



RD965

Outdoor DMR repeater

The RD965 is Hytera's first digital/analog repeater for outdoor use that is compatible with the DMR standard. Thanks to its compact design, the device can be used in a number of application scenarios, whether carried on your back, mounted on a wall or installed in an equipment rack.



Repeater

RD965

Outdoor DMR repeater



Highlights

GPS

The GPS module enables emergency control rooms to monitor the location of a small radio network in real-time if the repeater is being used as a mobile unit.

Small backup battery (optional)

The 10 Ah lithium-ion battery can support at least eight hours of operation at a duty cycle of 50% and boasts a high transmitting power as an emergency power supply, for outdoor operation and mobile use. RD965 is compatible with the SMBus 1.1 standard and can monitor battery statuses, such as the estimated remaining capacity. Intelligent charging management enables the battery to be charged automatically for later use. The three-stage battery protection enhances the safety and reliability of the charging process.

Repeater diagnostics and control system

Using a PC-based application, it is possible to monitor, diagnose, and control remote repeaters (via the IP interface with a network connected) and local repeaters (via USB port). Hytera's RDAC software supports network access at multiple points and enables the administrator to monitor two-way radios registered in the DMR radio network.

Voice input/output via dual timeslots

The device supports voice input and output via dual timeslots in digital mode and enables users to continuously record conversations.

Flexible networking

By connecting geographically distributed repeaters that run at the same or different frequencies to form an IP-based and location-independent wireless communication network, mobile radios can use voice and data services even when in roaming mode. The RD965 can be used with the RD985 in a repeater network.



Innovative design

Outdoor operation and IP67 degree of protection

RD965 fully complies with the standards MIL-STD-810 C/D/E/F/G and conforms to the IP67 degree of protection, ensuring exceptional performance, even in harsh conditions.

Slimline and portable

With its compact design, the device measures a mere 52 mm in height and weighs less than 5 kg, including the 10 Ah battery.

16 channels

The repeater supports up to 16 voice channels. The user can switch between channels using the PC-based RDAC software, the channel selector switch on the front panel of the device, or the external interface on the repeater.

Upgradeable software

New functions can be integrated easily and smoothly using software upgrades, meaning the user does not need to buy a new device.



Digital/analogue connection

Using a back-to-back-connection between two repeaters, analogue radio networks can be connected to the DMR radio system, facilitating the smooth transition from analogue to digital radio technology.

User-friendly control panel

The control panel has various indicators for the channel status, a button for a hand microphone and a connection for a hand microphone or a remote speaker microphone.

Flexible applications

The repeater can be mounted on tables and walls to provide mobile radio coverage within a building, installed in a mobile case or rack for emergency communication, or carried on your back for outdoor use. The RD965 repeater is also suitable for providing tunnels and underground facilities, e.g. underground car parks, with radio coverage.

In the box



External Power Supply (84W) PS7502

Optional accessories



GPS antenna AN0141H03



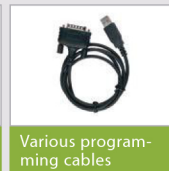
Nylon backpack NCN010



Lithium-ion battery PV3001



Remote speaker microphone IP67 SM18A1



Various programming cables

Technical Data

| General data | |
|--|--|
| Frequency range | VHF: 136 MHz – 174 MHz UHF: 400 MHz – 470 MHz |
| Supported operating modes | <ul style="list-style-type: none"> DMR Tier II in acc. with ETSI TS 102 361-1/2/3 Analog |
| Channel capacity | 16 |
| Zone capacity | 1 |
| Channel spacing | 12.5 / 20 / 25 kHz (analog) 12.5 kHz (digital) |
| Operating voltage | 13.6 ± 15% V _{DC} Storage battery: 14.8 V |
| Max. power consumption (in stand by) | ≤ 0.8 A |
| Max. power consumption (during transmission) | ≤ 3.5 A |
| Standard battery | 10 Ah (lithium-ion battery) |
| Battery life (5-5-90 operating cycle, high transmitting power, standard battery) | approx. 8 hours |
| Frequency stability | ± 0.5 ppm |
| Antenna impedance | 50 Ω |
| Dimensions (H × W × D) | 52 × 183 × 302 mm (repeater with protective housing) 42 × 172 × 280 mm (repeater without protective housing) |
| Weight | 3.5 kg (without standard battery) |

| 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), ± 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 | |
|--|--------------|
| Time to first position recognition (TTFF) cold start | < 1 minute |
| Time to first position recognition (TTFF) warm start | < 10 seconds |
| Horizontal accuracy | < 10 meter |

Your Hytera partner:

Northera Haberlesme Çözümleri A.Ş.



Dumlupınar Mah. Yumurtacı Abdi Bey Cad. Gümüşdere
Çıkmazi Sok. Concord İstanbul No: 1/E
C Blok Kat: 22 D:209 Kadıköy - İstanbul
Tel: +90 (216) 711 69 94
www.northera.com.tr

Hytera
Respond & Achieve

Hytera Communications Corporation Limited

Address: Hytera Communications (UK) Co. Ltd.

Hytera House, 939 Yeovil Road, Slough, Berkshire. SL1 4NH, UK.

Tel: +44 (0) 1753 826 120 Fax: +44 (0) 1753 826 121

www.hytera.co.uk info@hyterauk.co.uk

| Transmitter | |
|-----------------------------------|---|
| Transmitting power | 1 – 10 W (adjustable) |
| 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): 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 |
| 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 (analogue) | 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 power output | 0.5 W |
| Nominal audio distortion | ≤ 3% |
| Audio sensitivity | + 1 dB at - 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.

Further information can be found at:

www.hytera.co.uk

Keep up to date with Hytera on social media.



Hytera reserves the right to modify the product design and the specifications. In case of a printing error, Hytera does not accept any liability. All specifications are subject to change without notice.

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

HYT Hytera are registered trademarks of Hytera Communications Corp. Ltd. © 2017 Hytera Communication Corp., Ltd. All rights reserved.