R&S®SECOS
Secure EPM communications

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 hopping 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 or SOVERON® software defined radios
- Embedded customer unique encryption
- Fast, replay-proof, jamming resistant synchronization schemes
- Orthogonal networking
- TDMA networking capability
- Easy waveform configuration
- Excellent voice quality

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**Secure R&S®SECOS communications modes**

- **COMSEC**
- **COMSEC/TRANSEC**
- **COMSEC/TRANSEC/TDMA**

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*Secure R&S®SECOS communications modes: fixed frequency encrypted communications (COMSEC), encrypted frequency hopping (TRANSEC), and TDMA based automated data communications*
Specifications in brief

**Security**
- Proprietary, customer-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
- Frequency management center
- Workshop field
- Key distribution device

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