ecoSUBm-Power+ AUV

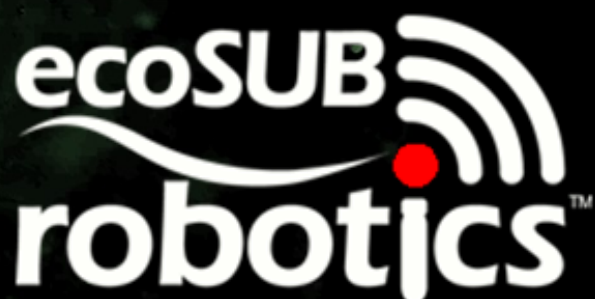## ecoSUB
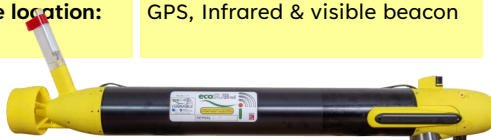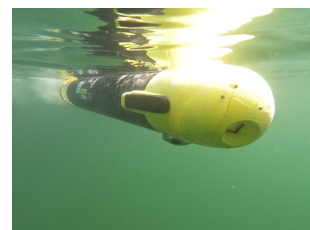
robotics™

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.

ecoSUBm-Power+ AUV

The ecoSUBm-Power+ is a one person portable AUV weighing only 17kg. It can be configured with a range of payloads, typically used to deploy side scan sonar, camera and DVL, but also to carry a comprehensive array of science sensors to collect useful oceanographic data. As a low cost platform with edge computing capability, it is well suited to mass deployment for collecting a lot of data quickly.

TECHNICAL DATA

Endurance:	30 hours, no payload, water temp 3.5° C	**Dimensions:**	Length 1490 mm, diameter 111 mm
Depth rating:	m5-Power+: 500 m m25-Power+: 2,500 m	**Weight in air:**	17kg (with NiMH batteries)
Communications:	Iridium SBD, Wi-Fi, Acoustics	**Surface location:**	GPS, Infrared & visible beacon

www.ecosub.uk

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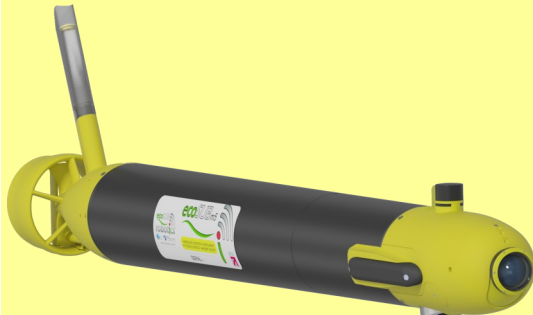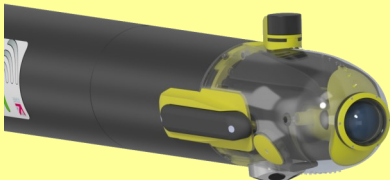
MADE IN BRITAIN

Planet Ocean

Payload configurations

ecoSUBm-Power+ AUVs feature the Power+ module, extending power and internal payload capacity from a standard ecoSUBm5/m25. ecoSUBm-Power+ AUVs are capable of carrying a wide range of payloads suitable for both Science and Survey applications, including:

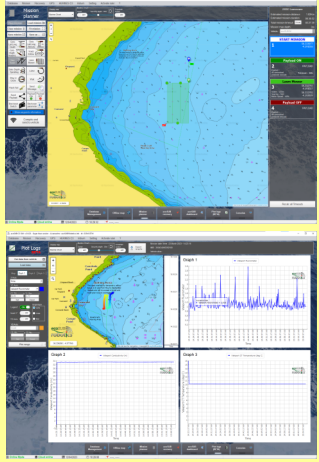| Side scan sonar	DVL	Current profiler	4K camera with	Conductivity,	Independent	Altimeter
Chlorophyl-a	CDOM/FDOM	Backscatter	Turbidity	Dissolved oxygen	pH	GoPro

ecoSUBm-Power+ Scout & Vision

In addition to the standard ecoSUBm-Science & Scout configurations, ecoSUBm-Power+ can also be configured with the ecoCAM 4K camera, interfaced to a Nvidia Jetson Nano for edge computing. Power+ doubles power on board for more endurance or higher power payload

Payload: Valeport CT • Marine Sonic Technologies Scout ARC Mk II Side Scan Sonar (900, 1200, 1800kHz or dual frequency) • ecoCAM 4K camera • Nvidia Jetson Nano Backseat GPU • Nortek Nucleus DVL-1000 (with currents) • Nano-modem (option for Sonardyne AvTrak6)

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

- 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

- 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 very

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