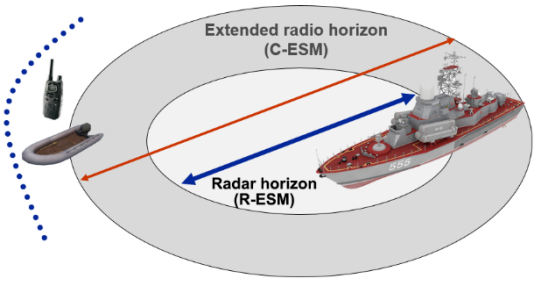
CRS-NAVAL

COMMUNICATION RECONNAISSANCE FOR NAVAL OPERATIONS

WHY C-ESM & COMINT

The use of Communication Intelligence (COMINT) and Communications Electronic Support Measures (C-ESM) enables support for a combat management system (CMS) or to work stand-alone for the identification of threats and for situational awareness in the surroundings.

Targets without radar equipment can be detected and tracked easier by intercepting their communication equipment. In most applications, a larger awareness of the radio horizon for communication signals is obtained due to the different propagation characteristics of the frequency bands used in comparison to the radar horizon.



It provides wideband detection, classification, direction finding, geo-location, and monitoring of radio signals and other emitters of electro-magnetic waves. Identification and tracking of emitters are supported as well as the integration to on-board systems like combat management systems.

We have systems in operation on different vessels, some combined with a land-based headquarter and training centre.

APPLICATIONS

- Early threat recognition
- Strategic and tactical collection of radio information in HF and VUHF
- Support of the combat management system.

BENEFITS

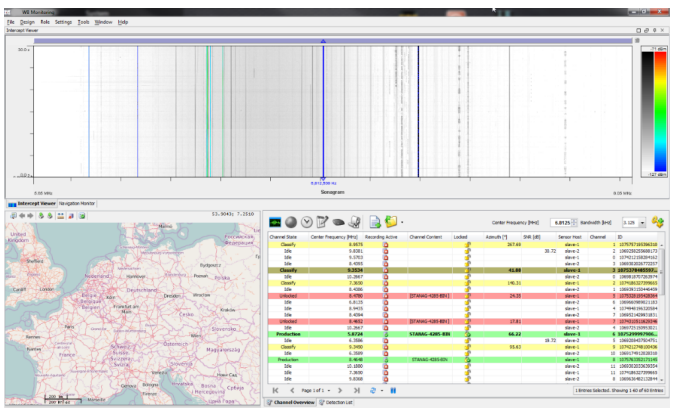
- HF and VUHF frequency range
- Excellent bearing accuracy over the full azimuth and a wide elevation
- Beyond R-ESM: detection of objects without radar emissions, e.g. small boats, UAVs etc.
- Automated signal detection and classification
- Plausibility check of emissions (AIS, ADS-B)
- Comprehensive online and offline analysis
- Multi-functional and multi-operator concept for special tasks
- Comfortable health monitoring and BITE
- Proven software concept allowing for fast updates and upgrades, independently from other on-board equipment
- Visualisation of the emitters as lists, polar or map display.

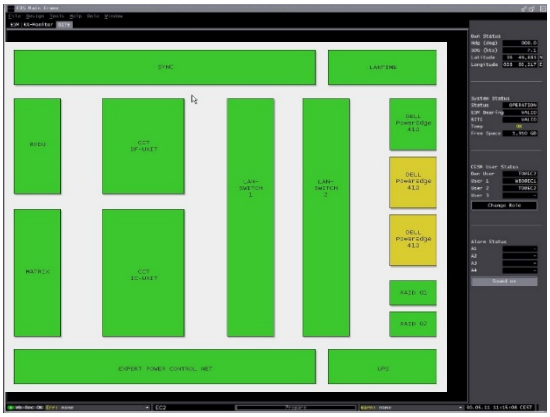
PRODUCT BACKGROUND

Saab Sensor Systems Germany introduced the CRS family to the market in 2005. Since then it is in use in different applications and configurations. Regular upgrades guarantee cutting edge technology.

EXPORT REGULATIONS

All relevant and applicable export control regulations are considered according to 5A001.b.5 of the regulation (EU) no. 1382/2014 of the European Parliament and of the Council.





SYSTEM DETAILS

The system uses one common human machine interface for the system management, mission planning, mission monitoring, and result analysis. Tasking and displaying of the situational picture can also be shown. Depending on the tasks, different roles can be assigned and used by the operators.

An intuitive user interface allows for fast and easy system usage.

FEATURES

The complete system is based on wideband technology for both monitoring and direction finding.

- Mission & task planning for special operations
- Interferometer and Super Resolution Direction Finding (SRDF)
- Different display functions for emitter display (polar, spectral, lists, map)
- Offline analysis provides knowledge to be used in libraries for continuous improvement of performance
- Listen-in function to received signals
- Activities based on alarm functionality like filtering and special system conditions including knowledge libraries
- Role concept for different user types like supervisors, monitoring operators, analysts, and administrators
- High system availability by automated fail-over function for control stations and sensors
- Tracking of emitters over time for improved situational awareness including visualisation
- Automated north alignment
- Support for automated platform identification (option).

TECHNICAL DATA

Frequency range (higher ranges upon request):

- Monitoring: 9 kHz to 6 GHz
- Direction finding: 1 MHz to 6 GHz

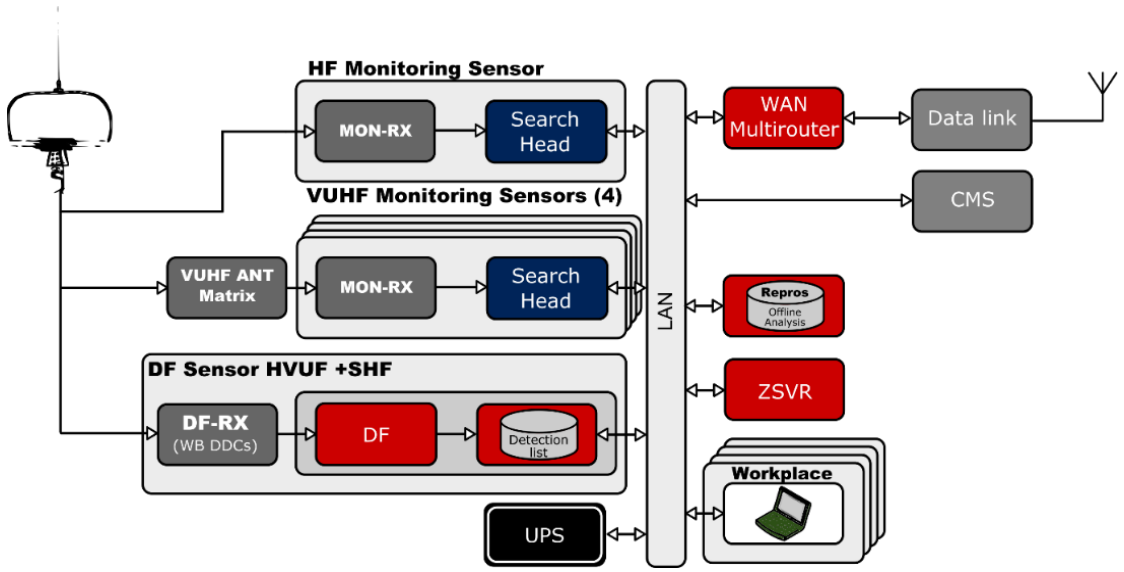
Direction finding: Selectable technologies including Watson-Watt, Interferometer, and SRDF.

Allows for communication between the sensors and the central station.

EXTENSIONS

The system can be extended to provide more functionality with

- R-ESM (radar electronic support measures)
- Cueing functionality of different sensors, e. g. ELINT sensors
- Additional tasking and reporting system for C2.
- Tracking and reporting system.



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