

Saildrone Surveyor
SAILDRONE, Inc. (United States)



Domain:	Maritime Surface
Type:	USV
Market	Civil, Commercial
Category:	
Application:	Environmental Research or Monitoring; Intelligence, Surveillance, Reconnaissance; Patrol, Security; Survey, Mapping
Continent:	North America
Countries:	United States
Production	Actively Marketed
Status:	

Description:

Saildrone is a US small business that designs, manufactures, and operates a fleet of the world's most capable, proven, and trusted uncrewed surface vehicles (USVs).

Predominantly powered by wind and solar, Saildrone USVs are capable of extreme-duration missions of over nine months in the open ocean, while producing a minimal carbon footprint. With a speed up to 10 knots, the Saildrone Surveyor carries sonar equipment capable of seafloor mapping to 7,000 meters.

The impressive capabilities of Saildrone's autonomous vehicles have been proven in numerous operational missions for science, ocean mapping, and maritime security, covering over 500,000 nautical miles from the Arctic to the Antarctic. The Saildrone fleet has logged more than 10,000 days at sea in some of the most extreme weather conditions on the planet.

PLATFORM SIZE PROPERTIES

Length:	19.81 meters (19810.00 mm; 65.00 feet)	
Height:	16.76 meters (16760.00 mm; 55.00 feet)	3.35 m (11 ft) draft + 13.41 m (44 ft) wing height
Weight:	12700.00 kg (28000.00 lbs)	14 tons

PERFORMANCE PROPERTIES

Cruise Speed:	6.00 knots (11.10 km/hr; 6.90 mph)
Cruise Speed Comment:	mapping speed
Maximum Range:	4630.00 km; 2877.00 miles
Range Comment:	2,500 nm @ 6 knots under power
Endurance:	4320.00 hrs (259200.00 mins)
Endurance Comment:	6 months under sail

POWER & PROPULSION PROPERTIES

Power:	57.40 kW (57400.00 W; 78.00 hp)
Motor & Propulsion System:	Other, Combustion Engine, Propeller
Propulsion Comment:	- Primary propulsion: Wind (Saildrone wing) - Auxiliary propulsion: 75 hp high-efficiency diesel
Energy Source:	Other, Diesel, Solar
Energy Source Comment:	Hybrid wind (primary) / diesel (aux) for propulsion with solar for onboard electronics

PAYLOAD PROPERTIES

Payload Power:	2 kW steady state, 4 kW peak
Sonar:	Multibeam Sonar - Kongsberg EM 2040 <400 m - Kongsberg EM 304 <7,000 m
Environmental Sensors:	- Wind speed & direction: B&G WS730S - Barometric pressure: Yacht Devices YDBC-05N - Sound velocity profiler: Valeport sound velocity probe (cast depth: 500 m) - Surface sound velocity probe: Teledyne SVP 70 (fixed on bottom of gondola) - Fish Biomass - Echo Sounder: Simrad EK80 for ecosystem monitoring - Ocean Currents: Simrad EC150 ADCP 300-500 m - Ocean Currents: Teledyne Pinnacle 45 ACDP

Other:	<p>Additional capabilities include:</p> <ul style="list-style-type: none"> - Near-real-time acquisition monitoring - Onboard data processing - Seafloor classification - High-resolution feature mapping - Nautical chart validation - Winch SVP to 500 m
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NAVIGATION PROPERTIES

Positioning:	Seapath 380+ GNSS/INS system
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PRIMARY ORGANIZATION

Primary Organization:	SAILDRONE, Inc. (United States)
Organization Description:	The world's oceans cover 71% of the Earth's surface, yet, they are the least understood and most vulnerable resource we have on the planet. We desperately need to know more about relationship between the oceans and climate change. Ocean acidification is one of the most serious threats to our planet and we have not begun to properly understand its causes or effects. Traditionally, large ships have been used to take measurements, however, these ships are very expensive and burn huge amounts of polluting diesel fuel during their operations. Unmanned vehicles, like gliders, and drifting bouy's have recently been deployed with promising results, however they are very slow (~1knots) and still require a ship to deliver them to their start location. Saildrone redefines the world of ocean monitoring by going further, faster and more cost effectively than any other technology on the planet.
Organization Address:	SAILDRONE, Inc.
	1050 W Tower Ave
	Alameda, CA 94501-5003
	UNITED STATES
Organization Type:	Private
Organization Size:	Small

RECENT NEWS

11/9/2022	Saildrone expects to increase seabed reconnaissance missions in 2023 across the Atlantic, Pacific, and the Middle East using their 33-ft long Voyager and 65-ft Surveyor.	defensenews link
9/1/2022	Saildrone has partnered with Austal USA to initiate production of the Surveyor USV. This comes following an announcement earlier in the year from the U.S. Navy that proposed the addition of 150 USVs to its long-range fleet.	usni news link
7/8/2021	The Saildrone Surveyor completed a trans-Pacific voyage that covered approximately 2,250 nautical miles over 28 days.	maritime executive news link