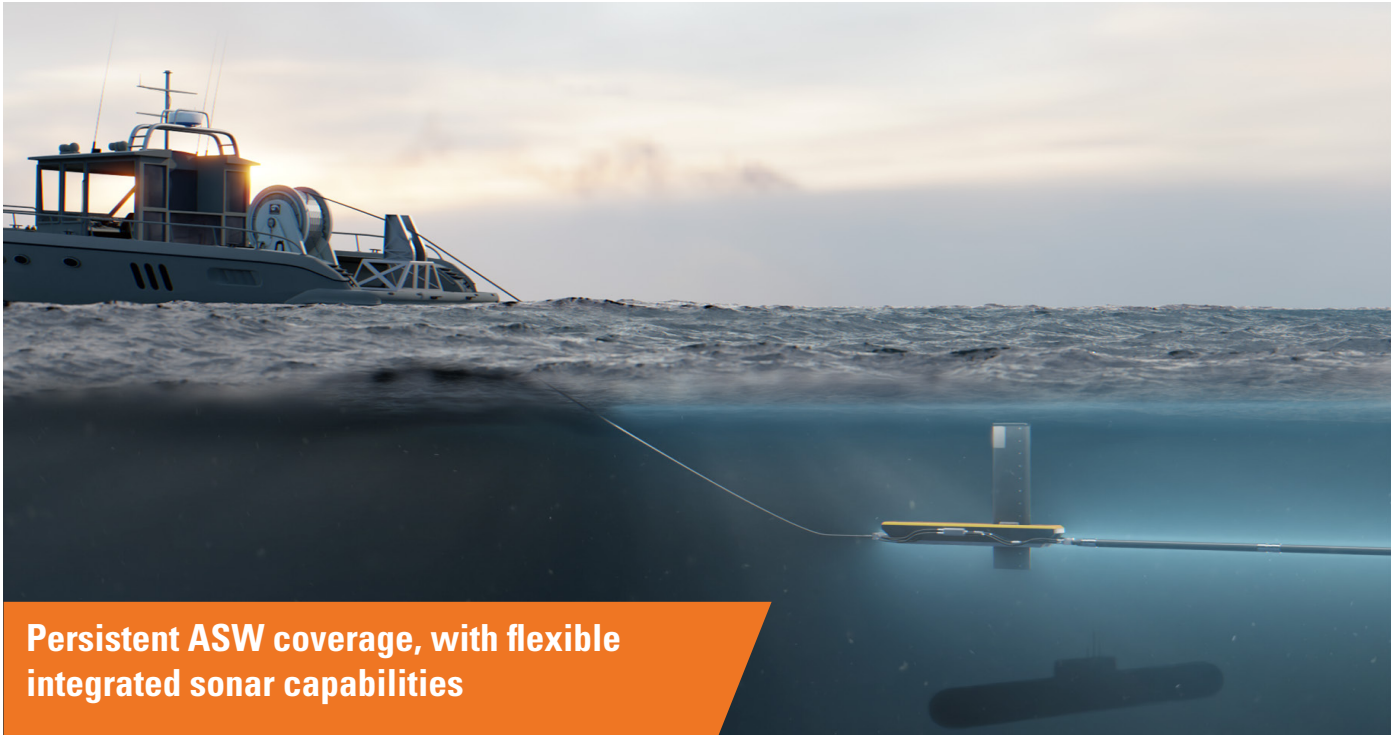


# Uncrewed Surface Vessel Towed Array Sonar



**Persistent ASW coverage, with flexible integrated sonar capabilities**

Uniquely offers interchangeable sonar capabilities in a single system – effective in both deep water and littoral environments.

Electrically powered winch system deploys and recovers the single-tow payload autonomously.

Passive Receive Module offers broad frequency coverage and is ambiguity resolved.

## **Features:**

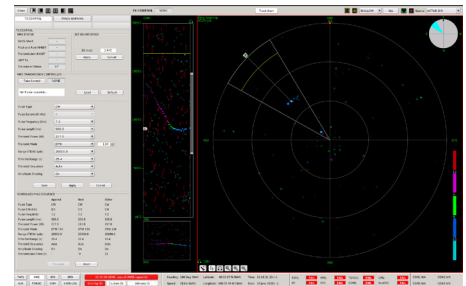
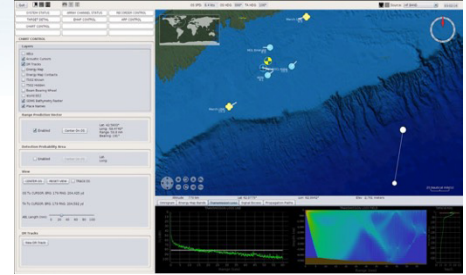
- Can be delivered on USV's 12 meters in length and larger
- Onboard electronics (Amp, TX/RX interface module, and sonar processing subsystem)
- Remote station (operator's console, sonar processing servers, OMI for all winch operations including array development and recovery)
- Advanced sonar signal processing, display, tactical decision aids and data management system
- Transmission in omnidirectional mode with multiple pulse types (LFM, HFM, CW)
- Unique inline array provides easy handling, storage and launch/receive while maintaining advanced acoustic capabilities
- Winch and towed array guide
- Design permits unique capability to change projectors in-field; changeable transmission frequency band optimizes sensor for changing operating area/environment
- Designed to MIL specs and environmental requirements

## TECHNICAL INFORMATION

Sonar type	Active/Passive Towed Array Sonar
Size	3.2m x 2.2 m x 2.3m* *Winch handling system, TA and guide
Weight	2-2.5 tonnes
Power	110V/220V-1PH and 440V-3PH
Nominal array diameter	60mm
Installation	USV* *Deck mounted system can be removed
Minimum Operational depth	10m
Maximum Operational depth	90 m* *Max sensor operating depths can be increased
Max operational speed	18 knots
Max survival speed	20 knots (VPA closed)* *VPA in horizontal mode. Higher speed depending on winch selection
RF Range	10 nautical miles
Data Rate	35 mgbits/second
Foot print	3.2m x 2.2m x 2.3m
Max Sea state for Deploy/Recovery	4
Active Sonar Frequencies	2-10kHz* *Support multiple active sonar bands with following frequencies: 2.2 kHz, 5 kHz, 10 kHz.
Passive sonar frequencies	5 – 5000 Hz
Adjustable source level	Yes
Detection range	In excess of 1st CZ   Up to 100 km* *Environmental conditions dependent
Transmitting sector	360°
Receive sector	360°
Maximum power requirement	15kW

## OPTIONAL CAPABILITIES

Simulation capabilities	Available: Onboard simulator/trainer
Provisions for underwater communications	Available: Can be embedded in sonar transmissions
Black box pinger detector	Available
Bi-static processing	Available
Multi-static processing	Available
Sonobuoy processing	Available



**Towed Releable Passive Sonar (TRAPS®) – TRAPS is a family of Vertical Projector Array (VPA) towed array sonars for in-service and future Naval vessels.**

- The TRAPS® array is a unique single tow design, which integrates a vertical projector array (VPA) source without a dedicated active handling/overboarding system.
- No cumbersome LARS (Launch and Recovery System): smaller space requirements, simpler handling and stowage, higher reliability, lower price with less weight, size and maintenance.



The product described here represents a general configuration of this family of products. Specifications are configurable for specific customer requirements. For pricing and availability information, please contact your General Dynamics representative.

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