

OctoPod

The All-in-One Airborne Surveillance Pod



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OctoPod

The All-in-One Airborne Surveillance Pod

Concept

The OctoPod is a unique all-in-one belly-mounted airborne surveillance pod jointly developed by AERODATA and its subsidiary OPTIMARE. It enables multi-sensor-based airborne surveillance operations while minimizing space consumption and costs for aircraft modification and certification. The OctoPod interfaces to the mission systems AeroMission® and MEDUSA®.



Aerial Infrared/Ultraviolet Imaging

Instrument: OPTIMARE IR/UV Line Scanner

- Wide-Field-of-View
- Mapping of relative oil spill thickness
- Thermal mapping



Day & Night Substance Classification

Instrument: OPTIMARE Laser Fluorosensor LFS-P

- Reliable day & night discrimination between oil & water
- Classification of crude and refined oils
- Detection of attenuating and fluorescing substances
- Water quality monitoring

Wide-Swath Radar Imaging

Instrument: OPTIMARE SLAR

- Long-range detection of oil spills
- Detection of maritime targets
- Surveillance of fishing activities
- Detection & mapping of speed boat wakes

Continuous Radar Surveillance

Instrument: State-of-the-art AESA radar

- Active Electronically Scanned Array technology
- Continuous detection & tracking of
 - moving maritime targets
 - moving land targets (GMTI)
 - airborne moving targets
- Target classification using ISAR
- Search and Rescue beacon detection (SART)

Electro-Optical / Infrared Imaging

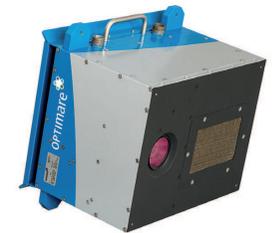
Instrument: 15" EO/IR System

- Designed for installation of systems from several suppliers
- Configurable payloads for:
 - optical target identification
 - target tracking
 - evidence gathering

Aerial Visible Imaging

Instrument: OPTIMARE VIS Line Scanner

- Wide-Field-of-View
- Mapping of visual appearance of oil spills
- Aerial RGB composite imaging of water & land surfaces



Search & Rescue and Tactical Direction Finding

Instrument: Airborne Radio Direction Finder

- Scanning of Search & Rescue frequencies
- COSPAS-SARSAT
- Broadband capability in VHF/UHF band

Scanning Microwave Radiometry

Instrument: OPTIMARE Microwave Radiometer MWR-P

- Day & night oil spill thickness measurement
- Detection of very thick oil (>50 microns)
- Fire detection
- Monitoring of moisture penetration of dikes

Missions

- Airborne maritime surveillance
- Airborne oil spill remote sensing
- Search & Rescue
- Airborne land surveillance

Core Features

- Multi-Functional
 - Eight core functionalities based on eight selected sensors.
 - Supports more than 20 different mission tasks.

- Belly-Mounted
 - Low effort for aircraft modification & certification
 - Low impact on aircraft cabin
- Multi-Platform
 - The vertical pod dimension stays within the ground clearances of the most prominent surveillance platforms

- Modular
 - Individually configurable from subset to full configuration
 - Expandable
 - Removable
 - Low effort for aircraft reconfiguration
- Fully-Integrated
 - Full mission system integration with AeroMission® and MEDUSA®

Basic Engineering Data

- Dimensions:
 - L: 4020 mm x W: 720 mm x H: max. 780 mm
- Mass:
 - max. 400 kg, depending on pod configuration
- Altitude:
 - Operation: max. 15.000 ft for operating all sensors (may be higher in a different configuration, optimum altitude depends on sensor type)
 - Ferry: max. 41.000 ft