Hytera
Respond & Achieve

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.

DMR
DIGITAL MOBILE RADIO ASSOCIATION

www.hytera-mobilfunk.com

Repeater

RD625

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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.

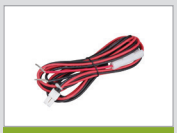
Repeater access management
To ensure a high level of security, the RD625 features a repeater access monitor that protect the radio network from unauthorized access attempts.

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	2870 g

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

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

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