

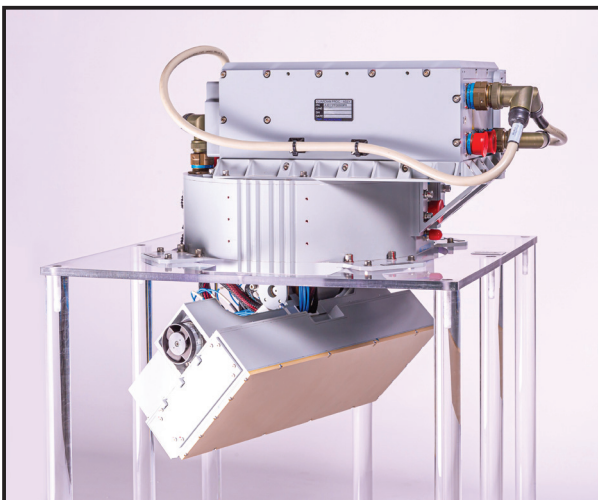


GUARDIAN - AIRBORNE ISR RADAR

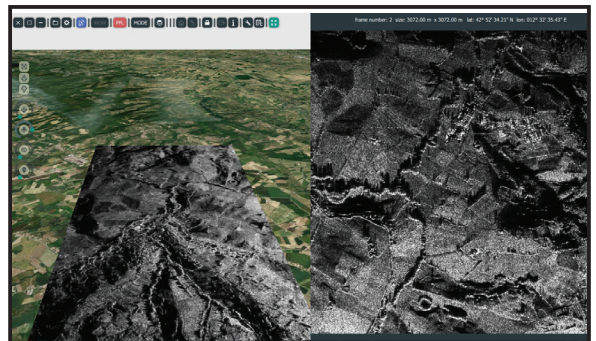
The Guardian is a light-weight state-of-the-art jamming-resistant multi-mode multichannel X-band Synthetic Aperture Radar (SAR) for Intelligence, Surveillance and Reconnaissance (ISR) over water and land.

It combines mechanical scanning of the antenna with electronic scanning of the radar beam to provide real-time wide area surveillance with a range of capabilities from long range search to exceptional small target detection.

The Guardian can detect, track and georeference moving targets ranging from fast moving vehicles to walking individuals. The Dismount Moving Target Indication (DMTI) mode is achieved thanks to Space Time Adaptive Processing (STAP) enabled by the multichannel technology.



The Guardian generates high-resolution SAR images for the detection and visualization of detailed features of the scenario, enabling classification of various targets in all weather conditions and during day and night.



KEY FEATURES

- Disruptive innovative SAR Real Time focuser
- Embedded Inertial Navigation System (INS)
- Heterogeneous computing (FPGA, CPU, GPU)
- High-resolution imaging (Spotlight, stripmap)
- Real-time detection (GMTI/DMTI/MMTI)
- Ground Mapping, Sea Surveillance
- Advanced classification (ISAR)

KEY BENEFITS

- Wide area monitoring
- Use of multiple Transmit/Receive Modules
- Jamming resistant
- Light-weight and compact
- Easy to install and use
- Modular, scalable and flexible design
- Low maintenance

TECHNICAL SPECIFICATIONS	
Frequency	X-band (9.5 GHz)
Bandwidth	up to 1 GHz
Coverage (Installation dependant)	Fixed installation, Mechanical azimuth/ elevation scanning
Maximum Range	60 km (imaging) 120 km (detection)
Ground Resolution	Up to 0.3 m
Modulation type	Arbitrary Waveforms
Number of Channels	4
Weight	35 kg (processor, stator, antenna) 23 kg (processor, antenna)
Cooling	Unconditioned air (internal fans)
Interfaces	Ethernet, Power
Operational modes	Stripmap, Spotlight Ground Mapping Sea Surveillance MTI, ISAR
Moving Target Indicator - MTI	Ground, Maritime, Dismount
Additional features	AIS (optional), Weight-on-Wheel, BIT, multi-maps
NATO STANAG	7023 (SAR imaging) 4607 (MTI)
Standards	MIL-STD-810H MIL-STD-461G

The Guardian consists of three ITAR-FREE small Line Replaceable Units (LRU): Processor, Stator/Pan-Tilt Unit (PTU) & Antenna. Those LRU's can be reconfigured if required to ease installation, reduce weight, and can be mounted directly onto the platform or in a pod.

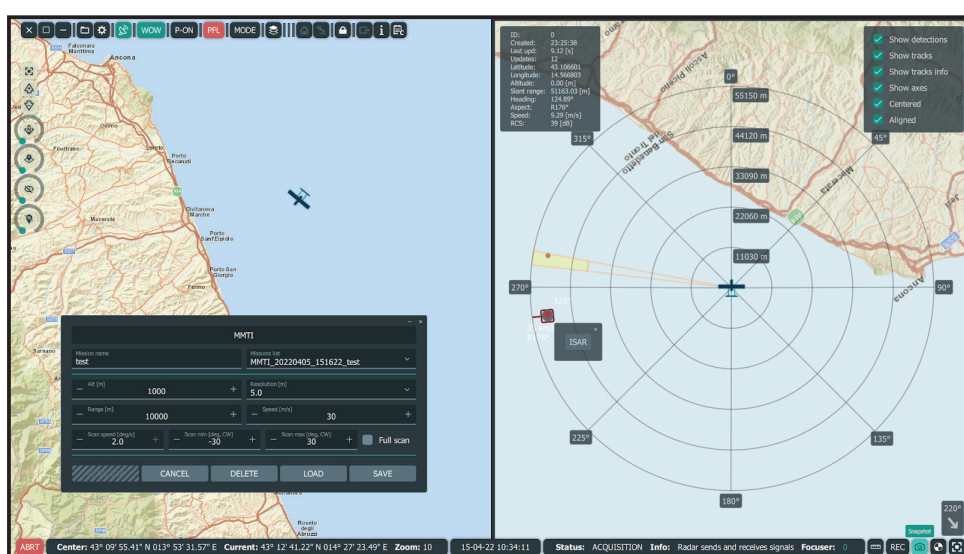
It provides a complete all-weather high-resolution intelligence and surveillance solution for new and existing airborne platforms, manned and unmanned (i.e. MALE RPAS, UAV).

Its compact size and light-weight allows the installation along-side electro-optical and infrared sensors even on platforms with low payload.

The baseline version of the Guardian system has four independent transmit/receive modules with four simultaneous sampling channels. However, custom scaled versions of the Guardian are also available.

It can be used for:

- Data and Intelligence gathering
- Surveillance and Reconnaissance
- Search and Rescue applications
- Disaster monitoring and recovery
- Maritime and border surveillance
- Mapping and monitoring
- Illegal trafficking monitoring



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