

AIRBORNE SIGINT SUITE

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The Airborne Signals Intelligence (SIGINT) Suite equips crewed and uncrewed aerial platforms with comprehensive Electronic Support Measures (ESM), Electronic Intelligence (ELINT) and Communications Intelligence (COMINT) capabilities. The suite's sophisticated sensors generate 360° situational awareness of all electronic and communications emissions in the air, on the ground and at sea. The collected data is processed in real time to generate an up-to-date Electronic Order of Battle (EOB).

The SIGINT suite detects, identifies and classifies communications system, radar and datalink emissions. It accurately geolocates emitters to support targeting, analyzes signals for deep intelligence using Artificial Intelligence (AI) and monitors high-volume communications. The collected raw data is processed onboard, and the intelligence exploitation is utilized immediately or transferred in real time to ground stations using Line-of-Sight (LOS) and Beyond-Line-of-Sight (BLOS) communications systems (i.e. ELK-1882 & ARC-840). ELTA's ELI-8080 (A-capella) can be used with the SIGINT Suite to create a real-time unified situational awareness picture from a number of Airborne SIGINT Suites and their sensors.

Highly customizable, the SIGINT Suite can be tailored to a wide range of platforms – from uncrewed aerial vehicles for stand-in intelligence, surveillance and reconnaissance (ISR) missions through to large SIGINT mission aircraft for strategic intelligence collection at long stand-off ranges. With over one-hundred units successfully installed worldwide on both crewed and uncrewed platforms, and decades of operational experience, the Airborne SIGINT suite has demonstrated superb effectiveness in times of peace and conflict.

KEY FEATURES

- Detect, classify, geolocate, separate, analyze, and monitor emitters across the spectrum of 1.5Mhz to 40GHz
- High Probability of Intercept (HPOI) with very high sensitivity and in wide instantaneous bandwidth
- Accurate, instantaneous geo-location using multiple techniques, including Interferometry, DTOA (Differential Time of Arrival) and others
- Advanced signal processing and analysis employing AI and ML (Machine Learning)
- Highly automated operation with small crews, requiring minimal training
- Effective operation in complex, dense electromagnetic environments

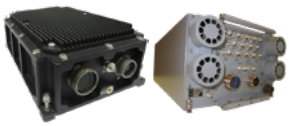
SUITE SENSORS AND SYSTEMS

The suite comprises the following systems.



ELINT / R-ESM
ELL-8385, ELI-8395

Intercepts and analyzes LPI radars and other emitters in dense and complex signal environments.



COMINT / C-ESM
ELK-7065, ELK-7072

Intercept, analyze, identify, locate and monitor communication networks and datalinks in dense and complex communication environments. HF/V/UHF bands. Advanced voice analysis with AI.



A-capella
ELI-8080

A real-time C4I system that manages, collects, processes and analyzes the output data of passive sensors in order to form an optimal joint situational awareness picture.



ELTA LOS/BOS
ELK-1882 & ARC-840

Field-proven communications systems based on ELTA's ELK-1882 NC² SATCOM, LOS and ARC-840 Multi-Channel Software Defined Radio product families.

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