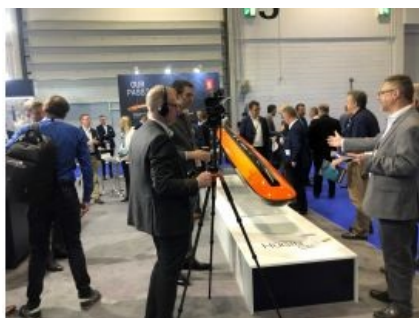
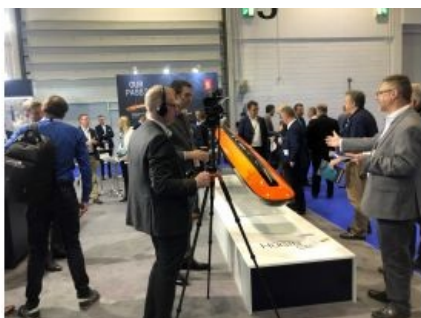


# Kongsberg Unveils HUGIN Edge AUV at Oceanology International 2022



Kongsberg Maritime used Oceanology International 2022 in London as the occasion to launch the HUGIN Edge AUV. The latest addition to Kongsberg Maritime's HUGIN family builds on the capabilities of the advanced HUGIN architecture, adding innovative autonomy to deliver the most advanced low-drag autonomous underwater vehicle (AUV).

Built with delivering exceptional durability

and reliability in mind, configured for deployment from all platforms, and offering leading sensor and navigation performance, HUGIN Edge is the newest member of the HUGIN family of AUVs. The new design combines elements of HUGIN's carbon monocoque approach used for the last 20 years coupled to extensive hydrodynamic modelling to refine the hull's low-drag shape. HUGIN Edge stands out as a next-generation vehicle designed specifically to answer the performance and efficiency challenges set by the modern world.

## Forward-looking Sonar

HUGIN Edge includes significant new features and capabilities. These include an innovative forward-looking sonar design providing 3D sensing capabilities for improved trajectory planning and directional collision avoidance coupled to traditional forward-scanning methodology.

To enable greater interoperability, the vehicle is equipped with the latest open interfaces for integration to third party planning and mission management tools. There are also new tools specifically designed to optimize results for every deployment. Central to these are goal-based mission planning tools and mission execution.

The mission planning capabilities provide a higher-level mission planning interface, requiring less specialist knowledge and input by the operator. Mission objectives may include sounding density or detection probability, enabling the AUV to calculate the actual waypoints, operational parameters and sensor configuration. In-mission adaptive execution allows HUGIN Edge to make several decisions autonomously, continuously replanning during mission execution as more information about the surrounding environment is gathered by the sensors.

It is these in-mission edge-processing capabilities that drive step-changes in both performance and efficiency for all operations.

## Operating from USVs, Small Surface Vessels and From Shore

Measuring less than four metres, HUGIN Edge weighs approximately 300kg. It is packaged with the latest battery technology to provide more than 24 hours operation at depths of up to 1,000 metres. The general arrangement includes the next generation of Kongsberg synthetic aperture sonar, a high-frequency multibeam echo sounder and a swappable camera or sub-bottom profiler. This configuration has been designed to cover most geophysical survey requirements, as well as mine countermeasures, rapid environmental assessment, search and recovery, and the survey of critical national infrastructure.

From inception, HUGIN Edge is designed to operate from uncrewed surface vehicles (USVs), small surface vessels and from shore. The design has been developed around Kongsberg's automated Launch and Recovery (LAR), with battery charging through inductive power providing true over the horizon operations. This capability removes the human from the field of operations, enabling supervision from afar to minimize operational risk, maximize safety and deliver the lowest carbon footprint.

Richard Mills, vice president of Marine Robotics Sales at Kongsberg Maritime, said: "Since the first dive of HUGIN on 7 March 1993, it has evolved into the most successful commercial off-the-shelf autonomous underwater vehicle ever made. In that time, the shape has changed from a smooth low-drag design to a more traditional cylindrical hull form focused on modularity and providing a flexible configuration. Over the last few years, we have released the high-performance HUGIN Superior, the pinnacle of survey capabilities within autonomous vehicles and HUGIN Endurance which stretches the operational range to 2,200 line kilometres in a single dive. HUGIN Edge returns to our original design philosophy of a smaller low-drag body using the common architecture and user interface, enabling interoperability of all

HUGIN systems. Hydrodynamic efficiency is combined with optimized sensor integration to provide the best of both worlds: efficiency and productivity.”



HUGIN Edge launch at Oceanology International 2022 in London.

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<https://www.hydro-international.com/content/news/kongsberg-unveils-hugin-edge-auv-at-oceanology-international-2022>

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