

Sea Searcher™ Active and Passive Hull-Mount Sonar

Ultra Maritime is the sole supplier of hull-mounted sonars to the UK's Royal Navy warship fleet



Key features

- Active and passive ASW
- Omni and sector (north and ship stabilised) transmissions
- Live, replay and training modes
- Automatic torpedo detection with low false alarm rate
- High source level, wide bandwidth, high dynamic range
- Mine and obstacle avoidance mode
- Automatic mammal detection and classification

Overview

Ultra Maritime's Sea Searcher™ is a family of HMS that provides the latest innovation in Anti-Submarine Warfare (ASW). Sea Searcher™ forms part of Ultra Maritime's flexible Integrated Sonar System (ISS) – an adaptable system that can be configured to meet individual customer and platform requirements.

Sea Searcher™ is a medium frequency hull mounted sonar, that provides active and passive surveillance and classification capabilities in a broad range of environmental conditions. It is capable of omni or sector transmission and can also provide automatic torpedo classification with low false alarm rate, mine and obstacle avoidance, underwater communications and optional automatic marine mammal detection.

Performance prediction features and an intuitive human computer interface optimises information gathering for faster and more efficient decision-making in a broad range of operational situations.

Technical Specification

The outboard Digital Array Module design reduces inboard footprint and complexity, increasing reliability and availability. Inboard, the system uses a flexible Ethernet network to connect the processing, sonar console, combat management and navigation system interfaces, data recorder and digital array.

The Sea Searcher™ HMS has been selected for the Royal Navy's Type 23 and Type 26 frigates, the Royal Australian Navy's Hunter Class and Canadian Surface Combatant.

Sea Searcher™ supports both bow and keel mounted configurations and can be fitted within new or existing domes.

The processing software uses an open systems architecture and publish/subscribe inter-process communications, permitting insertion of third-party applications and optional hosting on alternative processing hardware platforms, such as Shared Computing Environments.

Outboard	HMS-2210	HMS-1810	HMS-1606
Transducers	440	360	192
Array size (D x H)	1.64m x 1.44m	1.41m x 1.44m	1.24m x 0.92m
Array frame mount height	1.76m	1.65m	1.10m
Total weight	5050kg	3600kg	2012kg

Outboard	Weight	Height	Width	Depth
Processor cabinet	530kg	1.70m	0.60m	0.90m
Remote panel	8kg	0.15kg	0.30m	0.31m

Sonar Characteristics

Capabilities	Active and Passive ASW Mine & Obstacle Avoidance Sonar Integrated Underwater Communications Automatic Torpedo Detection, Classification & Localisation Marine Mammal Detection & Classification (optional) Record & Replay Built-in Training Simulator
Active operating frequency	5kHz – >12kHz
Active transmit sectors	360° or operator selectable sector (north or ship stabilised)
Active waveforms	CW, FM, combined CW & FM
Active centre frequency	3 x centre frequencies, operator selectable
Active ping lengths	1/16th – 2 seconds
Range scale	2 - 72 Kyds
Passive operating frequency	2 kHz – 8 kHz
Passive processing	Broadband, Narrowband, Transient, DEMON, Acoustic Intercept



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