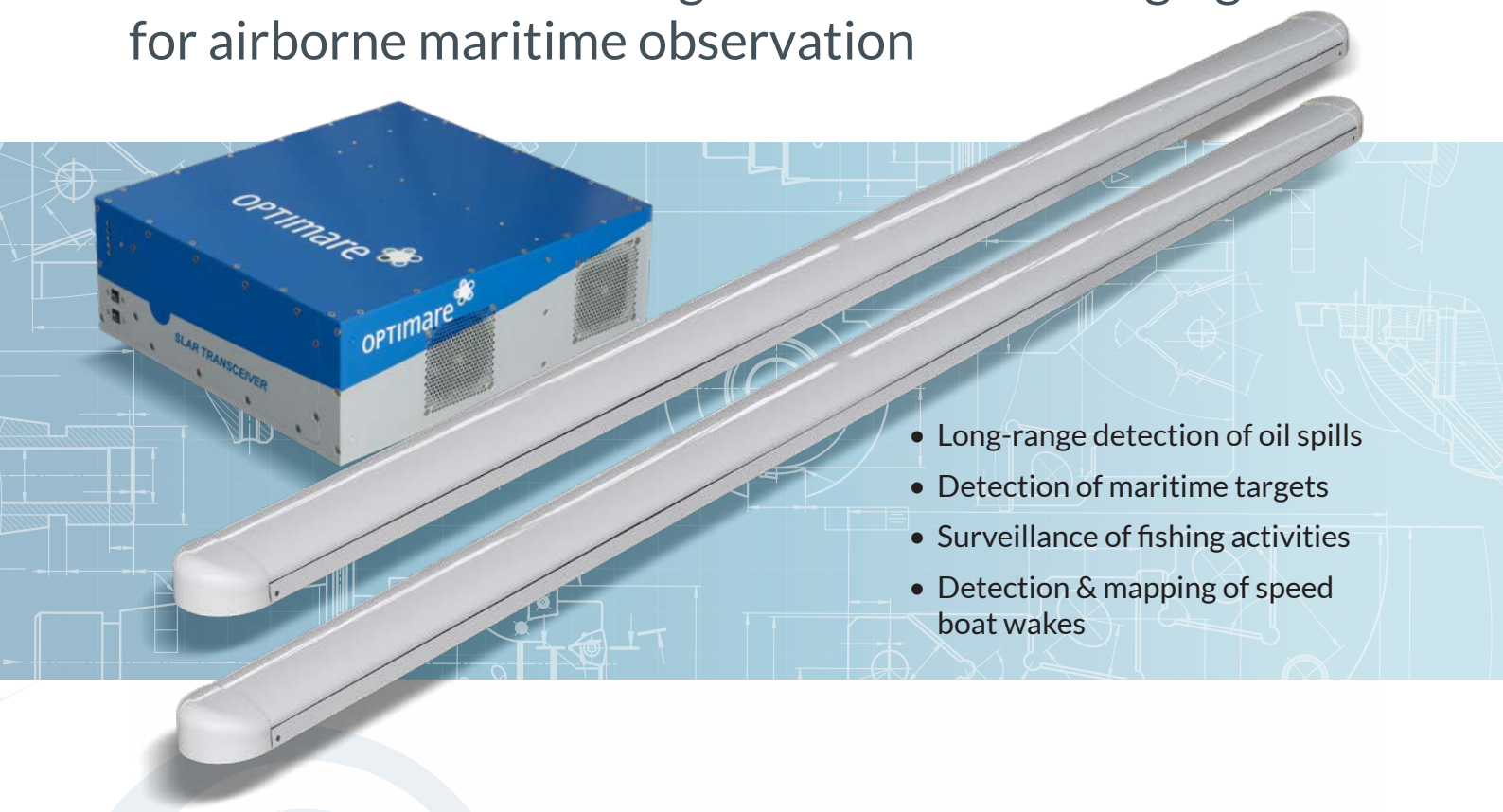
OPTIMARE SLAR

Wide-swath side-looking airborne radar imaging for airborne maritime observation



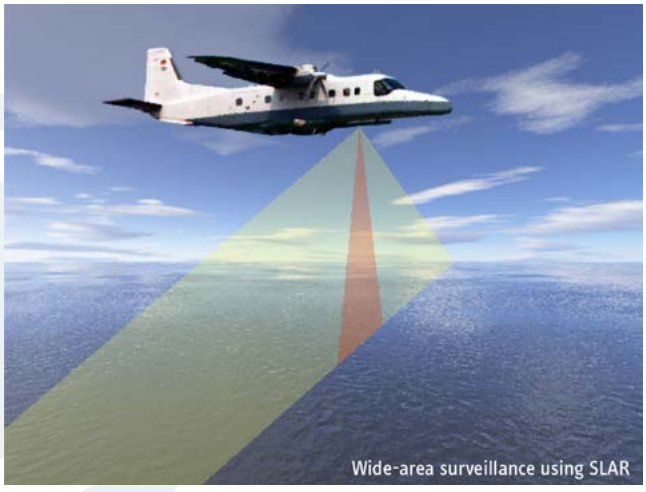
- Long-range detection of oil spills
- Detection of maritime targets
- Surveillance of fishing activities
- Detection & mapping of speed boat wakes

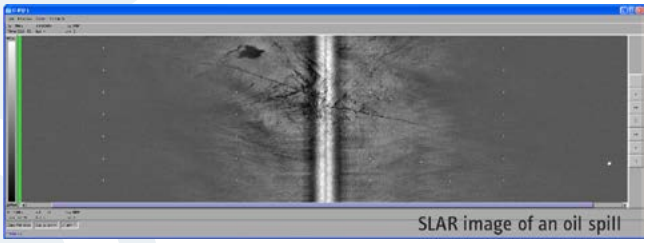
The Standard Technique

The OPTIMARE SLAR is a cloud-penetrating imaging X-band radar for day & night airborne maritime observation. Assuming sufficient aircraft altitude the OPTIMARE SLAR can have a swath width of more than 120 kilometers. The sensor is used for mapping the sea surface with regard to oil spills, vessels, wakes and many more.

Its well-proven imaging capabilities are ideally suited to support situational awareness and is often used to complement the discrete target information provided by search radars, automatic identification systems and direction finders. Moreover, SLAR has been the standard and prime technique for airborne oil spill surveillance since several decades.

The lightweight OPTIMARE SLAR with its outstanding performance and its unique ultra-thin antenna design maintains a superior position and is the SLAR solution of choice for a modern airborne maritime surveillance system. The OPTIMARE SLAR is available both as stand-alone instrument and as integral part of the AERODATA/OPTIMARE OctoPod.


Wide-area surveillance using SLAR


SLAR image of an oil spill

Technical Data

OPTIMARE SLAR

MECHANICAL PROPERTIES	
Dimensions	**Antenna:** L: 3314 mm x W: 74 mm x H: 150 mm **Transceiver:** L: 405 mm x W: 379 mm x H: 146 mm
Mass	**Antenna:** 16 kg (2 antennas required per system) **Transceiver:** 13 kg

POWER/FUEL SUPPLY	
Current	Max 7 A @ 28 VDC
Voltage	28 VDC (nominal), 20 VDC - 31.5 VDC

COMMUNICATION/INTERFACE	
Network Connection	Copper or fiber-optic ethernet

OPERATING/STORAGE CONDITIONS	
Altitude of Operation	Typically 1,000 ft ... 6,000 ft

RADIATIVE/IMAGING PROPERTIES	
Frequency	9.38 GHz ... 9.44 GHz (X-band)
Half Power Beam Width - azimuth	0.75°
Half Power Beam Width - Elevation	15.0°
Radiation pattern	Asymmetric pattern optimized for maritime surveillance
Scanning method	Across-track scanning
Antenna gain	> 32 dBi

STANDARDS	
Environmental qualification	In accordance with RTCA/DO-160G
Electromagnetic compatibility	In accordance with RTCA/DO-160G

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