

# R&S®M3SR Series4400 Software Defined Radio

## High class VHF/UHF radio standard for stationary and shipborne communications

To ensure secure radiocommunications and successful missions, today's stationary radio communications solutions for civil and military applications must meet extremely demanding RF requirements and provide different waveforms together with high operating reliability. The R&S®M3SR Series4400 software defined radio family is designed to meet such high requirements.



The R&S®M3SR Series4400 radio fulfills latest civil and military communication requirements and is used for a wide field of applications. The radio covers civil air traffic control, maritime and NATO standards. Several frequency hopping standards and tactical data transmission methods such as LINK 11 and LINK 22 are supported.

The R&S®M3SR Series4400 radio family features excellent RF characteristics making it possible to setup huge communications systems where many independent operating communications lines are used at the same time. Such RF characteristics play a crucial role on demanding platforms such as carriers and ground-based control stations.

A skilled combination of analog and digital technology provides high signal purity that results in extremely clear voice communications without the need for additional options. The radio supports IP based ad-hoc networks for high data rate applications up to Mbps.

Thanks to its modular design, customers can order the R&S®M3SR Series4400 customized to their needs and extend it later to handle changing requirements. Various interfaces make it easy to integrate the radios into legacy radio communications systems.

The VoIP capable R&S®M3SR Series4400 radio fits into the new VoIP based R&S®NAVICS naval communication system.

### Key features

- Extended frequency range from 100 MHz to 512 MHz
- LINK 11, LINK 22 and LINK Y support
- Embedded UHF EPM waveforms
- TCP/IP remote control and VoIP
- Simple network management protocol (SNMP)
- Various interfaces for external cipher units and modems
- Continuous transmission at temperatures up to +55°C
- Very high field reliability
- Embedded high performing RF filter components to handle demanding co-location issues

## Specifications

### Frequency range

- 100 MHz to 512 MHz, without gap

### Guard receiver

- 121.5 MHz and 243 MHz simultaneously monitored

### Modes of operation

- A3E, A9E, AXX, F3E, F9E, FSK, FSK-MSK, FXX

### Embedded waveforms

- R&S®SECOS5/16 TDMA
- HAVE QUICK II
- SATURN

### Channel spacing

- 8.33 kHz, 12.5 kHz, 25 kHz (4-carrier-offset)

### RF output power

- 35 W, 100 W, AM/FM

### Interfaces

- Several AF interfaces
- Several RF interfaces
- Ethernet interfaces
- VoIP interface referring to ED-137/1B
- Interfaces for external crypto devices
- 70 MHz IF interfaces

### Environmental data

- Operating temperature range from  $-20^{\circ}\text{C}$  to  $+55^{\circ}\text{C}$
- Storage temperature range from  $-40^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$
- Humidity in line with MIL-STD-810F
- EMI/EMC in line with MIL-STD-461E
- Shock in line with MIL-STD-810F

### Radio dimensions

- Transceiver (DC);  
427 mm × 132 mm × 427 mm (W × H × D)

### Radio power supply

- DC: 19 V to 31 V, 28 V (nom.)
- AC: 100 V to 240 V, 50/60 Hz  
with R&S®IN4000A power supply



R&S®M3SR Series 4400 radios used in naval systems.



Modular radio design, for easy upgrades, scalability and easy maintenance.

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