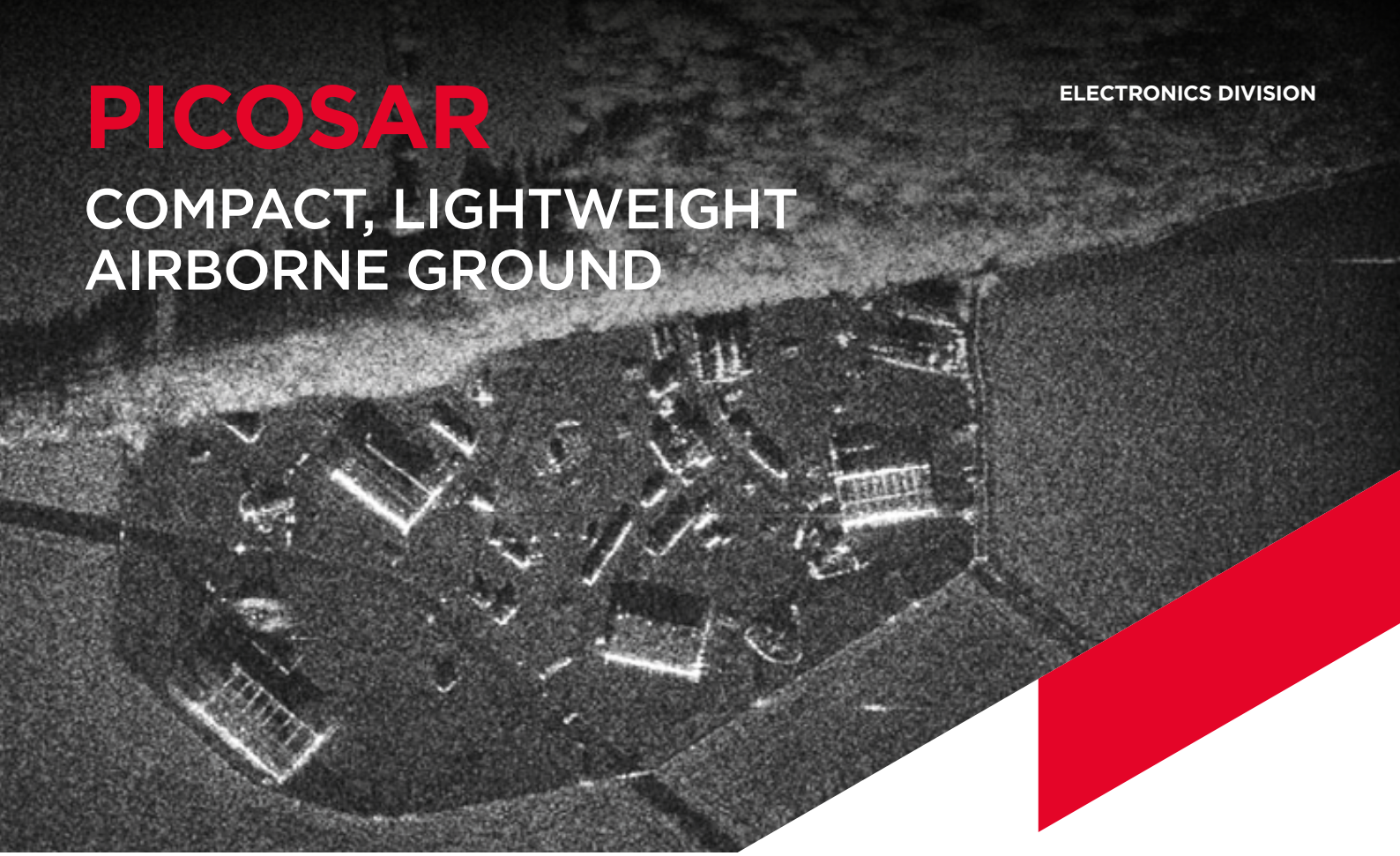
PICOSAR

COMPACT, LIGHTWEIGHT AIRBORNE GROUND



The PicoSAR Active Electronically Scanned Array (AESA) radar provides an unrivalled all-weather capability for Unmanned Aerial Systems, fixed wing and helicopter platforms.

Building on over 50 years of experience in the airborne radar field, PicoSAR combines our knowledge with the latest technology to meet the evolving requirements of the 21st century.

KEY FEATURES

The key to PicoSAR is the use of AESA technology in a small, compact configuration. Using many low power, solid state Transmit/Receive Modules (TRM) within its array, the PicoSAR radar is more reliable than conventional radar systems.

For the most compact installations PicoSAR can be mounted directly onto the platform and the beam steered electronically, or it can be mounted on a gimbal for an even greater field-of-view.

PicoSAR consists of a single small Line Replaceable Unit (LRU). This LRU can be reconfigured if required to ease installation, by detaching the antenna unit from the processor unit.

In addition, due to the flexibility of AESA technology the radar antenna can be resized to address specific platform constraints or customer performance requirements.

KEY BENEFITS

- Excellent performance
- High resolution ground mapping
- Wide area coverage
- High performance GMTI
- Low cost of ownership
- Reconfigurable radar system
- Lightweight
- Compact
- Very high reliability
- Easy to install and use

PicoSAR delivers a high resolution Synthetic Aperture Radar (SAR) imaging and Ground Moving Target Indication (GMTI) capability that permits new and existing platforms to easily acquire a true, all-weather ground mapping and surveillance capability. Its compact size, low weight and low power consumption permit installation in parallel with electro-optical/infrared sensors even on platforms with limited payloads.

BACKGROUND

Our company has been at the forefront of airborne radar capability since the 1950s when the AI23 radar became the world's first high power monopulse radar to enter squadron service.

To maintain our leading position, we have been developing AESA technology since the early 1990s, and we now have a range of AESA products available to meet the airborne radar market requirements.

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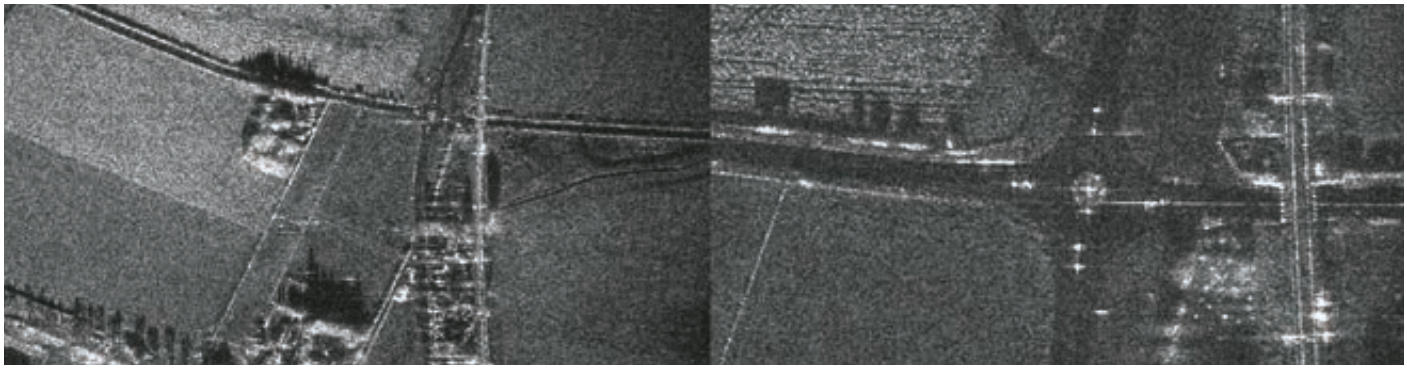
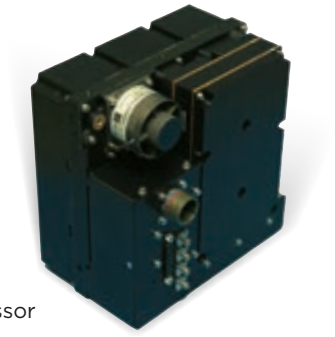


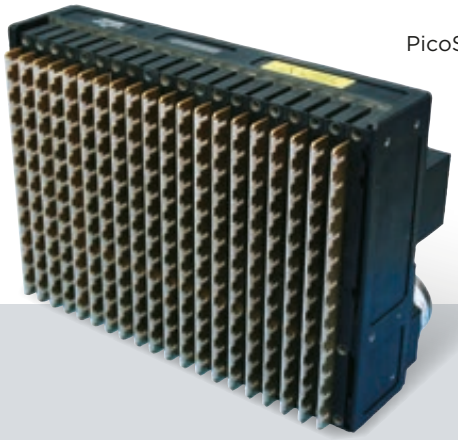
PicoSAR is one of a family of AESA radars that includes the Vixen family of fire control radars and the Seaspray family of surveillance radars which are in operation in the United States, on the USCG HC-130H aircraft and under contract for the UK Royal Navy Surface Combatant Maritime Rotorcraft (Future Lynx). PicoSAR utilises common technology and techniques used on our other radar programmes.

RELIABILITY

The PicoSAR radar minimises the impact of transmitter and receiver failure by using many solid state Transmit/ Receive Modules within a fixed array. As a result component failures within the array demonstrate graceful performance degradation rather than complete system failure, thereby delivering the highest levels of operational availability.



PicoSAR Processor



PicoSAR Antenna

TECHNICAL SPECIFICATION

- Frequency: X band
- Scan Coverage: ±45°
- Maximum Range: 20km (resolution dependant)
- Map Resolution: <1m
- Cooling: Unconditioned Air (existing internal fans)
- Weight: 10kg
- Input Power: <300W 28V DC

DIMENSIONS

- Height: Antenna 220 mm, Processor 200 mm
- Width: Antenna 310 mm, Processor 200 mm
- Depth: Antenna 85 mm, Processor 125 mm (140 mm max)
- Electrical Interface Connectors: Global Positioning System, (GPS) antenna feed, 28V DC power and Ethernet

CAPABILITIES

- Ground Mapping: Strip SAR
- Moving Target Detection: GMTI

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