

# Marine Robotics Launches New Mariner X USV



Maritime Robotics recently launched a new multipurpose unmanned surface vehicle (USV) platform, the Mariner X, with a configurable design and built for high-quality data acquisition at sea. The platform wields Maritime Robotics' market-leading software and supports a wide range of sensors and other equipment of the operator's choice.

The first operator of the new Mariner X USV platform is Argeo. Named *Argus*, Argeo's first unmanned survey and inspection vehicle will exploit the strong demand for accurate ocean mapping, especially in the booming offshore wind market. The [Argus USV](#) will conduct advanced mapping and inspection services using robotics and autonomous ocean space technology for offshore and energy projects in water depths from 2–200 metres.

"Argeo has been a fantastic partner in the development of the [Mariner X](#) platform. The result is a new and uniquely configurable vessel designed from scratch to make offshore and coastal operations safer and more cost-effective while also reducing the carbon footprint," said Vegard Hovstein, CEO of Maritime Robotics.

## Large Modular Deck Space

The Mariner X's substantial astern deck space fits two actuated moonpools and two dedicated sensor positions, allowing for a wide range of surface and sub-surface sensors and other payloads.

"Based on our own experiences and feedback from our customers, we wanted to make a vessel able to handle multiple survey sensors below the hull. We also wanted a configurable deck space to allow for towed sensors, cargo or other applications," said Hovstein.

The 5m<sup>2</sup> deck space also has a rail system for field-swappable payload systems. It easily facilitates mounting custom payloads such as survey navigation, satellite communications, deck generators, winches, deck cargo and more.

## Fewer Disturbances

Another innovative feature of the Mariner X is the hull and superstructure design, based on a collaboration between Maritime Robotics, Ulstein Design and local boat designer Innovation JBA. The shape of the foreship facilities improves force distribution, and the tapered front enables a gentler displacement to allow better stability during poor weather conditions. This translates to fewer disturbances and thus better data quality when surveying.

Combined with the possibility of multiple sensors and Maritime Robotics' well-proven SeaControl Autonomy System for enhanced vessel control, the Mariner X platform supports high-end data quality while also reducing the risks and costs of operations.

In addition to SeaControl, several other systems are in place to ensure safe and steady operations. The SeaSight system allows operators to monitor the surroundings and receive collision avoidance warnings based on AIS, radar overlay and visual live stream video.

"The strong polyethylene hull makes the Mariner X a stable, unsinkable and near-maintenance-free platform capable of handling extreme weather conditions. Tuned radome protects the antennas from harsh elements such as icing in Arctic environments," said Joel Pederick, product manager for Mariner and Mariner X at Maritime Robotics.

## Multibeam Echosounders and Sub-bottom Profilers

At a length of nine metres, the Mariner X is about three metres longer than its [Mariner-class sibling](#). However, it still fits within a container footprint for easy long-distance transport. It can be launched from ports and transit offshore or deployed from a vessel-based davit for easy deployment.

Operators of the Mariner X will be able to mount multibeam echosounders (MBES), sub-bottom profilers (SBP) and an acoustic modem, all on the same vessel. The Mariner X can also field sensor packages traditionally mounted on large vessels of opportunity.

"As a multipurpose platform, the Mariner X is designed to replace or operate as a force multiplier in conjunction with a conventional crewed

survey vessel. This can significantly reduce both the costs and environmental impact of operations at sea,” said Pederick.

The innovative design also features improved fuel efficiency and more stable operations at lower speeds, which reduces power consumption and emissions.



The Mariner X is a multi-purpose USV platform.

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