

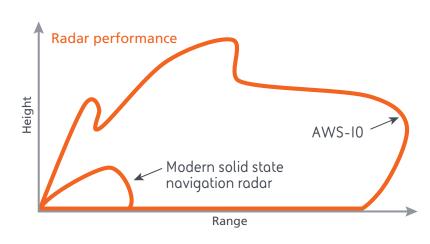
# AWS-10 Naval Radar

# Advanced S-Band Naval 2D Surveillance Radar

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

AWS-I0 is a new medium range, 2D air and surface surveillance radar designed for a wide range of naval and coast guard vessels.

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







# **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 environment
- Low masthead mass and extremely compact below decks envelope
- Optional high power transmitter
- Low profile antenna and nonstabilised options available.

# **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 utilising 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**

Low weight design < 800 k (including stabilised turning uni				
Type Shaped-beam (cosec²) reflecto				
Horizontal beamwidth		1.65°		
Antenna rotation rate		15 rpm		
Stabilis	ation	Mechanical		

## **Transmitter**

Frequency b	and E/F band		
Туре	Solid state transmit module		
Peak power	Standard 2 kW (nom.) High power 15 kW (nom.)		
Duty cycle	10% max.		
Frequency a	gility		

## Performance data

Maximum instrum	e 180 km			
Maximum elevatio	> 40°			
Minimum range	< 2	< 250 metres		
Tracking capacity		300 targets · & surface)		
Azimuth accuracy Azimuth resolution	n 3.	0.35° (98%) 25°		
Track declaration range	Standard	High		

range	Standard	High	
Aircraft	> 140 km > 40 kft	> 175 km > 40 kft	
Helicopter	> 75 km > 10 kft	> 100 km > 10 kft	

# Installation

Equipment footprint and ship services required

Std	High	Equipment	Mass	Height	Width	Depth	Ships chilled water	Ships power
✓	<b>✓</b>	Antenna	230 kg	1.35 m	4.7 m	1.6 m	n/a	None
<b>✓</b>	✓ Stabilised turning unit 5	570 kg 1 27	1 27 m	27 m 1.0 m	1.7 m	None - air cooled	9 kVA	
_	•	Stabilised turning unit	370 kg	1.27 111	1.0 111	1.7 111	None - all cooled	(max. Sea State 5)
✓	<b>✓</b>	Turning control unit	80 kg	0.8 m	0.6 m	0.25 m	None - air cooled	0.5 kVA
	<b>✓</b>	Signal generation and receive cabinet	280 kg	1.56 m	0.69 m	0.68 m	4.5 l/min	1 kVA
<b>✓</b>		Radar processing cabinet	355 kg	1.56 m	0.95 m	0.68 m	4.5 l/min	2 kVA
	<b>✓</b>	Transmitter cabinet	480 kg	1.75 m	0.75 m	0.80 m	15 l/min	8 kVA

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