Hytera
Respond & Achieve



# PD7 Series

## DMR handheld radios




With the PD7 series from Hytera, you can look forward to a quality device from the very beginning. This radio series is impressive, not only because of its durable and reliable design, but also thanks to its outstanding voice characteristics and its comprehensive PMR functionality. Choose the ever-popular PD7 series to meet your communication requirements in all manner of professional applications.

DMR
DIGITAL MOBILE RADIO ASSOCIATION

www.hytera.co.uk

# Radios

# PD7 Series

**PD705/PD705G**
**PD755/PD755G**
**PD785/PD785G**
**DMR handheld radios**









## Highlights

### User-Friendly Design

From the PD705, with its impressive, durable chassis, to the PD785 with its large color display and full keyboard, this series stands out thanks to its user-friendly design and great feature site, ideal to grab and go.

### Improved Utilization of the Frequency Spectrum

The PD7 series can be used in TDMA direct mode and in Hytera pseudo-trunking mode. This assignment of the available bandwidth, with double the number of channels, leads to more availability within the same assigned frequencies in DMR systems, compared to analogue.

### Versatile – Supports Digital and Analogue Operating Modes

The radios in the PD7 series offer both an analogue mode and a digital mode and are compatible with analogue radio systems; therefore migration to digital is made simple with the PD7 series. Along with conventional DMR (DMR Tier II), the radios also support analogue trunked radio as per MPT1327 and DMR trunked radio (Tier III) via chargeable licence. In addition, they can be used in Hytera XPT and simulcast systems.

### Additional Functions

- Versatile voice calls: Individual call, group call, broadcast call, emergency call
- Every radio is available as a GPS variant (request the model with a 'G'). Support of GIS applications such as AVL and telemetry as well as display of the distance and direction of other GPS radios (PD755G and PD785G).
- Data Services: Text messages, group text messages, control via API
- Encryption with 40 bit as per DMRA, or optionally with 128 and 256 bit.
- Different analogue dialing methods: HDC1200, DTMF, 2-tone and 5-tone dialing, squelch method, tone-coded CTCSS / CDCSS
- Emergency calls, Man Down alarm ('G' version only) and lone worker function
- Vibration function
- Supplementary services, radio check, remote monitor, call alert, radio disable/enable
- One-touch functions (incl. text messages, voice calls and supplementary services)
- Scanning (analogue, digital or mixed)
- Automatic cell re-selection (roaming) in IP multi-site systems
- Upgrade software to protect your investment and access the latest features. It is possible to activate other digital and analogue operating modes by changing the firmware software.

Dust and water-proof radios in accordance with IP67

Multifaceted accessories available for every operation




PD705/PD705G

PD755/PD755G

PD785/PD785G

Different menu languages available

Correspond to US Military Standard MIL-STD-810 C/D/E/F/G

## In the box



BL2008 - Lithium-Ion Battery (2000mAh)



Standard antenna (UHF or VHF)



CH10A07 - MCU Rapid-Rate Charger



RO04 - Leather Wrist Strap



BC19 - Belt Clip



Power supply unit for charger (PS1044)

## Optional accessories



Wireless headset ESW01



Remote Speaker Microphone (IP67) SM18N2



EHN17 - Swivel Style Earpiece



Car Kit with Antenna Adapter (Standard Version) CK03



6-unit charger MCA08



Leather Case with Swivel Belt Clip LCY003

The representations shown above are intended for reference purposes only. The products themselves may deviate from these representations.

## Technical Data

| General data | |
|---|---|
| Frequency range | VHF: 136 – 174 MHz / UHF: 400 – 470 MHz |
| Supported operating modes | • DMR Tier II (ETSI TS 102 361-1/2/3)<br>• Simulcast<br>• XPT Digital Trunking<br>• DMR Tier III via chargeable licence (ETSI TS 102 361-1/2/3/4)<br>• Analogue, MPT 1327 |
| Channel capacity | 1024 |
| Number of zones | 16 (PD705)<br>64 (PD755/PD785, with up to 16 channels each) |
| Channel spacing | 12.5 / 20 / 25 kHz (analogue)<br>12.5 kHz (digital) |
| Operating voltage | 7.4 V (nominal) |
| Standard battery | 2000 mAh (lithium-ion battery) |
| Battery life (analogue)<br>(5-5-90 duty cycle, high transmitting power, standard battery) | VHF: about 11 h / 10 h (GPS operation)<br>UHF: about 13.5 h / 12 h (GPS operation) |
| Battery service life (digital)<br>(5-5-90 duty cycle, high transmitting power, standard battery) | VHF: about 13.5 h / 12 h (GPS operation)<br>UHF: about 15.5 h / 14 h (GPS operation) |
| Frequency stability | ± 1.5 ppm |
| Antenna impedance | 50 Ω |
| Dimensions (H × B × T)<br>(without antenna, with standard battery) | 125 × 55 × 35 mm (PD705)<br>125 × 55 × 37 mm (PD755 / PD785) |
| Weight<br>(with antenna and standard battery) | approx. 335 g (PD705)<br>approx. 355 g (PD755 / PD785) |
| Programmable keys | 3 (PD705)<br>5 + number keys (PD755 / PD785) |
| LCD display (PD755 / PD785) | 160 × 128 pixels, 65,536 colors, 1.8 inch, 4 lines |
| **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), ± 15 kV (air) |
| Protection against dust and moisture | IP67 |
| Shock and vibration resistance | MIL-STD-810 C/D/E/F/G |
| Relative humidity | MIL-STD-810 C/D/E/F/G |
| **GPS (optional)** | |
| Time to first position fix (TTFF) | < 1 Minute (cold start)<br>< 10 seconds (warm start) |
| Horizontal accuracy | < 10 meter |

| Transmitter | |
|---|---|
| Transmitting power | VHF: 1 / 5 W<br>UHF: 1 / 4 W |
| Modulation | 11 K0F3E at 12.5 kHz<br>14 K0F3E at 20 kHz<br>16 K0F3E 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 (< 1 GHz)<br>- 30 dBm (> 1 GHz) |
| Modulation limiting | ± 2.5 kHz at 12.5 kHz<br>± 4.0 kHz at 20 kHz<br>± 5.0 kHz at 25 kHz |
| Hum and noise | 40 dB at 12.5 kHz<br>43 dB at 20 kHz<br>45 dB at 25 kHz |
| Adjacent channel selectivity | 60 dB at 12.5 kHz<br>70 dB at 20/25 kHz |
| Audio sensitivity | + 1 dB to - 3 dB |
| Audio distortion | ≤ 3 % |
| Digital vocoder type | AMBE +2™ |
| **Receiver** | |
| Sensitivity (analogue) | 0.3 µV (12 dB SINAD)<br>0.22 µV (typical) (12 dB SINAD)<br>0.4 µV (20 dB SINAD) |
| Sensitivity (digital) | 0.3 µV / BER 5 % |
| **Adjacent channel selectivity**<br>TIA-603<br>ETSI | <br>60 dB at 12.5 kHz / 70 dB at 20 / 25 kHz<br>60 dB at 12.5 kHz / 70 dB at 20 / 25 kHz |
| **Intermodulation**<br>TIA-603<br>ETSI | <br>70 dB at 12.5 / 20 / 25 kHz<br>65 dB at 12.5 / 20 / 25 kHz |
| **Spurious response rejection**<br>TIA-603<br>ETSI | <br>70 dB at 12.5 / 20 / 25 kHz<br>70 dB at 12.5 / 20 / 25 kHz |
| Signal-noise ratio (S/N) | 40 dB at 12.5 kHz<br>43 dB at 20 kHz<br>45 dB at 25 kHz |
| Nominal audio power output | 0.5 W |
| Audio distortion | ≤ 3 % |
| Audio sensitivity | + 1 dB at - 3 dB |
| Conducted spurious emission | < - 57 dBm |

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

Your Hytera partner:

Further information can be found at:
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Encryption features are optional and have to be configured separately. They are also subject to European export regulations.


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SyncComms