



#### Hytera America

3315 Commerce Parkway, Miramar, FL 33025, United States  
Telephone: +1(954)846-1011

8 Whatney, Suite 200, Irvine, CA 92618, United States  
Telephone: +1(949)326-5740

1916 Wright Boulevard, Schaumburg, IL 60193, United States  
Telephone: +1 (213) 262-3578

Hytera Authorized Dealer:  
Alpha Prime Communications  
Sales . Rentals . Service  
1808 Janke Drive, Suite E  
Northbrook, IL 60062 USA  
847-298-4000 . [service@alphaprimecomm.com](mailto:service@alphaprimecomm.com)



Hytera retains right to change the product design and specification. Should any printing mistake occur, Hytera doesn't bear relevant responsibility. Little difference between real product and product indicated by printing materials will occur by printing reason.

**HYT**, Hytera are registered trademarks of Hytera Communications Co., Ltd.  
© 2018 Hytera Communications Co., Ltd. All Rights Reserved.



# Digital Patrol Radio PD412 i SERIES

Compliant with DMR standard

Dual Mode Analog & Digital. Embedded RFID reader



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

# Features

## Voice Call

Voice call capability includes private, group and all call.



## Rugged & Reliable

Compliant with MIL-STD-810 C/D/E/F/G standards. IP54 rated.

## Small, Sleek, Light

Size: 112×55×31mm. Weight: 270g.

## Long Battery Life

In digital mode, the 1500mAh battery provides 16 hours on a 5-5-90 duty cycle. (5% transmit; 5% receive, 90% standby)

## Preprogrammed Text Messages

## One Touch Call/Text

One Touch Voice Calls and Preprogrammed Text Messages.

## Dual Mode (Analog & Digital)

Dual modes (analog & digital) operation to ensure a smooth migration from analog to digital.

## VOX

The VOX (Voice-operated Transmit) feature allows you to trigger the voice transmission by speaking into the radio rather than initiating a voice call by pressing the PTT (Push To Talk) switch for convenient use at high pace working environment.

## Development Port for radio and RFID

The HYTERA API facilitates third party applications development in support of customized solutions.

## Psuedo Trunk (Optional)

Several talk groups share the same frequency, and each one of them can dynamically chose to use one of the slots to talk. This is a two-slot-trunked mode. While time-slot 1 is busy, MD612i will use time-slot 2 to transmit.

## Roaming

Automatic roaming of all sites in an IP Multi-site Connect system.

## Additional Features

PD402i support Radio Registration Service (RRS), Emergency Alarm & Call, Remote Monitor Decode (Optional), Radio Disabled Decode (Optional) and Priority Interrupt Decode (Optional).

# Specifications

| General                     |         |   |
|-----------------------------|---------|---|
| Frequency Range             |         | UHF: 400-470MHz, 450-520MHz<br>VHF: 136-174MHz                                |
| Channel Capacity            |         | 32  |
| Zone Capacity               |         | 3   |
| Channel Spacing             |         | 25/12.5KHz  |
| Operating Voltage           |         | 7.4V  |
| Battery                     |         | 1500mAh (Li-Ion)<br>2000mAh (Li-Ion)  |
| Battery Life (5/5/90 )      |         | Analog/Digital:<br>12/16 hours (1500mAh)<br>16/22 hours (2000mAh)             |
| Weight                      |         | 270g  |
| Dimensions                  |         | 112×55×31mm   |
| Frequency Stability         |         | ±0.5ppm   |
| Antenna Impedance           |         | 50Ω   |
| RFID Reading Range          |         | up to 4cm   |
| Receiver                    |         |   |
| Sensitivity (Digital)       |         | 0.22μV / BER 5%   |
| Sensitivity (Analog)        |         | 0.22μV (Typical) (12dB SIN AD)<br>0.4μV (20dB SIN AD)<br>0.22μV (12dB SIN AD) |
| 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   |
| Inter-modulation            | TIA-603 | 70dB @ 12.5/25KHz   |
|                             | ETSI    | 65dB @ 12.5/25KHz   |
| Hum & Noise                 |         | 40dB @ 12.5KHz<br>45dB @ 25KHz  |
| Rated Audio Power Output    |         | 0.5W  |
| Rated Audio Distortion      |         | ≤3%   |
| Audio Response              |         | +1 ~ -3dB   |
| Conducted Spurious Emission |         | <-57dBm   |

| Transmitter                 |  |
|-----------------------------|--|
| RF Power Output             | VHF High power: 5W<br>VHF Low power: 1W<br>UHF High power: 4W<br>UHF Low power: 1W |
| FM Modulation               | 11K0F3E @ 12.5KHz<br>16K0F3E @ 25KHz   |
| 4FSK Digital Modulation     | 12.5KHz Data Only: 7K60FXD<br>12.5KHz Data & Voice: 7K60FXW                        |
| Conducted/Radiated Emission | -36dBm <1GHz, -30dBm >1GHz   |
| Modulation Limiting         | ±2.5KHz @ 12.5KHz<br>±5.0KHz @ 25KHz   |
| FM Hum & Noise              | 40dB @ 12.5KHz<br>45dB @ 25KHz   |
| Adjacent Channel Power      | 60dB @ 12.5KHz, 70dB @25KHz  |
| Audio Response              | +1 ~ -3dB  |
| Audio Distortion            | ≤3%  |
| Digital Vocoder Type        | AMBE+2 ™   |
| Digital Protocol            | ETSI-TS102 361-1,-2,-3   |
| Environmental               |  |
| Operating Temperature       | -30°C~ +60°C   |
| Storage Temperature         | -40°C~ +85°C   |
| ESD                         | IEC 61000-4-2 (Level 4)<br>±8kV (Contact)<br>±15kV (Air)                           |
| Dustproof & Waterproof      | IP54 Standard  |
| Humidity                    | Per MIL-STD-810 C/D/E/F/G Standard   |
| Shock & Vibration           | Per MIL-STD-810 C/D/E/F/G Standard   |

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

Target Markets



Features

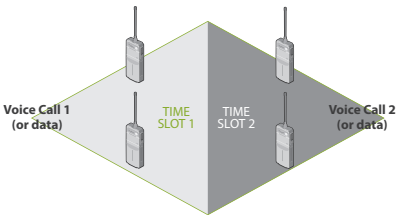
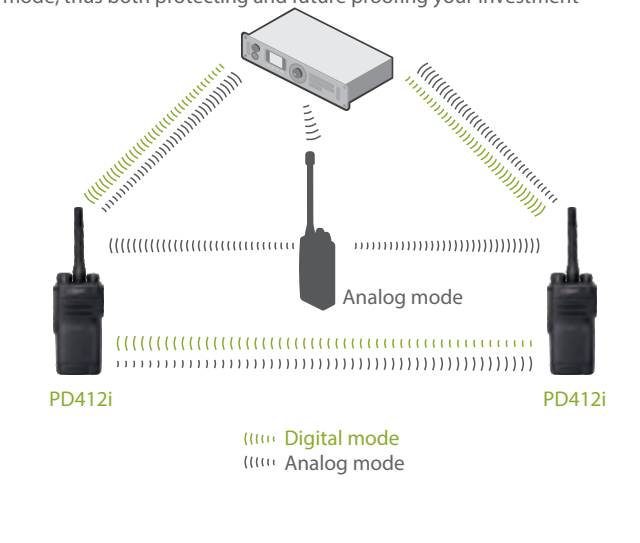
Embedded RFID

The PD412i radio reads RFID tag data and automatically transmits the data via the defined timeslot. An ideal application for patrol monitoring and resource management.



Analog & Digital Mixed Channel

The PD412i radio is dual mode capable, it automatically detects whether the received signal is analog or digital. If a digital signal is received the radio will transmit its response in digital mode, if an analogue signal is received, the radio will respond in analogue mode. The PD412i will function with existing analogue FM infrastructure. When the infrastructure is updated to digital, it will operate in digital mode, thus both protecting and future proofing your investment



Standard



Options







LIGHT & DURABLE.DIGITAL VOICE,CLEARER AND LOUDER  
EMBEDDED RFID READER  
ANALOG & DIGITAL MIXED MODE



## Hytera PD412i Patrol System

The Hytera PATROL System is a tour guard or route management solution providing real-time resource tracking and management. The system comprises PATROL Radios, Receiving Stations, PATROL Checkpoints and PATROL Application Software. When the PD412i PATROL Radio is close to the PATROL Checkpoint, the PATROL Radio automatically reads the Checkpoint RFID data, transmits RFID data in real-time to the Receiving Station. The Receiving Station which is connected to a PC running the PATROL application, records the incoming data, time and date stamps it and highlights the relevant PATROL Checkpoint in the application on screen. Additional features include, one-touch radio alarm, PATROL data resend, simple or advanced PATROL plan configuration, data query and data backup.

