

 SERIES

Hytera



Digital Portable Repeater

# RD962 SERIES

- Slim and Easy to Carry for Portable Applications
- Optional Embedded Duplexer and Ruggedness for Outside Use

**DMR** DIGITAL MOBILE RADIO ASSOCIATION **RATED**  
**IP67**



[www.hytera.us](http://www.hytera.us)





## RD962 i SERIES

RD962i is a digital / analog portable repeater that is compatible with the DMR standard. This device is compact for easy transport and can be embedded with an optional mini duplexer. It supports a range of power supply options to guarantee uninterrupted communications during emergencies. Its API and 100 Mbps network port combine to support an extended array of applications. The device provides IP67 protection, making it reliable in harsh operating environments.

## Applications

Events

Public Safety

Forestry

Firefighters

Rescue Teams

Construction



# Product Features

- Slim and Portable**  
With its compact design, the RD962i measures only 1 3/5th inches and weighs less than 6.62 lbs. The device can also have an optional embedded mini duplexer inside.
- External Battery**  
With an optional external large-capacity battery, the device delivers an extended battery life to guarantee uninterrupted communications.
- Emergency Power Port**  
The port allows for power connection in emergencies.
- IP67 Protection**  
Compatible with the IP67 standard for water and dust protection, the device can operate properly when wet and dirty (tested in 1 meter of water for 30 minutes).
- Reliable and Durable**  
Compatible with the American military standard MIL-STD-810 C/D/E/F/G and HALT verified, the device can perform excellently in harsh operating environments.
- User-friendly Panel**  
The operating panel provides a wide range of status indicators, a button for channel adjustment, and a port for palm microphone or remote speaker microphone.
- Over-the-air Signaling Encryption**  
For secure communications, RD982i supports over-the-air encryption to protect the signaling frames of both voice and data services.



- Smart Battery (optional)**  
A 10Ah smart Li-Ion battery can support at least eight hours of work when working at 50% duty cycle and high TX power. Compatible with the smbus1.1 standard, RD962i can monitor battery conditions such as estimated remaining capacity, used capacity percentage, and usage record. The device can also maximize the battery life through smart charge management, it can automatically recharge the battery for use anytime. Powered by three levels of battery protection, the device considerably enhances charging safety and reliably.
- Repeater Diagnostics and Control**  
Through a PC-based application, the system administrator can remotely diagnose and control (connected to the Internet via an IP port) and local repeaters (via a USB port). Hytera's RDAC software supports network access at multiple points and allows the administrator to monitor networked two-way radios.
- Voice Input/output via Dual Time Slots**  
In digital mode, the device supports voice input and output via dual time slots and enables calls continuous call recording.
- Digital / Analog Smart Switching**  
Back to back interconnection of digital & analog network can be achieved by wired or wireless IP, ensuring a smooth analog-to-digital transition and smart switching between networks.
- Flexible Networking**  
By connecting geographically distributed repeaters that run at the same or different frequencies to form an IP-based and location-independent wireless communication network, IP-based repeater interconnection allows mobile radios to obtain voice and data services while roaming.
- 16 Channels**  
This product supports up to 16 channels. You can switch between channels using PC based RDAC software, the channel selector knob on the front panel, or the external interface on the repeater.
- Digital-analog Interconnection**  
This feature enables two-way radios with digital and analog radio fleets, and digital and analog users to intercommunicate in different operating modes to guarantee users' seamless transition from analog to digital capabilities.
- GPS**  
The GPS module supports GPS data transmission and enables emergency command centers to monitor the location of a small mobile network in real time.
- Out-of-range Notification**  
Out-of-range Notification in RMO: A radio is always notified when it has left the repeater coverage. The users can realize if they are in the talk range all the time by paying attention to the alert tone.

# Accessories

Optional



Waterproof Remote Speaker Microphone (IP67)  
SM18A1



Multi-Functional Installation Bracket  
BRK17



Power Adapter for Portable Repeater  
PS7502



Power Management System  
PV3001

See website for full list



# Specifications

General	Frequency range		VHF: 136 - 174MHz UHF1: 400 - 470MHz; UHF3: 350 - 400MHz
	Channel Capacity		16
	Channel Spacing		25 / 20 / 12.5KHz
	Operating Voltage		DC: 13.6 V ± 15% Battery: 14.8V
	Current Drain	Standby	<0.5A
		Transmit	<2.5A
	Battery		10Ah (Li-Ion)
	Battery Life (50-50 Duty Cycle, High TX Power)		8hrs
	Frequency Stability		± 0.5ppm
	Antenna Impedance		50 Ω
	Duty Cycle		100%
	Dimensions (HxWxD)	with protective shell	11.85 x 7.24 x 2 inches
		with no protective shell	11.45 x 6.77 x 1.62 inches

Weight		6.61 lbs
FCC ID		136-174MHz: YAMRD962iVHF 400-470MHz: YAMRD962iU1
Industry Canada ID		138-174MHz: 8913A-RD962iVHF 406.1-470MHz: 8913A-RD962U1

Environmental Specifications	Operating Temperature		-22° F ~ +140° F
	Storage Temperature		-40° F ~ +185° F
	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		IP67 Standard
	Humidity		Per MIL-STD-810 C/D/E/F/G Standard
	Shock & Vibration		Per MIL-STD-810 C/D/E/F/G Standard

GPS	TTFF (Time To First Fix) Cold Start		<1 minute
	TTFF (Time To First Fix) Hot Start		<10 seconds
	Horizontal Accuracy		<10 meters



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Transmitter	RF Power Output		1-10W (adjustable)
	FM Modulation (Analog Emissions Designator)		11K φF3E @ 12.5KHz; 14KφF3E @ 20KHz ; 16KφF3E @ 25KHz
	4FSK Digital Modulation (Digital Emissions Designator)		12.5KHz Data Only: 7K6 FXD 12.5KHz Data & Voice: 7K6 FXW
	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 @ 20KHz ; 45dB @ 25KHz
	Adjacent Channel Power		60dB @ 12.5KHz 70dB @ 20/25KHz
	Audio Response		+1 ~ -3dB
	Audio Distortion		≤ 3%
	Digital Vocoder Type		AMBE+2™

Digital Protocol		ETSI-TS102 361-1, 2&3
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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 60dB @ 12.5KHz / 70dB @ 20/25KHz
	Intermodulation TIA-603 ETSI		75dB @ 12.5/20/25KHz 70dB @ 12.5/20/25KHz
	Spurious Response Rejection TIA-603 ETSI		75dB @ 12.5/20/25KHz 70dB @ 12.5/20/25KHz
	Blocking TIA-603 ETSI		90dB 84dB
	S/N		40dB @ 12.5KHz; 43dB @ 20KHz ; 45dB @ 25KHz
	Rated Audio Distortion		≤ 3%
	Audio Response		+1 ~ -3dB

Conducted Spurious Emission		< -57dBm
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### Your Local Dealer

Hytera Authorized Dealer:  
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20KHz / 25KHz will not be available on new equipment in the U.S. after January 1<sup>st</sup>, 2011

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