

R&S® M3SR Series 4100 HF Radio Family for Stationary and Shipborne Communications

Brief Summary

Götz Mayser

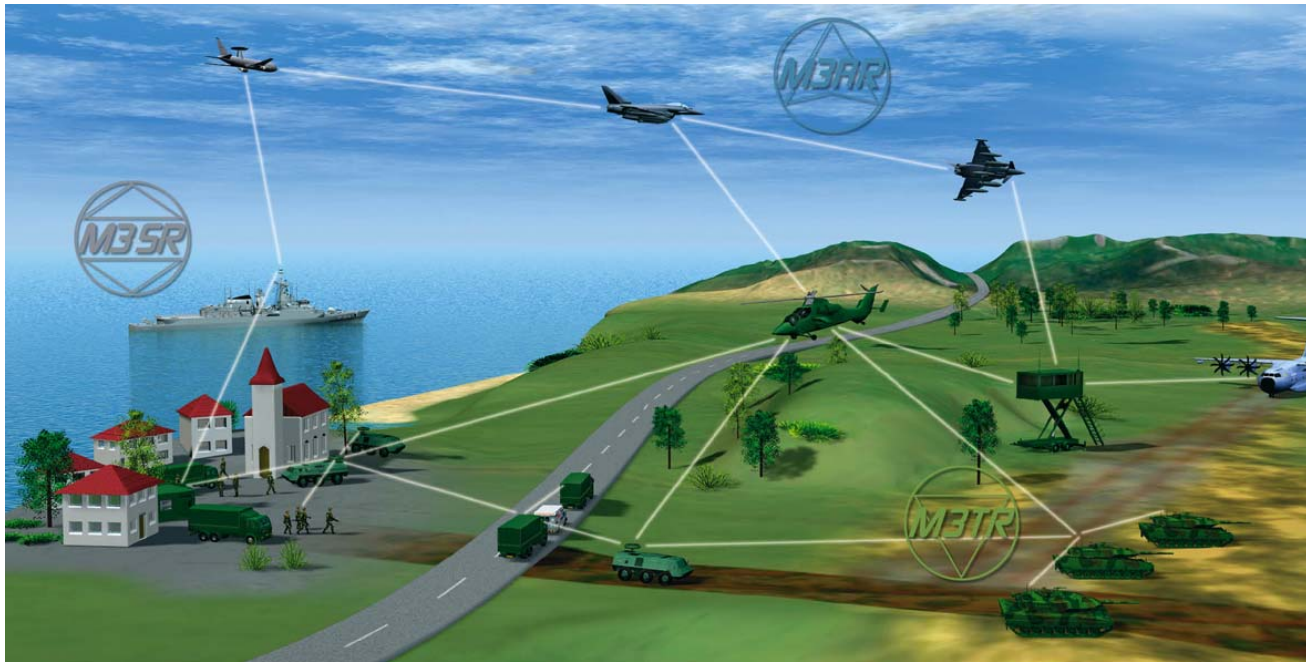
Product Management HF Radios

75 Years of
Driving
Innovation

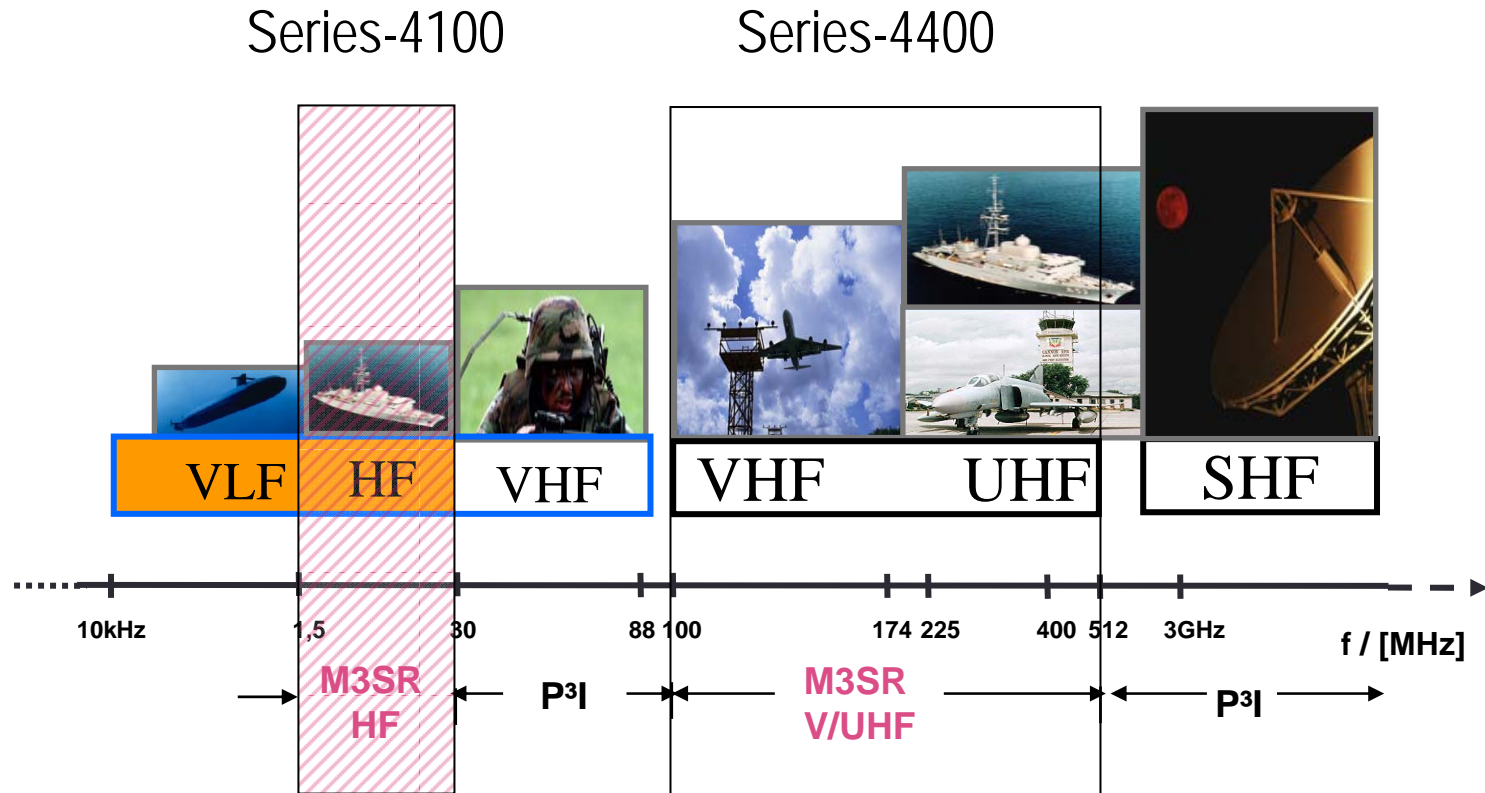

ROHDE & SCHWARZ

M3xR Family

Multiband Multimode Multirole Radios



Frequency Bands of R&S® M3SR



R&S® M3SR Series 4100 - Key facts

- | Software defined radio
- | Frequency range:
 - 1.5 MHz to 30 MHz (transmission)
 - 10 kHz to 30 MHz (reception)
- | Flexible range of applications
- | Interoperable with R&S® M3TR
- | Easy operation
- | Low maintenance effort
- | Collocation capability
- | Selective level control for optimum transmit power
- | Frequency-agile pre- and postselectors improve the large-signal characteristics



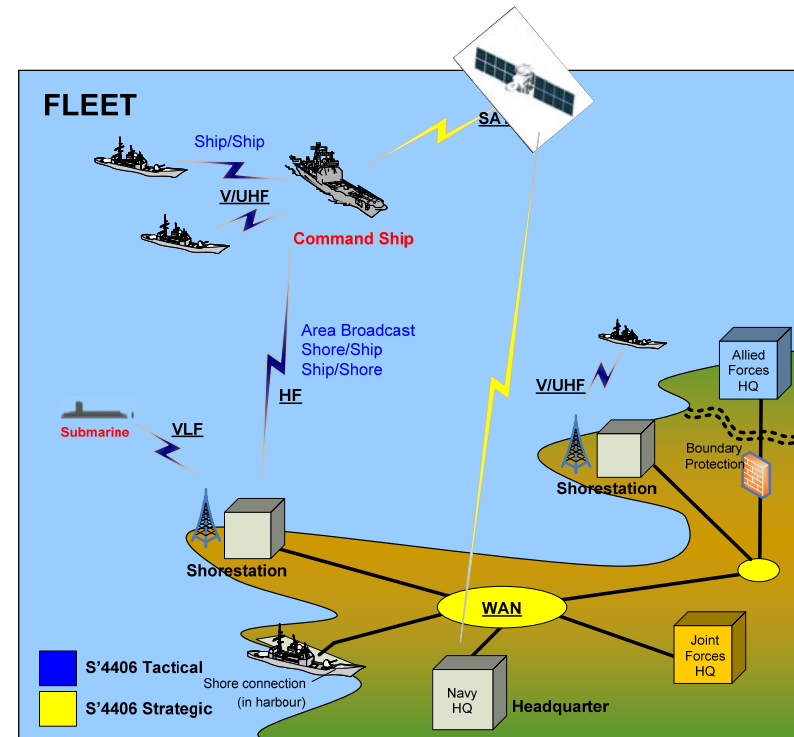
R&S® M3SR Series 4100 is used for...

I Military and paramilitary customers worldwide

- I Naval communication systems (ship and shore)
- I Army communication systems
- I Coast and Border Guard communication systems

I Civil applications

- I HF Embassy Networks
- I Air Traffic Control (ATC)
- I International Aid Organizations



Several Power Classes and Standalone Receiver available



R&S®EK4100 Receiver



R&S®XK4115 Transceiver



Broadband System



**500 / 1000 W
Transceiver System**

System Components – Antenna Tuning Units

- | **Several models for naval and stationary installations**
- | **Models for 150W, 500W and 1000W RF output available**
- | **Silent tuning capability**
- | **Frequency hopping capability (except FK2900M)**



FK2900M



FK4115M



FK4150U



FK4190M

Operation Modes

- | **Fixed frequency modes (voice, data, morse)**
- | **EPM waveform R&S®SECOM-H**
 - | HF slow hopping waveform with embedded comsec
 - | Voice, data, IP
- | **Data link capability in line with**
 - | STANAG 5511
 - | STANAG 5522
- | **Embedded HF modem waveforms**
 - | STANAG 4285
 - | STANAG 4539
 - | MIL-STD-188-110B Appendix F
 - | STANAG 4481
 - | STANAG 5065 (only RX)
 - | STANAG 4529

ALE (Automatic Link Establishment)

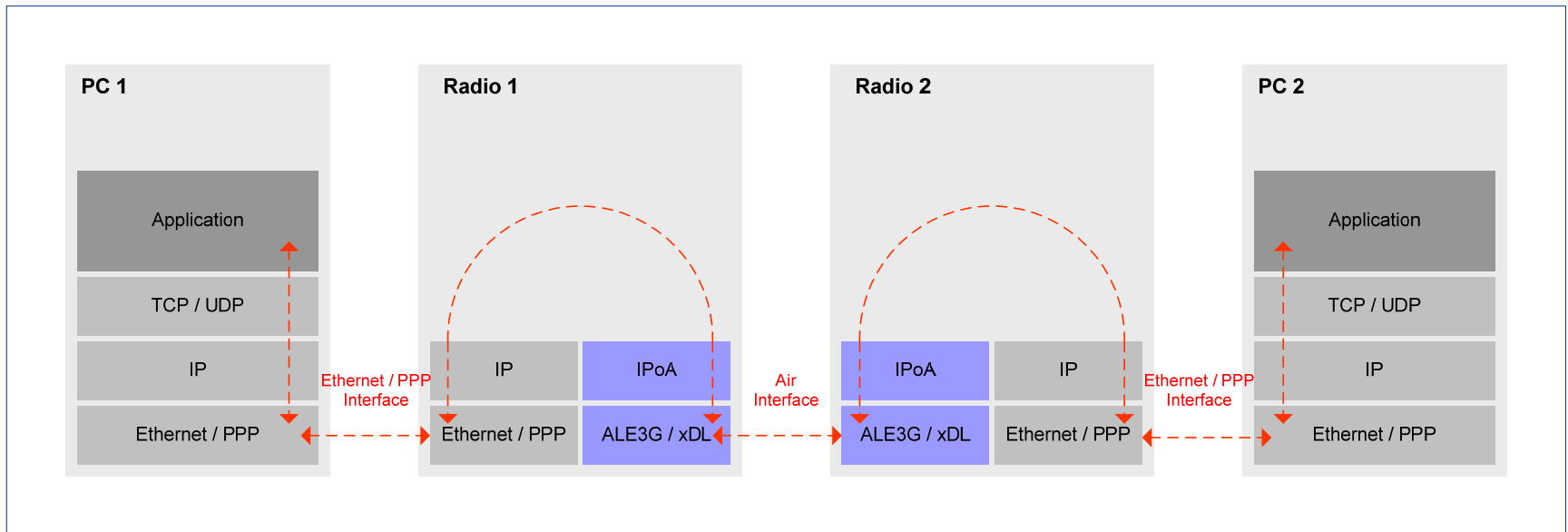
- | **ALE-2G (FED-STD-1045-1046-1049)**

- | **ALE-3G / STANAG 4538**
 - | Fast link setup
 - | Embedded data link protocols HDL and LDL
 - With transparent IP interface
 - Adaptive xDL protocol selection
 - | Linking protection
 - | Voice priority over data
 - | Occupancy detection

- | **2G/3G interoperability mode**

IP over Air (IPoA)

- | **Transparent IP interface with static IP routing**
- | **Several waveforms supported**
 - | xDL (STANAG 4538)
 - | SECOM-H
- | **Allows easy integration of IP based applications**
- | **Embedded text message application**



R&S® M3SR Series 4100 Product Demo

STANAG 4538 FLSU
adaptive LDL/HDL

R&S® M3SR Series 4100 Radio



R&S® M3TR Radio



Mail Application

IP

IP



Mail Application



Many thanks for your attention !

Questions...