

 SERIES



“Hello Yellow”

## BD612i Two-Way Digital Radios

Rugged UHF and VHF BD612i DMR radios provide cost-effective and easy-to-use radio communications with excellent performance

### Improved Digital Performance

The BD612i radios feature digital noise cancellation for improved audio quality, and long battery life for up to 16 hours of operation. Digital encoding and high output power provides excellent reception and extended range.

### Light and Compact

Weighing less than 9 ounces, the light and compact design makes the BD612i easy to carry and operate.

### Rugged and Reliable

The BD612i is built to the MIL-STD-810G standard for shock and temperature endurance, and complies with the IP66 standard for water and dust resistance.

**The BD612i digital radios are the next generation of the TC6 analog radios, and improves on the legendary Hytera ruggedness, performance, and value.**

- Built rugged for the most demanding environments
- Digital audio quality for clear calls on noisy job sites
- Powerful battery for reliable operation over long shifts
- Extended range to improve efficiency and reduce infrastructure costs
- Compact and easy-to-use



## BD612i Key Features



### ERGONOMIC AND EASY TO USE

- Tactile buttons for no-look PTT and emergency calling
- Simple operation with channel and power/volume knobs
- LED Indicator shows transmit and receive status in green and red lights



### ANALOG OR DIGITAL OPERATION

- The BD612i operates in analog or digital mode, and allows switching between the two modes for communication with analog radios
- Enables simple and cost-effective migration path to digital



### HIGH QUALITY AUDIO

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



### LONG-LIFE BATTERY

- Powerful 1500mAh Lithium Ion battery delivers up to 16 hours of operation, and an optional 2000mAh Lithium Ion battery delivers up to 22 hours of operation



### RELIABLE AND DURABLE

- Compliant with MIL-STD-810-G for shock and vibration
- IP66 rated for water and dust resistance



### SCANNING

- Allows listening to communications on other channels



### EMERGENCY CALLING

- One-touch Emergency Alarms can be sent to other radios with the programmable button
- Improves worker safety and emergency response time



### ANTI-INTERFERENCE

- Digital encoding and error correcting reduces signal interference on the same frequency



### 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



### AUDIO CHANNEL ANNOUNCEMENT

- Channel number voice announcement for fast and accurate channel switching



### VOX

- Voice activated microphone enables hands free operation
- Also supported on external earpiece and microphone accessories

# Standard Accessories

 AN0435W09 16cm Whip Antenna 400-470MHz	 BL1506 1500mAh Li-Ion Battery	 BC08 Belt Clip	 CH10L23 Drop-In Single Unit Charger	 R003 Nylon Hand Strap	 PS1014 Power Adapter Input: 100-240VAC Output: 12VDC/1A
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# Optional Accessories

## EARPIECES

External earpieces with in-line PTT Mics and a VOX (hands free) switches

 EH01 Receive-only C-Style Earpiece	 EH02 Receive-only Swivel C-Style Earpiece	 ES01 Receive-only Earbud
 ES02 Receive-only Acoustic Tube Surveillance Earpiece	 ACM-01 <sup>①</sup> PTT Mic with 3.5mm Jack Connects to Receive-only Earpieces	 ESM12 Earbud with PTT Mic and VOX
 EAM13 2-Wire Transparent Acoustic Tube Surveillance Earpiece	 EHM15-A D-Style Earpiece with PTT Mic and VOX	 EHM18-A C-Style Earpiece with PTT Mic and VOX

## REMOTE SPEAKER MICROPHONES

Remote Speaker Mics provide easy access for audio, are IP rated for water resistance, and have audio jacks for receive-only earpieces.

 SM08M3 IP54 Rated 3.5mm audio jack	 SM13M1 Noise Cancelling with High / Low Speaker Volume IP55 Rated, 3.5mm audio jack	 SM26M1 IP54 Rated 2.5mm audio jack
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## OTHER ACCESSORIES

 PC76 Data Programming Cable	 AN0435H13 <sup>③</sup> 9cm Stubby Antenna	 NCN011 Nylon Carrying Jacket
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## POWER ACCESSORIES

 BL2018 2000mAh Li-Ion Battery Provides 22 hours operation in Digital Mode (16 Analog)	 MCL19 Multi-unit Charger for Six Radios (includes power supply)	 CHV09 Vehicle Adapter (Input: 11-25V DC, Output: 12V DC & 1A)
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① Features 3.5mm jack for receive-only ES01 Earbud, ES02 Acoustic Tube Surveillance Earpiece, EH01 C-Style Earpiece, and EH02 Swivel C-Style Earpiece

② Features 2.5mm jack for receive-only EAS03 Acoustic Tube Earpiece, EHS18 C-Style Earloop Earpiece, and EHS17 Swivel C-Style Earpiece

③ AN0435H13: 400-470MHz, 9cm    AN0141H06: 136-147MHz, 17cm  
 AN0167H06: 160-174MHz, 17cm    AN0153H08: 147-160MHz/1575MHz, 12cm  
 AN0435W09: 400-470MHz, 16cm    AN0153H07: 147-160MHz, 17cm  
 AN0160H13: 146-174MHz, 15cm    AN0167H07: 160-174MHz/1575MHz, 12cm

# Specifications

General	
Frequency Range	UHF: 400-470 MHz VHF: 136-174 MHz
Channel Capacity	48 Channels (24 Analog, 24 Digital)
Zone Capacity	3 Zones with 16 Channels per Zone
Channel Spacing	25/12.5kHz
Operational Voltage	7.2V
Li-Ion Battery	1500mAh Standard, 2000mAh Optional
Battery Life (5/5/90)	1500mAh: 16 hours Digital, 12 hours Analog 2000mAh: 22 hours Digital, 16 hours Analog
Weight	8.5 ounces (240g)
Dimensions	4 1/4" x 2 1/8" x 1 5/32" (108 x 54 x 29mm)
Frequency Stability	± 0.5ppm
Antenna Impedance	50Ω

Receiver	
Digital Sensitivity	0.22μV (BER 5%)
Analog Sensitivity	0.22μV (Typical) (12dB SINAD) 0.4μV (20dB SINAD)
Adjacent Selectivity	TIA-603: 65dB @ 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

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

Transmitter	
RF Power Output	VHF High Power: 5W VHF Low Power: 1W UHF High Power: 4W 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	≤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	IP66 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
BD612i-V1	VHF 136-174MHz, Standard Antenna 146-174MHz, 48 Channels
BD612i-U1	UHF 400-470MHz, Standard Antenna 400-470MHz, 48 Channels



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