



PD505

DMR handheld radio

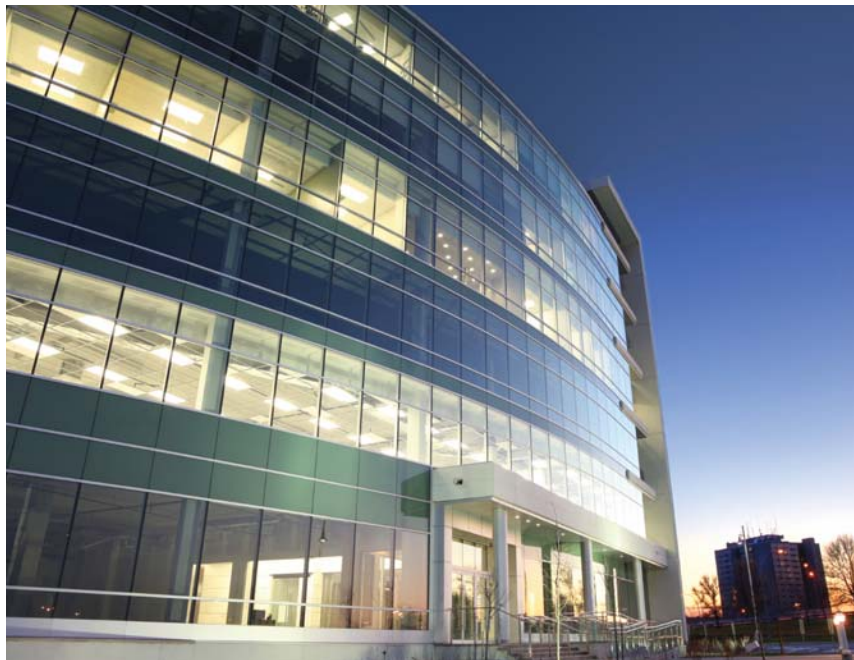
The new Hytera PD505 terminal series impresses with its lightweight design, functionality and high cost effectiveness. With its compact design, excellent voice quality and support of digital and analog radio, the PD505 renews your radio communications. The PD505 handheld radios are designed according to the DMR standard and meet all requirements of this open standard.



Radio

PD505

DMR handheld radio



Highlights

Improved use of the radio spectrum

Thanks to the TDMA process the PD505 allows an assignment of the available bandwidth with double channel capacity. This results in a clear relief of the increasing spectrum scarcity with the use of DMR radio systems.

Ergonomic design

The handheld radio PD505 offers you a high degree of user-friendliness and reliability which cannot be foregone in critical situations.

Individual button design

The two rotary buttons of the radio are separated by the antenna. This design prevents incorrect operations.

Reliability

The PD505 meets all requirements of the open ETSI standard DMR (ETSI-TS102 361-1, -2, -3) as well as MIL810-C/D/E/F/G and degree of protection IP54. The PD505 series thus offers you excellent features even under rough operating conditions.

Powerful battery

Compared to the analog technology using FDMA, the battery life can be improved by approx. 40 % by using TDMA.

Excellent voice quality

With the combined application of the narrow band codex and technologies for error correction the PD505 ensures an excellent voice quality even in loud environment and in peripheral areas of radio coverage.



Functions (excerpt)

- Small, sleek, light
115 x 54 x 27 mm, dual-color injection-molded housing, only 260 g.
- Lithium-ion battery with long lifespan
In digital mode, the PD505 reaches a readiness time of at least 16 hours, at an operating cycle of 5-5-90.
- Robust and reliable
PD505 meets all the requirements of the MIL-STD-810 C / D / E / F / G standards.
- Secure communications
Provides Hytera encryption in digital mode and a scrambler feature in analog mode.
- Advanced signalling
Supports different analog dialling methods, including HDC1200, 2-tone and 5-tone, lightens integration into existing analog radio fleets.
- DMR Data Service
The data protocol used is fully compatible with the DMR standard.
- One Touch Call / Text
Supports one-touch features like pre-programmed text messages, voice calls and supplementary features.
- Supplementary features (optional)
PD505 can decode radio enable/disable, remote monitor, as well as priority interrupt.
- Dual Mode (analog & digital)
Providing digital and analog operation modes, the PD505 ensures a smooth migration from analog to digital.

Crystal-clear voice transmission

Ergonomic and user-friendly design

Compact size, light weight

Lightweight yet durable



Technical Data

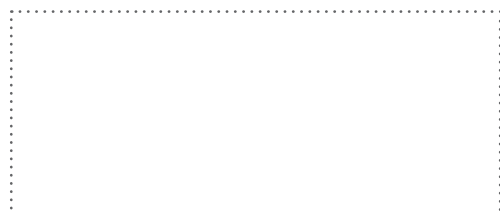
General data	
Frequency range	UHF: 400 - 470 MHz VHF: 136 - 174 MHz
Channel capacity	32
Number of zones	3
Operating voltage	7.4 V
Battery	1500 mAh (lithium-ion battery)
Weight	260 g
Dimensions (H x W x D) (with standard battery, without antenna)	115 x 54 x 27 mm
Frequency stability	± 0.5 ppm
Antenna impedance	50 Ω

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 / 70dB 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 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

Transmitter	
Transmitting power	VHF: 1 / 5 W UHF: 1 / 4 W
Modulation	11 KΦF3E at 12.5 kHz 14 KΦF3E at 20 kHz 16 KΦF3E at 25 kHz
4FSK digital modulation	12.5 kHz (data only): 7K6ΦFXD 12.5 kHz (data and voice): 7K6ΦFXW
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 + +
ETSI standard	ETSI-TS102 361-1, -2, -3

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 discharge), ± 15 kV (air discharge)
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

Your Hytera partner:



Hytera Mobilfunk GmbH

Address: Fritz-Hahne-Straße 7, 31848 Bad Münster, Germany
Phone: +49 (0)5042 / 998-0 **Fax:** +49 (0)5042 / 998-105
E-mail: info@hytera.de | www.hytera.de/en

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

For more information, visit: www.hytera.de/en

Contact us when you are interested in buying Hytera products, sales partnership or application partnership:

✉ info@hytera.de



SGS Certificate DE11/81829313

Hytera Mobilfunk GmbH reserves the right to alter product design and to change the specification. If a printing error occurs, Hytera Mobilfunk GmbH assumes no liability. All specifications subject to change without notice.

Encryption features are optional and require a separate configuration, subject to German and European export regulations.

HYT Hytera Encryption features are optional and require a separate configuration, subject to German and European export regulations.
 © 2013 Hytera Mobilfunk GmbH. All rights reserved.



PD605

DMR handheld radio

The new Hytera PD605 series impresses with its light-weight design, its functionality and high cost effectiveness. With the compact metal housing, the excellent voice quality and support of both digital and analogue radio, the PD605 gives your radio communication a breeze of fresh air. The PD605 handheld radios are designed according to the DMR standard and meet all requirements of the open DMR standard.



Radio

PD605

DMR handheld radio



Highlights

Improved use of the radio spectrum

Thanks to the TDMA process the PD605 allows an assignment of the available bandwidth with double channel capacity. This results in a clear relief of the increasing spectrum scarcity with the use of DMR radio systems.

Extended frequency range

The frequency range in UHF is from 400 MHz to 527 MHz.

Support of GPS, GIS and AVL (optional)

The optionally available GPS module supports GIS / AVL applications to optimize your workflows and operations.

Man Down function (option)

The optional available Man Down function automatically alerts your other wireless devices and / or the control center if the user falls and remains lying.

Further Development Port

The further development port provides users and application developers the possibility to add more useful features to your PD605.

Ergonomic design

The handheld radio PD605 offers you a high degree of user-friendliness and reliability which cannot be foregone in critical situations.

Individual button design

The two rotary buttons of the radio are separated by the antenna. This design prevents incorrect operations.

Reliability

The PD605 meets all the requirements of the open ETSI DMR standards (ETSI TS102 361-1, -2, -3) and the MIL810-C/D/E/F/G and IP67 (waterproof up to one meter depth for at least 30 minutes dive time).

Powerful battery

Compared to the analog technology using FDMA, the battery life can be improved by approx. 40 % by using TDMA.

Excellent voice quality

With the combined application of the narrow band codex and technologies for error correction the PD605 ensures an excellent voice quality even in loud environment and in peripheral areas of radio coverage.



Functions (excerpt)

- Small, sleek, light
119 x 54 x 27 mm, only 290g.
- Lithium-ion battery with long lifespan
In digital mode, the PD605 reaches a readiness time of at least 16 hours, at an operating cycle of 5-5-90.
- Robust and reliable
PD605 meets all the requirements of the MIL-STD-810 C / D / E / F / G standards. The IP67 rating ensures maximum resistance against environmental influences.
- Secure communications
Provides DMRA encryption in digital mode and a scrambler feature in analog mode.
- Advanced signalling
Supports different analog dialling methods, including HDC1200, 2-tone and 5-tone, lightens integration into existing analog radio fleets.
- DMR Data Service
The data protocol used is fully compatible with the DMR standard.
- One Touch Call / Text
Supports one-touch features like pre-programmed text messages, voice calls and supplementary features.
- Supplementary features (optional)
PD605 can decode radio enable/disable, remote monitor, as well as priority interrupt.
- Dual Mode (analog & digital)
Providing digital and analog operation modes, the PD605 ensures a smooth migration from analog to digital.



Technical Data

General data	
Frequency range	UHF: 400 - 527 MHz* VHF: 136 - 174 MHz
Channel capacity	32
Zone capacity	3
Channel spacing	25/20/12,5 kHz
Operating voltage	7,4 V
Battery	1500 mAh (Lithium-Ion battery)
Battery life span (5/5/90)	Analogue: approx. 11 h Digital: approx. 16 h
Weight	290 g
Dimensions (H x W x D) (with standard battery, without antenna)	119 x 54 x 27 mm
Frequency stability	± 0,5 ppm
Antenna impedance	50 Ω

Receiver	
Sensitivity (analogue)	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 / 70dB 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 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

Transmitter	
Transmitting power	VHF: 1 / 5 W UHF: 1 / 4 W*
Modulation	11 KΦF3E at 12,5 kHz 14 KΦF3E at 20 kHz 16 KΦF3E at 25 kHz
4FSK digital modulation	12,5 kHz (data only): 7K6ΦFXD 12,5 kHz (voice & data): 7K6ΦFXW
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 + + or SELP
ETSI standard	ETSI-TS102 361-1, -2, -3

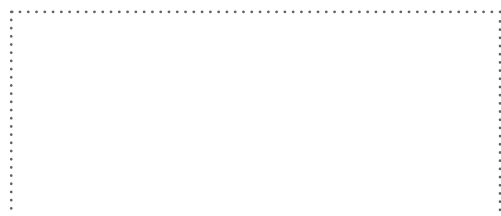
Ambient data	
Operating temperature range	-30 °C to +60 °C
Storage temperature range	-40 °C to +85 °C
ESD	IEC 61000-4-2 (level 4), ± 8 kV (contact discharge), ± 15 kV (air discharge)
Protection against dust and moisture	IP67
Shock and vibration resistance	MIL-STD-810 C/D/E/F/G
Relative humidity	MIL-STD-810 C/D/E/F/G

GPS (optionally)	
TTFF (cold start)	< 1 minute
TTFF (warm start)	< 10 seconds
Horizontal Accuracy	< 10 meter

Features marked with * are available in later versions.

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

Your Hytera partner:



Hytera Mobilfunk GmbH

Address: Fritz-Hahne-Straße 7, 31848 Bad Münder, Germany
Telephone: +49 (0)5042 / 998-0 **Fax:** +49 (0)5042 / 998-105
E-mail: info@hytera.de | www.hytera.de

For more information, visit: www.hytera.de/en

Contact us when you are interested in buying Hytera products, sales partnership or application partnership:

✉ info@hytera.de



SGS Certificate DE11/81829313

Hytera Mobilfunk GmbH reserves the right to alter product design and to change the specification. If a printing error occurs, Hytera Mobilfunk GmbH assumes no liability. All specifications subject to change without notice.

Encryption features are optional and require a separate configuration, subject to German and European export regulations.

HYT Hytera[™] are registered trademarks of Hytera Co. Ltd. ACCESSNET[®] and all derivatives are protected trademarks of Hytera Mobilfunk GmbH. © 2013 Hytera Mobilfunk GmbH. All rights reserved.



RD625

DMR repeater

The RD625 is a digital repeater designed specifically to provide reliable radio coverage in buildings and tunnels. The RD625 has been developed in accordance with the Digital Mobile Radio (DMR) open ETSI standard and can be operated in digital or analog.



Repeater

RD625

DMR repeater



Highlights

Flexible IP networking

Hytera's DMR repeater can be connected to an IP-based communication network with multiple locations. The roaming function is used to provide radios in this radio network with voice and data services across cells.

Connecting VoIP private automatic branch exchanges (PABX)

The RD625 repeater makes it possible to connect existing VoIP telephone systems to the DMR radio network. This allows DMR radio subscribers to hold half-duplex conversations with participants from the telephone network. Telephone subscribers have the option of making either individual or group calls in the radio network.

Analog and digital operation with the ability to switch automatically

The RD625 repeater can be operated both in analog and in digital mode and is completely compatible with analog systems currently in use. The device can automatically change between digital and analog mode depending on the type of receiver signal, saving both time and money by eliminating the need to configure frequencies and channels manually.

Automatic AC/DC switchover

The integrated power supply of the RD625 automatically chooses between alternating current and direct current. This makes it possible to provide a fail-safe radio signal by connecting the repeater to an independent source of direct current (UPS) in addition to the normal supply of power. If the AC supply fails, the RD625 switches to the second power supply automatically.



Easy installation

The RD625's well-engineered design makes wall mounting easy using the optionally available wall bracket. This makes it possible to install the repeater flexibly and conveniently in buildings.

Compact all-in-one design

The RD625 combines transmitter and receiver components, the voltage supply and the duplexer (optional) in its compact chassis.



Repeater diagnostics and control system (RDAC)

A PC-based application can be used to monitor, inspect and control the RD625.

The software supports network access from multiple points and allows administrators to monitor the DMR radio network.

Repeater access management

To ensure a high level of security, the RD625 features a repeater access monitor that protect the radio network from unauthorized access attempts.

Standard accessories



EU AC power cable
PWC03

Optional accessories



Wall mount BRK21



DC power cable
PWC06



Programming cable
(USB) PC40



Back-to-Back
data cable PC49



Fine-wire fuse
POA15

Technical Data

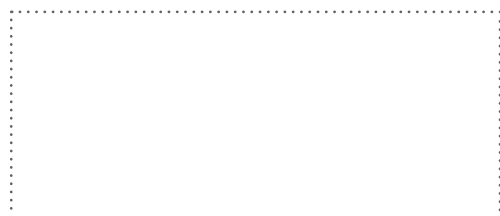
General	
Frequency range	VHF: 136 - 174 MHz UHF: 400 - 470 MHz
Supported operating modes	DMR Tier II (conventional DMR) in accordance with ETSI TS 102 361-1/2/3, analog
Channel capacity	16
Channel spacing	12.5 / 20 / 25 kHz
Operating voltage	13.6 ± 15% V _{DC} 90 V – 264 V _{AC}
Max. power consumption (in stand by)	≤ 0.5 A
Max. power consumption (during transmission)	≤ 5.5 A
Frequency stability	±0.5 ppm
Antenna impedance	50 Ω
Dimensions (H×W×D)	210 x 348 x 108 mm
Weight (with duplexer)	5 kg

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	65 dB at 12.5 kHz / 75 dB at 20 / 25 kHz 60 dB at 12.5 kHz / 70 dB at 20 / 25 kHz
Intermodulation TIA-603 ETSI	75 dB at 12.5 / 20 / 25 kHz 70 dB at 12.5 / 20 / 25 kHz
Spurious response rejection TIA-603 ETSI	75 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 distortion	≤ 3%
Audio sensitivity	+1 to -3 dB
Conducted spurious emission	< -57 dBm

Transmitter	
Transmitting power	1 – 25 W (continuous)
Modulation	11 KΦF3E at 12.5 kHz 14 KΦF3E at 20 kHz 16 KΦF3E at 25 kHz
4FSK digital modulation	12.5 kHz (data only): 7K6ΦFXD 12.5 kHz (data and voice): 7K6ΦFXW
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
Capacity of the adjacent channel	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

Your Hytera partner:



Hytera Mobilfunk GmbH

Address: Fritz-Hahne-Strasse 7, 31848 Bad Münster, Germany
Phone no. +49 (0)5042 / 998-0 **Fax:** +49 (0)5042 / 998-105
Email: info@hytera.de | www.hytera-mobilfunk.com

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

For further information, please go to:

www.hytera-mobilfunk.com

Contact us if you are interested in purchase, sales or application partnership:

✉ info@hytera.de



SGS certificate DE11/81829313

Hytera Mobilfunk GmbH reserves the right to modify the product design and the specifications. Hytera Mobilfunk GmbH does not assume any liability in case of a printing error. All specifications are subject to change without prior notice.

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

HYT Hytera are registered trademarks of Hytera Co. Ltd. ACCESSNET® and all derivatives are protected trademarks of Hytera Mobilfunk GmbH.
 ©2014 Hytera Mobilfunk GmbH. All rights reserved.