

Underwater Acoustic Communication Market by Interface Platform (Sensor Interface, Acoustic Modem), Application (Environmental Monitoring, Pollution Monitoring, Hydrography, Oceanography), Communication Depth, End User and Region - Global Forecast to 2028

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Report description:

Underwater acoustic communication market size is valued at USD 2.1 billion in 2023 and is anticipated to be USD 3.5 billion by 2028; growing at a CAGR of 11.0% from 2023 to 2028. The growing deployment of acoustic navigation for underwater positioning and increasing use of underwater communication by oil & gas industry is expected to grow the market at an estimated rate. Intensifying need for reliable and secure communication in defense and homeland security

Underwater wireless communication is used by several end users, especially from the aerospace & defense, oil & gas, and homeland security segments. Reliable and secure communication is one of the major concerns for these end users. The data collected by defense, homeland security, and other end users contain crucial information that needs to be secured throughout the communication channel so that it can be protected from intruders.

Growing demand for environmental monitoring and seafloor mapping

Acoustic sensing contains various sonar devices for seafloor mapping, submersible navigation, and underwater objects. The Nippon Foundation and the General Bathymetric Chart of the Oceans (GEBCO) plan to cooperate globally to map the whole seafloor topography by the end of 2030. The detailed charted topography of the whole ocean will aid in understanding marine geology, utilizing marine mineral and renewable energy resources, monitoring marine geohazards, and providing route surveys for underwater cables and pipelines.

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Security threat in underwater communication

The security threats in underwater communications can be divided into passive and active attacks, in accordance with the actions taken by the intruders. In a passive attack, intruders simply try to obtain data, while in an active attack, they attempt to inject, alter, or delete data by introducing malicious nodes. In either case, the concept of authenticated data access offers a high-level solution, which can prevent IoT network both from passive data extraction and from active data injection.

The breakup of primaries conducted during the study is depicted below:

- By Company Type: Tier 1 - 38 %, Tier 2 - 28%, and Tier 3 -34%
- By Designation: C-Level Executives - 40%, Directors - 30%, and Others - 30%
- By Region: North America- 35%, Europe - 20%, Asia Pacific - 35%, RoW - 10%

The key players operating in the RF signal chain components market include few globally established players such as KONGSBERG (Norway), Sonardyne International (UK), EvoLogics GmbH (Germany), Thales (France), Teledyne Technologies Incorporated (US), L3Harris (US), Ultra (UK), Sonardyne International (UK), EvoLogics GmbH (Germany), Moog, Inc. (US) and Nortek (Norway).

Research Coverage

The report segments the underwater acoustic communication market and forecasts its size based on region (North America, Europe, Asia Pacific, and ROW), By Sensor Interface (Sensor Interface, Acoustic Modem, and Others), Communication Depth (Shallow Water, Medium Water, Long Water, and Full Ocean), by Application (Environmental Monitoring, Pollution Monitoring, Climate Monitoring, Hydrography, Oceanography, and Others), by End User (Oil & Gas, Military & Defense, Homeland Security, Scientific Research & Development). The report also provides a comprehensive review of market drivers, restraints, opportunities, and challenges in the underwater acoustic communication market. The report also covers qualitative aspects in addition to the quantitative aspects of these markets.

Key Benefits of Buying This Report

- This report includes market statistics pertaining to by interface platform, communication depth, application, end user and region.
- Major market drivers, restraints, challenges, and opportunities have been detailed in this report.
- Illustrative segmentation, analyses, and forecasts for the market based interface platform, communication depth, application, end user and region have been conducted to provide an overall view of the underwater acoustic communication market.
- The report includes an in-depth analysis and ranking of key players.

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