

# GENERAL DYNAMICS

Mission Systems

## Bluefin<sup>®</sup> - 9

*Unmanned Underwater Vehicle (UUV)*



Most Powerful Sensor Package in  
a Two-Man Portable UUV

Expeditionary & Low Logistics for the  
Most Dynamic Missions

Side Scan Sonar w/ Full Swath Bathymetry

HD Machine Vision Camera

Sound Velocity Sensor + Temperature + Pressure

Turbidity

Fluorometry

The General Dynamics Mission Systems Bluefin<sup>®</sup>-9 unmanned underwater vehicle (UUV) provides unmatched high-resolution data, leading navigation, data processing and mission turnaround time in a two-man portable UUV. Featuring a full carbon fiber body, a carefully selected and integrated suite of sensors, latest generation communications and navigational components, and new onboard processing capabilities, the Bluefin-9 is the professional's tool to KNOW WHAT'S BELOW.

**UNMATCHED DATA QUALITY** - Bluefin-9's integrated Sonardyne Solstice multi-aperture side scan sonar delivers a 200 meter swath range and ultra-high along-track resolution of 0.15°.

**PRECISE & RELIABLE NAVIGATION** - The Bluefin-9 provides precise navigation (0.3% D.T. CEP 50) and accurate, geo-referenced data by incorporating a high-performance Doppler Velocity Log (DVL) and Inertial Navigation System (INS).

**EXPEDITIONARY OPERATION** - The Bluefin-9 allows swapping of the 1.9 kWh battery and 1TB Removable Data Storage Module (RDSM) in 30 minutes or less. The modular, free-flooded architecture eases in-field maintenance and minimizes operational down-time.

**DATA WHEN YOU NEED IT** - The Bluefin-9 features advanced on-board data processing that offers operators access to processed sonar and camera data that is ready for post-mission analysis.

When the data are mission critical, trust General Dynamics Mission Systems' Bluefin Robotics completely redesigned Bluefin-9 UUV to provide the most reliable and comprehensive data sets in a vehicle of its class.

## Sonardyne Solstice Multi-Aperture Sonar

The integrated Sonardyne Solstice multi-aperture sonar delivers high-resolution sonar imagery for hydrographic and bathymetric mapping. Each of the two Solstice arrays has 32 multibeam elements to dynamically focus along the whole length of the swath. High-resolution data across the entire swath results in maximum effective resolution, decreases false-positives, and improves operational efficiencies.

## 1TB Removable Data Storage Module (RDSM) With Camera

Bluefin-9's new RDSM acts as an independent data processor, generating and storing post-processed data with a simple interface to an operator's workstation. The RDSM contains a high-definition, machine vision-grade monochrome camera that captures still images and video. Imagery is geotagged for easy review during post-mission analysis.

## Dedicated Emergency Operations System

The Bluefin-9 is designed with an innovative emergency operations system that provides redundancy to the vehicle's core functions in the event of a failure. An independently powered low-power microcontroller ensures key communications systems are able to provide locational data and telemetry to an operator to facilitate prompt and safe recovery of the vehicle.

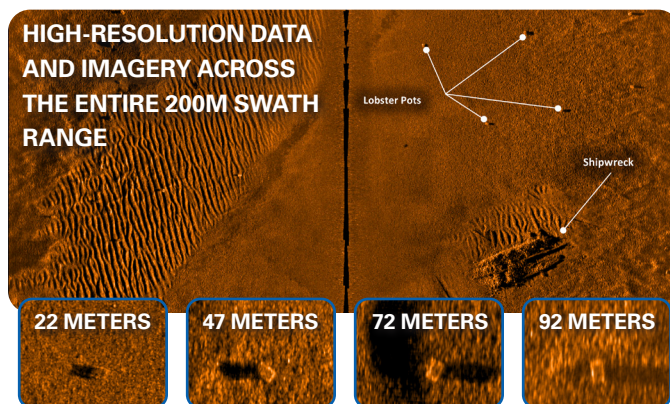
## 12-Month Standard Limited Warranty

Like all Bluefin Robotics solutions, the Bluefin-9 comes with General Dynamics quality, reliability, and support. Our 12-month limited warranty provides additional confidence that the Bluefin-9 is the platform of choice for the toughest and most vital missions.

## Technical Specifications

- **Diameter**
  - -9.375" (23.8 cm) W x 10.375" (26.4 cm) H
  - Increased vehicle stability
- **Length**
  - 95.2" (248.1 cm)
- **Weight**
  - (Dry): 155 lb (70 kg)
- **Buoyancy**
  - Buoyant in Fresh and Salt Water
  - Seamless transition between water bodies
- **Lift Points**
  - Nose and Aft Mounted carrying handles for two man lift

- **Depth Rating**
  - 656' (200m)
- **Energy**
  - 1.9 kWh Rechargeable Lithium Ion battery
  - Designed for rapid removal and replacement – recharges in six hours using rugged battery charger
- **Endurance**
  - 8hr @ 3kt / 12hr @2kt
  - (2hr transit; 6 hr survey)
- **Speed**
  - Up to 6.0 kt sustained transit
  - Survey at up to 5.0 kt
- **Propulsion**
  - Gimballed, ducted thruster for propulsion and control
- **Navigation**
  - Realtime accuracy <- 0.3% D.T. CEP 50
  - Dedicated Inertial Navigation System
  - Doppler Velocity Log
- **Integrated Payloads & Sensors**
  - Sonardyne Solstice 3000 Multi-aperture sonar
  - Removable Data Storage Module (RDSM) with Camera
  - Turbidity and Fluorometer Sensor
  - Sound Velocity Sensor + Temperature + Pressure
- **Antenna**
  - Integrated GPS, Wi-Fi, and Iridium with visible strobe
- **Communications**
  - Ethernet, Wi-Fi, Iridium, Acoustic
- **Safety Systems**
  - Ground Fault Detection, Leak Detection, Independently Powered Emergency Operations System
- **Software**
  - Bluefin Dashboard and Bluefin Planner
  - Optional SeeByte SeeTrack v4 interoperability



Lobster Pots. Approximate dimensions 800mm x 600 mm x 400mm

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FOR MORE INFORMATION, PLEASE CONTACT:  
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