

Distributed Fiber Optic Sensor Market Size, Share & Trends Analysis Report By Vertical (Oil & Gas, Industrial), By Technology (Rayleigh Effect, Raman Effect), By Application, And Segment Forecasts, 2023 - 2030

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Abstracts

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Distributed Fiber Optic Sensor Market Growth & Trends

The global distributed fiber optic sensor market size is expected to reach USD 2.53 billion by 2030, registering a CAGR of 6.8% over the forecast period, according to a new report by Grand View Research, Inc. The global industry is expected to grow exponentially over the forecast period. Factors, such as significant demand from the civil engineering vertical and rising adoption in the oil & gas sector, substantially boost the adoption of distributed fiber optic sensor (DFOS). Fiber optics can withstand rough handling, such as in pipes, streams, and reactors, where manual inspection is not feasible. Furthermore, they help in structural health monitoring at dangerous workplaces and can also be used for border security purposes to prevent intrusion.

Thus, its capability to work in a challenging environment is another factor propelling the industry's growth. Increasing demand for sophisticated infrastructure and rising per capita income is predicted to lead to industrial automation, urban mobility, and growth in high-end residential projects. Various governments are focusing on conserving their prevailing infrastructure and developing new ones. They are under constant pressure to provide the necessary infrastructure, amenities, and connectivity to people. This has resulted in increased spending on projects, such as roads, railways, and dams. This rapid growth in the advanced civil engineering vertical is expected to boost the DFOS

market

The growing acceptance of DFOS has promoted manufacturers and suppliers to increase R&D expenditure to offer better products to their customers. Service providers are trying to regulate efficiencies and optimize their production process to capture maximum market share and eliminate all other substitutes of the fiber optics technology. The high production & installation price of DFOS products is promoting manufacturers to develop more competitively priced and reliable optic inspection products. Technological complexities, along with other challenges, raise the price of deploying fiber optics, which further hamper industry growth.

Distributed Fiber Optic Sensor Market Report Highlights

The temperature sensing application segment dominated the industry in 2022. Temperature sensors find solicitations in the oil & gas and civil engineering segments

Suppliers and manufacturers of fiber optic equipment are looking forward to achieving higher bandwidth, 100 GBPS, by undertaking intense research activities

North America dominated the global industry and accounted for the largest revenue share in 2022

The growing demand for DFOS equipment can be attributed to the ever-growing demand for efficient and optimized processes, across enterprises and manufacturing sectors

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