



MD655 / MD655G

Digital mobile radios

No matter the application, the MD655/MD655G digital mobile radios are compact and user-friendly, making them your reliable companion for in-vehicle or desktop communications.

As well as outstanding voice-quality and reliability, the MD655/MD655G excels through its simple operation via handheld microphone.



Radio

MD655 MD655G

Digital mobile radios



Highlights

Intuitive operation

The MD655/MD655G is operated solely via the handheld microphone, which contains all necessary buttons, as well as an LC display. Two of the five buttons serve as function keys, available to be assigned to separate functions by the user. For different installation options, the handheld microphone is optionally available in 2.2m or 6m cable length.

Compact design

The MD655/MD655G excels through its stylish and particularly compact design. With dimensions of just 165 x 46 x 140 mm, and a weight of just 1050g, the MD655/MD655G can be used in a multitude of ways to benefit the individual user.

Various installation options

With its operation via handheld microphone, the MD655/MD655G can be installed anywhere within a vehicle. Thanks to Hytera's wide selection of cable lengths, this mobile radio can be placed in whichever location is optimal for you.

Adaptable transmitting power

Programming the MD655/MD655G allows transmitting power to be increased from 1 W up to 25 W.

Analogue and digital mobile radio (dual mode)

With the MD655/MD655G, it's possible to configure both analogue and digital channels. This enables quick and easy movement between analogue and digital modes.

Improved utilization of the frequency spectrum

Thanks to Hytera Pseudo Trunking and the TDMA procedure, the MD655/MD655G allows the available bandwidth to be assigned to twice the number of channels. This has a clear mitigating effect on increasing spectrum scarcity.

Expansion interface

Thanks to the expansion interface, the range of functions offered by the MD655/MD655G can be increased. Accessories and applications, developed by partners, can also be connected to this interface.



Functions

- Analogue or digital operation
- Versatile voice calls:
 - Individual call, group call, broadcast call, emergency call, data call
- GPS functions (MD655G only)
 - Send GPS text messages
- Data services
 - Text messages
 - Group text messages
 - Control of the radio via API
- DMR services
 - Remote monitor
 - Radio enable
 - Radio disable
 - Call alert
- Different types of analogue signaling: HDC1200, 2-tone and 5-tone dialing
- Priority Interrupt
- Automatic cell re-selection (roaming) in IP multi-site systems
- Analogue scrambling
- Secure encryption with encryption algorithm ARC4 (40 bit) in accordance with DMRA or with optional algorithms AES128 and AES256 (128 and 256 bit)
- Upgradeable software
- Roaming
- Supports XPT Digital Trunking

Simple operation through handheld microphone with LC display

Emergency button

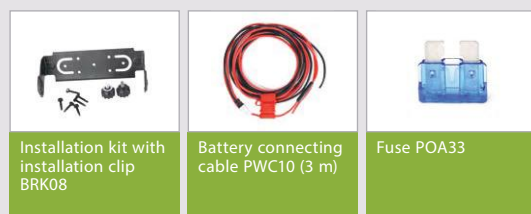
Programmable keys



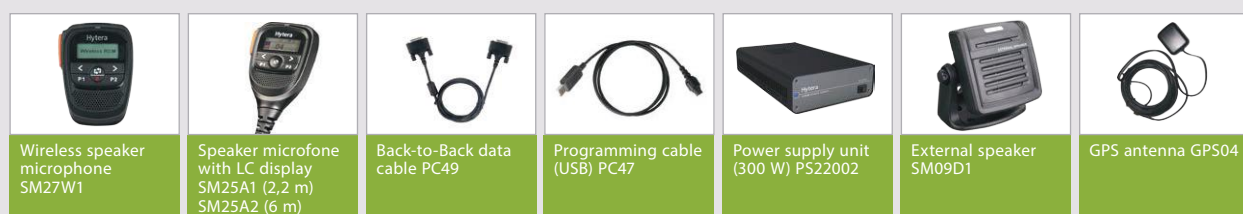
Lightweight and compact mobile radio

Various installation options

In the box



Optional accessories



The illustrations are for reference purposes only. The products might differ from these illustrations.

Technical Data

General data	
Frequency range	VHF: 136 - 174 MHz UHF: 400 - 470 MHz
Supported operating modes	<ul style="list-style-type: none"> DMR Tier II in acc. with ETSI TS 102 361-1/2/3 Simulcast XPT Digital Trunking Analogue
Channel capacity	1024
Zone capacity	64 (with max. 16 channels each)
Channel spacing	12.5 / 20 / 25 kHz (analogue) 12.5 kHz (digital)
Operating voltage	13.6 ± 15% V _{DC}
Max. power consumption (in stand by)	≤ 0.6 A
Max. power consumption (during reception)	≤ 2.0 A
Max. power consumption (during transmission)	1 W: < 3 A 25 W: < 8 A
Frequency stability	± 0.5 ppm
Antenna impedance	50 Ω
Dimensions (W × H × L)	165 × 46 × 140 mm
Weight	1050 g

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	IP54
Shock and vibration resistance	MIL-STD-810 C/D/E/F/G
Relative humidity	MIL-STD-810 C/D/E/F/G

GPS (MD655G)	
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:



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Transmitter	
Transmitting power	1 - 25 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): 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 to - 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	70 dB at 12.5 / 20 / 25 kHz 65 dB at 12.5 / 20 / 25 kHz
Spurious response rejection TIA-603 ETSI	75 dB at 12.5 / 20 / 25 kHz 75 dB at 12.5 / 20 / 25 kHz
Signal-to-noise ratio (S/N)	40 dB at 12.5 kHz 43 dB at 20 kHz 45 dB at 25 kHz
Nominal audio power output	Internal 3 W at 20 Ω, external 7.5 W at 8 Ω
Nominal audio distortion	≤ 3 %
Audio sensitivity	+ 1 to - 3 dB
Conducted spurious emission	- 57 dBm

All technical specifications were tested according to the relevant standards. Subject to change on the basis of continuous development.

Further information can be found at:
www.hytera.co.uk

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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.

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