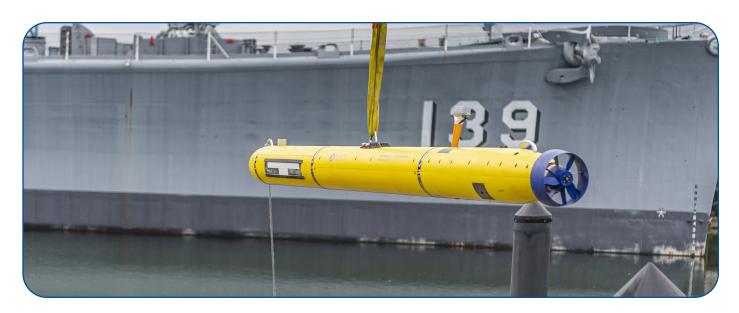
### GENERAL DYNAMICS

Mission Systems

# **Bluefin®-12 with Integrated Survey Package**

Unmanned Underwater Vehicle (UUV)





Advanced, Mission-Ready and Modular Medium-Class UUV

Embedded On-Board Data Processing

Side Scan Sonar with Full Swath Bathymetry

Integrated Environmental Sensor Suite

**HD Machine Vision Camera** 

Shared Bluefin UUV Infrastructure and Streamlined Logistics

The General Dynamics Mission Systems Bluefin®-12 is a lightweight mediumclass unmanned underwater vehicle (UUV) designed to deliver mission critical data and complete operators' high-consequence and changing missions. Built with robust core capabilities, increased modularity, embedded intelligence, data processing, and extended operational range, Bluefin-12 is READY FOR TODAY'S MISSION AND PREPARED FOR TOMORROW'S THREATS.

**Core Capabilities** – The Bluefin-12 UUV is equipped with a suite of core sensors and capabilities delivering a low-logistics, high performance UUV.

**On-Board Data Processing** – Equipped with robust data processing power and a 1TB Removable Data Storage Module (RDSM), Bluefin-12 delivers actionable data at the conclusion of each mission.

**Unmatched Data Quality** – Bluefin-12's available Sonardyne Solstice multiaperture side scan sonar delivers a 200 meter swath range and ultra-high along-track resolution of 0.15°.

**Precise and Reliable Navigation** – The Bluefin-12 provides precise navigation (0.1% D.T. CEP 50) and accurate, geo-referenced data by incorporating a high-performance Doppler Velocity Log (DVL) and Inertial Navigation System (INS).

**Mission-Based Modularity** – The Bluefin-12 provides greater than 4,000 cubic centimeters (4,150 cm³) of available payload space open for the integration of user-selected and mission-specific sensors.

# **Bluefin®-12 with Integrated Survey Package**

General Dynamics Mission Systems' Bluefin-12 UUV adapts and delivers mission critical capability and data over long-duration operations. The completely redesigned medium-class Bluefin-12 is the UUV to extend your mission capability.

# **Mission-Based Modularity**

The Bluefin-12 features a modular construction enabling the integration of user-selected and mission specific payloads. Four discrete modular sections enable efficient on-deck mission preparation, maintenance and refitting for continuous extended missions, including rapid access and maintenance of internal components.

# **Integrated Intelligent Capabilities**

Bluefin-12 delivers numerous capabilities that increase operational efficiency including collision avoidance, terrain following, and Automatic Target Recognition (ATR).

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

Bluefin-12'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.

# **Technical Specifications**

- Diameter
  - ~12.8" (32 cm)
- Length
  - 15.8' (4.83 m)
- Weight
  - (Dry): 550 lb (250 kg) with integrated survey package
- Payload Capacity
  - 4,150cm<sup>3</sup>
- Buoyancy
  - Buoyant in Fresh and Salt Water
  - Seamless Transition Between Water Bodies
- Lift Points
  - Nose, Mid-section, Aft Mounted Lift-Points
- Depth Rating
  - 656' (200 m)
- Energy
  - Four (4) 1.9 kWh Rechargeable Lithium Ion battery
  - Designed for Rapid Removal
  - Replaceable Individual Batteries Recharge in Six Hours
- Endurance
  - 24 hr @ 3kt / 36 hr @2kt
  - (4 hr Transit; 20 hr Survey)

#### Speed

- Up to 6.0 kt Sustained Transit
- Survey at Up to 5.0 kt

#### Propulsion

Gimbaled, Ducted Thruster for Propulsion and Control

#### Navigation

- Realtime Accuracy <- 0.1% D.T. CEP 50
- Doppler Velocity Log

#### Available Integrated Payloads and 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



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Mission Systems

FOR MORE INFORMATION, PLEASE CONTACT:

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