Airborne Surveillance Radar
I-Master

Perfect balance of performance and form factor for manned and unmanned surveillance aircraft
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The world’s leading Lightweight Surveillance MTI/SAR Radar

Lightweight and versatile

I-Master is a compact lightweight, high performance radar. It provides world-leading Moving Target Indication [MTI] and Synthetic Aperture Radar [SAR] performance for surveillance, detection, and recognition of targets over large areas at long stand off ranges. I-Master provides high fidelity imagery for classification and positioning of various targets and can accurately detect and locate moving targets (from fast moving vehicles to individuals at walking pace) in all weather conditions during day and night. Weighing only 30kg, the design allows for easy installation on fixed wing or rotary wing, both manned and unmanned aircraft. I-Master is a ‘plug & play’ capability with the same footprint as a standard 15” EO/IR sensor turret. For a single sensor platform, it can easily replace, or on a multisensor platform is can compliment your sensor suite. I-Master greatly improves the effectiveness and efficiency of any surveillance scenario.

Multiple modes

- **Movement**
  - **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° for optimal wide area coverage

- **Imagery**
  - **Spotlight SAR Mode**: High resolution ground imaging enables target classification
  - **Stripmap SAR Mode**: Enables wide area terrain mapping and target detection

Technical specification

- **Frequency**: Ku Band (12-18 GHz)
- **Weight**: 30kg
- **Range**:
  - Up to 35km in land modes
  - Up to 100km in maritime modes
- **Dimensions**: 370mm (d) x 470mm (h)
- **Scan Coverage**: 360° azimuth rotation
- **Elevation Tilt**: +10 degrees / -55 degrees
- **Electrical Power**: 28V DC @ 600W Max
- **Data**: Ethernet
- **MTI Modes**: 360° Surveillance, Spotlight, Sector Scan and Tracker
- **MTI Performance**: Detection and accurate location of fast and slow moving targets including foot traffic
- **SAR Modes**: Strip Map and Spotlight
- **SAR Resolution**: 3m to <30cm
- **Change Detection**: Amplitude & Coherent