

SEASPRAY 7500E

MULTI-MODE SURVEILLANCE RADAR

ELECTRONICS DIVISION



The Seaspray 7500E multi-mode radar combines a state-of-the-art Active Electronically Scanned Array (AESA) with a Commercial Off-The-Shelf (COTS) processor.

It offers leading edge capabilities covering both air-to-air and air-to-surface environments. Meeting the customer's evolving requirements, Seaspray 7500E is one of the latest members to the successful Seaspray family of surveillance radars. More than 500 Seaspray radars have been delivered to operators around the world on a variety of platforms ranging from helicopters and fixed wing aircraft, to fast patrol boats.

KEY FEATURES

AESA technology and flexible waveform generation capability enables Seaspray 7500E to deliver peak performance in all modes. Using multiple low power, solid state Transmit/Receive Modules (TRM) makes the Seaspray 7500E radar more reliable than conventional radar systems.

This results in a significant cost benefit over the life of the system. Superior performance in detecting small targets, such as Fast Inshore Attack Craft (FIAC) in high sea states, through use of Composite Electronic and Mechanical Scanning (CEMS).

Interleaved modes by virtue of its ability to change waveforms pulse-to-pulse. For instance, surface surveillance and weather detection can be provided simultaneously. Effectively two radars within one system.

KEY BENEFITS

- › Excellent performance
- › Low cost of ownership
- › True multi-mode operation
- › Software driven
- › Highly reliable
- › Easy to install
- › Easy to use
- › Mode interleaving

Comprising just two primary air cooled Line Replaceable Units and requiring no waveguide, Seaspray 7500E is easy to install.

It can be provided as a turnkey solution with embedded navigation sensors and Human Machine Interface or as a sensor solution to integrate with a platform mission system using industry standard interfaces.

SUPERIOR OPERATIONAL AVAILABILITY

Seaspray 7500E removes the impact of single point transmitter failure inherent within conventional systems.

The high power, low MTBF single transmitter is replaced by multiple low power, high MTBF TRMs within the array. Any TRM failures result in graceful performance degradation rather than complete system failure. Consequently, Seaspray 7500E delivers high operational availability.

We have stood at the forefront of the airborne radar market since the 1950s when the AI23 radar became the world's first high power monopulse radar to enter squadron service.

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



TECHNICAL SPECIFICATION

CHARACTERISTICS

- › Frequency: X Band
- › Scan coverage: 360°
- › Maximum range: 320 NM
- › Mean Time Between Failure (MTBF): 2,000 hours
- › Cooling: Unconditioned air
- › Weight: 110kg

DIMENSIONS

- › Scanner: 565 mm height
- › Swept volume: 1154 mm diameter, 306 mm height
- › Interfaces: Ethernet plus Mil Std 1553B, ARINC 419, RS422, RS232, USB and Synchro
- › Video outputs: RGB Stanag 3350, VGA, Digital Video

FUNCTIONS

- › Track While Scan: Automatic
- › Track Identification: AIS integration
- › Mode Interleaving: Simultaneous dual-mode operation

CAPABILITIES

- › Surface surveillance: Long Range Search, Priority Track, Small Target Mode
- › Navigation: Real Beam Ground Map, Weather Detection, Turbulence Detection
- › Beacon Detection: Search and Rescue Transponder (SART)
- › Target Imaging/Classification: ISAR, Range Profiling

GROUND MAPPING

- › Spot SAR: High resolution ground mapping
- › Strip SAR: Medium resolution wide area ground mapping, Oil Slick detection, Iceberg detection
- › Moving Target Detection: GMTI, Air-to-Air MTI

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