

Bluefin SandShark®

A Low-cost, Open, Micro AUV for Rapid Deployment and Technology Development



The Bluefin SandShark® is a one-person-portable, low-cost autonomous underwater vehicle (AUV) designed to leverage today's miniaturized sensors and also be the development platform for the next generation.

The standard tail section houses all core vehicle systems and connects in seconds to any number of fully customizable and modular wet or dry payload sections. Small enough to be carried in a backpack, the Bluefin SandShark® is a low logistics and rapidly deployable solution for virtually any underwater need.

Applications

Defense

- Intelligence, Surveillance, and Reconnaissance
- Rapid Environmental Assessment
- Unexploded Ordnance Survey
- Mine Countermeasures

Law Enforcement

- Search and Salvage
- Near-shore Persistent Monitoring
- Port and Harbor Security

Oil and Gas

- Near-shore Infrastructure Inspection
- Pre/Post Dredging Survey

Shipyard and Marina Assessment

- Water Quality
- Docked Vessels
- Bridge Pylons, Docks and Moorings
- Sand and Silt Deposit Assessment

Mapping and Hydrography

- 3D Inshore Seabed Survey
- Debris Field Mapping
- Bathymetric Assessment
- Archaeology and Exploration

Research and Development

- Training and Education
- Developmental Payloads
- Autonomy and Behavior Research
- Novel Energy Systems

Environmental Sciences / Aquaculture

- Habitat Mapping
- Ecosystem Assessment
- Water Quality Testing
- Climate Research
- Fisheries Census

Technical Specifications

■ Dimensions

- Tail section:
 - diameter - 4.875" (12.4 cm)
 - length - 20" (51 cm)
 - weight - <11 pounds (5.12 kg)
- Payload Section:
 - diameter - 4.875" (12.4 cm)
 - length - customizable (standard 23" - 60")
 - weight - customizable

■ Performance

- Depth Rating: 200 meters
- Speed: 2-4 knots
- Active Roll Control, Field-replaceable fins
- Navigation: GPS, 9-axis IMU, Depth Sensor, Altimeter (optional DVL)
- Vehicle software incorporates the Bluefin Standard Payload Interface to facilitate integration with autonomy suites: ROS, MOAA, JAUS, MOOS, and more

■ Mast Section

- Magnetic on/off switch
- Status LEDs (user-configurable)
- Wi-Fi
- Visible and Infrared Strobes

■ Battery

- Lithium-Ion battery pack
- 24 VBUS, up to 10 Ah
- Protection against over-voltage, over current, under-voltage, under-temp and over-temp
- UN 38.3 Certified
- No HAZMAT training required for ground transport when installed in vehicle

Starter Kit includes:

- Bluefin SandShark® tail
- 110VAC Shore Power Charger
- Wireless Router
- 18" flooded payload section w/nose
- Maintenance Kit
- Spares Kit
- Durable Rolling Case

GENERAL DYNAMICS

Mission Systems

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