



## Hytera presents: The world's first DMR handheld radios for digital PMR446 radio

The new license-free digital handheld mobile radios from Hytera are among the first license-free DMR handheld radios in the world. They operate in the 446-MHz frequency range and were developed in accordance with the open Digital Mobile Radio standard. Their compact design and intuitive operation make these DMR radios the ideal companion for day-to-day business.



# Radios

## PMR446 Digital DMR handheld radio



### The open mobile radio standard DMR

Digital Mobile Radio (DMR) is an open digital mobile radio standard for professional mobile radio (PMR) that was developed by the European Telecommunications Standards Institute (ETSI). DMR mobile radio systems use a channel range of 12.5 kHz and, as such, are compatible with the frequency spectrum of analog mobile radio. As a result, mobile radio solutions based on the DMR standard enable a simple and cost-saving migration from analog to digital mobile radio.

The DMR standard differentiates three different graduations in functionality and performance. The license-free DMR radios from Hytera correspond to the level DMR Tier I. Products in accordance with DMR Tier I are used for simple radio communication in the license-free 446-MHz band and support a maximum transmitting power of 0.5 watt.

For users who require a higher scope of functions, Hytera also offers conventional DMR mobile radio systems. Furthermore, DMR trunked radio systems are also part of the Hytera product portfolio.

### PMR446 – License-free radio for everyone

PMR446 radios can be operated by any user without a special proof of need or a license. The UHF frequency range from 446.0 to 446.2 MHz is assigned to these license-free radios, while the range from 446.0 to 446.1 MHz is reserved for analog applications and the range from 446.1 up to 446.2 MHz for dialog applications.

The "PMR" in PMR446 is an abbreviation for "Private Mobile Radio". PMR446 radios always have a permanently installed antenna and a maximum transmitting power of 0.5 watt.

Our digital PMR446 radios combine the properties of citizens' band radio with the new digital mobile radio standard DMR. With this unique combination, you receive license-free radios that also offer extensive functions of professional digital mobile radio.





## Benefits

### Advantages of our digital PMR446 radios

#### High voice quality

The DMR digital radio technology supports various methods for hum and noise, thereby ensuring an improved voice quality than conventional analog radio technology. This applies particularly to the outside edges of the transmission area.

#### More radio channels

In contrast to conventional analog radio devices, our digital radio devices give you 16 analog and 16 digital radio channels.

#### Longer battery runtime

Thanks to the TDMA process used, our radios achieve a battery service life in digital mode that is up to 40 % longer than the traditional analog mobile radio.

#### License-free DMR radio

Our license-free DMR radios are the first of their kind on the market. This means that you can use them without an operating license and do not have to do without professional product features! On top of that, you receive PMR446 radios that feature state-of-the-art digital radio technology.

#### Analog and digital mobile radio in one radio device

All of our DMR radios support analog as well as digital radio service. This allows you to communicate even with already existing analog radio devices.



## Application

### Possible applications of our digital PMR446 radios

#### PD355LF & PD365LF

The compact and practical design make the handheld radios PD355LF and PD365LF from Hytera with their light weight of only 160 g to attractive and functional companions. Stay in contact with your colleagues, secure reliable communication with style.

- Catering business
- Retail business
- Hotel industry
- Leisure time

#### PD505LF

The robust and rugged design render the license-free handheld mobile radio PD505LF from Hytera the perfect companion if a professional and robust radio is required. Provide for more security and efficiency during the daily collaboration.

- Construction trade
- Agriculture
- Facility management
- Leisure time

# Radios

## PD355LF & PD365LF

DMR handheld radios



### Highlights

#### Attractive and a lightweight

Their stylish and compact design and the intuitive operation render the radios PD355LF and PD365LF as companions that nobody wants to miss in day-to-day communication. With a weight of only approx. 160 g for each model, both can be carried comfortably and even fit in the pockets of pants or jackets.

#### Support of analog and digital mobile radio

Both handheld radios were developed in compliance with the ETSI Digital Mobile Radio (DMR) standard. They support license-free operation according to DMR Tier I and can also be operated as an analog radio.

#### 32 preprogrammed channels

Thanks to the implemented digital technology, both radios offer 32 preprogrammed channels. Of these channels, 16 are analog and 16 digital, divided into three zones.

#### Integrated antenna

The unique integrated antenna design enables excellent availability without a large antenna on the radio.

#### Small investment - fast start

The license-free DMR devices not only offer numerous features, but also a quick, uncomplicated start into the digital PMR446 radio at a fair price.

#### Long battery service life

In digital mode, the supplied lithium-ion battery (2000 mAh) provides both mobile radios with an operating time of at least 12 hours, given an operating cycle of 5-5-90 (5 percent talk/send, 5 percent receive and 90 percent standby).

#### Additional Functions (selection)

- Dual mode: Switching between digital and analog is possible
- Versatile voice calls: Individual call, group call, and broadcast call on digital channels
- Dust and water protection according to IP54
- Shock and vibration resistance according to MIL-STD-810 C/D/E/F/G
- DMR text messages with up to 64 characters
- Four programmable keys
- Charging and programming via Micro-USB interface
- Scan function for analog as well as digital channels



Micro-USB port for charging the battery

Integrated antenna design



PD365LF

PD355LF

Long battery runtime

Compact design

### Standard scope of delivery



Lithium-ion battery  
(2000 mAh) BL2009



Switching power adapter  
for charger PS1018



Hand strap RO01



Belt clip BC20/BC 21

### Additional accessories (selection)



Programming cable  
(USB) PC69



Earphone with C-clip  
EHS16

# Radios

## PD505LF DMR handheld radio



### Highlights

#### Support of analog and digital mobile radio

The PD505LF was developed in compliance with the ETSI Digital Mobile Radio (DMR) standard. The handheld radio supports license-free operation according to DMR Tier I. It can also be operated as an analog radio.

#### Secure communication

Thanks to the Hytera basic encryption with 40 bit, you communicate securely with your colleagues.

#### Accessories for every operation

As the classic Hytera handheld radio, you have access to an extensive portfolio of accessories for the PD505LF. Whether multiple charger for up to six radios, cases, headsets or speaker microphones, the PD505LF adapts itself to all operating conditions.

#### Ergonomic design

The PD505LF 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 PD505LF 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.

#### Additional Functions (selection)

- Dust and water protection according to IP54
- Shock and vibration resistance according to MIL-STD-810 C/D/E/F/G
- Versatile voice calls: Individual call, group call, and broadcast call on digital channels
- Analog signaling: 5-tone, 2-tone, HDC1200, CTCSS, CDCSS for analog channels
- Squelch in analog operation
- Scan function for analog as well as digital channels
- Although the PD505LF has no display, it supports text messages: Up to 25 pre-programmed text messages can be saved.
- TDMA direct mode for DMR
- Hytera basic encryption with 40 bit
- DMRA data service
- VOX



High cost efficiency

Individual button design



PD505LF

Ergonomic and lightweight chassis

Battery service life of 16 hours (1500 mAh)

### Standard scope of delivery

### Additional accessories (selection)



Lithium-ion battery  
(1500 mAh) BL1502



Voltage supply unit for  
charging cradle CH10A07



Switching power adapt-  
er for charger PS1018



Vehicle power adapter  
for charger CHV09



Speaker microphone  
SM26M1



Earphone ESM12



Hand strap RO03



Belt clip BC19



Lithium-ion battery  
(2000 mAh) BL2010



6-unit charger MCA08



Carrying case (nylon)  
NCN011

## Technical Data

PD355LF & PD365LF	
Frequency range	UHF: 446,0 – 446,2 MHz
Supported operating modes	<ul style="list-style-type: none"> <li>DMR Tier I (license-free DMR)</li> <li>PMR446 analog mobile radio</li> <li>DMR Tier I in acc. with ETSI TS 102 361-1/2/3</li> </ul>
Channel capacity	32
Zone capacity	16 (in condition as supplied to the customer 3 zones with 32 channels preconfigured)
Channel spacing	12.5 kHz (analog, digital)
Battery service life (5-5-90 duty cycle, high transmitting power, standard battery)	approx. 12 hours (digital)
Standard battery	2000mAh (lithium-ion battery)
Transmitting power	0.5 W
Frequency stability	± 0.5 ppm
Antenna impedance	50 Ω
Digital vocoder type	AMBE +2™
Operating voltage	3.7 V
Dust and water protection	IP54
Shock and vibration resistance	MIL-STD-810 C/D/E/F/G
Operating temperature range	- 30 °C to + 60 °C
Storage temperature range	- 40 °C to + 85 °C
Dimensions (H × B × T)	123 × 58 × 23 mm (PD355) 135 × 58 × 24 mm (PD365)
Weight	approx. 160 g

PD505LF	
Frequency range	UHF: 446,0 – 446,2 MHz
Supported operating modes	<ul style="list-style-type: none"> <li>DMR Tier I (license-free DMR)</li> <li>PMR446 analog mobile radio</li> <li>DMR Tier I in acc. with ETSI TS 102 361-1/2/3</li> </ul>
Channel capacity	32
Zone capacity	3
Channel spacing	12.5 kHz (analog, digital)
Battery service life (5-5-90 duty cycle, high transmitting power, standard battery)	approx. 16 hours (digital)
Standard battery	1500mAh (lithium-ion battery)
Transmitting power	0.5 W
Frequency stability	± 0.5 ppm
Antenna impedance	50 Ω
Digital vocoder type	AMBE +2™
Operating voltage	7.4 V
Dust and water protection	IP54
Shock and vibration resistance	MIL-STD-810 C/D/E/F/G
Operating temperature range	- 30 °C to + 60 °C
Storage temperature range	- 40 °C to + 85 °C
Dimensions (H × B × T) (without antenna)	115 × 54 × 27 mm
Weight	approx. 260 g

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:



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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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