



## ALQ-500

# RF Electronic Countermeasures

Bringing maximum survivability in today's operating theatres

ALQ-500 belongs to a new generation of radar-band countermeasure subsystems based on the development of high-speed digitization techniques with respect to its analogue predecessors. This new system benefits from all the "know-how" gained up to now in the field of ECM systems as well as in the advances made in fast digitization and signal digital processing. From the beginning of its conception, the design has considered current and future trends of

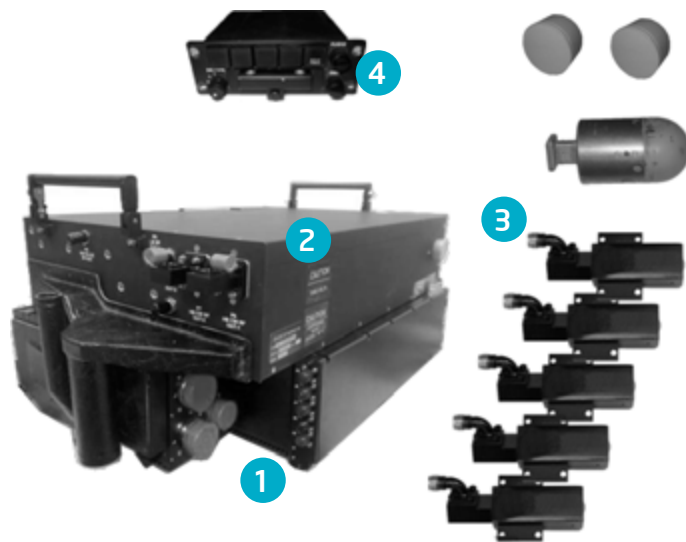
NATO countries regarding radar band ECM systems and their interfaces with other systems such as "Radar Warning Receivers", "Laser Warning Receivers", "Missile Warner," and associated passive countermeasure systems. As fundamental concept of future evolution, this new ECM system has been designed according to a modular architecture easily extendable from the same core process and techniques generation.



## Incorporating the latest DRFM technology

The entire process of generating coherent countermeasures with threatening signals is performed by means of DRFM techniques, so that the generation of modulations, delays, frequency and phase shifts, etc are extremely versatile. Moreover, multi-threat treatment does not involve device duplicity.

ALQ-500 includes the most recent advances in fast digitization techniques as well as in signal digital processing both in time and frequency domains, allowing it to fully exploit all the power that is provided by these techniques achieving considerable versatility as well as increased resolution accuracy in time, frequency and phase parameters.



### Example of system configuration

- 1 ECM Processor
- 2 High Power RF Transmitter
- 3 Transmitting/Receiving Antenna
- 4 Control Unit

## Built on a proven, high reliability and flexible COTS based open architecture

Flexible hardware architecture through a reduced parts count and an intensive use of COTS, including programmable processors, combined with a rapid COTS insertion approach, years of operating flights in EF-18 deceiving and jamming many threats, the modular and upgradable design and the easy installation make this system the ideal choice to protect aircraft in complex scenarios.

### Highlights

Use of advanced DRFM techniques:

- Multi-Threat capability.
- Wide Band operation.
- Generation of Doppler shift techniques.
- Stand-Off-Jamming capability.
- Large variety of jamming/deceiving techniques in speed, distance and angle.
- Enables the use of different techniques separately or combined depending on library programming.
- Capable of generating several false targets over threat radars.
- Transmitted power amplitude modulation capability.
- Flexible hardware Architecture: operating modes can be modified by loading new software.

### Equipment sovereignty

ALQ-500 can be supported with Indra ground support test, post-flight analysis, and threat library management systems. Indra's electronic warfare ground support systems provide end-to-end testing, complete reprogramming of separately loadable user data files, library generation and evaluation, as well as detailed post-mission analysis tools for recorded data down to intra-pulse level. Indra can thus provide full equipment sovereignty, allowing end users to operate, maintain and upgrade ALQ-500 independently.