Hytera
Respond & Achieve

PD705 / PD705G

DMR handheld radios

With its compact chassis, degree of protection IP67, the superlative voice quality and the support for digital and analog radio, the PD705/PD705G will put fresh wind into the sails of your radio communication. The handheld radios PD705 and PD705G (variant with GPS) are designed in accordance with the DMR standard.

DMR
DIGITAL MOBILE RADIO ASSOCIATION

www.hytera-mobilfunk.com

Radio

PD705
PD705G

DMR handheld radios

Highlights

Improved utilization of the frequency spectrum
Thanks to the TDMA process the PD705/PD705G allows an assignment of the available bandwidth with double channel capacity. This results in a clear relief of the increasing spectrum scarcity.

Ergonomic design
The handheld radios PD705 and PD705G (variant with GPS) from Hytera offer you a high degree of user-friendliness and reliability which cannot be foregone in critical situations. The ingeniously devised and intelligent industry antenna design assures comfortable operation and remarkable GPS properties.

Reliability
The PD705/PD705G meets all the requirements of the open ETSI standard DMR as well as MIL810-C/D/E/F/G and degree of protection IP67. The device series thus offers excellent features even under rough operating conditions.

Powerful battery
Compared to analog technology and the FDMA process, TDMA enables the battery service life to be increased by about 40% depending on operating conditions.

Excellent voice quality
Through the combined application of the narrow-band codec and the digital technologies for error correction, the PD705/PD705G also provides superlative voice quality, even in loud environments or in peripheral areas of radio coverage.

Upgradeable software
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):

- Optional analog or digital operation
- Versatile voice calls
  - Individual call
  - Group call
  - Broadcast call
  - Emergency call
- Control of the radio via API
- Different analog dialing methods
  - HDC1200, DTMF, 2-tone and 5-tone dialing
  - Squelch procedure/tone call CTCSS/CDCSS
- Supplementary services
  - Radio Check
  - Remote Monitor
  - Call Alert
  - Radio Disable/Enable
- Scanning
  - of analog voice and signaling
  - of digital voice and data
  - mixed scanning of analog and digital activities
- Automatic cell re-selection (roaming) in IP multi-site systems
- Analog scrambling
- Secure encryption with encryption algorithm ARC4 (40 bit) in accordance with DMRA or with optional algorithms AES128 and AES256 (128 and 256 bit)
- Upgradeable software

Separate control buttons
The two control buttons are separated from each other by the antenna. This makes operation easier, even with gloves.

Versatile services
In addition to conventional communication services, the PD705/PD705G can for example offer functions such as scanning, emergency calls, man down alarm (optional) and lone worker function.

Integrated antenna
The integrated radio and GPS antenna provides improved convenience and remarkable GPS features.

Robustness and reliability
The devices meet the requirements of MIL-STD-810 C/D/E/F/G standards and passed the HALT tests (Highly Accelerated Life Test).

Dustproof and waterproof
The PD705/PD705G is waterproof and dustproof in accordance with an IP67 degree of protection, which means it is capable of withstanding a water depth of one meter for at least half an hour.

Standard accessories


Lithium-ion battery with 2000 mAh BL2006


Charging station CH10A04


Power adapter PS1018


Antenna

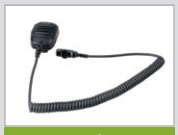

Hand strap (leather) RO04

Optional accessories (excerpt)

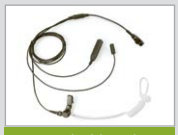

Lithium-ion battery with 2500 mAh BL2503


MCU quick charger MCA06


Programming cable (USB/serial) PC38


Waterproof microphone (IP57) SM18N2


D-earset with PTT microphone EHN12


Concealed headset (3 cables, beige) EAN17

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

Technical Data

General data	
Frequency range	VHF: 136 - 174 MHz; UHF: 400 - 470 MHz
Supported operating modes	• DMR Tier II in acc. with ETSI TS 102 361-1/2/3 • Simulcast • DMR Tier III in acc. with ETSI TS 102 361-1/2/3/4 • Analog, MPT 1327
Channel capacity	1024
Zone capacity	3
Channel spacing (analog)	12.5 / 20 / 25 kHz
Channel spacing (digital)	12.5 kHz
Operating voltage	7.4 V (nominal)
Standard battery	2000 mAh (lithium-ion battery)
Battery service life (analog) (5-5-90 operating cycle, high transmitting power, standard battery)	VHF: approx. 11 h / 10 h (GPS mode) UHF: approx. 13.5 h / 12 h (GPS mode)
Battery service life (digital) (5-5-90 operating cycle, high transmitting power, standard battery)	VHF: approx. 13.5 h / 12 h (GPS mode) UHF: approx. 15.5 h / 14 h (GPS mode)
Frequency stability	± 1.5 ppm
Antenna impedance	50 Ω
Dimensions (H × W × D) (with standard battery, without antenna)	125 × 55 × 35 mm
Weight (with antenna and standard battery)	335 g

Ambient data	
Operating temperature	- 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	IP67
Shock and vibration resistance	MIL-STD-810 C/D/E/F/G
Relative humidity	MIL-STD-810 C/D/E/F/G

GPS (PD705G only)	
Time to first position recognition (TTFF) cold start	< 1 minute
Time to first position recognition (TTFF) warm start	< 10 seconds
Horizontal accuracy	< 10 meter

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 at - 3 dB
Nominal 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 %
Adjacent channel selectivity 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
Intermodulation TIA-603 ETSI	 70 dB at 12.5 / 20 / 25 kHz 65 dB at 12.5 / 20 / 25 kHz
Spurious response rejection TIA-603 ETSI	 70 dB at 12.5 / 20 / 25 kHz 70 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

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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