

Day only Optical Radar

— World's first non-emitting wide area optical search system

Finding small objects at sea remains a challenge for maritime search aircraft.

Radar is traditionally size, weight and power dependant. The smaller the object of interest, the larger the radar required to find it. The size and cost is often prohibitive.

In challenging sea states searches for small targets are still conducted visually. If you are lost at sea at night, the chance of being found drops significantly due to the reliance on a narrow field of view EO/IR sensor.

The IAS airborne Day only Optical Radar provides a transformative capability for small object search.

Easily installed, and a fraction of the size weight and power of a traditional radar, the IAS Optical Radar uses a specially configured array of day and night optical sensors that continuously observe the ocean in a 180-degree arc in front of the aircraft.

Everything on the ocean's surface is autonomously detected in under a second, presenting aircraft operators with a small image of each object found alongside its location coordinate on a map.

Detection to identification is completed in seconds.

- Provides an airborne autonomous persistent wide-area, and maritime search capability
- Significantly increases the effective swath of any search pattern with a high probability of detection
- Finds people at sea over 30 times faster than current SAR equipment with a greater than 90% probability of detection

— Core capabilities:

- Day only operations
- 30x faster search
- Low Size, Weight and Power
- Finds non-reflective, non-transmitting objects
- Proven up to sea state 6 with heavy white caps
- Operates in harsh conditions such as: snow, hail, rain and clouds
- Operational in 4 countries



— Multi mission

- Illegal Immigration
- SAR
- Counter Piracy
- Counter Narcotics
- Fisheries Monitoring
- Maritime Security
- Debris Detection

— Cross platform

Can be integrated onto rotary and/or fixed-wing asset, and on both manned and unmanned aircraft.

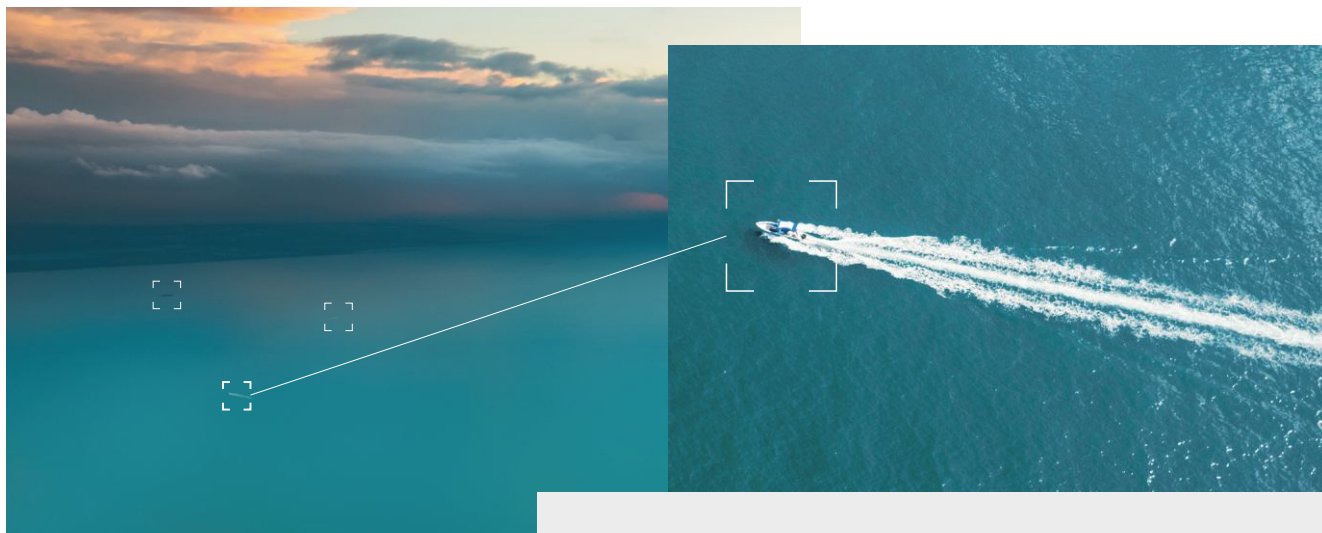
— Customizable

The covert IAS Optical Radar can be customized in a modular fashion for both day and/or night operation in a wide-area and/or SAR configuration. Modular customizations can be made for variety of aircraft installations.

— Modular

The pod is internally modular to allow configuration changes, along with processing expandability to meet all SWaP constraints.

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IAS OPTICAL POD

Components

- 8 x EO Cameras
- Composite aerodynamic shell formed around a metal base-frame
- Forced air smart environmental control

Power

- 18-36VDC
- 90W base load, up to 480W (environmental control)

Dimensions

Width: 14.1 inches
Length: 26 inches
Depth: 5.9 inches

Weight

18kg (incl. environmental controls)

QUALIFICATIONS

- Designed and built to DO-160 standards.
- Operational for both fixed and rotary wing aircraft.
- Operable up to 350kts (GS).
- Designed to an extended temperature range of -40°C to +60°C.

SEARCH MODES OF OPERATION

- Wide Area Maritime Search (WAMS)
- Search and Rescue (SAR)
- Both WAMS and SAR are configured for search operations with a Field of View (FOV) of 180 degrees in a forward arc in front of the aircraft



SAR Field of View



WAMS Field of View

IAS PROCESSOR

Components

- 6 x NVIDIA Xavier Processor Modules
- Optical Radar Software

Power

- 18-36VDC
- < 150W

Format

ARINC 6000 format LRU

Weight

9.7kg

For inquiries, contact:
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