ecoSUBu5 micro-AUV

ecoSUB
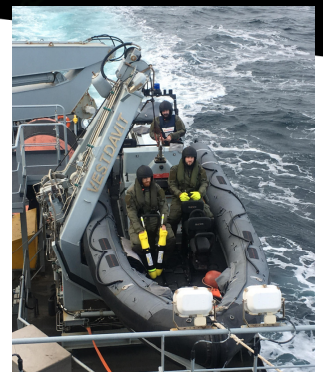**robotics**™

ecoSUB Robotics

ecoSUB is a new generation of autonomous system for a wide range of underwater applications in the marine environment. Extremely affordable, one person portable, low logistics solutions, with high levels of performance and customisation, ecoSUB AUV platforms dramatically increase access to AUV technology.

ecoSUBu5 AUV

The ecoSUBu5 micro-AUV weighs only 4kg, it is classed as a single payload platform, ideal for a CT (conductivity, temperature), fluorometer, SVP (sound velocity profiler) or similar, to be able to collect useful oceanographic data. As a low cost platform, it is well suited to mass deployment for collecting a lot of data quickly. Due to its unique cylinder profile, it is ideal for launch from a wide range of other systems.

TECHNICAL DATA

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Endurance:	10 hours, no payload, water temp 3.5° C	**Dimensions:**	Length (including antenna) 925 mm, diameter 111 mm
Depth rating:	500 m	**Weight in air:**	4kg (with alkaline batteries)
Communications:	Iridium SBD, Wi-Fi, Acoustics	**Surface location:**	GPS, Infrared & visible beacon

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Payload configurations

Limited to single payloads, or multiple compact payloads, the ecoSUBu5 AUVs are capable of carrying a range of useful payloads suitable for oceanographic data collection and communication gateway applications, including:

Conductivity, temperature	Sound velocity profiler	Chlorophyl-a	Turbidity	Altimeter	Acoustic modem	Independent acoustic pinger

ecoSUBu5-Science

Configured to collect key science data on physical and biological parameters, the low cost, low weight micro-AUV platform is a useful tool for simple detecting thermoclines, fronts, algal blooms and other interesting features
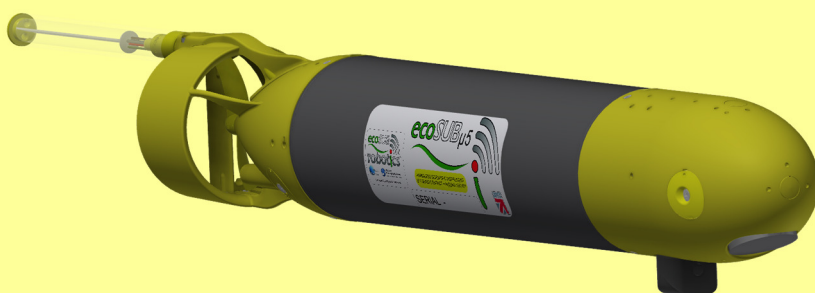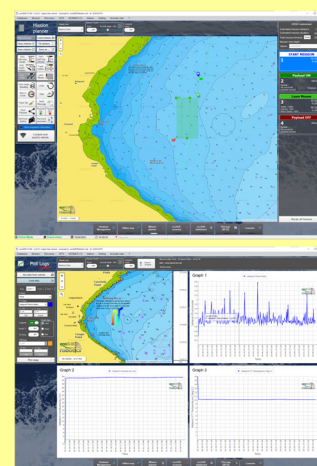

Payload:

- Valeport CT-F (conductivity, temperature, Chlorophyl-a) or mini-SVP (sound velocity)
- Marine Sonic Technologies ECHO Altimeter (altitude)

ecoSUB C3 GUI

Easy to use for vehicle interface, mission planning, recovery, data download and plotting

- Fully autonomous platform – no human in the loop during mission – no need to write code, behaviours or mission scripts
- Remote operation – missions can be operated/ monitored from any global location

- Easy to use Windows based software for interfacing with vehicles. Point and click mission planning with detailed parameter controls, vehicle recovery module, data transfer, data plotting and more

- Iridium satellite coms for full global coverage, Wi-Fi for high bandwidth data transfer
- Limited infrastructure requirements – AUV, Hermes (or router) and Laptop is all that is needed to run missions

HERMES C3 Coms Box

Smart and convenient communications tool for ecoSUB operators

Creates Wi-Fi network for ecoSUB AUVs to connect to, 4G internet, GPS, 2-way Iridium coms in internet denied environments, acoustic coms

- Vehicles transmit system status and position information every 5 mins when on the surface to confirm okay for re-tasking or easy recovery

- Front seat / Back seat architecture for integrating users own hardware, code, algorithms or third party control systems

- Ideal for swarm/squad/ shoal applications
- Open source ecoSUB CMSA underwater network protocol embedded in every vehicle

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