

IAI Debuts ELI-3150 ELLYON Multi-Mission Aircraft Solution

By Richard Scott

[Israel Aerospace Industries \(IAI\)](#) has unveiled a unified airborne multi-mission suite packaging electronic attack (EA) and intelligence, surveillance, target acquisition and reconnaissance (ISTAR) capabilities into a large business jet platform.

Known as ELI-3150 ELLYON, the new “all-in-one” payload embodies full-spectrum electromagnetic surveillance and high-power jamming for suppression of enemy air defense (SEAD) missions; signals intelligence (SIGINT); long-range synthetic aperture radar/ground moving target indication (SAR/GMTI) radar; electro-optical sensing; and wide-band satellite communications. A highly automated Mission Management System (MMS) provides sensor fusion, effects management, and real-time information dissemination to ground and airborne nodes.

ELLYON employs wideband standoff EA, using in-house Active Electronically Scanned Array (AESA) technology developed by IAI’s ELTA subsidiary, to jam hostile surveillance radars at ranges well beyond the threat envelope of hostile integrated air defense systems. Additional SEAD effects, designed to degrade adversary situational awareness and command and control capabilities, are derived from communications and GNSS jammers.

The aircraft’s comprehensive ISTAR suite includes an ELTA’s multi-mode AESA radar with SAR (strip and spot)/GMTI, maritime, and air to air modes. Additional sensors include an in-house SIGINT collection suite, which detects and analyzes radar emitters and communications signals to build an accurate

Electronic Order of Battle in real time, and a multi-spectral long-range electro-optical/infrared payload to facilitate accurate “eyes on” target classification and identification.

ELLYON is equipped with a comprehensive, secure communications suite with HF/VHF/UHF radios, a tactical datalink, and wideband SATCOM datalinks. A self-protection suite – comprising a radar warning receiver, missile warning system, chaff/flare dispensers and directed infrared countermeasures – is fitted for operations in contested airspace.

The aircraft’s highly automated MMS, featuring extensive use of Artificial Intelligence/Machine Learning (AI/ML) tools, is equipped with between four and six operator stations. The embodiment of AI/ML software is designed to ease crew workload, improve efficiency, and reduce crewing requirements.

Open architecture provides for capability insertions and extended functionalities, according to IAI. The company adds that ELLYON is already prepared for manned-unmanned teaming.

IAI has emphasized the platform-agnostic nature of the ELI-3150 ELLYON suite. While information and imagery released by the company shows a baseline instantiation using the Bombardier Global 6500 aircraft, IAI has previously developed special mission adaptations of the Gulfstream V and Gulfstream G550 for use in the airborne early warning and control, ISTAR and SIGINT roles.