



The Bluefin-12S is a highly modular autonomous underwater vehicle with the ability to carry multiple payloads simultaneously. Its baseline low-cost navigation solution and 4.5-kWh energy capacity provide ample capability for most shallow applications. The ultimate configuration of Bluefin-12S is customizable for unique requirements.

**FREE-FLOODED MODULARITY** – The vehicle design includes swappable payload sections and battery modules for in-field mission reconfiguration. Subsystems can be quickly accessed for rapid turnaround between missions and also allow for in-field maintenance, accelerating operational tempo.

**VERSATILITY & SCALABILITY** – Standard building blocks enable a variety of configurations without having to design from scratch. The Bluefin-12S can accommodate new payloads and enhanced energy sections – evolving with expanding requirements or changing applications. It can also be delivered with an empty payload section and a standard payload interface for customer payload integration.

**ACCURATE NAVIGATION** – Bluefin's navigation software combines information from the IMU and multiple other sensors – including GPS, a DVL, an SVS and a compass – to provide accurate navigation with an error of less than 0.5% of distance traveled, yielding high-quality data without an INS.

**EASE OF USE** – An intuitive software package enables quick and easy planning and monitoring of missions and rapid post-mission processing and display, and is capable of exporting data to third-party software.



The Bluefin-12S can be recovered with a simple A-frame

## Applications

- Inshore Survey
- Search & Salvage
- Oceanography
- Scientific Research
- Mine Countermeasures (MCM)
- Unexploded Ordnance (UXO)

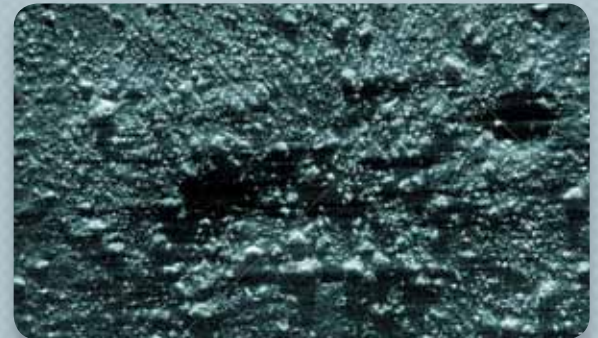


# Bluefin-12S

<b>Diameter</b>	12.75 in (32 cm)
<b>Length</b>	12.4 ft (377 cm)
<b>Weight (Dry)</b>	470 lb (213 kg)
<b>Buoyancy</b>	8 lb (3.6 kg) net positive
<b>Lift Points</b>	1 (located mid-vehicle)
<b>Depth Rating</b>	650 ft (200 m)
<b>Endurance</b>	26 hours @ 3 knots with a side scan sonar
<b>Speed</b>	Up to 5 knots
<b>Energy</b>	4.5 kWh of total energy Three 1.5 kWh battery packs Lithium-polymer, pressure-tolerant
<b>Propulsion</b>	Gimbaled, ducted thruster for propulsion and control
<b>Navigation</b>	Real-time accuracy $\leq 0.5\%$ of D.T. CEP 50 Post-processed accuracy $\leq 0.2\%$ of D.T. CEP 50 IMU, DVL, SVS, compass and GPS (optional INS solution available)
<b>Antenna</b>	Integrated — GPS, RF, Iridium and strobe
<b>Communications</b>	RF, Iridium and acoustic; Ethernet via shore power cable
<b>Safety Systems</b>	Fault and leak detection, dropweight, acoustic tracking transponder, strobe, RDF and Iridium (all independently powered)
<b>Software</b>	GUI-based Operator Tool Suite
<b>Data Management</b>	4 GB flash drive for vehicle and payload data
<b>Standard Payloads (others available)</b>	Empty payload section with standard payload interface specification for customer-integration of payload  SSS, SAS, and various other sensors and payloads available



The Bluefin-12S operating as a sensor testbed



(Mosaiced by third-party software)

Bluefin-12S synthetic aperture sonar imagery of seafloor craters



**SYSTEM PACKAGE** — The Bluefin-12S comes as a part of a comprehensive system package primarily consisting of the vehicle, support equipment, spares, software, training and 1-year warranty.



**OPERATOR TOOL SUITE** — Each system includes an intuitive software package that provides the interface between the AUV and operator for all phases of a mission, including planning, monitoring and execution, data management, and post-mission analysis.