

ecoSUBm-Power+ AUV



PRODUCT DATASHEET

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 high accuracy navigation, including INS, DVL & USBL, 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 rapid data collection.

TECHNICAL DATA

Endurance:	30 hours, no payload, water temp 3.5° C. Typical 8-10 hours	Dimensions:	Length 1450mm (dependent on payloads), diameter 146 mm
Depth rating:	m5-Power+: 500 m m25-Power+: 2,500 m	Weight in air:	17kg (with NiMH batteries, no payload or ballast)
Communications:	Iridium SBD, Wi-Fi, Acoustics	Surface location:	GPS, Infrared & visible beacon



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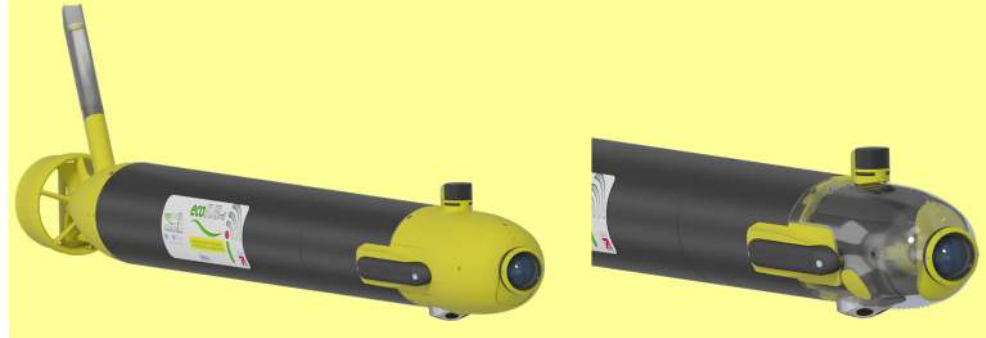
Payload configurations

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	MBES	4K camera with edge computing	DVL / INS / USBL	Current profiler	Independent acoustic pinger	Altimeter
Conductivity, temperature	Chlorophyll-a	CDOM/FDOM	Backscatter	Turbidity	pH	Dissolved oxygen

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 Orin Nano for edge computing. Power+ doubles power on board for more endurance or higher power payload

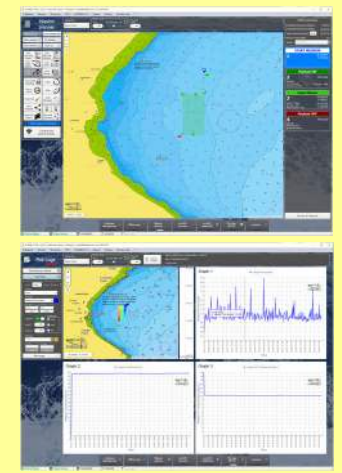


Payload: NBOSI CT • Marine Sonic Technologies Scout ARC Mk II Side Scan Sonar (900, 1200, 1800kHz or dual frequency) • ecoCAM 4K camera • Nvidia Jetson Orin Nano Backseat GPU • Nortek Nucleus DVL-1000 (with currents) • Nano-modem (option for Sonardyne AvTrak6)

- 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
- Vehicles transmit system status and position information every 5 mins when on the surface to confirm okay for re-tasking or easy recovery
- 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
- Front seat / Back seat architecture for integrating users own hardware, code, algorithms or third party command and control systems
- 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
- Ideal for swarm/squad/shoal applications
- Open source ecoSUB CMSA underwater network protocol embedded in very vehicle

ecoSUB C3 GUI

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



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

