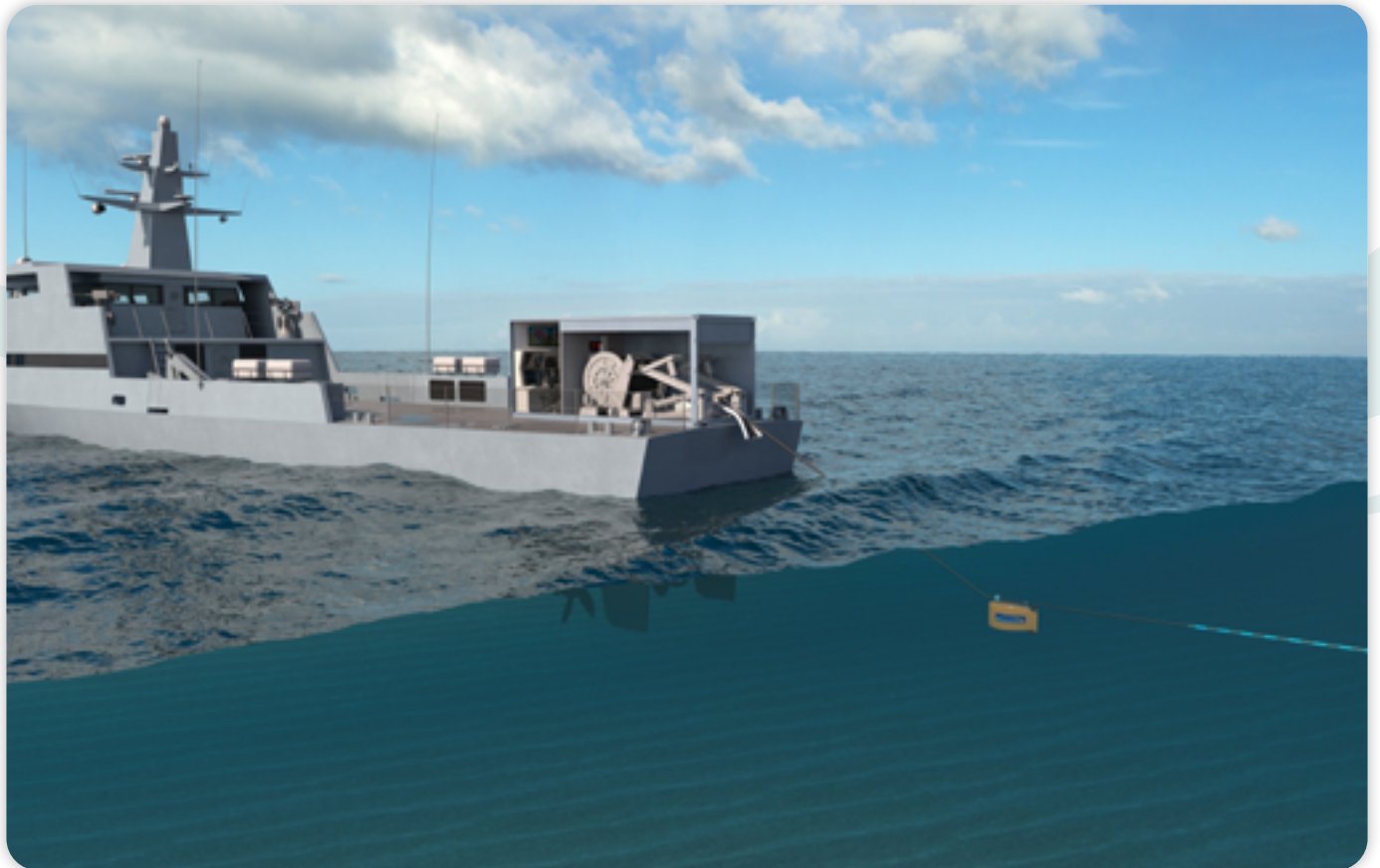# Modular Sword Fish™ - Active Modular Towed Array Sonar

Modular SwordFish is a cutting-edge, portable, compact and lightweight Towed Array Sonar (TAS) system that detects, tracks and classifies submarines at variable sea depths and bathymetry layers in both littoral and deep waters.

Enhancing ASW Missions with the Latest Technologies

A lighter version of the SwordFish TAS is the SwordFish MTAS – Modular TAS system that was designed according to the Navies' requirements for modular and flexible Medium-low frequencies ASW sonar systems. The MTAS lightweight system us, an all-in-one TAS system, requires very small footprint on deck and is suitable for Frigates, Corvettes, and OPVs. A unique single 20-ft ISO container configuration enables the modular system to be stored for long time and easily installed, dismantled, and transferred between vessels during exercises or time of escalation.

Implementing today's most advanced electronics and acoustic technologies, the low-frequency Modular SwordFish™ TAS system utilizes state-of-the-art machine learning, automation algorithms and signal processing to deliver ultra-long-range, high-resolution underwater target search, detection, tracking, and classification of submarines, midget-submarines, UUVs and torpedoes, at variable depths and in difficult environmental conditions.

Modular Sword Fish™ - Active Modular Towed Array Sonar

Operating simultaneously in passive, active and parallel modes in both littoral and deep waters, the versatile Modular SwordFish TAS suits a wide range of ASW missions and tactical scenarios and can be controlled from an onshore or onboard mission control station.

Due to its high level of automation and user-friendly HMI, SwordFish can be run by a single operator, significantly reducing workload as well as training requirements.

Benefits

- suitable for vessels of various sizes and non-dedicated ASW platforms
- Fixed or Modular system's configuration are available
- Designed for a wide range of ASW missions at various depths
- Easy to operate, run by a single operator; reduced workload & training requirements on the sonar operator

- Creates situational awareness
- Multiple display modes
- User-friendly HMI and GUI
- Lightweight; low deck signature
- Adaptable to any Combat Management System (CMS)
- Robust, reliable, safe deck hoist and hydraulic system
- Low Life Cycle Costs, ruggedized and combat-proven components

Main Capabilities

- State of the Art Active and Passive TAS system, that detects even the quietest submarines, midget-submarine, and torpedoes, hiding under thermal layer.
- Operates in active, passive, and parallel modes
- Utilizes advanced electronics and acoustic technologies, Machine Learning (ML), automation, signal processing
- Passive broadband and narrowband automatic detection, tracking & classification of underwater targets

- Automatic Torpedo Alert (ATA)
- Embedded Range Prediction System (RPS)
- Built-in operator training simulator
- Extensive Built-in-Test (BIT)
- High resolution and very long-range detection
- Optional record & playback of raw data
- Own-ship self-noise measurement
- Mutual Interference Suppression (MIS)
- Works with DSIT's BlackFish Hull Mounted Sonar and HMS system of other vendors

Technical Specifications

- Low-Medium frequencies ranges are available
- Passive triplet array hydrophone resolves right/left ambiguity
- Navigation Data: GPS location, speed, heading, pitch and roll

- Active Search Detector: EDFD, DP, SBC
- Passive Search Detector: BBED, BBSBC, NBED
- Sensitive technical specifications are available on request