

PD985 DMR Handheld Radio



Highlights of the PD985

01

MicroSD card

The PD985 has a MicroSD card slot, which can be used to store critical communications. The card slot is located below the installed battery of the radio.

MicroSD cards with a capacity of up to 32 gigabytes are supported, which means that up to 576 hours of voice communication can be stored.

02

Single-frequency repeater mode

The repeater mode of the PD985 increases the range of other radios by receiving voice and data communication in DMO mode on the first timeslot, and transmitting these information on the second timeslot using the same frequency at the same time.

The PD985 DMR handheld radio is thus ideally suited for use in areas with limited radio coverage.

03

Bluetooth® 4.0

Supporting Bluetooth® 4.0, the PD985 is ready for wireless audio accessories.

Besides easy data exchange, the convenient programming via Bluetooth® is also possible.

04

Full-duplex calls

The PD985 allows full-duplex calls to other PD985 radios, phones and mobile phones, where both parties can talk and listen at the same time.

05

Real-time clock

The integrated real-time clock allows users to check the exact time of received messages and calls.

06

Smart battery

The PD985 has the new smart battery feature on board, which increases user-friendliness and battery life.

Battery status, battery life and the remaining charging time can be checked using the smart battery charger.



Endlessly rotatable 360-degree channel knob

Intelligent antenna design



1.8 inch display



IP68 water and dust protection

Improved sensitivity and frequency stability



Improved voice quality



Longer battery life



360-degree channel knob

With this channel knob, users can easily and conveniently change the channel and zone.



Improved sensitivity and frequency stability

Compared to the PD785, the PD985 has a vastly improved performance. Its advanced technology increases both range and reliability.



Degree of protection: IP68

The dust and moisture protection according to IP68 ensures the operation of the radio even in harsh working environments and equips the PD985 for every application.



Longer battery life

The charging times are drastically shortened and the battery life is up to 33 percent longer than the PD785/PD785G.



Improved voice quality

The speaker with an output power of 3 watts and a new method for suppression of ambient noise ensures crystal-clear voice communication.

Features of the PD985 (selection)

Basic features

- Full-fledged keypad
- Color display
- Text messages
- Preprogrammed text messages
- Automatic cell re-selection (Roaming)
- Scanning
- Channel announcement
- Bluetooth® 4.0 (audio)
- Bluetooth® 4.0 (data)*
- Integrated GPS
- Option board for self-developed additional functions

Advanced features

- Pseudo Trunking
- Telemetry
- Rental function
- Phone interconnect
- Full-duplex call (DMR Tier II)*
- Full-duplex call (DMR Tier III)*
- Single-frequency repeater mode*
- MicroSD card*
- Smart battery feature*
- Real-time clock

Supported operating modes

- DMR Tier II (conventional DMR)
according to ETSI TS 102 361-1/2/3
- Simulcast
- XPT Digital Trunking
- DMR Tier III (DMR Trunking)
according to ETSI TS 102 361-1/2/3/4
- Conventional analog radio
- MPT 1327 (analog trunked radio)

Security

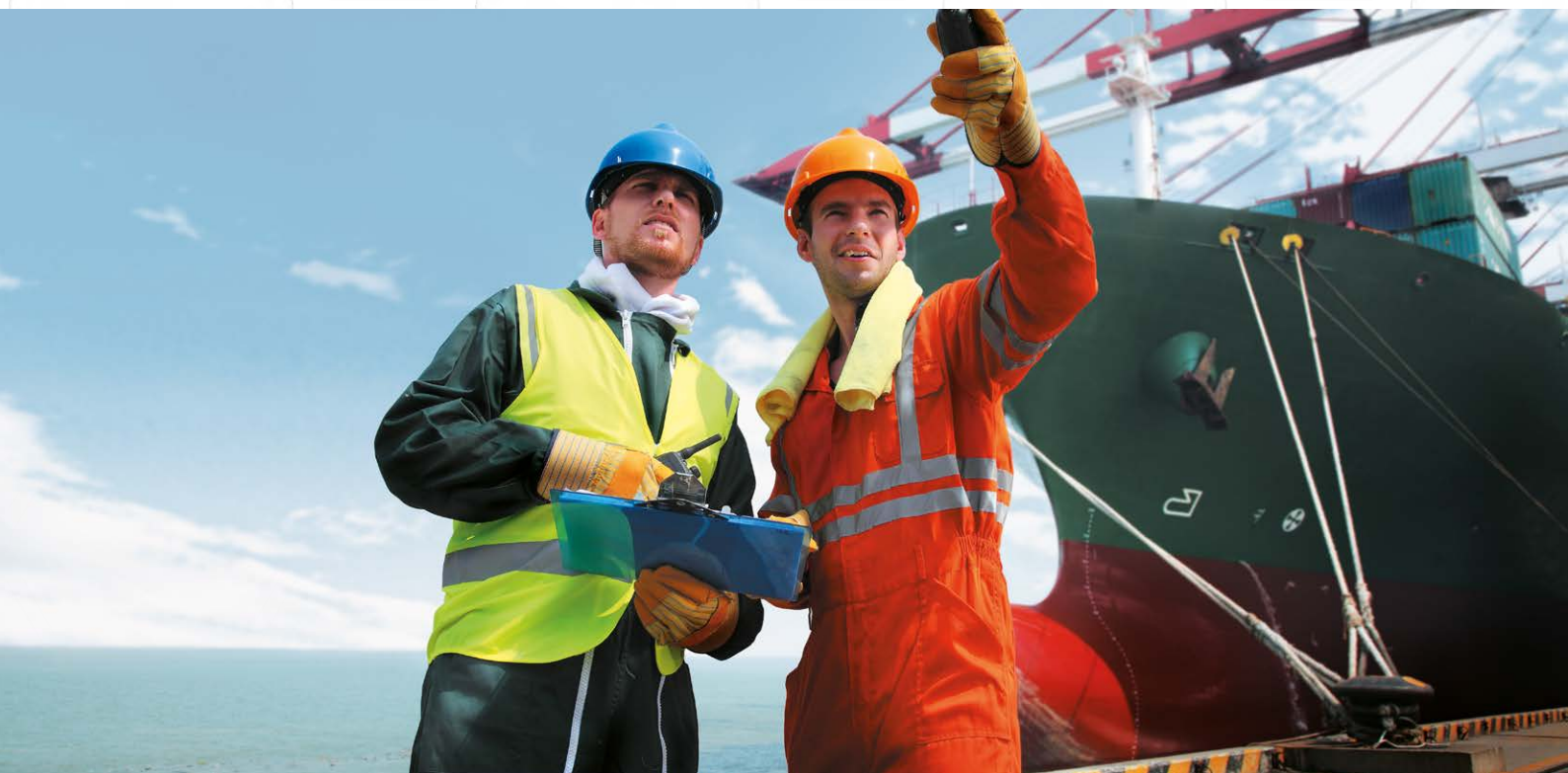
- Emergency alarm
- Dedicated emergency button
- Alert call
- Man-down alarm
- Lone worker function
- Enhanced encryption (40 Bit)
- Enhanced encryption (128 / 256 Bit)
- Multiple key encryption
- Priority Interrupt
- Remote Monitor
- Vibration alarm
- Radio enable disable)
- GPS messages
- GPS location check

Audio features

- Automatic Gain Control (AGC)
- Acoustic Feedback Suppressor
- Loudness Quality Optimization (LQO)
- Multi-band equalizer*
- Dynamic noise reduction

- Standard function
- Optional function

Functions marked with * are made available by means of a subsequent software update.



Accessories for the PD985

Users of the PD985 can access a comprehensive range of accessories. In addition to a wide range of different audio accessories, such as speaker sets and loudspeaker microphones, various solutions for charging management as well as carrying accessories are available.

Bluetooth® accessories

Thanks to integrated Bluetooth® 4.0, the PD985 can be easily paired with Bluetooth®-capable audio accessories.

Charging accessories

In addition to single chargers with 1 A or 2 A, the PD985 can also be charged with the CH10A06 dual-charging cradle, which offers an additional slot for a replacement battery.

One highlight is the CH20L04 smart battery charger with color display, which shows the battery status, the life of the battery and the remaining charging time.

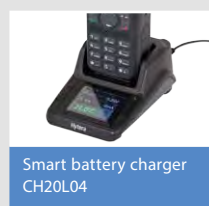
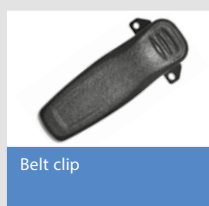
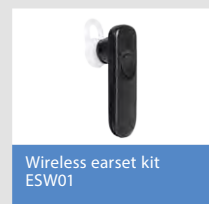
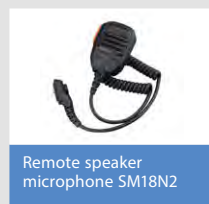
If the PD985 is used in a larger scenario, the MCA08 charging station and the MCA05 battery optimizing system are available for charging 6 radios at the same time.

The CH20L04 smart battery charger and the CH20L06 single charger offer a charging current of 2 A and ensure faster charging.



Charger	Normal battery (2000 mAh)	Smart battery (2000 mAh)
CH20L06 charger (2 A charging current)	ca. 2 h	ca. 1 h 30 min
CH20L04 smart battery charger (2 A charging current)		
CH10A07 charger (1 A charging current)	ca. 3 h and 40 min	ca. 3 h and 40 min

Scope of delivery



The illustrations shown above are intended for reference purposes only. The products themselves may differ from these illustrations. The scope of delivery of radio equipment may deviate due to project-specific requirements.

Technical data

General data	
Frequency range	UHF 350 – 527 MHz
Channel capacity	1024
Number of zones	64 (Up to 128 channels in each zone)
Weight	12.5 / 20 / 25 kHz (analog) 12.5 kHz (digital)
Operating voltage	7.4 V (rated)
Standard battery	2000 mAh (lithium-ion battery)
Battery service life (5-5-90 duty cycle, high transmitting power, standard battery)	• ca. 14.5 h (analog) • ca. 19.5 h (digital)
Frequency stability	± 0.5 ppm
Antenna impedance	50 Ω
Dimensions (H × B × T, without antenna)	131 x 54,5 x 36 mm
Weight (with antenna and standard battery)	335 g
LCD display	1.8 inch, 160 × 128 pixels, 65,536 colors
Programmable keys	5 + number keys
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	IP68
Shock and vibration resistance	MIL-STD-810 C/D/E/F/G
Relative humidity	MIL-STD-810 C/D/E/F/G
GPS	
Time to first position fix (TTFF)	< 1 minute (cold start) < 10 seconds (warm start)
Horizontal accuracy	< 10 meter

Transmitter	
Transmitting power	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)	0.22 μV
Sensitivity (digital)	0.22 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
Spurious response rejection 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 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:



Hytera Mobilfunk GmbH

Adresse: Fritz-Hahne-Straße 7, 31848 Bad Münder, Germany
Tel.: + 49 (0)5042 / 998-0 **Fax:** + 49 (0)5042 / 998-105
E-Mail: info@hytera.de | www.hytera-mobilfunk.com

Further information can be found at:

www.hytera-mobilfunk.com

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



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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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