slocum G3 GLIDER

Autonomous Underwater Vehicle
Long Endurance, Proven Performance

TELEDYNE MARINE
WEBB RESEARCH
Everywhereyoulook™

Slocum G3 Glider

System Overview

The Slocum glider is buoyancy driven to enable long range and duration remote water column observation for academic, military, and commercial applications. The Slocum Glider can be deployed and recovered from any size vessel with minimal time on station. Once the Slocum glider is deployed, it can easily be controlled from anywhere in the world through the use of web based piloting tools. This allows fleets of gliders to be operated remotely with minimal personnel and infrastructure.

Versatility by Design

Slocum gliders are modular, allowing for rapid sensor reconfiguration to respond to emergency conditions or situations. Over 50 sensors and other options are available to address a wide variety of ocean conditions and sampling requirements.

Endurance for Persistent Monitoring Tasks

The buoyancy propulsion drive provides months of performance at sea and the optional thruster provides up to 2 knots of horizontal speed. This long endurance glider will expand your data collection range or situational awareness by providing real data over extended periods of time.

Even in the Roughest Seas

No matter the sea state, gliders are capable of continuous sampling without risking personnel or costly assets. Slocum gliders routinely operate around the world in extreme weather conditions.

Autonomous Operation

Slocum gliders can run pre-programmed routes, surfacing to transmit real time data to shore while downloading new instructions at regular intervals.

High Resolution Sampling

Slocum gliders enable high resolution sampling over transects that can be revisited during a single deployment. This enables resolution of sampled features over time and space at a substantially lower cost than with traditional methods.

KEY BENEFITS

- Most prolific underwater gliding platform
- Demonstrated multiple ocean basin crossings
- Decades of buoyancy driven system experience
- Custom sensor integrations
- Modular design

KEY FEATURES

Software

- Robust software
- Auto ballast
- Speed control
- Low power consumption modes
- Ice coping capabilities
- Compression for data transfer

Mechanical

- 840 to 1800cc Hydraulic Flight Drive
- Pneumatic Surfacing Drive
- Hybrid thruster produces over 1000cc additional drive
- Wet payload capable
- Extended energy payload capable

Operations

- 1-2 man operable
- +/- 3.5 σ external ballast
- Recovery strobe light
- Nose recovery system and variety of bail and lift point options for large vessel operations

Markets

Academic Applications

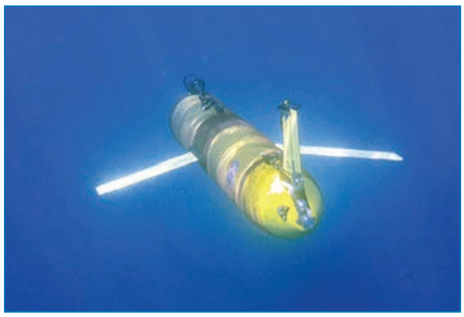
Widely adaptable platform for operations in coastal, offshore, under ice and extreme conditions. Gliders provide a safe, less costly option to traditional ship based measurements

Commercial Applications

Proven experience with near shore and deep water monitoring for commercial applications including hydrocarbon detection, produced formation water monitoring and marine mammal mitigation

Premiere Defense Applications

Proven platform of choice for military applications with over 150 vehicles shipped to date. Support for small development programs and large fleets. Slocum gliders have proven to provide high quality oceanographic data at 1% cost compared to survey ship operations.



Jackson Schroeder, University of Georgia Skidaway Institute of Oceanography

Courtesy of U.S. Navy - Does not imply endorsement

SFMC Software

Slocum Fleet Mission Control (SFMC)

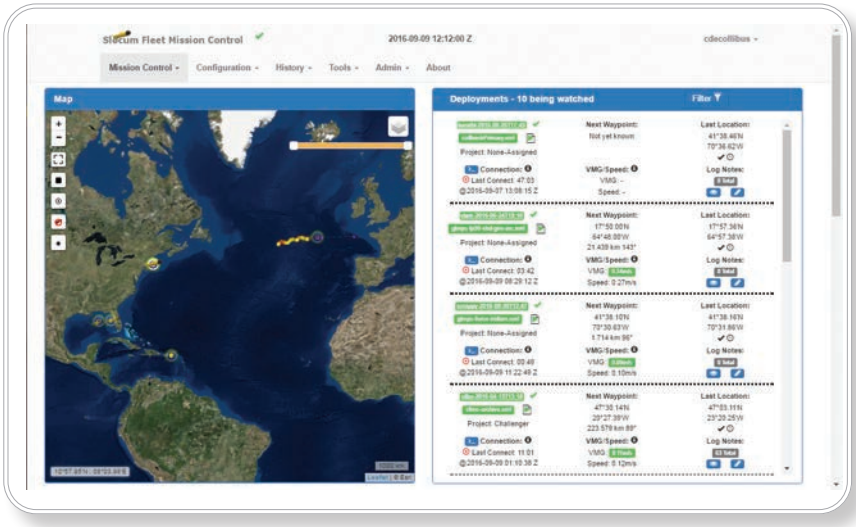
Teledyne Webb Slocum Fleet Mission Control (SFMC) is a software suite used to manage multiple Teledyne Webb Research Slocum glider deployments around the world. The SFMC highlights pertinent information, significantly reducing piloting time and allowing smaller teams to manage large fleets of gliders. SFMC provides a web user interface (UI) that includes an interactive map for displaying glider positioning details including past, recent and planned locations.

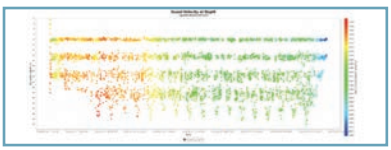
FEATURES

- Web based glider command and control
- Waypoint planning
- Integrated glider terminal
- Real-time sensor monitoring
- Customizable maps and overlays
- User login accounts with varying permission levels

BENEFITS

- Active vehicle tracking and mission planning
- Consolidated data management
- Ability to access tools from any platform (PC, MAC, tablet, smartphone)
- Increased security





Sensor Options:

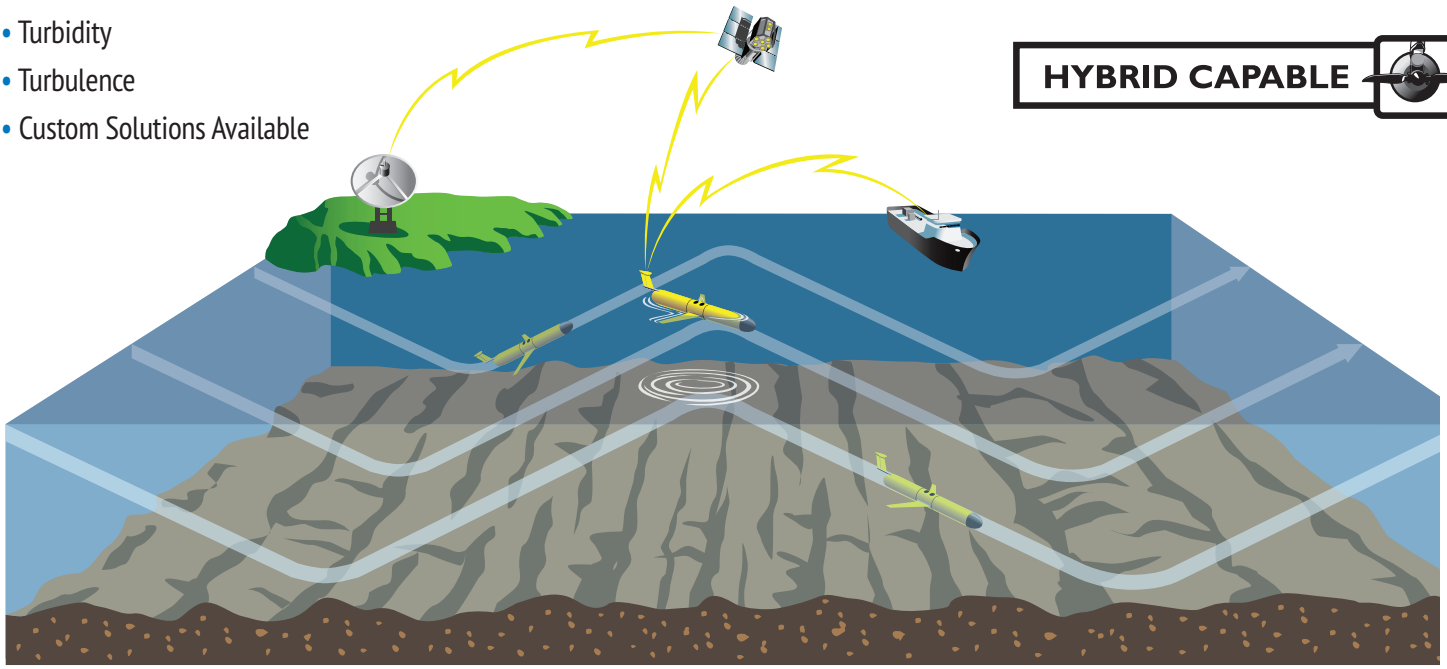
- Acoustic Doppler Current Profiler (ADCP)
- Acoustic Modem
- Optical Transmission and Passive Acoustic Monitoring
- Beam Attenuation
- CTD Pumped or Unpumped
- Echosounder Options
- Fish Tag Detection
- Hydrophones
- Nitrate
- Optical Backscatter Options
- Optical Attenuation Options
- Optical Fluorometry Options
- Oxygen Options
- PAR
- Particle Size Analyzer
- Particle/Biology Imaging
- Radiometer
- Turbidity
- Turbulence
- Custom Solutions Available

GENERAL SPECIFICATIONS	
Deployment	Versatile, deployment with 1-2 people. LARS options available.
Power	Alkaline (A) / Rechargeable (Li) / Lithium (L)
Range	350-1200km/ 700-3000km/ 3000-13000km
Deployment Length	15-50 days/ 1-4 months/ 4-18 months
Depth Options	(4 to 150m) or (40 to 1000m) operating depth range*
Navigation	GPS, Pressure Sensor, Altimeter, Dead Reckoning
Communication	RF Modem, Iridium (RUDICS), ARGOS, Acoustic Modem
Horizontal Speed	Buoyancy Engine: 0.35 m/s (0.68 knot) Average, up to 0.5 m/s (1 knots) with full drive. Thruster: Up to 1 m/s (2 knots)
Mass	55 - 70kgs (dependent upon configuration)
Dimensions	Vehicle Length: 1.5 meters; Hull Diameter 22 cm

* Modular buoyancy engine dependent

Note: Endurance and range dependent on sensors and sampling frequency, energy source and communications

HYBRID CAPABLE



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