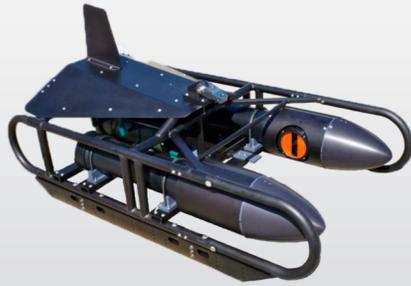


## Robust, Stable, Practical Sensor Platforms

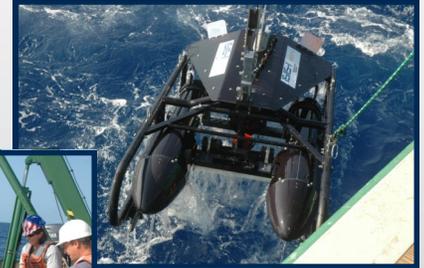
Two field-proven modular designs: the **Utility Sled** and the **Dynamic Flight Control Vehicle**

**The BellaMare Utility Sled (BUS)** - a passive towed-vehicle design with a large payload capacity. Using internally-recording sensors, the tow depth can be controlled by management of a simple wire towline.



*Specifications (typ.) (shown with optical instrumentation payload)*

- Dimensions: 86" L x 46" w x 66" h
- Weight in Air: 800 lb
- Weight in Water: 350 lb
- Depth Rating: 200 m (std.)



## The BellaMare Dynamic Flight Control Vehicle (DFCV)

A high-capacity vehicle, with actively controlled pitch, roll and rudder, allows programmed undulation, terrain following and lateral-offset navigation. Designed to use an electromechanical/fiberoptic tow line, this vehicle communicates with the *BellaMare Torside Control Station* onboard the tow vessel which provides programmed flight profiles and real-time vehicle attitude monitoring and control. The tow line also allows high-capacity power and data transfer to accommodate larger payloads, such as multibeam and scanning sonars or optical sensors, that require vessel-based, real-time processing systems.



*Specifications (typ.) (shown with optical instrumentation payload)*

- Dimensions: 87" L x 50" w x 66" h
- Weight in Air: 1600 lb
- Weight in Water: 120 lb
- Depth Rating: 200 m (std.)



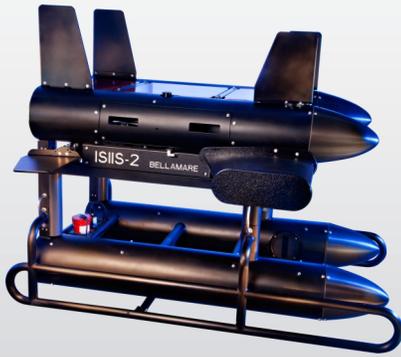
## Unique BellaMare Vehicle Advantages

- Modular design allows interchangeable lower payload bays: rapidly reconfigure the vehicle with alternate (predefined) sensor suites, at sea, for different survey tasks.
- The *BellaMare Sensor Integration Module*, onboard the towed-vehicle, combines the output of several sensor systems into a single data stream for real-time monitoring and control from the *Torside Control Station*, allowing adaptive survey management.

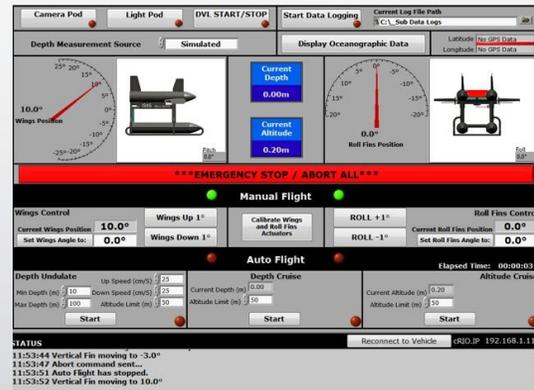
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## BellaMare Dynamic Flight Control

The combination of actuator-driven vehicle control surfaces, the *Topside Control Station* and our *Vehicle Control Software* provides real-time monitoring and flight control, allowing programmed flight profiles and attitude monitoring for automating functions such as:



- Depth-undulation
- Terrain-following
- Lateral-offset



## BellaMare Sensor Integration

Equip the towed-vehicle with a full scientific sensor suite for environmental characterization, integrated into a single record, to complement optical, sonar or any other survey application.

The vehicle *Sensor Integration Module* accepts a wide variety of sensor data formats to combine individual sensors into a common data stream, and communicate topside via an optical fiber.



The *Topside Control Station* is fully contained inside a protective case, including computer, vehicle power supply, and communications multiplexer card. An external RAID array drive, keyboard, mouse, and 2 monitors complete the system.



The *Sensor Integration Software* provides real-time display of sensor data in graphical and tabular format for a comprehensive environmental picture.



Integrate multiple sensors with real-time monitoring for adaptive survey management.

