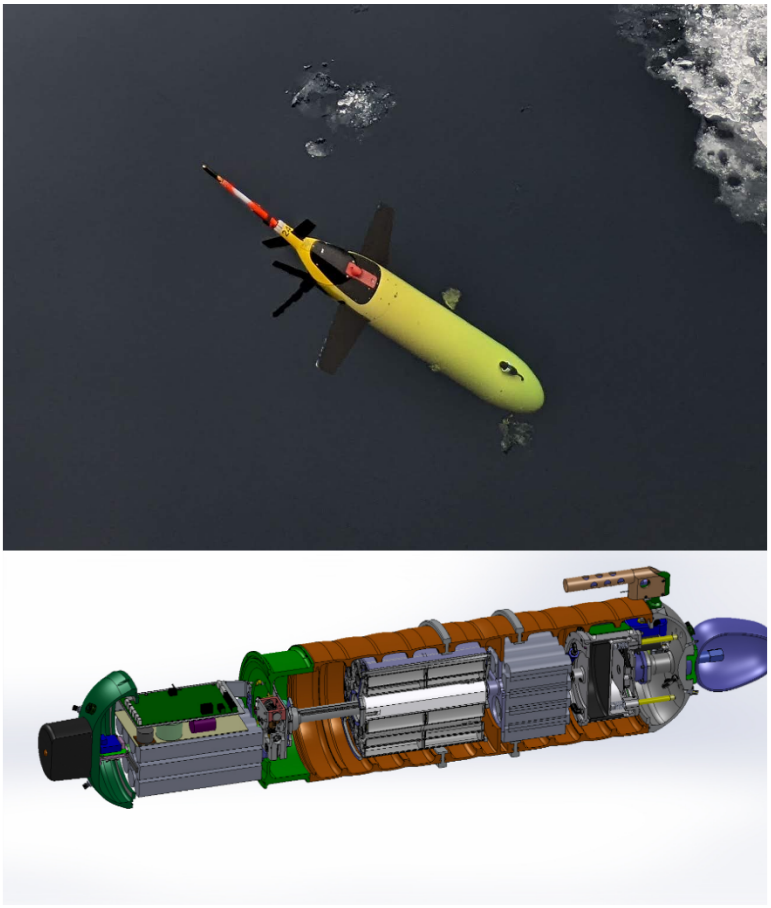
Seaglider SGX

https://iop.apl.washington.edu/seaglider.php

SGX is the latest generation of the Seaglider family of buoyancy-driven autonomous underwater vehicles developed at the University of Washington, offering 60% more battery capacity and more flexible payload options compared to earlier generations of the vehicle.



Features

- Long endurance
- Advanced navigation capabilities, including under-ice behavior and mission scripting and autonomy
- Cloud-based Basestation v3 software for data handling, flight model processing, and web-based piloting and visualization
- Automatic compass calibration and onboard automatic pitch and roll trim
- Maintenance access from both forward and aft endcaps
- Robust data transfers through Iridium RUDICS, with firmware options available to reduce upload sizes

Sensor Integration

The standard sensor suite for SGX is a RBRLegato CTD, Aanderaa 4831 optode, and Seabird/WETLabs ECO puck optical sensor. Hardware ports, processor interfaces, and software architecture enable users to integrate a wide range of additional sensors.

Vehicle specifications

Deployment duration	12 months with continuous sampling
Depth range	1000 m
Size	203 cm (length), 29.5 cm (diameter)
Mass	~70 kg
Speed	Typically 0.1 to 0.25 m/s horizontal, 0.1 m/s vertical
Power	Lithium batteries (15 V)
Processors	ARM-based motherboard; optional independent science processor/controller for added sensor control