

Hytera

BD3 SERIES



BD302i and BD352i UHF Two-Way DMR Radios

Compact and lightweight BD3i Series radios provide cost-effective and easy-to-use radio communications with excellent performance



Excellent Performance

The BD3i Series radios provide extended range with crystal clear digital audio that is easy-to-hear, and long battery life for up to 16 hours of operation.

Rugged and Reliable

The BD3i Series radios meet MIL-STD-810-G for shock and vibration, and are IP54 rated for dust and water resistance to guaranty reliability in harsh environments.

Analog and Digital

Supports both analog and digital operation and can automatically switch between the two modes. This provides flexible operation, and provides an easy and cost-effective upgrade path to digital systems.

Light and Compact

Weighing only 5 ounces, the lightweight and compact design makes the BD3i Series easy to carry and operate for long shifts.



Key Features

- A/D ANALOG & DIGITAL DUAL MODES**
- Supports both analog and digital modes of operation
 - Allows switching between the two modes for communication with analog radios
- ANALOG & DIGITAL AUTO DETECT**
- Detects the signal type and automatically switches between analog and digital mode
 - Enables a simple and cost-effective migration path from analog to digital
- EXTENDED TALK RANGE**
- Hytera's innovative receiving technology extends talk range
- AUDIO CHANNEL ANNOUNCEMENT**
- Voice announcement of channel number for quick and accurate channel switching, even in low visibility (BD302i only)
- OLED OLED DISPLAY**
- High contrast display for Channel number, Caller ID, Zone number, battery power, and high/low power (BD352i only)
- LONG-LIFE BATTERY**
- Powerful 2200mAh Lithium Ion batteries enable up to 16 hours of operation in digital mode and 12 hours in analog
- EMERGENCY CALLING**
- One-touch Emergency Alarms can be sent to other radios with the programmable button
 - Improves worker safety and emergency response time

- CLEAR VOICE**
- DMR digital technology provides excellent audio quality for reliable communication
- RELIABLE AND DURABLE**
- Compliant with MIL-STD-810-G for shock and vibration
 - IP54 rated for water and dust resistance
- ANTI-INTERFERENCE**
- Digital encoding and error correcting reduces signal interference on the same frequency
- DMR DMR**
- DMR signaling enables group call, private call, and all call transmitting with PTT ID
 - Supports DMR Tier II repeaters to extend coverage
- PSEUDO TRUNKING**
- This virtual trunking feature automatically uses whichever digital timeslot is free to improve call connectivity and frequency efficiency
- VOX**
- Voice activated microphone enables hands free operation
 - Also supported on external earpiece and microphone accessories
- SCANNING**
- Allows listening to communication activities on other channels



Standard Accessories



Optional Accessories



Specifications

General	
Frequency Range	UHF 400-470MHz
Channel Capacity	BD302i: 48 Channels (24 Analog, 24 Digital) BD352i: 256 Channels (128 Analog, 128 Digital)
Zone Capacity	BD302i: 3 Zones with 16 Channels per Zone BD352i: 16 Zones with 16 Channels per Zone
Channel Spacing	25/12.5kHz
Operational Voltage	3.8W
Battery	2200mAh (Li-Ion)
Battery Life (5/5/90)	16 hours Digital, 12 hours Analog
Weight	BD302i: 5 ounces (140g) BD352i: 5.36 ounces (152g) (with AN0435H19 antenna and BL2202 battery)
Dimensions	BD302i: 3 31/32" x 1 15/16" x 1 1/32" (101 x 49 x 26mm) BD352i: 4 5/32" x 2 1/8" x 1 3/16" (106 x 52 x 30mm)
Frequency Stability	± 0.5ppm
Antenna Impedance	50Ω
Display	BD352i: OLED single-line display
Receiver	
Digital Sensitivity	0.22μV (BER 5%)
Analog Sensitivity	0.22μV (Typical) (12dB SINAD) 0.4μV (20dB SINAD)
Adjacent Selectivity	TIA-603: 60dB @ 12.5kHz, 70dB @ 25kHz
Spurious Response Rejection	TIA-603: 70dB @ 12.5/25kHz
Intermodulation	TIA-603: 65dB @ 12.5/25kHz
Hum and Noise	40dB @ 12.5kHz, 45dB @ 25kHz
Rated Audio Power Output	0.5W
Rated Audio Distortion	≤5%
Audio Response	+1 to -3dB
Conducted Spurious Emission	<-57dBm

Transmitter	
RF Power Output	UHF High Power: 2W UHF Low Power: 1W
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	≤5%
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

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

Ordering Information

Part Number	Description
BD302i-U1	UHF 400-470MHz, 48 Channels
BD352i-U1	UHF 400-470MHz, 256 Channels, OLED display



Hytera North America

3315 Commerce Parkway, Miramar, FL 33025, United States
Telephone (954) 846-1011

8 Whatney, Suite 200, Irvine, CA 92618, United States
Telephone (949) 326-5740

100 Leek Crescent, Unit 11, Richmond Hill, ON L4B 3E6, Canada
Telephone (905) 305-7545



HYT, Hytera are registered trademarks of Hytera Communications Co., Ltd.
© 2020 Hytera Communications Co., Ltd. All Rights Reserved.
Hytera retains right to change the product design and specification.

BD3i-DS-B 4/20