Hytera

i SERIES
PD402i

PD402i DMR Two-Way UHF/VHF Radios

Hytera PD402i UHF and VHF two-way DMR radios provide reliable and easy-to-use radio communications.

- Audio equalizer and digital audio for loud and clear voice calls
- Compliant with the DMR standard and supports double channel capacity
- Functions in digital and analog modes
- IP55 rated and compliant with MIL-STD-810 G
- Cost-effective with advanced features

DMR
DIGITAL MOBILE RADIO ASSOCIATION

ROTATING CHANNEL CONTROL

VOLUME

ACCESSORY/DATA PORT

PUSH-TO-TALK BUTTON

CLEAR AUDIO

PROGRAMMABLE BUTTONS

IP55 RATED

LONG-LIFE BATTERY

ANALOG AND DIGITAL

PD402i Key Features

ERGONOMIC AND EASY TO USE
- Tactile buttons for no-look PTT and emergency calling

A/D ANALOG AND DIGITAL OPERATION
- The PD402i operates in analog or digital mode
- Allows switching between the two modes for communication with analog radios
- Enables a simple and cost-effective migration path from analog to digital

HIGH-QUALITY AUDIO
- Audio equalizer adjusts low, mid, and high frequency gain
- Provides high-quality digital audio performance with loud and clear private calling, group calling, and all call

LONG-LIFE BATTERY
- Powerful Li-Ion 1500mAh battery
- Delivers up to 16 hours of operation in digital mode and 12 hours in analog mode

RELIABLE AND DURABLE
- IP55 rated for water and dust ingress and compliant with MIL-STD-810-G for impact strength and durability
- $-22^{\circ}F$ to $+140^{\circ}F$ ($-30^{\circ}C$ to $+60^{\circ}C$) operating temperature

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

PRE-PROGRAMMED TEXT MESSAGING
- One-touch sending of pre-programmed text messages
- Stores up to ten pre-defined text messages

VOX
- Voice activated communications (VOX) activates the microphone by speaking to enable hands-free operation
- Also supported on external earpiece and microphone accessories

UPGRADE FEATURES (Optional)
- Encryption for secure audio and data
- Remote Monitor allows dispatcher to key the PTT button and listen in an emergency situation
- Stun/Revive enables dispatch and other users to disable/enable a radio if it is stolen, lost, or used maliciously

SYSTEMS AND NETWORK FEATURES
- The PD402i can be deployed on DMR Tier II systems
- Roaming allows radios to seamlessly move between connected repeaters with non-stop voice transmission
- Pseudo Trunk is a virtual trunking feature that automatically uses whichever digital timeslot is free to improve call connectivity and frequency efficiency
- Radio Registration Service (RRS) allows the PD402i to communicate with dispatch and unified communications applications

Standard Accessories

Stubby Antenna	BP1503 1500mAh Lithium polymer Battery	BC08 Belt Clip	CH10A07 Drop-In Single Unit Charger	RO03 Nylon Hand Strap	Power Adapter Input: 100-240VAC Output: 12VDC/1A

Optional Accessories

EARPIECES

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

EH-01
Receive-only C-Style Earpiece

EH-02
Receive-only Swivel C-Style Earpiece

ES-01
Receive-only Earbud

EA-01
Receive-Only Earpiece with Transparent Acoustic Tube

ACM-01[1]
PTT Mic with 3.5mm Jack Connects to Receive-only Earpieces

EHM18-A
C-Style Earpiece with PTT Mic and VOX

EHM15-A
D-Style Earpiece with PTT Mic and VOX

EAS03
Receive-Only Transparent Acoustic Tube Earpiece

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.

SM50M1 [1]
IP54 Rated
3.5mm audio jack

SM26M1 [2]
IP54 Rated
2.5mm audio jack

POWER AND CHARGING

CHV09
Vehicle Adapter
(Input: 11-25V DC,
Output: 12V DC & 1A)

BL2010
2200mAh Li-Ion Battery
Provides 22 hours operation
in Digital Mode (16 Analog)

MCL39
Multi-unit Charger
with Power Supply

OTHER ACCESSORIES

PC76
Data Programming Cable

NCN011
Nylon Carrying Jacket

AN0435W09[3]
400-470MHz UHF Antenna
AN0160H13
146-174MHz VHF Antenna

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[1] Features 3.5mm jack for receive-only ES-01 Earbud, EA-01 Acoustic Tube Surveillance Earpiece, EH-01 C-Style Earpiece, and EH-02 Swivel C-Style Earpiece

[2] Features 2.5mm jack for receive-only EAS03 Acoustic Tube Earpiece, EHS18 C-Style 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 400-470MHz VHF 136-174MHz
Channel Capacity	256 Channels (128 Analog, 128 Digital)
Zone Capacity	3 Zones with 16 Channels per Zone
Channel Spacing	25/12.5kHz
Operational Voltage	7.4V
Battery	1500mAh (Li-Ion) Standard, 2000mAh Optional
Battery Life (5/5/90)	1500mAh: 16 hours Digital, 12 hours Analog 2000mAh: 22 hours Digital, 16 hours Analog
Weight	9.5oz (270g)
Dimensions	4 13/32″ x 2 1/8″ x 1 3/32″ (112 x 55 x 28mm)
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) 0.22µV (12dB SINAD)
Adjacent Selectivity	TIA-603: 60dB @ 12.5kHz, 70dB @ 25kHz ETSI: 60dB @ 12.5kHz, 70dB @ 25kHz
Spurious Response Rejection	TIA-603: 70dB @ 12.5/25kHz ETSI: 70dB @ 12.5/25kHz
Intermodulation	TIA-603: 70dB @ 12.5/25kHz ETSI: 65dB @ 12.5/25kHz
Hum and Noise	40dB @ 12.5kHz, 45dB @ 25kHz
Rated Audio Power Output	0.5W
Rated Audio Distortion	≤3%
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	-22ºF to +140ºF (-30ºC to +60ºC)
Storage Temperature	-40ºF to +185ºF (-40ºC to +85ºC)
ESD	IEC 61000-4-2 (Level 4) ±8kV Contact, ±15kV Air
Dust and Water Ingress	IP55 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
PD402i-V1	VHF 136-174MHz, 1-5W Power
PD402i-U1	UHF 400-470MHz, 1-4W Power