

TacSAR



BENEFITS

- Frequency: X-band.
- All-weather operation.
- High resolution, wide swath SAR mapping.
- Land and maritime operation.
- Wide FOV area coverage.
- Interleaved modalities for mission flexibility.
- High reliability.
- Compact form and fit
- Mature proven solution.

The new Tactical synthetic aperture radar (TacSAR) airborne reconnaissance system from Raytheon, built on the operational pedigree of the DB/MS-110 EO/IR system, in partnership with Leonardo, provides commanders with a vital all-day/night ISR capability.

The TacSAR pod has seen the integration of the Leonardo Osprey 50 into the DB/MS-110 architecture and offers 24/7 mission effectiveness for multiple combat ISR missions.

A view to the future for tactical reconnaissance

The TacSAR is a true end-to-end operational capability and shares common support equipment and infrastructure with the DB-110 system. The key elements of the TacSAR system are:

- Mission planning — system common with DB/MS-110.
- Ground support equipment.
- Airborne reconnaissance pod.
- Data link.
- Processing, exploitation and dissemination – using Sci-Toolset.
- Training and support for all elements including radar imagery analysis.

A true force multiplier providing battle-winning ISR

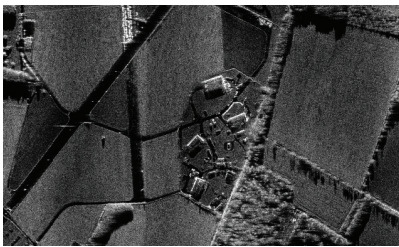
The TacSAR's mission flexibility is provided by the Leonardo multimode Active Electronically Scanned Array (AESA). The radar offers the following all-weather modes of operation:

- High-resolution spot SAR imaging for areas of specific interest.
- Wider-area strip SAR imaging for wide-area targets (such as airfields) or reconnaissance of line features.
- Wide area ground moving target indicator (GMTI).
 - Real-time or forensic data on moving ground targets over a wide area.
 - GMTI data is output in NATO Standard 4607 with SAR data output in NITF 2.1/STANAG 4545 facilitating dissemination of data.
- Maritime surveillance and tracking for a comprehensive picture of surface vessels.
- Classification of maritime targets by Inverse SAR (ISAR) mode.
- Mode interleaving to maximize operational flexibility and all-weather operations.

TacSAR



High-resolution spot SAR image



Wide-area strip SAR image



Osprey-50 radar

A view to the future for tactical reconnaissance

The TacSAR system is a unique collaboration between ISR specialists with proven operational pedigrees worldwide.

The multimode radar provides commanders with the ultimate capabilities for mission flexibility and all-weather operations.

The Osprey 50 multi-mode surveillance radar provides a powerful second-generation AESA surveillance capability as the primary sensor on airborne assets to meet the challenges of Strategic ISR operations. Osprey 50 fulfils the surveillance requirements of Strategic ISR platforms of users around the world, bringing together a wide azimuth and elevation electronically scanned (E-Scan) fixed antenna with a compact, state-of-the-art Processor and multi-channel Receiver.

Key features

Osprey 50 provides a genuine multi-domain capability, with high performance sea surveillance, notably against 'difficult targets', wide area land surveillance, very high resolution ground mapping, small and low speed ground target indication, high performance air-to-air surveillance.

These capabilities, combined with the radar's ability to rapidly interleave modes and provide scan-independent beam steering, make Osprey 50 ideally suited to mixed environment operations, such as in the littoral.

The radar design allows for individual element failures within the array resulting in graceful performance degradation rather than complete system failure, delivering high operational availability when compared with conventional radar systems.

Performance benefit of AESA radar

E-Scan enables simultaneous multi-domain wide area search and Target of Interest (ToI) focus, and ultra-fast beam scanning to provide vastly improved clutter cancellation and superior detection performance. This performance is maintained at high altitudes, allowing installation and operation from a wide spectrum of platforms.

Contact

Raytheon Global ISR Sensors and Software Solutions
7 Technology Park Drive
Westford, MA
01886 USA
eoir_westfordrc@rtx.com