



## PD4 Series

DMR handheld radios

With longer battery life, lightweight with a long battery life and an integrated RFID reader (PD415), the PD4 series from Hytera are your optimal companions for everyday work. The PD4 series supports both analogue and digital operation, ensuring a smooth migration to digital radio for any user.



# Radios

## PD4 Series

PD405

PD415

DMR handheld radios



## Highlights

### Integrated RFID reader (PD415)

The optional Hytera RFID tags and checkpoints, transmitting this information back to the Hytera Patrol software by radio signal. The ideal solution for security and patrol requirements.

### Patrol System with the PD415

The Hytera Patrol system is an application that uses the data captured via RFID (PD415 only). Upload your site map and plot your checkpoints, then once your staff have been assigned a radio tag, the patrol system will monitor and log their journey in real-time when they tag any asset checkpoint.

### Impressive voice quality

With embedded digital technology, the PD4 series produces outstanding voice quality, even in noisy environments, and at the outer perimeters of radio coverage.

### Improved utilisation of the frequency spectrum

Thanks to the TDMA method, DMR radios make it possible to configure the available bandwidth with double the channel capacity of conventional analogue radio. This has a clear mitigating effect on increasing spectrum scarcity.

### Mixed analogue and digital channel

This function ensures that the PD4 radios can detect both analogue and digital signals and change automatically to the relevant operating mode.

### Robust

Both radios are dust and water-resistant according to IP55 (PD405) or IP54 (PD415) and meet the US military standard MIL-STD-810 C/D/E/F/G.

### Additional Functions

- Different operating modes: analogue, DMR Tier II or mixed
- Digital or analogue channel search
- Supports pre-programmed text message transmission
- TDMA direct mode allows up to two simultaneous calls, even without repeater
- VOX (voice-controlled send keying)
- Emergency alarm
- Individual call, group call and all call
- Priority Interrupt, remote monitor, radio enable and disable (all via chargeable licence)
- Hytera Pseudo Trunking and Basic Encryption (via chargeable licence)
- Radio Registration Service (RRS), Radio Check, Alert Call



Programmable keys

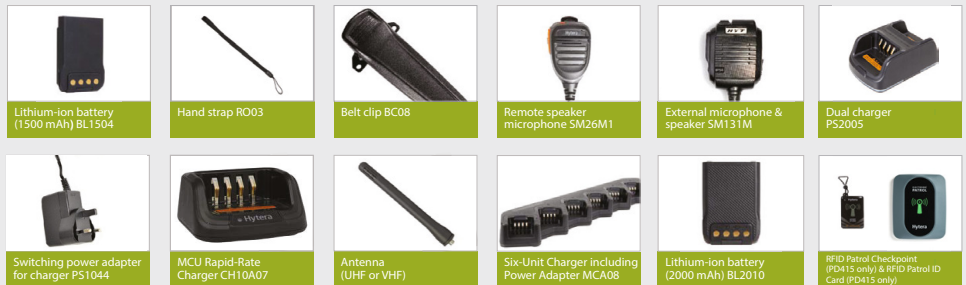
Different operating modes:  
analogue, DMR Tier II or mixed



Integrated RFID reader for Patrol System (PD415)

Small, slim and light, only 270 g

### In the box



### Optional accessories

## Technical Data

| General data                                  |   |
|---|---|
| Frequency range                               | VHF: 136 - 174 MHz<br>UHF: 400 - 470 MHz<br>UHF3: 350 - 400 MHz<br>UHF2: 450 - 520 MHz (PD415 only)   |
| Supported operating modes                     | • DMR Tier II<br>in acc. with ETSI TS 102 361-1/2/3<br>• Analogue                                     |
| Channel capacity                              | 256 (128 analogue + 128 digital)  |
| Number of zones                               | 3 (with max. 16 channels each)  |
| Channel spacing                               | 12.5 / 25 kHz   |
| Operating voltage                             | 7.4 V (nominal)   |
| Standard battery                              | 1500 mAh (lithium-ion battery)  |
| Battery life<br>(5-5-90 duty cycle)           | analogue / digital:<br>approx. 12 / 16 hours (with 1500 mAh)<br>approx. 16 / 22 hours (with 2000 mAh) |
| Frequency stability                           | ± 0.5 ppm   |
| Antenna impedance                             | 50 Ω  |
| Dimensions (H × W × D)<br>(without antenna)   | 112 × 54 × 28 mm (PD405)<br>112 × 54 × 31 mm (PD415)  |
| Weight<br>(with antenna and standard battery) | approx. 270 g   |
| Programmable keys                             | 2   |
| Range of the RFID reader                      | up to 4 cm  |

| Environmental conditions             |   |
|--------------------------------------|---|
| Operating temperature range          | - 30°C to + 60°C  |
| Storage temperature range            | - 40°C to + 85°C  |
| ESD                                  | IEC 61000-4-2 (level 4),<br>± 8 kV (contact, ± 15kV (air) |
| Protection against dust and moisture | IP55 (PD405)<br>IP54 (PD415)                              |
| Shock and vibration resistance       | MIL-STD-810 C/D/E/F/G                                     |
| Relative humidity                    | MIL-STD-810 C/D/E/F/G                                     |

Your Hytera partner:



**Hytera**  
Respond & Achieve

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| Transmitter                       |   |
|-----------------------------------|---|
| Transmitting power                | VHF: 1 / 5 W UHF: 1 / 4 W   |
| Modulation                        | 11 KDF3E at 12.5 kHz<br>16 KDF3E at 25 kHz                          |
| 4FSK digital modulation           | 12.5 kHz (data only): 7K60FXD<br>12.5 kHz (data and voice): 7K60FXW |
| Interfering signals and harmonics | -36 dBm (< 1GHz)<br>-30 dBm (> 1GHz)                                |
| Modulation limiting               | ± 2.5 kHz at 12.5 kHz<br>± 5.0 kHz at 25 kHz                        |
| Hum and noise                     | 40 dB at 12.5 kHz<br>45 dB at 25 kHz                                |
| Adjacent channel selectivity      | 60 dB at 12.5 kHz<br>70 dB at 25 kHz                                |
| Audio sensitivity                 | + 1dB at - 3dB  |
| Nominal audio distortion          | ≤ 3 %   |
| Digital vocoder type              | AMBE+2™   |

| Receiver  |  |
|---|--|
| Sensitivity (analogue)                          | 0.22 µV (12 dB SINAD)<br>0.22 µV (typical) (12 dB SINAD)<br>0.4 µV (12 dB SINAD) |
| Sensitivity (digital)                           | 0.22 µV / BER 5 %  |
| Adjacent channel selectivity<br>TIA-603<br>ETSI | 60 dB at 12.5 kHz / 70 dB at 25 kHz<br>60 dB at 12.5 kHz / 70 dB at 25 kHz       |
| Intermodulation<br>TIA-603<br>ETSI              | 70 dB at 12.5 / 25 kHz<br>65 dB at 12.5 / 25 kHz                                 |
| Spurious response rejection<br>TIA-603<br>ETSI  | 70 dB at 12.5 / 25 kHz<br>70 dB at 12.5 / 25 kHz                                 |
| Signal-to-noise ratio (S/N)                     | 40 dB at 12.5 kHz<br>45 dB at 25 kHz   |
| Audio power output                              | 0.5 W  |
| Nominal audio distortion                        | ≤ 3%   |
| Audio sensitivity                               | + 1 dB at - 3dB  |
| Conducted spurious emission                     | < -57dBm   |

All technical information was determined at the factory and in accordance with the corresponding standards. Subject to change on the basis of continuous development.

Further information can be found at:

[www.hytera.co.uk](http://www.hytera.co.uk)

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Hytera reserves the right to modify the product design and the specifications. In case of a printing error, Hytera does not accept any liability. All specifications are subject to change without notice.

Encryption features are optional and have to be configured separately. They are also subject to European export regulations.

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