

Distributed Acoustic Sensing (DAS) Market by Component (Interrogator Units, Visualization Software), Fiber Type (Single-mode Fiber and Multimode fiber), Industry (Oil & Gas, Infrastructure, Transportation), and Region - Global Forecast to 2025

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Abstracts

“Distributed acoustic sensing (DAS) market is expected to grow at CAGR of 11.4% during 2020–2025”

The global distributed acoustic sensing market is estimated to grow from USD 462 million in 2020 to USD 792 million by 2025; it is expected to grow at a CAGR of 11.4% during the forecast period. DAS systems are being used across various industry verticals such as oil & gas, infrastructure, military, and transportation. Distributed acoustic sensing (DAS) involves the use of optoelectronic systems to measure acoustic signals along the length of an optical fiber. Real-time acoustic signals can be monitored along tens of kilometers of fiber length. Unlike traditional, electrical powered sensors, DAS systems are immune to electromagnetic interferences, have a higher range, a longer lifespan, and can also operate in harsh environments. Increased digitization in the oil & gas industry has led to an increase in the use of DAS systems for production and pipeline monitoring, as well as in optimizing the life of an oil well. This has led to their use in other industries such as military and infrastructure, which is also driving the overall DAS market

“Market for DAS systems using multimode fiber to grow at higher CAGR during forecast period”

Multimode fibers are mostly used for distributed temperature sensing (DTS) applications however, they can be used for DAS systems as well. Multimode fibers are utilized in a

few specialized downhole operations (such as operations in tight gas wells and hydraulic fracturing operations) in oilfields. Although multimode fibers have a lower range, they can eliminate signal fading. Many of the existing oil wells have deployed distributed temperature sensing (DTS) systems, which utilize multimode fibers and using DAS systems with existing multimode fibers allow temperature and acoustic measurements with one type of fiber can greatly expand the use of DAS technology. Hence, the market for multimode fibers is expected to witness faster growth during the forecast period compared to single-mode fibers.

“Hardware component to hold largest share of DAS market in 2020”

There are two primary hardware components used in a DAS system: optical fiber cable and interrogator unit. The interrogator unit is much more expensive compared to fiber-optic cables if the overall hardware cost is taken into account. DAS systems being used to monitor large distances in thousands of kilometers require the deployment of several interrogator units as well as optical fiber cables to cover such large distances. Hence, the hardware component is expected to hold the largest share of the DAS market during the forecast period compared to the market for visualization software and services.

“Americas to hold largest share of DAS market in 2020”

The DAS market is dominated by the Americas, with North America contributing to the majority share of the market compared to South America. North America comprises of the US, Mexico, and Canada. The presence of major players in the region, such as Schlumberger (US) and Halliburton (US) is one of the key drivers for the demand for DAS systems in this region. The increase in shale gas exploration and hydraulic fracturing activities has boosted the growth of the oil & gas industry in the region. For instance, according to the US Energy Information Administration (EIA), hydraulic fracturing accounted for more than 50% of the crude oil production in the US and its share has been increasing since then. Along with the oil wells, North America has a widespread network of pipelines to transport oil across various regions. In South America, Venezuela and Brazil dominate the oil production in the region. In South America, oil & gas export activities are an important economic driver for most countries in the region. For instance, according to the Organization of the Petroleum Exporting Countries (OPEC), Venezuela's oil revenues account for about 99% of its export earnings.

The Americas is expected to be one of the most affected markets for DAS systems due to COVID-19. In North America, the US and Canada account for the world's largest and

third-largest network of oil & gas pipelines, respectively. In oil wells, both hydraulic fracturing and offshore drilling activities will likely be put on hold due to a decrease in oil prices, which will affect the potential installation of DAS systems. In addition, most South American countries are heavily dependent on oil & gas exports for the growth of their economy. Hence, a decrease in oil production will also have an adverse effect on the DAS market due to the fall in the GDP.

In the process of determining and verifying the market size for several segments and subsegments gathered through secondary research, extensive primary interviews have been conducted with key industry experts in the DAS system marketplace. The break-up of primary participants for the report has been shown below:

By Company Type: Tier 1 – 40%, Tier 2 – 40%, and Tier 3 – 20%

By Designation: C-level Executives – 40%, Directors – 30%, and Others – 30%

By Region: Americas – 40%, APAC – 30%, Europe – 20%, and RoW – 10%

The report profiles key players in the distributed acoustic sensing (DAS) market with their respective market ranking analysis. Prominent players profiled in this report are Schlumberger (US), Halliburton (US), Baker Hughes (US), OptaSense (UK), Future Fibre Technologies (Australia), Fotech Solutions (UK), Bandweaver (China), Hifi Engineering (Canada), Omnisens (Switzerland), Silixa (UK), Aragon Photonics (Spain), Solifos (Switzerland), Febus Optics (France), ofs (US), fibrisTerre (Germany), Senstar (Canada), AP Sensing (Germany), T.G. Baker Americas (US), Fibre Completion Services (Canada), Yokogawa Electric (Japan), NKT Photonics (Denmark), Weatherford (US), Cementys (France), and Fiber SenSys (US).

Research Coverage:

This research report categorizes the global distributed acoustic sensing (DAS) based on component, fiber type, industry, and geography. The report describes the major drivers, restraints, challenges, and opportunities pertaining to the distributed acoustic sensing (DAS) market and forecasts the same till 2025 (including the analysis of the impact of COVID-19 on the market). Apart from these, the report covers leadership mapping and the analysis of all the companies included in the DAS market ecosystem.

Key Benefits of Buying the Report

The report would help leaders/new entrants in this market in the following ways:

1. This report segments the distributed acoustic sensing (DAS) market comprehensively and provides the closest market size projection for all subsegments across different regions.
2. The report helps stakeholders understand the pulse of the market and provides them with information on key drivers, restraints, challenges, and opportunities for market growth.
3. This report would help stakeholders understand their competitors better and gain more insights to improve their position in the business. The competitive landscape section includes competitor ecosystem, product developments and launches, partnerships, and mergers and acquisitions.
4. The analysis of the top 25 companies, based on the strength of the product portfolio, as well as the business strategy, will help stakeholders visualize the market positioning of these key players.
5. Geographic analysis and country-wise information that will shape the market in the coming years have also been covered in this report.

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