



# AWS-10 Lightweight Naval Radar

Advanced S-band naval 2D surveillance radar

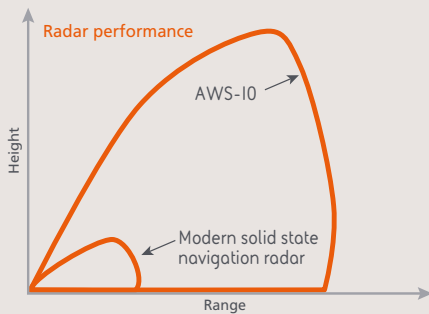
Our advanced naval sensors provide enhanced situational awareness in the most demanding environments.

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

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## Key performance benefits

- Delivers high quality track data
- Significant contribution to tactical situational awareness in primary sensor role
- Excellent performance during precipitation and high sea states
- Fast inshore attack craft and small airborne target detection in clutter
- Fully frequency agile - optimises performance in hostile ECM environment
- Low masthead mass and extremely compact below decks envelope
- Optional high power transmitter.



## 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
- 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 turning unit)	250 kg
Type	Slotted waveguide array
Horizontal beam-width	1.9°
Antenna rotation rate	15 rpm

### Transmitter

Frequency band	E/F band
Type	Solid state transmit module
Peak power	Standard 2 kW (nom.) High power 15 kW (nom.)
Frequency agility	

### Performance data

Maximum instrumented range	180 km
Maximum elevation coverage	> 25°
Minimum range	< 250 metres
Tracking capacity	> 800 targets (air and surface)
Azimuth accuracy	0.4°
Azimuth resolution	3.7° (98%)
Track declaration range	<b>Standard High</b>
Aircraft km	> 125 km > 175 > 40 km > 40 kft
Helicopter km	> 75 km > 100 > 10 ft > 10 kft

### Installation

Equipment footprint and ship services required :

Std	High	Equipment	Mass	Height	Width	Depth	Ships chilled water	Ships power
✓	✓	Antenna	75 kg	0.20 m	3.75 m	0.50 m	n/a	None
✓	✓	Turning unit	170 kg	0.60 m	0.65 m	0.80 m	None - air cooled	1.5 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	2 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

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