

Underwater Wireless Communication Market is Set to Rise at a Revenue of US\$ 19.62 Billion By 2031 | Astute Analytica

CHICAGO, UNITED STATES, September 11, 2023 /EINPresswire.com/ -- Global [underwater wireless communication market](#) value was US\$ 5.71 billion in 2022 and is estimated to surpass the market size of US\$ 19.62 billion by 2031, growing at a CAGR of 14.7% during the forecast period from 2023 to 2031.

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The marine communication infrastructure's essential component, underwater wireless communication, has seen significant growth in recent years. The expansion is majorly due to the quick development of wireless communication technology, expanding offshore oil and gas exploration activities, and rising investment in undersea defense and surveillance systems.

The development of effective, dependable, and high-speed communication systems has become necessary due to the exponential growth in undersea activities and operations, including exploration, surveillance, environmental monitoring, and disaster management. The fusion of acoustic and radio frequency (RF) communication technology is a noteworthy example. While slower, acoustic communication provides long-distance communication capabilities that are essential for deep-sea operations.

The potential of underwater communication systems has been increased by the incorporation of cutting-edge technologies like the Internet of Things (IoT) and Artificial Intelligence (AI), which has sparked the creation of real-time, high-speed, and dependable data transmission solutions. In order to forecast possible system failures, for instance, AI-powered systems can monitor communication patterns, enabling preventive maintenance and reducing operational disturbances.

The oil and gas industry, the defense sector, and marine research groups are the main



consumers of underwater wireless communication systems. These systems are increasingly being used for environmental monitoring and catastrophe management due to their real-time data transmission capabilities, which facilitate quick action and recovery. These technologies have a huge potential to enhance underwater communication networks, which will pave the way for other developments. As more gadgets connect and real-time communication beneath the sea becomes more important, demand is expected to increase.

Acoustic Communication Generated About 46.3% of Market Revenue Share

The acoustic communication segment is likely to develop at the highest growth rate of 15.6%. In 2022, the segment attained a revenue share of 46.3% of the global underwater wireless communication market.

The use of acoustic communication in underwater environments is rising due to the growing need for real-time data transfer and the requirement for dependable and secure communication solutions. As underwater communication protocols and acoustic modems improve, this technology's capabilities continue to grow.

Underwater information is transmitted using acoustic transmission. Underwater surveillance, offshore oil and gas development, environmental monitoring, and underwater navigation systems are just a few of the many applications where it is commonly employed.

Scientific Research and Development Captured Around 37.2% of Revenue Share

The scientific research and development sector attained a sizeable market share of 37.2% in 2022. Diverse methods for wireless underwater communication have been developed during the past ten years thanks to the efforts of researchers. Accurate and effective communication in difficult underwater conditions is now possible due to the development of acoustic modems, buoy networks, and underwater sensor networks.

In the upcoming years, the underwater wireless communication market will expand due to ongoing efforts in scientific research and development. For instance, in September 2023, Chinese scientists purportedly created a terahertz-based submarine-detecting gadget that can identify minute vibrations or ripples on the water surface brought on by an underwater submarine.

North America Generated About 35.5% of Market Revenue Share

In 2022, North America dominated the global market with about 35.5% revenue share due to its developed technological infrastructure and considerable investments in the defense and exploration industries.

This has been made possible by the region's forward-thinking approach to the usage of

underwater robotic technologies. Unmanned underwater vehicles, commonly referred to as underwater robots, have many benefits, including the elimination of the need for human divers, which makes offshore activities more viable and safe. For instance, in January 2021, the US Office of Naval Research awarded Advanced Acoustic Concepts LLC a US\$ 9.3 million contract to develop supporting technologies for autonomous underwater vehicles to identify and operate objects in deep ocean environments.

Underwater acoustic communication is a crucial component of the improved security and surveillance systems that are the main driver of the high demand for these technologies in North America. For instance, in July 2023, the Institute of Electrical and Electronics Engineers (IEEE) declared the availability of 802.11bb, a new standard for light-based wireless communications, usually referred to as Li-Fi. During the forecast period, this trend is anticipated to rapidly fuel the market for underwater wireless communication in North America.

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Competitive Landscape

A wide range of regional businesses and multinational organizations compete fiercely in the market. In order to strengthen their market positions, key firms are concentrating on product innovation, strategic mergers and acquisitions, and collaborations.

List of Prominent Key Players Profiled

- Benthowave Instrument Inc
- Bruel and Kjar
- DSPComm
- EvoLogics GmbH
- Fugro
- Kongsberg Gruppen
- Nortek AS
- Ocean Technology Systems
- RJE International, Inc
- SAAB AB
- SONARDYNE
- Subnero Pte Ltd
- Teledyne Technologies Incorporated
- Ultra Electronics Maritime Systems
- Wilcoxon Sensing Technologies
- Other Prominent Players

Segmentation Outline

The global underwater wireless communication market segmentation focuses on Type, Technology, Application, Industry, and Region.

By Type

- Acoustic Communications
- Optical Communications
- RF Communications
- Others

By Technology

- Sensor Technology
- Vehicular Technology

By Application

- Environmental Monitoring
- Pollution Monitoring
- Seismic Monitoring
- Ocean Current Monitoring
- Climate Recording
- Marine Archaeology
- Search and Rescue Mission
- Others

By Industry

- Oil and Gas
- Military & Defense
- Marine
- Scientific Research & Development
- Civil
- Commercial
- Others

By Region

- North America
 - o The U.S.
 - o Canada
 - o Mexico
- Europe
 - Western Europe
 - The UK
 - Germany
 - France
 - Italy
 - Spain
 - o Rest of Western Europe
 - Eastern Europe
 - Poland

- Russia
- Rest of Eastern Europe
- Asia Pacific
- China
- India
- Japan
- Australia & New Zealand
- ASEAN
- Rest of Asia Pacific
- Middle East & Africa
- UAE
- Saudi Arabia
- South Africa
- Rest of MEA
- South America
- Argentina
- Brazil
- Rest of South America

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