Ground Based Radar EA Systems

The Radar EA Systems provide high operational performances for protection and electronic attack in the EMS domain.

Mission

The Radar EA (Electronic Attack) Systems provide Land Forces with effective protection and attack capabilities against air and surface hostile radar emitters.

Radar EA Systems generate jamming and deception countermeasures against single or multiple threats active in their area and frequencies of coverage.

Standard covered frequency band is 2 to 18 GHz, where most of the radars work. There are also options covering 0.5 to 2 GHz, as well as higher radiated power versions for 2 to 6 GHz and 6 to 18 GHz bands.

They are able to carry out any of the following tasks and techniques:

- Passive Surveillance and Analysis.
- Electronic Defence:
  - Area Protection.
  - High Value Asset Protection.
  - Self-Protection.
- Electronic Attack:
  - Jamming, coherent and noise based.
  - Deception.
  - Generation of false targets.
  - Collaborative techniques.

System Features

The Radar EA Systems include all the necessary capabilities to develop effective Electronic Defence and Attack actions. They constitute a unique instrument to face successfully the known and unknown electromagnetic scenarios, providing:

The highest technical performances

- Coherent and conventional jamming techniques, based on in-house advanced multi-bit Digital Radio Frequency Memories (DRFM).
- Very fast response from signal detection to countermeasure activation.
- Dedicated EA receivers and antennas for coherent techniques and tracking.
- Standard and high power configurations available. Maximum countermeasure power efficiency.
- Fast transmitting antenna pointing for full 360º azimuth coverage.
- CW high power amplifiers.
- Radiation inhibition within specific geographical and/or frequency sectors.
- Stabilization devices according to the vehicle requirements for mechanical pointing configuration.

Multi-threat countermeasuring capabilities

- Advanced power management to share energy effectively amongst several threats.
- Higher processing capacity and algorithms to allow real-time multi-threat jamming.

Advanced jamming and deception techniques

- Coherent and synthetic signal.
- Active (unconditional) and reactive modes.
- Several jamming activation modes: automatic, supervised, manual and imposed.
- Look-through in all jamming modes to allow ESM to assess target behavior.
- Multiple types of jamming signal modulation, including audio swept.

Integration with ES subsystem

The included digital wideband RESM subsystem provides early alert and emitters identification capabilities, allowing:

- Automatic selection of the most effective countermeasure, based on easily updatable libraries.
- Synchronized and coherent jamming and deception signal generation.
- Fast pointing of the transmitting antennas.
- Carrying out full passive surveillance tasks, including in-depth technical analysis of emitters of interest as a support for intelligence activities.

Modularity and flexible integration

- Flexible architecture, allowing further upgrades and future enhancements.
- Powerful BITE: initialization, operator initiated and continuous.
- Easy maintenance, based on a modular design concept.
- Transmitting antenna configuration adaptable to the platform.

Optional Capabilities

Enhanced sensitivity and accuracy ELINT subsystem for High ERP versions

Specific ELINT subsystem with increased sensitivity and accuracy, allowing precise aiming of high gain antennas and distant emitters' finer tracking and effective jamming. Therefore, radiation efficiency is greatly optimized on all-range targets. Enhanced passive surveillance capability.

System components

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

indracompany.com

Avda. de Bruselas, 35
28108 Alcobendas
Madrid, Spain

T +34 91 627 10 00
infodefence@indracompany.com