useful for communication of sensitive information and in noisy environment where it is hard to hear the voice clearly.



### Back To Back Solution

The back to back solution achieves cross-band communication between analog and digital modes. With a back to back data cable, two MD78Xi mobile radios can be connected to realize intercommunication between different systems.

# VERTICAL MARKETS



Public Safety



Public Security



School Bus



Forest Industry



Business



Manufacturing

## ACCESSORIES Diverse accessories for specific tasks

### STANDARD



Palm Microphone  
(For Half Duplex Model)



Telephone Style Handset  
(For Full Duplex Model)



Mounting Bracket



Power Cord

### OPTIONAL



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

# SPECIFICATIONS

GENERAL			
Frequency Range	UHF1: 400-470MHz; UHF3: 350-400MHz; VHF: 136-174MHz		
Channel Capacity	1024		
Zone Capacity	64(each with a maximum of 256 channels)		
Channel Spacing	Analog: 25/20/12.5kHz Digital: 12.5kHz		
Operating Voltage	13.6V ±15%		
Current Drain	Standby	< 0.6A	
	Receive	< 2.0A	
	Transmit	1W	<2A
		25W	<8A
45W		<12A	
	50W	<12A	
Weight	1.7 kg		
Dimensions (H×W×D)	60 x 174 x 200 mm		
Frequency Stability	±0.5 ppm		
Antenna Impedance	50Ω		
LCD Display	2.0 inch, 4 rows		
RECEIVER			
Sensitivity	Analog	0.22μV (12dB SINAD) 0.18μV (12dB SINAD) (Typical) 0.35μV( 20dB SINAD)	
	Digital	0.22μV/BER5%	
Selectivity	TIA-603	65dB @ 12.5kHz / 75dB @ 20/25kHz	
	ETSI	60dB @ 12.5kHz / 70dB @ 20/25kHz	
Intermodulation	TIA-603	75dB @ 12.5/20/25kHz	
	ETSI	70dB @ 12.5/20/25kHz	
Spurious Response Rejection	TIA-603	75dB @ 12.5/20/25kHz	
	ETSI	70dB @ 12.5/20/25kHz	
Hum and Noise	40dB @ 12.5kHz; 43dB @ 20kHz 45dB @ 25kHz		
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 : 1-25W High power : UHF: 1-45W; VHF: 1-50W
FM Modulation	11K0F3E @ 12.5kHz; 14K0F3E @ 20kHz; 16K0F3E @ 25kHz
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
FM Hum & Noise	40dB @ 12.5kHz; 43dB @ 12.5kHz 45dB @ 25kHz
Adjacent Channel Power	60dB @ 12.5kHz; 70dB @ 20/25kHz <sup>†</sup>
Audio Response	+1 ~ -3dB
Audio Distortion	≤3%
Digital Vocoder Type	AMBE+2™ or SELP
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)
American Military Standard	MIL-STD-810 C/D/E/F/G
Dustproof & Waterproof	IP54
Humidity	Per MIL-STD-810 C/D/E/F/G
Shock & Vibration	Per MIL-STD-810 C/D/E/F/G

GPS	
Accuracy specs are for long-term tracking (5 satellites visible at nominal -130dBm)	
TTFF (Time To First Fix) Cold Start	<1 minute
TTFF (Time To First Fix) Hot Start	<10 seconds
Horizontal Accuracy	<5m (50% probable); <10m (95% probable)

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



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