



Rigel RESM System Naval

The Naval based compact RESM system provides high performance operation for light platforms.

Mission

The Rigel RESM (Radar Electronic Support Measures) system's family constitutes a unique instrument to successfully face the new electromagnetic warfare scenarios.

The Rigel RESM system provides high sensitivity detection, analysis, classification and identification of radar signals, as well as high accurate DF measurement within a wide band instantaneous coverage, covering the whole 2-18 GHz frequency range.

High Performance ES-System

- Outstanding warning capability regarding pulsed and Continuous Wave (CW) signals, including Low Probability of Interception (LPI) Radars.
- Wide band operation for superior tactical information, with Probability Of.
- Interception (POI) of 100%, with accurate tracking of targets.
- Accurate DF measurements.
- Interoperability blanking with onboard systems.
- Robustness to installation.
- Advanced Deinterleaving algorithms.
- Advanced library matching algorithms for accurate identification.
- Powerful BITE (initialization, operator initiated and continuous).

Powerful Recording Capabilities

- Several data levels (events, pulse descriptors, detection descriptor, raw data (samples from the digitizers)).
- Powerful analysis tools for detailed analysis of signals and ELINT capabilities.
- Advanced training functionality (reproduction of a previously recorded scenario allowing the operator to practice with the whole functionality of the system).

Core Technology

Wide band digital reception is the core of the RESM systems resulting in a set of unique characteristics, including:

- The best system architecture for detection and measurement of Low Probability of Intercept (LPI) radars and CW signals.
- Robustness in very dense or jamming scenarios.
- The use of "Dual Digital Receiver Techniques" allows significant improvements in radar parameter measurements.
- Flexible HW architecture.
- System design suitable for Multi-role missions (surveillance/warning, intelligence).
- Inherent pulse to pulse intra-pulse measurement capabilities.
- Very High sensitivity for both pulsed and CW signals and equivalent detection range function.
- Extensive data collection on different levels.
- Dual RF/IF signal digitization to provide full digital receiver detection combined with fast video signal sampling.
- The use of CW robust DLVAs provides an adequate video protection on CW or jamming conditions.

Technological advantages

- High-end performances in a compact system; low weight, low power consumption and modular configuration for easy installation.
- Redundant architecture; better availability.
- High degree of automation.
- Modern and easy-to-use operating and handling modes based on a single operator concept allowing control of all functions from one multi functional console.
- High reliability with reduced maintenance at both preventive and corrective levels.
- Optimum performance to cost ratio.
- Flexible architecture (allowing further upgrades and future enhancements).
- Interoperability with on-board systems (blanking management).
- Fully integrable with Rigel RECM system.
- High integration capability with onboard and off-board systems (standardized interfaces).
- Fully integrable with Command, Control, and Communications (C3)/Combat Management System (CMS).

Optional Extensions

Frequency band extensions

System extends all its features and capabilities to the following bands (several configurations available).

- 0.5-2 GHz band.
- 18-40 GHz band.
- 50-500 MHz band.

Electronically Pointed Antenna Very High DF Accuracy

This option improves the DF measurement capability of the system, providing very high DF accuracy.

Enhanced sensitivity digital interception module

This mode provides to the system the capability to focus the operation in a particular sub-band, allowing to reach an extended detection sensitivity.

Detailed Intra-Pulse Analysis SW

The system capability of raw data storage makes possible a later fine analysis for Intra-Pulse (IP) detailed measurement. This option provides the operator with powerful graphic tools and algorithms to analyze the intrapulse modulation and the radar signature of a signal.

System is available in several configurations, so that it can be adapted to different platform installation constraints.



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