



Hytera DS-6310 Simulcast

DMR simulcast system for professional users

The Hytera DS-6310 Simulcast is based on the open DMR standard, and allows operation of a conventional DMR radio system (DMR Tier II) as a simulcast network. Using the Hytera RD985S repeater, it is possible to inexpensively expand large-area radio coverage, with one frequency pair.



Mobile radio system

DS-6310 SIMULCAST

DMR simulcast system



Advantages of Hytera DS-6310 Simulcast

Reliable DMR radio coverage over large areas

The Hytera simulcast system is ideal for utility companies, public transport organizations and municipalities who either want, or need, to modernize their existing simulcast or analogue mobile radio system.

Full-area radio coverage with just one frequency pair

Simulcast systems are used whenever it is necessary to provide frequency-efficient radio coverage of large areas, and when the focus of radio communication is on the digital functionality of a DMR Tier II system. The simulcast technology means that only one frequency pair is required for such a mobile radio system, irrespective of the number of base stations in the network.

High voice quality thanks to "Dynamic Voting"

The excellent voice quality of the simulcast system exploits the strengths of digital radio to the full. In addition, the system also ensures that ideal voice quality is guaranteed in areas where the radio coverage of two base stations overlaps. The switch ensures, by means of quality check, that the best radio signal is forwarded and broadcast in each case.

Analogue and digital operation

The Hytera simulcast system is capable of both analogue and digital operation. CTCSS and CDCSS signaling systems are supported in analogue mode. However, the greatest added value is obtained in digital operation. Here, two calls can take place simultaneously on one frequency and data transmission services are also available.

Increased capacity through intelligent system management (Subnetting)

Using the network management software, the simulcast system can be divided into different subnets depending on base stations or the timeslots of a repeater. Each subnet operates as an independent mobile radio system, and can provide additional capacity in certain areas. Subnets can be temporarily connected with each other in order to react quickly to changed conditions.

Flexible networking thanks to IP technology

The IP-based system architecture provides for flexible networking, and creates less demand for system connections. Based on commercially available network technology such as servers, switches and routers, the IP transport network of the simulcast system can be maintained and upgraded cost-efficiently.

Extensive range of compatible radios

The simulcast system is based on the DMR standard for conventional digital radio (DMR Tier II). This ensures compatibility with numerous Hytera radios. Analogue and DMR radios can therefore still be used in conjunction with the simulcast system.





Versatile architecture options

Hytera DS-6310 Simulcast comprises of base stations, and at least one Mobile Switching Office (MSO). The individual network constituents are connected with each other via an IP transport network.

Base station with flexibility down to the very last detail

The base station of the simulcast system is based on the tried and tested RD985S repeater technology from Hytera.

- Modular structure for ease of operation and maintenance.
- Optional delivery in an equipment rack or for installation in an existing rack.
- Existing RD985S repeaters can be used for the simulcast system.

A maximum of two repeaters can be used in a base station. In addition to the repeaters, the base station also includes the Synchronized Expansion Unit (SEU), a power supply and a duplexer.

Dispatcher system

The Hytera simulcast system can be operated with both line dispatcher (LDS) and radio dispatcher solutions. Both solutions are characterized by efficient communication and simple management of the radio subscribers in the simulcast system.

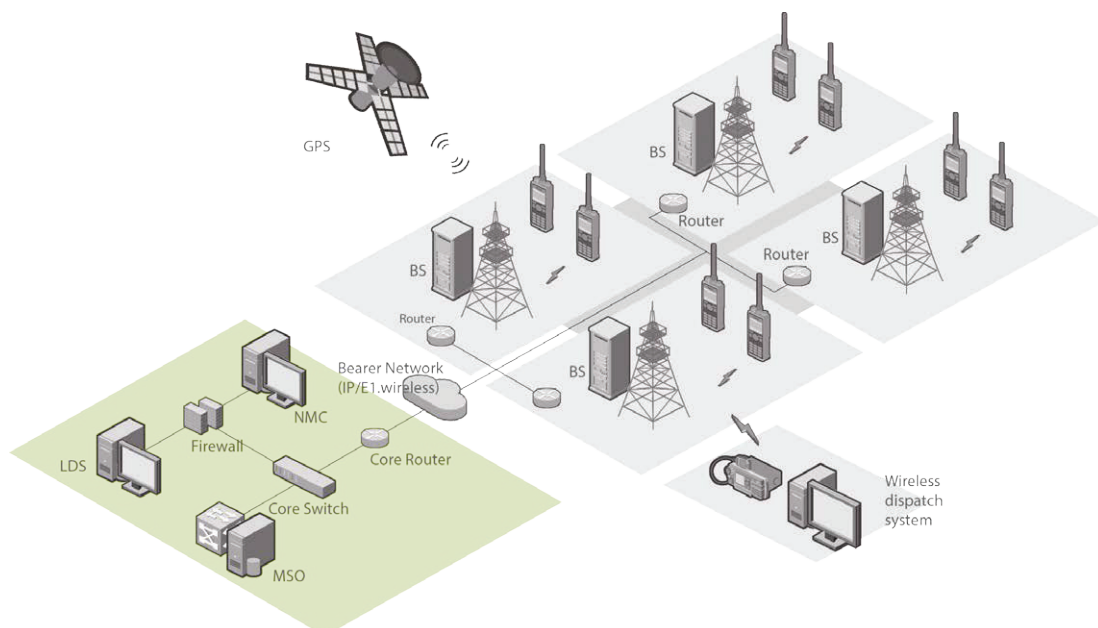
Network Management System (NMS)

The NMS ensures efficient administration of the mobile radio system, by providing comprehensive functions for monitoring, operation and maintenance. In addition, it facilitates the configuration of the software and hardware components.

- Several workstations can be connected, thanks to its client-server architecture.
- Central management of network elements and software updated by remote access.
- Gateway configuration for PABX or PSTN connection, permitting communication between mobile radio systems and telephones via SIP protocol.

Functions

- Voice Services: Individual call, group call, include call, broadcast call, emergency call, PSTN/PABX call, dispatcher call, etc.
- Data services: Text and status messages, GPS data, AVL, etc.
- End-to-end encryption, OTAP, discreet listening, voice recording, etc.



Our product range for Hytera DS-6310 Simulcast

Hytera offers you a complete product range for your simulcast mobile radio system. From infrastructure via mobile radios, up to applications – you can compile your individual solution.



DMR radios with DMR Tier II support (selection)



Network Management System (NMS)



SmartDispatch / LDS



Base station with RD9855 repeater in rack or for installation

Technical Data

Characteristics of the mobile radio system	
Frequency range	VHF: 136 MHz – 174 MHz UHF: 400 MHz – 470 MHz
Supported operating modes	DMR Tier II according to ETSI TS 102 361-1/2/3 Analogue
Base stations	100 per MSO
Repeater	200 per MSO
Supported repeaters	max. 2 per base station
Mobile Switching Offices (MSO)	max. 8 in the mobile radio system
Channel spacing	12.5 / 20 / 25 kHz (analogue) 12.5 kHz (digital)

Characteristics of the base station	
Power consumption under full load	With one repeater: ≤ 200 W With two repeaters: ≤ 400 W
Operating temperature range	-30 °C to +60 °C
Storage temperature range	-40 °C to +85 °C
Relative humidity	5 % to 95 %
Dimensions (H x B x T) (equipment rack)	With one repeater: 355 x 428 x 483 mm (8 U) With two repeaters: 900 x 600 x 600 mm (18 U)
Weight (equipment rack)	With one repeater: ≤ 50 kg With two repeaters: ≤ 110 kg

The technical data of the RD9855 repeater is described in the corresponding flyer. All functions and technical data have been tested in accordance with the relevant standards. Subject to change on the basis of continuous development.

Your Hytera partner:



Further information can be found at:

www.hytera.co.uk

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

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