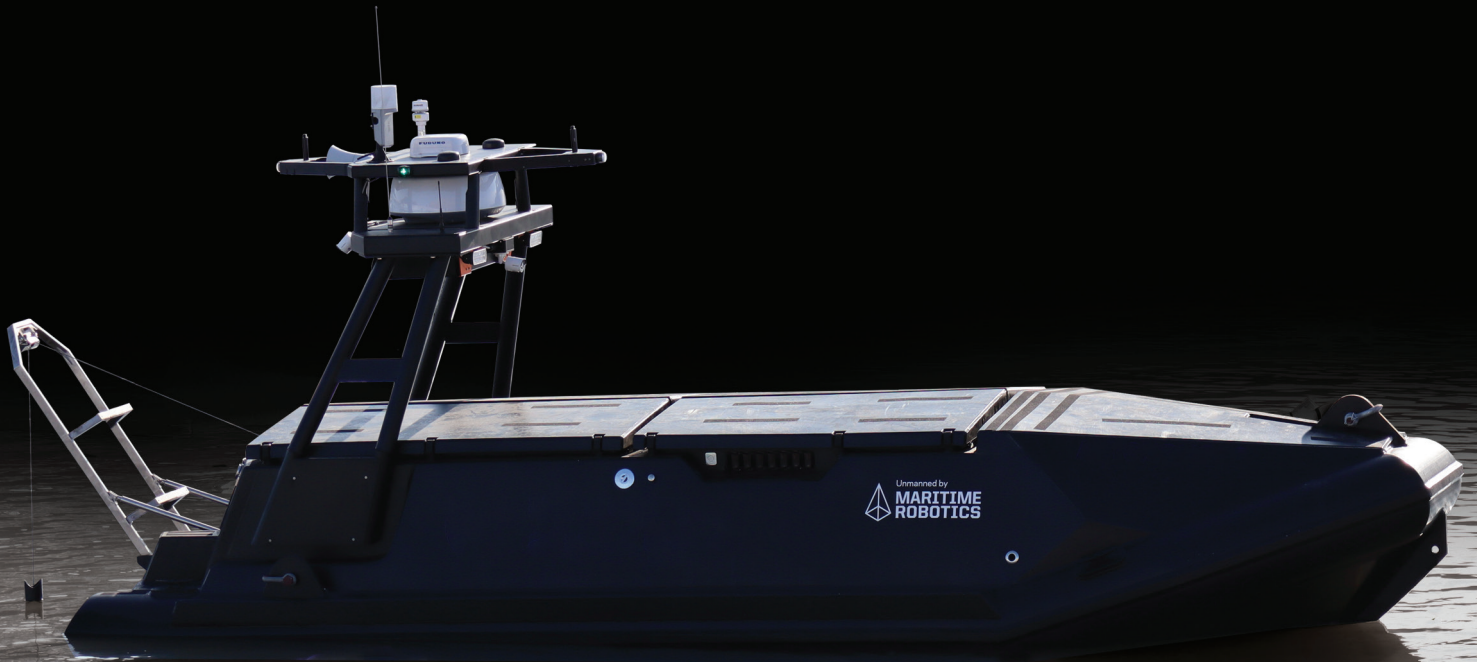


MARINER

UNMANNED SURFACE VEHICLE [USV]

COST-EFFECTIVE AND RISK-REDUCING MARITIME DATA ACQUISITION



ENABLING OCEAN SPACE AUTONOMY



MARINER

The Mariner Unmanned Surface Vehicle (USV) is a multipurpose unmanned vehicle for offshore and coastal applications.

The Mariner MK II is an enhanced version of our field proven original Mariner USV.

The Mariner USV's HDPE construction is stable, unsinkable and near maintenance-free. It is built for use, and is trailer or flatbed transportable and suitable for a 40ft container.

The Mariner has a diesel-powered propulsion system with a waterjet. Redundant propulsion is available as an option with two electric thrusters. If your payload demands an additional power a generator can be fitted. Endurance is a minimum of 50 hours at 5 knots or 250NM.

The Mariner can be equipped with a variety of surface and subsea sensors. For example: EO and IR cameras, radars, single and multi-beam sonar systems, oceanographic instruments, hydroacoustic positioning systems. The subsea sensors can be mounted through a moonpool in the mid portion of the craft and users have the option to install an elevator mechanism for lowering the sensor under the hull.

Maritime Robotics SeaControl allows for command and control of the vehicle with SeaSight providing situational awareness through radar, AIS and camera integration.



DETAILS

01



Mariner USV

02

- MBR1 44/127 1.5km Range
4G/LTE/SatCom/Iridium SBD Global Range
- 20+kn max speed
- Diesel: 50hrs (5kn)
Electric: 8hrs (5kn) extended with generator
- 2,250kg (Fueled and with payload)
- Launch and Recovery System
- Bow thruster
- Moonpool

Height 270cm



Length 598cm

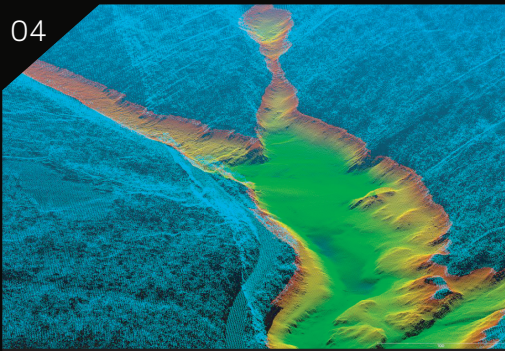
Specifications

03



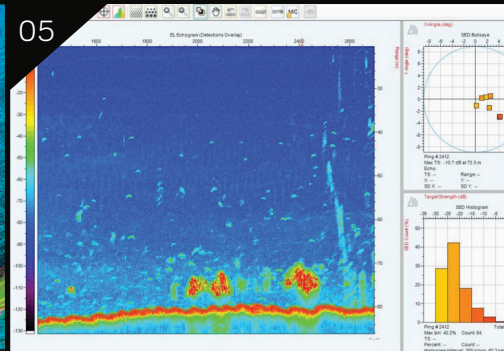
Vehicle Control Station

04



Bathymetry

05



Environmental Monitoring

06



Hydroacoustic

01 MARINER UNMANNED SURFACE VEHICLE (USV)

The Mariner USV is a cost-effective system for maritime data acquisition that is adept in both offshore and coastal scenarios.

02 SPECIFICATIONS

The Mariner is a versatile USV that allows for both high speed patrolling and low speed surveying. The vessel has a practical design that can easily be shipped worldwide in a standard 20 ft container and allows for integration of a large variety of payloads and sensors.

03 VEHICLE CONTROL STATION (VCS)

The USV operator interacts with the Mariner through the Vehicle Control Station usually located on shore or on a mother vessel. The intuitive graphical user interface with nautical charts, AIS, video and radar overlay can also be augmented with AIS and radar-based collision warnings.

04 BATHYMETRY

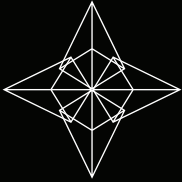
Ultra compact single-beam and multi-beam sonar systems are available for integration. Unmanned Surface Vehicles offer a great advantage in repetitive and tedious missions. Bathymetry is one such application where there is great potential for a seabed-mapping USV.

05 FORCE MULTIPLIER

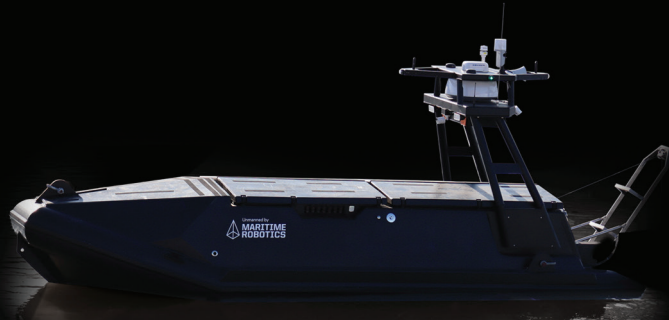
The Mariner USV is ideal to deploy from an existing fleet of vessels to work as a force multiplier. Scouting for fish, environmental mapping or conducting bathymetry survey, with a significantly reduced headcount. This enables the fleet to extend their footprint at minimal cost when compared to a manned vessel.

06 HYDROACOUSTIC POSITIONING AND GATEWAY

Robots helping other robots is the next frontier. With the cost-effective capabilities of having a USV as a communication relay and support platform on the sea surface, Autonomous Underwater Vehicle (AUV) operations can be simplified and improved.



MARINER



SPECIFICATIONS	MARINER STANDARD	//	MARINER HYBRID
Length x Width x Height	598 cm x 206 cm x 270 cm 235.4" x 81.1" x 106.3"		
Draft	80 cm 31.5"		
Dry weight	2250 kg 4960 lbs (Fueled) // 2600 kg 5732 lbs (Fueled)		
Hull material	HDPE		
Propulsion	Yanmar diesel engine coupled with Hamilton Jet Fuel Tank: 200 liters	//	Additionally: Torqeedo Cruise electric thrusters
Endurance	Up to: 50 hours @ 5 kn	//	Additionally: 6 hours @ 4 kn
Control Station	Laptop / Desktop • Industrial remote for launch and recovery		
AIS	✓		
Camera	✓		
High-bandwidth comms	✓		
SVP winch	Optional		

INTEGRATIONS		
Environmental Sensors	Bathymetric Singlebeam	Underwater Hyperspectral Imager
Aquatic Habitat Echo Sounder	Sub Bottom Profilers	USBL
Fisher Echo Sounder	Multibeams	SVP Sensor
Surveillance Equipment EO/IR Camera Systems	Sidescan Sonar	On-board software for correction services over the NTRIP protocol

A LEADER IN UNMANNED SOLUTIONS

Maritime Robotics, developer and supplier of the Otter, is a leading provider of innovative unmanned solutions for maritime operations and data acquisition. The company develops and delivers Unmanned Surface Vehicle Systems (USV), Moored Balloon System (MBS) as well as Unmanned Aircraft Systems (UAS). Our main markets are geophysical surveying, oil & gas, environmental monitoring, and the defence/security market. With technology developed in close collaboration with civilian, governmental and military partners, Maritime Robotics focuses on delivering high-quality system solutions and products that are cost-effective, reduce HSE risk exposure and are highly deployable, in any conditions.