

AWS-10 Naval Radar

Advanced S-band Naval 2D surveillance radar

Our advanced naval sensors provide enhanced situational awareness in the most demanding environments.

AWS-10 is a new medium range, 2D air and surface surveillance radar designed for a wide range of naval and coastguard vessels.

Selected for the UK Royal Fleet Auxiliary the AWS-10 offers a cost effective package and unparalleled performance.

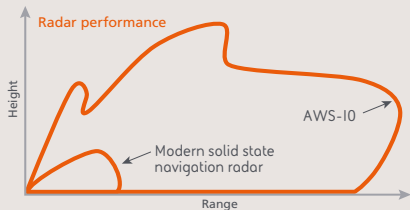
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Key performance benefits

- Delivers track quality required for air traffic management
- Significant contribution to tactical situational awareness during primary sensor role
- Excellent performance in precipitation and high sea states
- Fast inshore attack craft and small airborne target detection in clutter
- Fully frequency agile - optimises performance in hostile ECM environments
- Low masthead mass and extremely compact below decks envelope
- Optional high-power transmitter
- Low profile antenna and non-stabilised options available.

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Below decks



Turning control unit



Radar processing cabinet

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Functional aspects

- 2D general air and surface surveillance
- Back-up navigation surface surveillance
- Integrated IFF/SSR antenna (Mode S compatible)
- Proven integration with existing combat systems
- Options for sensor integration (IFF, electro-optics, navigation radar)

Processing

- High-speed FPGA-based digital signal processing
- Digital pulse compression
- Advanced adaptive clutter suppression processing (MTD and MTI)
- Advanced, multi-hypothesis track extraction
- Optimised for helicopter air traffic management.

Installation

- Compact installation envelope on a wide range of vessels from corvettes and OPVs to landing platforms, carriers and support ships
- Installation and commissioning can be achieved during normal ship re-fit period.

Technical data

- Four operating modes all at 15 rpm
- Fully automatic detection and tracking.

Low through-life costs

- Designed using commercial components to provide high operational availability
- Inherently high reliability
- MTBCF > 4000 hours
- MTTR < 30 minutes
- Low operational maintenance requirements
- Comprehensive on-line fault detection and diagnosis
- A software-centric radar, enabling ease of capability upgrade.

Antenna

Ultra-low design (including stabilised turning unit)	< 800 kg
Type	Shaped-beam (cos ²) reflector
Horizontal beamwidth	1.65°
Antenna rotation rate	15 rpm
Stabilisation	Mechanical
Transmitter	
Frequency band	E/F band
Type	Solid state transmit module
Peak power	Standard 2 kW (nom.) High-power 15 kW (nom.)
Duty Cycle	10% max.
Frequency agility	

Installation

Equipment footprint and ship services required :

Std	High	Equipment	Mass	Height	Width	Depth	Ships chilled water	Ships power
✓	✓	Antenna	230 kg	1.35 m	4.7 m	1.6 m	n/a	None
✓	✓	Turning unit	570 kg	1.27 m	1.0 m	1.7 m	None - air cooled	9 kVA (max. sea state 5)
✓	✓	Turning control unit	80 kg	0.8 m	0.6 m	0.25 m	None - air cooled	0.5 kVA
	✓	Signal generation and receive cabinet	280 kg	1.56 m	0.69 m	0.68 m	4.5 l/min	1 kVA
✓		Radar processing cabinet	355 kg	1.56 m	0.95 m	0.68 m	4.5 l/min	2 kVA
	✓	Transmitter cabinet	480 kg	1.75 m	0.75 m	0.80 m	15 l/min	8 kVA

Performance data

Maximum instrumented range	180 km
Maximum elevation coverage	> 40°
Minimum range	< 250 metres
Tracking capacity	> 800 targets (air and surface)
Azimuth accuracy	0.35°
Azimuth resolution	3.25° (98%)
Track declaration range	Standard High
Aircraft km	> 140 km > 175 > 40 km > 40 kft
Helicopter km	> 75 km > 100 > 10 ft > 10 kft

For more information contact:

BAE Systems Maritime Services
Newport Road, Cowes
Isle of Wight, PO31 8PF, United Kingdom
E: radaruk@baesystems.com
W: www.baesystems.com/radaruk

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