THALES

I-Master
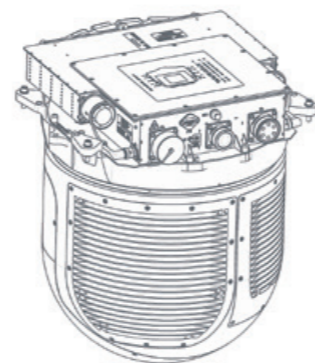**Pioneering Airborne
Surveillance Radar**

# Go anywhere.
See everything.

I-Master is the world's highest performing surveillance radar in its class, deployed globally on a wide range of platforms, for a number of applications. Designed and developed by expert Thales radar engineers, I-Master delivers world class intelligence, surveillance and reconnaissance performance, in a compact package.

Mission Commanders are provided with outstanding high-fidelity classification and positioning imagery, with the ability to detect ships from up to 100km, vehicles from up to 35km and infantry movement from up to 15km - in all weather conditions and with ground-breaking precision and targeting functionality.

I-Master has four different modes that operators can choose between, depending on their mission requirements. These include:

Perfect balance of performance and form factor

Weighing only 30kg, I-Master has been designed for easy installation on manned and unmanned aircrafts. I-Master's 'plug & play' integration capability has the same footprint as a standard 15 EO/IR sensor turret. It can easily replace, or on a multi-sensor platform, complement your sensor suite.

Fixed wing aircraft   **Rotary wing**   **Unmanned aerial vehicle**
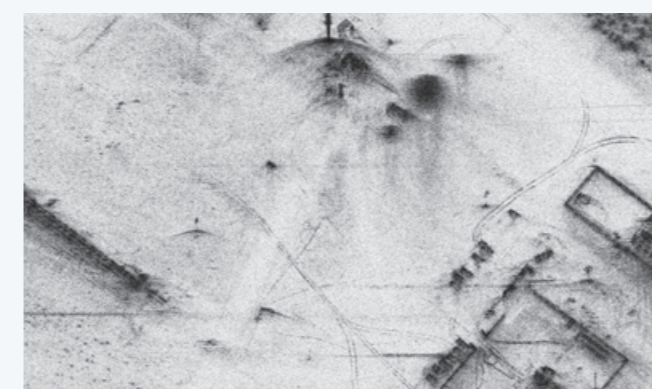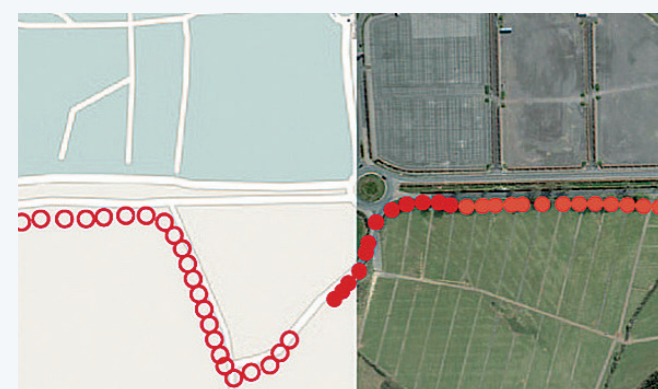
Ground Moving Target Indicator

GMTI reveals moving objects in the radars field of view, from, from low speed foot patrols, to fast moving targets like speeding vehicles. Tracks are displayed instantly on the operator's workstation and can be overlaid on a Digital Map, Satellite or SAR Imagery. GMTI can also support weapons systems and cue EO/IR sensors for detailed observation.

I-Master's 360° scan mode minimises the need to reposition the aircraft during surveillance and ensures continuous contact with the target.

Spotlight Mode
Maintaining continued focus of movements over a specific area of interest

Sector Scanning
Long range movement detection over a chosen sector

Tracking
Focusing on a specified ground path, independent to the flight path of the aircraft

360 Scanning
I-Master provides GMTI 360 degrees for optimal wide area coverage

Synthetic Aperture Radar

I-Master provides real-time, high resolution, wide area geo-located ground mapping. It can survey in excess of 800km^2 per-hour - even in conditions of cloud, rain, fog, smoke and sand storms that defeat camera-based systems.
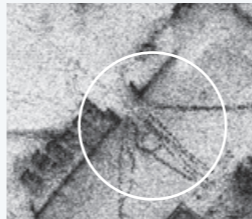
Ground maps produced by I-Master show new features such as temporary bridges, barriers, flooding or to establish the movement of vehicles to support further analysis and planning.

Strip-Map Sar Mode
Wide area detection of stationary targets such as vehicles or encampments

Spotlight Sar Mode
Used to obtain higher resolution detailed imagery of specific targets for classification purposes

Coherent Change Detection

Unique Thales CCD algorithms enable historic tracks or imprints to be displayed on the image that are not visible to the eye or alternative sensors such as an EO/IR.

By comparing SAR images of the same area taken at different times (whether hours or days apart), it is possible to automatically highlight any changes that have taken place, such as new encampments.

CCD Imagery
The image on the left highlights recent foot traffic. Thales's unique CCD algorithms paired with SAR imagery, enable the historic tracks to be displayed.

Maritime Moving Target Indication

MMTI allows users to detect and track targets in the maritime domain, ranging from small, fast moving crafts such as jet-skis, to larger, slower vessels such as ships and tankers.

Detection ranges up to 56 nautical miles are possible, subject to sea-state conditions. The algorithms designed specifically by Thales can detect unusual vessel movements; perform "pattern of life" analysis; and persistently track targeted vessels.

Surveillance Mode
Large area selectable scan coverage with several resolutions and swath depth, enabling detection of very small to large targets in high sea states

Spotlight Mode
High resolution imaging enables spotlight tracking of identified targets

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