Marine Acoustic Sensors - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

Market Report | 2025-04-28 | 110 pages | Mordor Intelligence

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Report description:

The Marine Acoustic Sensors Market size is estimated at USD 1.55 billion in 2025, and is expected to reach USD 2.12 billion by 2030, at a CAGR of 6.41% during the forecast period (2025-2030).

Marine acoustic sensors are used in small devices in various ship types for real-time data collection and environmental monitoring. These devices come in a broad variety of forms with numerous uses. Marine acoustic sensors are used for marine life detection, monitoring, and other purposes.

Key Highlights
- The Internet of Things (IoT) technology has been presented as a recent intelligent work technical revolution concept. The marine industry will have access to a broad range of opportunities due to the rapidly increasing rush of acoustic sensor technology applications and the capabilities of low-cost computing components.
- Docks are being supported globally in solitary networks to support their cloud-based IoT due to the rapid adoption of IoT in global marine technology. An intelligent and smart port can be described as fully automated, with all devices connected via an IoT smart port. It comprises a network of intelligent sensors, including acoustic sensors and wireless devices that make the central infrastructure of a smart port.
- The rising technological-based acoustic sensors for military ships, submarines, and vessels to guard and give them real-time situational awareness are boosting the market growth during the forecast period.
- The marine acoustic sensors allow the integration of signal processing and sensor functions within one product. However, acoustic sensors have faced operational challenges like inadequate stability and reliability, impacting their adoption growth.
- Increased investments in R&D activities by leading shipbuilders and system developers globally for expanding fully autonomous ships have increased the need for marine acoustic sensors. Autonomous ships are estimated to launch as sustainable, safe, and

efficient modes of process for the marine industry.

Marine Acoustic Sensors Market Trends

Underwater Transducer to Hold Major Share in the Product Segment

- An underwater transducer is a device that converts one form of energy to another underwater. Marine technology often refers to devices that can convert electrical signals into sound waves (actuators) or sound waves into electrical signals (sensors). While hydrophones are a specific type of underwater transducers used for sound detection, other underwater transducers can serve different purposes, such as emitting sonar signals or generating vibrations for various applications.
- Several experiments and projects in underwater transmission are happening, further driving the underwater transducer segment. For instance, in November 2022, the NTT Corporation, NTT DOCOMO, INC, and NTT Communications Corporation performed a joint experiment on achieving broadband wireless communication for various marine activities. It succeeded at 1-Mbps/300-m underwater transmission in a shallow sea area (water depth of about 30 m) using underwater acoustic communication in field experiments.
- Various product innovations, developments, and collaborations with the defense sector are also driving the studied segment. For instance, in May 2023, In collaboration with the US Navy, Teledyne Marine completed the first-ever successful undersea glider deployment from a helicopter, marking the first time an autonomous underwater vehicle (AUV) was successfully launched from an aircraft. The Teledyne Slocum glider is a long-endurance AUV for multiple persistent operational missions. The Naval Oceanographic Office (NAVOCEANO) pilots the LBS gliders and includes collected data supporting Navy operations.
- In 2023, SIPRI reported that the United States' military expenditure made up 37 percent of global military expenditure.

North America Holds Significant Market Share

- An increase in the adoption of underwater communication in navel defense, an increase in autonomous underwater vehicles, and a surge in the need for scientific exploration and data collection are the key factors driving the growth of the underwater communication systems market in North America, further driving the market studied.
- Autonomous underwater vehicles have become mainstream for the military, navy, and coastal security forces, especially subsea operations. The US Navy extensively uses these vehicles for various applications, such as mine countermeasures (MCM), intelligence, surveillance and reconnaissance, identification (ID), and anti-submarine warfare (ASW). The Navy has accelerated acquisition strategies for the faster purchase of underwater vehicles to counter significant challenges from China.
- During the peak time of the pandemic, US Naval Sea Systems Command Washington signed a contract worth USD 11.1 million with Boeing to upgrade naval operations. The company was expected to upgrade for future naval operations such as guidance and control, navigation, situational awareness, mission sensors, population, and core communication. For instance, at the same time, the US Navy signed a contract worth USD 43 million with Boeing to develop an Orca Extra Large Unmanned Undersea Vehicle (XLAUV).
- In August 2022, the Department of Defense's Industrial Base Policy Office launched a pioneering manufacturing pilot program through the Defense Production Act (DPA) Title III Program with the Austin Center for Manufacturing and Innovation (ACMI) in Austin, Texas. The first-of-its-kind pilot program was expected to focus on advanced manufacturing technology for commercial and military applications that can be rapidly scaled to production. These developments in military applications may also drive the market studied for the region.
- The increase in defense expenses may also drive the market studied. For instance, according to the US Congressional Budget Office, defense spending in the United States is predicted to increase yearly until 2033. Defense outlays in the United States are

expected to increase up to USD 1.1 trillion in 2033.

Marine Acoustic Sensors Industry Overview

The market studied is fragmented with the presence of major players like BAE Systems PLC, Garmin Ltd, Teledyne Marine Technologies (Teledyne Technologies Incorporated), Ocean Sonics Ltd, and Geospectrum Technologies Inc. Players in the market studied are adopting strategies such as partnerships and acquisitions to enhance their product offerings and gain sustainable competitive advantage.

- June 2023 - Thales reinforced its collaboration with the Italian Navy by inaugurating a new integrated service center at the La Spezia naval base. This center will serve as the exclusive service partner of the Navy for the upkeep of sonar systems installed on minesweeper vessels and the waterfront support of frigate vessels operating in the Naval Bases of Naples and Taranto.
- In January 2023, the company announced the acquisition of a new GaviaOsprey AUV by the Royal Netherlands Institute for Sea Research (NIOZ). NIOZ is the Netherlands' national oceanographic institute conducting multidisciplinary applied marine research to address major scientific questions about the company's oceans and seas. NIOZ studies the ocean's role in changing climate from equator to pole, from the continental shelf to the deep ocean, and from present to past.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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