

PD505

DMR handheld radio



Compact & reliable

The PD505 handheld radio impresses with its lightweight design, range of functions and high cost-effectiveness. 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.

Light and easy to operate

The radios of the PD5 series are particularly ergonomic and easy to operate. With a weight of only 260 g (PD505) or 280 g (PD565), the PD5 series offers a high level of mobility comfort.

Long battery service life

The lithium-ion battery (1500 mAh) in digital mode reaches an operating period of at least 16 hours (duty cycle 5-5-90). With the optionally available 2000-mAh battery, it will even be 20 hours.

Technical Data PD505

General data	
Frequency range	VHF: 136 – 174 MHz UHF: 400 – 470 MHz
Supported operating modes	<ul style="list-style-type: none"> ▪ DMR Tier II according to ETSI TS 102 361-1/2/3 ▪ Simulcast ▪ XPT Digital Trunking ▪ Analog
Number of channels	256
Number of zones	16
Channel spacing	12.5 / 20 / 25 kHz (analog) 12.5 kHz (digital)
Operating voltage	7.4 V (nominal)
Standard battery	1500 mAh (lithium-ion battery)
Battery service life (5-5-90 duty cycle, high transmitting power, standard battery)	approx. 11 hours (analog) approx. 16 hours (digital) at 1500 mAh; approx. 20 hours (digital) at 2000 mAh
Frequency stability	± 0.5 ppm
Antenna impedance	50 Ω
Dimensions (H × W × D, without antenna)	115 x 54 x 27 mm
Weight (with antenna and standard battery)	approx. 260 g
Programmable keys	1

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	IP54
Shock and vibration resistance	MIL-STD-810 C / D / E / F / G
Relative humidity	MIL-STD-810 C / D / E / F / G

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 cancellation	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 response (TIA-603D)	+ 1 dB at - 3 dB
Nominal audio distortion	≤ 3 %
Digital vocoder type	AMBE +2™

Receiver	
Sensitivity (analog)	0.22 µV (12 dB SINAD) 0.22 µV (typical) (12 dB SINAD) 0.4 µV (20 dB SINAD)
Sensitivity (digital)	0.22 µV / BER 5 %
Adjacent channel selectivity TIA-603	60 dB at 12.5 kHz / 70 dB at 20 and 25 kHz
ETSI	60 dB at 12.5 kHz / 70 dB at 20 and 25 kHz
Intermodulation TIA-603	70 dB at 12.5 / 20 / 25 kHz
ETSI	70 dB at 12.5 / 20 / 25 kHz
Spurious response rejection TIA-603	70 dB at 12.5 / 20 / 25 kHz
ETSI	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
Nominal audio distortion	≤ 3 %
Audio response (TIA-603D)	+ 1 dB to - 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.



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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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