

EELUME S-SERIES



Norwegian company Eelume, known for its M-series of modular Autonomous Underwater Vehicle (AUV) vehicles, has recently introduced the S-series. This comprises a range of small to medium-class All-Terrain vehicles engineered to operate in close proximity to challenging underwater topographies.

Of particular interest is the articulated tail with twin thrusters.

"Despite a decade of traditional AUV utilisation, there remains untapped potential for expanding the deployment of environmentally sustainable AUVs in underwater environments that are currently inaccessible or only accessible via ROVs," said a spokesman.




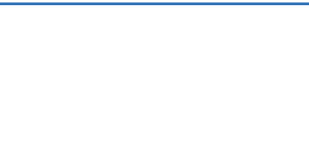
"In addition to carrying out conventional AUV applications, Eelume's designers say that the new All-Terrain AUVs can revolutionise new applications such as close-proximity imaging, photomosaic generation of subsea environments, photogrammetry, bathymetric mapping of intricate underwater terrain and structures, under-ice mapping, stop-and-inspect functionalities, and more."

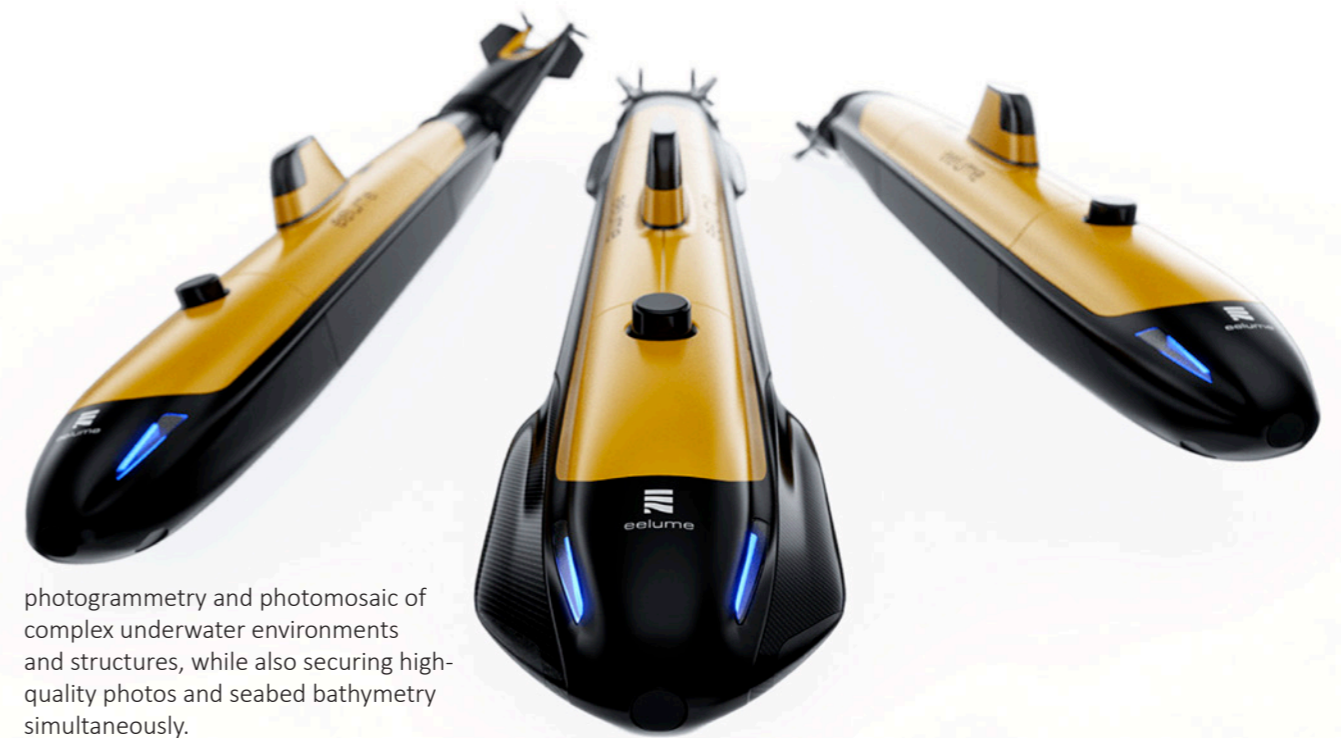
"The range of All-Terrain AUVs two-person portable units can provide high-quality data at an attractive cost point."

According to the designers, the new system has a number of key features:

"Importantly, by bringing sensors closer to areas of interest, it will be

able to produce Ultra high-quality data. Capturing high-resolution data elevates autonomous ocean space discovery. They can also capture 3D

MODELS		Length:	Width	Weight	Depth	Speed	Endurance range
	Eelume 300 S	200 cm	20 cm	45 kg	300 m	0-5 knots	11 h / 64 km
	Eelume 600 S	250 cm	20 cm	45 kg	600 m	0-5 knots	11 h / 64 km
	Eelume 300 CS	200 cm	20 cm	50 kg	300 m	0-5 knots	10 h / 52 km
	Eelume 600 CS	250 cm	20 cm	50 kg	600 m	0-5 knots	10 h / 52 km
	Eelume 300 CXS	200 cm	30 cm	60 kg	300 m	0-5 knots	8 h / 43 km
	Eelume 600 CXS	250 cm	30 cm	60 kg	600 m	0-5 knots	8 h / 43 km



photogrammetry and photomosaic of complex underwater environments and structures, while also securing high-quality photos and seabed bathymetry simultaneously.

"The system is designed for simplicity, allowing users to focus on ocean discoveries without worrying about complex mission planning or traditional survey constraints."

The All-Terrain AUV offer 360 deg of freedom in roll and pitch, enabling safe exploration of underwater environments like hill-sides, underwater structures, under-ice areas, vessels, harbours, and more.

The 2-person portable vehicles weighing from 45 to 65 kg are easily deployable and retrievable, even from small inflatable RHIBS or from shore.

The company says typical applications include complex underwater surveys like under-ice research can be achieved with a fraction of the carbon footprint and costs compared to traditional methods. They also expand the operational envelope for inspecting and monitoring critical underwater energy infrastructure.

M-SERIES



Eelume first entered the market with its M-series AUV. Its keynote is its motorized articulation modules.

Very basically resembling an eel, the long slender hydrodynamic body can be fly to site powered by sets of thruster pairs, but either end can incorporate cameras/sensor or grabs, effectively acting as arms, optimising the position and orientation of sensors.

They can traverse large distances and conduct conventional surveys and their shape allows access to confined spaces inaccessible by conventional underwater vehicles.

When deployed as a resident system, the M-Series offers rapid response and thus, a IMR (Inspection, Maintenance, and Repair) capability, often eliminating the reliance on surface vessels. The company says that autonomous subsea residency could potentially reduce the cost of subsea operations by up to 90%. It can also be launched from a ship or shore for shorter duration operations.