



## PD7 Series

DMR handheld radios

With the PD7 series from Hytera, you can look forward to quality 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 functions. Choose the premium solution among DMR handheld radios – the PD7 series.



# Radios

## PD7 Series

PD705/PD705G

PD755/PD755G

PD785/PD785G

DMR handheld radios



### Highlights

#### User-Friendly Design

From the PD705, with its impressive, durable chassis, through the PD785 with its large color display and full keyboard: This series stands out thanks to its user-friendly design, its finely balanced features and its extensive range of functions.

#### Improved Utilization of the Frequency Spectrum

The PD7 series can be used in TDMA direct mode and in pseudo-trunking mode. This assignment of the available bandwidth with double the number of channels leads to a significant easing of the increasing shortage of frequencies in the operation of DMR mobile radio systems compared to analog mobile radio systems.

#### Versatile – Supports Digital and Analog Operating Modes

The radios in the PD7 series possess both an analog mode and a digital mode and are compatible with analog radio systems; as a consequence it is very easy for you to change to the digital age.

Along with conventional DMR (DMR Tier II), the radios also support analog trunked radio as per MPT1327 and DMR trunked radio. In addition, they can be used in Hytera XPT and simulcast systems.

#### Additional Functions (selection)

- Versatile voice calls: Individual call, group call, broadcast call, emergency call
- Every radio is available as a GPS variant. Support of GIS applications such as AVL and telemetry as well as display of the distance and direction of other GPS radios (PD755 and PD785).
- 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 analog dialing methods: HDC1200, DTMF, 2-tone and 5-tone dialing, squelch method, tone-coded CTCSS / CDCSS
- Emergency calls, Man Down alarm (optional) 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 (analog, digital or mixed)
- Automatic cell re-selection (roaming) in IP multi-site systems
- Upgradeable software enables the possibility of new features. It is possible to activate other digital and analog operating modes by changing the firmware software.



Dust and water-proof radios in accordance with IP67







Multifaceted accessories available for every operation









Different menu languages available

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

### Scope of Delivery

		
Lithium-ion battery	Standard antenna (URF or VRF)	Quick charger (optional)
		
Hand strap	Belt clip	Power supply unit for charger (optional)

### Additional Accessories (Selection)

		
Wireless headset ESW01	Loudspeaker microphone (IP67) SM18N2	Earphone with C-clip EHN17
		
Active holder for vehicles CK03	6-unit charger MCA08	Leather pouch with belt loop LCY003

## Technical Data

General data	
Frequency range	VHF: 136 – 174 MHz / UHF: 400 – 470 MHz
Supported operating modes	<ul style="list-style-type: none"> <li>DMR Tier II (ETSI TS 102 361-1/2/3)</li> <li>Simulcast</li> <li>XPT Digital Trunking</li> <li>DMR Tier III (ETSI TS 102 361-1/2/3/4)</li> <li>Analog, MPT 1327</li> </ul>
Channel capacity	1024
Number of zones	16 (PD705) 64 (PD755/PD785, with up to 16 channels each)
Channel spacing	12.5 / 20 / 25 kHz (analog) 12.5 kHz (digital)
Operating voltage	7.4 V (nominal)
Standard battery	2000 mAh (lithium-ion battery)
Battery service life (analog) (5-5-90 duty cycle, high transmitting power, standard battery)	VHF: about 11 h / 10 h (GPS operation) UHF: about 13.5 h / 12 h (GPS operation)
Battery service life (digital) (5-5-90 duty cycle, high transmitting power, standard battery)	VHF: about 13.5 h / 12 h (GPS operation) UHF: about 15.5 h / 14 h (GPS operation)
Frequency stability	± 1.5 ppm
Antenna impedance	50 Ω
Dimensions (H × B × T) (without antenna, with standard battery)	125 × 55 × 35 mm (PD705) 125 × 55 × 37 mm (PD755 / PD785)
Weight (with antenna and standard battery)	approx. 335 g (PD705) approx. 355 g (PD755 / PD785)
Programmable keys	3 (PD705) 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), ± 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) < 10 seconds (warm start)
Horizontal accuracy	< 10 meter

Your Hytera partner:



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Transmitter	
Transmitting power	VHF: 1 / 5 W UHF: 1 / 4 W
Modulation	11 K0F3E at 12.5 kHz 14 K0F3E at 20 kHz 16 K0F3E at 25 kHz
4FSK digital modulation	12.5 kHz (data only): 7K60FXD 12.5 kHz (data and voice): 7K60FXW
Interfering signals and harmonics	- 36 dBm (< 1 GHz) - 30 dBm (> 1 GHz)
Modulation limiting	± 2.5 kHz at 12.5 kHz ± 4.0 kHz at 20 kHz ± 5.0 kHz at 25 kHz
Hum and noise	40 dB at 12.5 kHz 43 dB at 20 kHz 45 dB at 25 kHz
Adjacent channel selectivity	60 dB at 12.5 kHz 70 dB at 20/25 kHz
Audio sensitivity	+ 1 dB to - 3 dB
Audio distortion	≤ 3 %
Digital vocoder type	AMBE +2™
Receiver	
Sensitivity (analog)	0.3 µV (12 dB SINAD) 0.22 µV (typical) (12 dB SINAD) 0.4 µV (20 dB SINAD)
Sensitivity (digital)	0.3 µV / BER 5 %
<b>Adjacent channel selectivity</b> TIA-603 ETSI	60 dB at 12.5 kHz / 70 dB at 20 / 25 kHz 60 dB at 12.5 kHz / 70 dB at 20 / 25 kHz
<b>Intermodulation</b> TIA-603 ETSI	70 dB at 12.5 / 20 / 25 kHz 65 dB at 12.5 / 20 / 25 kHz
<b>Spurious response rejection</b> TIA-603 ETSI	70 dB at 12.5 / 20 / 25 kHz 70 dB at 12.5 / 20 / 25 kHz
Signal-noise ratio (S/N)	40 dB at 12.5 kHz 43 dB at 20 kHz 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.

Further information can be found at:

[www.hytera-mobilfunk.com](http://www.hytera-mobilfunk.com)

Contact us if you are interested in purchasing, sales or application partnerships: ✉ [info@hytera.de](mailto:info@hytera.de)



SGS Certificate DE11/81829313

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

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