



SEASPRAY 7000E MULTI-MODE SURVEILLANCE RADAR

The Seaspray 7000E Active Electronically Scanned Array (AESA) multi-mode surveillance radar provides an unrivalled surveillance capability as the primary sensor on airborne assets to meet the challenges of the 21st century.

The Seaspray range of radars has been delivering a high performance surveillance capability to armed forces and paramilitary users for nearly 40 years. Seaspray 7000E is the latest in the successful Seaspray family of surveillance radars. It combines a state-of-the-art AESA with a Commercial-Off-The-Shelf (COTS) processor to deliver a leading edge capability covering both air-to-surface and air-to-air environments.

KEY FEATURES

AESA technology and flexible waveform generation capability enables Seaspray 7000E to deliver peak performance in all modes.

Using multiple low power, solid state Transmit/Receive Modules (TRM) makes the Seaspray 7000E 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.

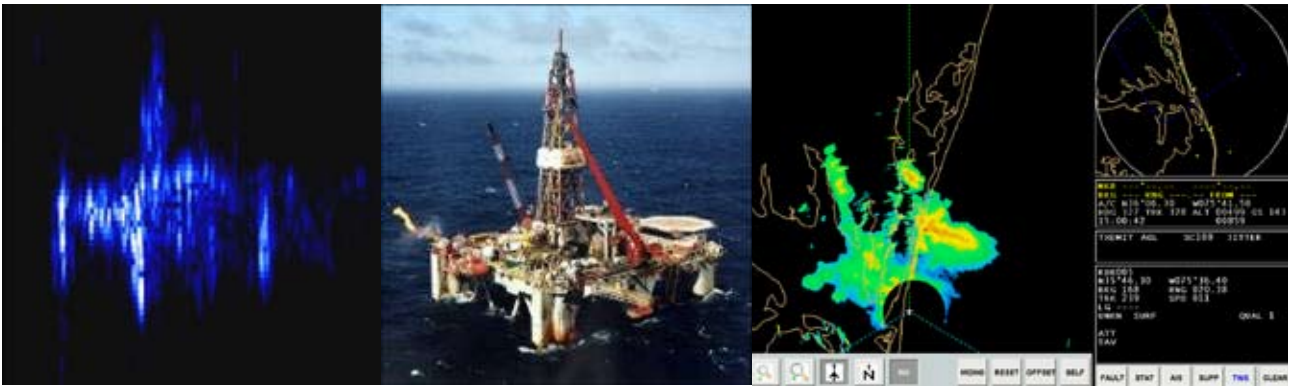
Comprising just two primary air cooled Line Replaceable Units and requiring no waveguide, Seaspray 7000E is easy to install.

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.

KEY BENEFITS

- Excellent performance
- Low cost of ownership
- True multi-mode operation
- Superior reliability
- Ease of installation
- Easy to use
- Mode interleaving.

Seaspray 7000E Multi-Mode Surveillance Radar



Inverse Synthetic Aperture Radar (ISAR) Imagery

Photograph of Oil Rig Platform

Weather Detection

TECHNICAL SPECIFICATIONS

Characteristics

Frequency	X Band
Scan Coverage	360°
Maximum Range	200 NM
Mean Time Between Failure (MTBF)	2,000 hours
Cooling	Unconditioned air
Weight	80kg
Dimensions	
Scanner	540mm height
Swept volume	886mm diameter
	281mm height

Interfaces

	Ethernet plus Mil Std 1553B, ARINC 429, ARINC 419, RS422, RS232, USB and synchro
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Video Outputs

	RGB, Stanag 3350, VGA, Digital Video
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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
Moving Target Detection	- Iceberg detection
	GMTI
	air-to-air MTI

SUPERIOR OPERATIONAL AVAILABILITY

Seaspray 7000E 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 7000E delivers high operational availability.

BACKGROUND

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.



Strip SAR Display

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