



ICS

Integrated Communication
& Surveillance System
for Submarines



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ELTA and HENSOLDT Optronics have teamed up to offer an innovative Integrated Communication & Surveillance System (ICS) for submarine Intelligence Surveillance and Reconnaissance (ISR) missions. The ICS is a fully integrated system combining HENSOLDT's OMS150-Optronic Mast System with ELTA's combat-proven SIGINT (C-ESM & R-ESM) and SATCOM systems.

The ICS includes the following sensors and systems:

C-ESM System for HF/V/UHF

Intercepts, analyzes, identifies, monitors, and locates communication networks, AIS and datalinks in dense and complex communication environments.

- 360° frequency coverage: 1.5-500 MHz
- Voice & Data processing

Laser Communications

Point-to-point laser LOS communication with data rates up to 5 GByte/s.

R-ESM System

Advanced system for interception, analysis, and location of radars, including Low Probability of Intercept (LPI) emitters, in dense electromagnetic environments.

- 360° frequency coverage: 2- 18 GHz

Optronic System

Optical surveillance with HDTV, SWIR, LLTV and MWIR capabilities.

AESA SATCOM System

Secure SATCOM (Ku) On-the-Move (SOTM) based on electronic steering technology.

- Works with geostationary and LEO satellites
- Complies with ITU-R 524-9

SINGLE MAST – COMPLETE ISR AND COMMUNICATIONS FUNCTIONALITY

The ICS houses all the sensors in a single uniquely engineered mast to minimize the submarine's stealth signature, both from radar and optical detection – a substantial advantage in comparison to multiple mast configurations. The system is compatible with all major mast hoisting systems, allowing for fast, on-site installation, while requiring no modifications to the submarine's hull.



OPERATIONAL BENEFITS

During an ISR mission, the following functions can be simultaneously performed from a single mast:

- Optical surveillance
- R-ESM and C-ESM including DF
- Wideband laser communications
- Fleet and special forces communications with encrypted, low probability of intercept SATCOM
- System operation can either be integrated within the CMS or on a dedicated console

