Hytera

i 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

DMR
DIGITAL MOBILE RADIO ASSOCIATION

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

RO03
Nylon Hand Strap

PS1014 Power Adapter
Input: 100-240VAC
Output: 12VDC/1A

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-01①
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

OTHER ACCESSORIES

PC76
Data Programming Cable

AN0435H13③
9cm Stubby Antenna

NCN011
Nylon Carrying Jacket

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)

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-Sytle Earloop Earpiece, and EHS17 Swivel C-Style Earpiece

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