Unmanned Surface Vehicles Market to Grow at a CAGR of 13.9% During Forecast Period, Driven by U.S. & Japan

Key growth drivers include military modernization, offshore wind demand, and advanced USV technology rollouts in 2025


Unmanned Surface Vehicles Market

NEW YORK, NY, UNITED STATES, August 26, 2025 /EINPresswire.com/ -- Unmanned Surface Vehicles (USVs) self-propelled vessels operating autonomously or via remote control are charting a dynamic growth trajectory in maritime technology. Equipped with advanced navigation, sensors, and communication systems, USVs are becoming indispensable for missions spanning defense, environmental monitoring, and offshore operations. Forecasts highlight a robust CAGR of around 13.9% from 2024 to 2031, driven by escalating demand for maritime surveillance, real-time data collection, and cost-effective deployments without risking human life. As innovation accelerates in AI autonomy, hybrid propulsion, and regulatory frameworks, the USV market is quickly evolving from niche novelty to a cornerstone of modern maritime strategy.

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Key Strategic Developments and Partnerships

• In Feb 2025, Saronic Technologies raised $600M in Series C at a ~$4B valuation to build Port Alpha, a high-output shipyard for autonomous vessel production.
• In Feb 2025, Seasats secured US$10M funding from Shield Capital, Aero X Ventures, Techstars, and others to scale its solar-powered Lightfish vessels for environmental and defense use in Japan.
• In 2025: Ocean Power Technologies (OPTT) targets profitability by year-end with 270% YoY revenue growth, global expansion, and new contract wins boosting capabilities.

Military Contracts & Partnerships

• In May 2025: Saildrone partnered with the Danish Armed Forces to deploy four wind- and solar-powered Voyager USVs for surveillance across the Baltic, North Sea, and Arctic.
• In Apr 2025: Textron Systems secured a $100M three-year U.S. Navy contract for software updates and payload integration on Mine Countermeasures USVs.
• In Apr 2025: L3Harris, SAMI, and Zamil launched a joint venture to produce the first Saudi-made modular USVs under Vision 2030.
• In Feb 2025: Exail Technologies won a major navy contract worth hundreds of millions of euros to supply UMIS autonomous drone systems for mine warfare.
• In Feb 2025: Thales delivered the world's first 12-meter autonomous mine countermeasure USV to the French Navy under the MMCM program.

Market Players in USV:

The major global players include L3Harris Technologies, Textron Inc., Rafael Advanced Defense Systems Ltd., ECA Group, Teledyne Technologies, Elbit Systems, Searobotics, SAAB AB, 5G International and Liquid Robotics.

Market Segments

The unmanned surface vehicle market is led by medium-sized vessels (3–7 meters) and the defense sector, driven by naval modernization and security needs, while extra-large vessels (>14 meters) and the commercial segment are the fastest growing with applications in offshore energy and logistics. Propulsion systems dominate due to their critical role, but software solutions are expanding rapidly with AI and autonomy advancements. By endurance, 100–500 hours vessels hold the largest share, whereas over 1000 hours models are the fastest growing for long-duration missions. Twin hulls lead the market, while rigid inflatable hulls see the fastest uptake for tactical use. Operationally, ROSVs dominate, but ASVs are growing the fastest, supported by advancements in autonomy and communication technologies.

Introduction to Unmanned Surface Vehicle (USV) Market for Offshore Energy, 2025–2032

DataM Intelligence releases its latest report: Global Unmanned Surface Vehicle (USV) Market for Offshore Energy, 2025–2032, projecting growth from US$ 650.1 million in 2024 to approximately US$ 1.6 billion by 2032, at a 10.1% CAGR. The U.S. and Japan emerge as critical markets amid rising demand in offshore frameworks and military-tech applications.

Market Growth Drivers & Methodology

This robust growth is catalyzed by:

• Expanding offshore wind projects (notably in coastal Virginia, targeting 2.6 GW capacity)
• Defense advancements, including the U.S. Navy's Modular Attack Surface Craft (MASC) initiative and Japan's multi-role combat USV projects
• Innovations in solar/wind-powered autonomy like Sailbuoy crossing the Pacific
Our forecast integrates validated data from regional deployments, policy drivers, and ongoing USV trials in both defense and commercial sectors.

U.S. Market Dynamics

• The U.S. Navy's MASC program, demanding rapid-prototype, non-exquisite USVs capable of handling containerized payloads, is reshaping fleet capabilities. Delivery timelines are under 18 months, with open-architecture prioritization for production scalability.
• Autonomous trials such as Seasats' solar-powered ASV trans-Pacific voyage demonstrate maturity in low-logistic, persistent monitoring platforms.
• Offshore wind growth remains a key civilian demand vertical, with projects like Coastal Virginia Offshore Wind (CVOW) requiring logistical and inspection support—an ideal use case for USVs.

Japan's Strategic Advancement

• ATLA and Mitsubishi Heavy Industries are co-developing a combat support USV outfitted with ISR sensors and potential weaponry, with sea trials expected by late 2027.
• Japan's JMSDF deployed a mine-disposal USV from a Mogami-class frigate, equipped with dual-frequency synthetic aperture sonar for real-time explosive neutralization.
• Adoption of Sailbuoy, a wind-powered USV, highlights Japan's need for energy-resilient vessels suited to challenging marine conditions.

Looking for in-depth insights? Grab the full report: https://www.datamintelligence.com/buy-now-page?report=unmanned-surface-vehicle-market

Recent Industry Insights

Region Highlight

U.S.: Navy stabilizes fleet-level USV capability via MASC; ASV endurance proven by Seasats trans-Pacific trip
Japan: Combat-ready USV slated for deployment; real-world mine countermeasure operations initiated
Global: Emerging global proposal for USV-based ocean observing systems for climate and surveillance data infrastructure

Strategic Recommendations

According to DataM Intelligence analysts:

1. Build modular, renewable-powered USVs targeting offshore wind and naval surveillance.
2. Engage with defense R&D arms leveraging open architecture mandates, especially within U.S. and Japan.
3. Align with green energy expansion, especially U.S. coastal sectors requiring persistent unmanned logistics.
4. Ensure regulatory compliance and operational readiness by integrating target-use case validations.

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Related Reports:

The Global Unmanned Aerial Vehicles Market is expected to grow at a CAGR of 11% during the forecast period (2024-2031).
The Global Automated Guided Vehicle Market is expected to grow at a CAGR of 14% in the forecast period (2024-2031).

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