

R&S®SECOS

SECURE EPM COMMUNICATIONS SYSTEM

Armed forces radiocommunications are vulnerable to intentional or unintentional eavesdropping and jamming in today's communications scenarios. R&S®SECOS, the secure EPM communications system, was developed to counteract such activities. The EPM method is based on a proven technical solution.

R&S®SECOS can be deployed in secure fixed-frequency and in frequency agile mode. It was specifically designed to take advantage of the radios' technical characteristics and therefore offers a very high range without compromising transmission quality. R&S®SECOS employs customized encryption. For voice operation, various speech codecs are available that can be selected as required. The R&S®SECOS waveform is suitable for use in fast airborne platforms as well as shipborne and vehicular applications.

R&S®SECOS allows simultaneous, collision-free operation of several R&S®SECOS frequency hopping networks so that multiple orthogonal R&S®SECOS communications networks can be operated nationwide in parallel without impacting system performance. R&S®SECOS supports point-to-point and broadcasting data transmission and uses forward error correction (FEC).

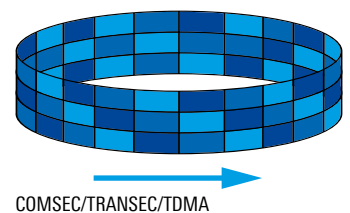
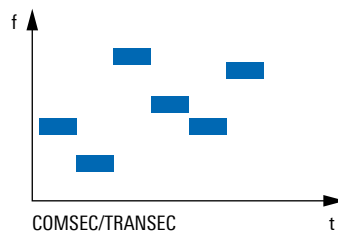
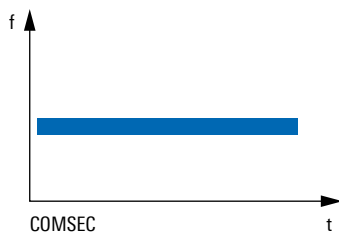
An integrated time division multiple access (TDMA) method makes it possible to create tactical data networks. The multistage TDMA concept enables automatic data exchange between different subscribers of an R&S®SECOS data network. Multiple TDMA data networks can be operated in parallel.

Key features

- ▶ Secure voice and data communications
- ▶ Fully integrated in R&S®M3xR and SOVERON® radios
- ▶ Embedded user unique encryption
- ▶ Fast, replay-proof, jamming resistant synchronization schemes
- ▶ Orthogonal networking
- ▶ TDMA networking capability
- ▶ Easy waveform configuration
- ▶ Excellent voice quality

Secure R&S®SECOS communications modes

Fixed frequency encrypted communications (COMSEC), encrypted frequency hopping (TRANSEC) and TDMA based automated data communications



Data Sheet | Version 03.00

ROHDE & SCHWARZ

Make ideas real



SPECIFICATIONS IN BRIEF

Security

- ▶ Proprietary, user-specific algorithm for COMSEC, TRANSEC and waveform management
- ▶ Very high communications and management key diversity
- ▶ Supports different orthogonal hopping schemes
- ▶ Deception proof due to inherent time authentication

Electronic protection measures (EPM)

- ▶ Frequency hopping
- ▶ Variable dwell times
- ▶ Selectable frequency range

Robustness

- ▶ Fast synchronization
- ▶ Autonomous time control
- ▶ Handles high bit error rates (BER) and high block error rates (BLER)

Communications modes

- ▶ Voice and data communications
- ▶ User-configurable TDMA scheme for data communications

Management tools

- ▶ Key management center
 - Control of all functions relevant to communications security
- ▶ Frequency management center
 - Overall frequency planning and allocation
- ▶ Workshop Field
 - Maintenance tool, e.g. to securely download radio waveforms
- ▶ Key distribution device
 - Distribution of mission related R&S®SECOS keys and data within R&S®SECOS system

R&S®M3SR 100 W stationary VHF/UHF transceiver



SOVERON® VHF/UHF airborne transceiver



Key and frequency management center software suite

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