



PD505

DMR handheld radio

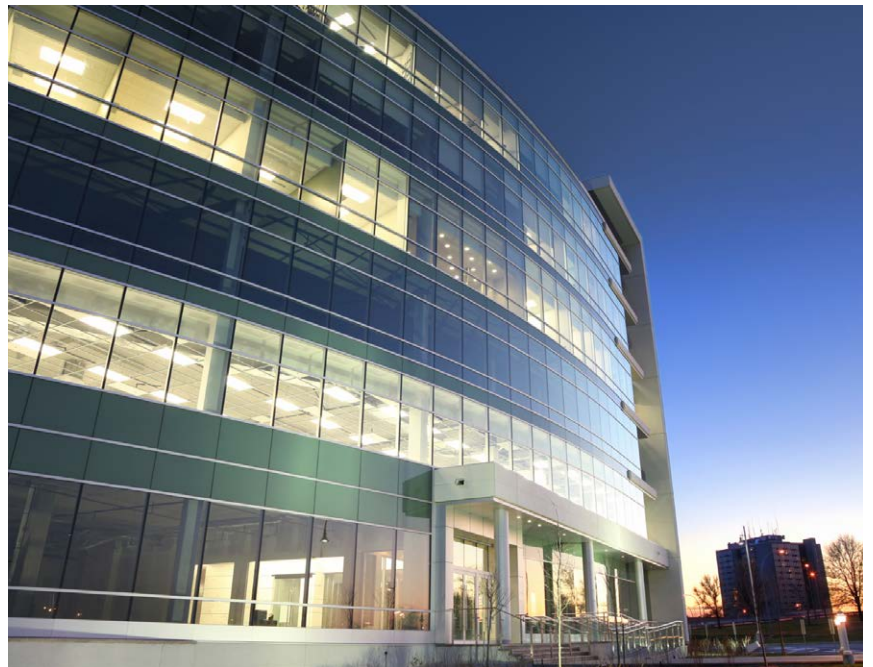
The PD505 DMR handheld radio impresses with its light-weight design, range of functions and excellent value for money. Its compact housing, outstanding voice quality and support for both digital and analog radio will bring a breath of fresh air to your radio communication. The PD505 handheld radio is designed in accordance with the DMR standard and therefore meets all the open standard's requirements.



Radio

PD505

DMR handheld radio



Highlights

Improved use of the audio frequency spectrum

Thanks to the TDMA process, the PD505 enables you to assign the available bandwidth with double the channel capacity. This has a clear mitigating effect on the increasing spectrum scarcity encountered when using DMR radio systems.

Ergonomic design

The PD505 handheld radio is easy to operate and highly reliable, which is indispensable in critical situations.

Individual button design

The two rotary buttons of the radio transceiver are separated by the antenna. This design prevents operating errors.

Reliability

The PD505 meets all requirements of the open DMR ETSI standard (ETSI-TS 102 361-1, -2, -3), the MIL810-C/D/E/F/G standard and degree of protection IP54. Thus excellent features are offered even under harsh operating conditions.

Powerful battery

Compared to the FDMA process in analog mode, with TDMA the battery service life can be improved by approximately 40% when using DMR.

Excellent voice quality

With the combined application of the narrow band codec and digital technologies for error correction, the PD505 ensures excellent voice quality even in loud environments and in peripheral areas of radio coverage.

Upgradeable software

The upgradeable software makes the use of new features possible. By altering the firmware-software, other digital and analog operating modes can be enabled, without the need for purchasing a new radio device.



Functions (excerpt)

- Small, slim, light
115 x 54 x 27 mm, two-color plastic housing, weighs a mere 260 g.
- Battery with long service life
In digital mode, the PD505 operates for at least 16 hours and at a 5-5-90 operating cycle from a full charge.
- Robust and reliable
PD505 is compatible with MIL-STD-810 C/D/E/F/G standards.
- Secure communication
Provided by Hytera encryption in digital mode and a scrambler function in analog mode.
- DMR Data Service
The data protocol used is fully compliant with the DMR standard.
- One Touch Call / Text
Supports one touch-functions, including preprogrammed text messages, voice calls and supplementary functions.
- Expanded signaling
Supports various expanded analog signal modes, including HDC1200, 2-tone and 5-tone for improved integration into existing analog radio fleets.
- Dual modes (analog & digital)
Dual modes (analog & digital) ensure the radio operates smoothly when migrating from analog to digital.

Crystal clear voice transmission

Compact size, lightweight



Ergonomic and user-friendly design

Light yet durable

Available accessories (excerpt)

Lithium-ion battery (1500 mAh) BL1502	Lithium-ion battery (2000 mAh) BL2010	Switching power adapter for charger PS1018	Various antennas	Hand strap (Nylon) RO03	Belt clip BC19
Carrying case (nylon) NCN011	6-unit charger MCA08	Programming cable (USB/serial) PC63	Remote speaker microphone (IP54) SM26M1	Earpiece (mic with PTT, acoustic tube) EAM12	

The illustrations below are for reference purposes only. The products might differ from these illustrations.

Technical Data

General	
Frequency range	VHF: 136 - 174 MHz UHF: 400 - 470 MHz
Supported operating modes	<ul style="list-style-type: none"> DMR Tier II in acc. with ETSI TS 102 361-1/2/3 Simulcast Analog
Channel capacity	32
Zone capacity	3
Channel spacing	12.5 / 20 / 25 kHz (analog) 12.5 kHz (digital)
Operating voltage	7.4V (nominal)
Standard battery	1500mAh (lithium-ion battery)
Battery service life (5-5-90 duty cycle)	ca. 11 hours (analog) ca. 16 hours (digital)
Frequency stability	± 0,5 ppm
Antenna impedance	50 Ω
Dimensions (H×W×D) (with standard battery, without antenna)	115 x 54 x 27 mm
Weight	260 g

Receiver	
Sensitivity (analog)	0.22 µV (typical) (12 dB SINAD) 0.4 µV (20 dB SINAD) 0.22 µV (12 dB SINAD)
Sensitivity (digital)	0.22 µV / BER 5%
Adjacent channel selectivity TIA-603 ETSI	60 dB at 12.5 kHz / 60 dB at 20 / 25 kHz
Spurious response rejection TIA-603, ETSI	70 dB at 12.5 / 20 / 25 kHz
Intermodulation TIA-603 ETSI	70 dB at 12.5 / 20 / 25 kHz 65 dB at 12.5 / 20 / 25 kHz
Hum and noise	40 dB at 12.5 kHz 43 dB at 20 kHz 45 dB at 25 kHz
Nominal audio power output	0.5 W
Nominal audio distortion	≤ 3%
Audio sensitivity	+1 to -3 dB
Conducted spurious emission	< -57 dBm

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
Noise suppression	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
Nominal audio distortion	≤ 3%
Digital vocoder type	AMBE + +

Ambient data	
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)
Dust and water protection	IP54
Shock and vibration resistance	MIL-STD-810 C/D/E/F/G
Relative humidity	MIL-STD-810 C/D/E/F/G

All technical specifications were tested according to the relevant standards. Subject to change on the basis of continuous development.

Your Hytera partner:



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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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