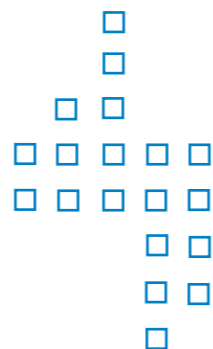


This document gives only a general description of the products or services and, except where expressly provided otherwise, should not form part of any contract. Changes may be made in the products or the conditions of supply.

THALES



>> ADVANCED INTEGRATED SEARCH AND ATTACK SONAR SUITE



> Sonar 2076

ADVANCED INTEGRATED SEARCH AND ATTACK SONAR SUITE

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Thales Underwater Systems has been at the forefront of submarine sonar development for more than 40 years and, as a result, has a unique understanding of the submarine's complex role and the ever changing threat from more sophisticated, faster and quieter submarines.

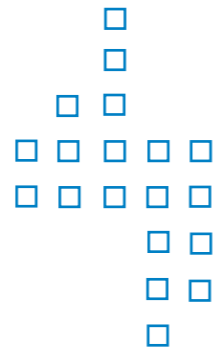
The Company understands the operational constraints within which submarines operate and the extent to which these are influenced by the marine environment. This wealth of knowledge has been applied to the development of Sonar 2076, the world's most advanced fully integrated, passive/active search and attack sonar suite.

Sonar 2076 has been developed for the Royal Navy as part of the Swiftsure and Trafalgar Class Final Phase Update and is also being fitted to the Astute Class submarines. The system has now entered service following an extensive series of highly successful sea trials.

[www.thalesgroup.com/naval](http://www.thalesgroup.com/naval)

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# THALES SONAR 2076



The system consists of a comprehensive suite of outboard arrays, combined with an inboard processing capacity providing a capability that is an order of magnitude greater than any other submarine sonar.

The outboard components comprise:

- Hull-mounted flank, bow, mine detection and intercept arrays
- Fin-mounted underwater communications arrays
- Towed array with associated reelable cable system

These arrays have been developed specifically for the Trafalgar Class submarine and utilise the latest materials technology and manufacturing techniques to maximise the achievable performance within the physical constraints of the installation. In particular:

- The flank arrays provide levels of performance that dramatically increase the submarine's ability to detect, track and classify contacts at long range and represent a unique capability
- Sea trials have demonstrated that the towed array out-performs any other towed array in production today



Sonar 2076 is being fitted to the ASTUTE Class Submarine



Sonar 2076 is now in service with the Royal Navy

The principal inboard equipment consists of processing cabinets, active transmit cabinets, a cooler cabinet, operator multi-function consoles and a recording suite. In terms of sheer processing power, this represents a signal processing capability approximately five times greater, and a data processing capability approximately ten times greater, than any other sonar system in the world today.

Sonar 2076 has also been selected by BAE Systems for fitting to the Astute Class submarines. The system is being fitted as a common product to the Trafalgar Class, with only minor modifications to suit Astute specific requirements. This has dramatically improved the affordability of implementing the Astute sonar solution and will also significantly reduce the through-life support costs across all the platforms fitted with the system.

The only significant difference for the systems fitted to Astute is the provision of a Towed Array Handling System capable of reeling the Sonar 2076 towed array. This is being procured under a separate contract.

