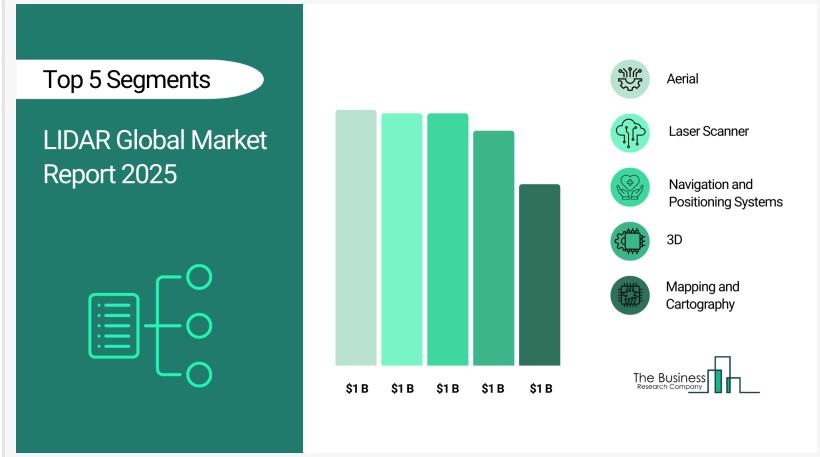
LiDAR Market In 2029

The Business Research Company's LiDAR Global Market Report 2025 – Market Size, Trends, And Forecast 2025-2034

LONDON, GREATER LONDON, UNITED KINGDOM, December 24, 2025 /EINPresswire.com/ -- LiDAR Market to Surpass $6 billion in 2029. In comparison, the Aerospace Support and Auxiliary Equipment market, which is considered as its parent market, is expected to be approximately $39 billion by 2029, with LiDAR to represent around 15% of the parent market. Within the broader Aerospace & Defense industry, which is expected to be $1,102 billion by 2029, the LiDAR market is estimated to account for nearly 1% of the total market value.

Which Will Be the Biggest Region in the LiDAR Market in 2029
Asia Pacific will be the largest region in the LiDAR market in 2029, valued at $2,092 million. The market is expected to grow from $758 million in 2024 at a compound annual growth rate (CAGR) of 23%. The exponential growth can be attributed to the increasing investments and increasing urbanization.

Which Will Be The Largest Country In The Global LiDAR Market In 2029?
The USA will be the largest country in the LiDAR market in 2029, valued at $1,544 million. The market is expected



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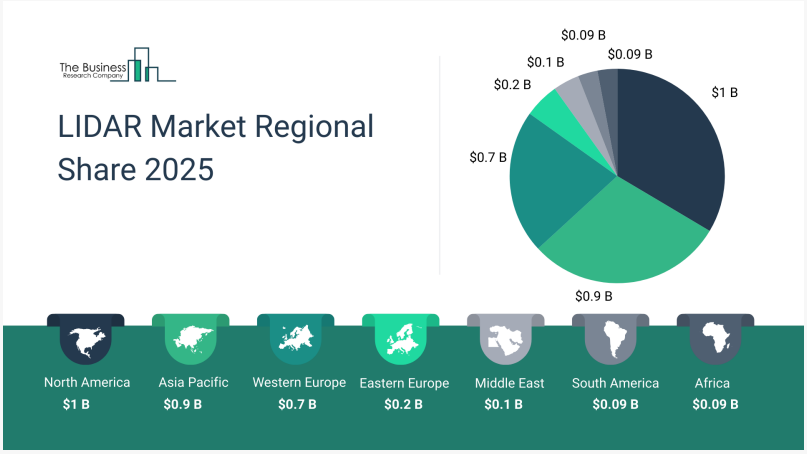

LIDAR Market Trends

to grow from $757 million in 2024 at a compound annual growth rate (CAGR) of 15%. The rapid growth can be attributed to the rising demand for 3D imaging and increasing demand for autonomous vehicles.

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What will be Largest Segment in the LiDAR Market in 2029?
The LiDAR market is segmented by component into laser scanner, navigation and positioning systems, other components. The laser scanner market will be the largest segment of the LiDAR market segmented by component, accounting for 47% or $2,842 million of the total in 2029. The laser scanner market will be supported by advancements in precision scanning technology, growing demand for high-resolution data for surveying and mapping, increasing use in autonomous vehicles for environment sensing, adoption in environmental monitoring for accurate terrain mapping, integration into robotics for improved navigation and rising investments in smart city infrastructure that require detailed and accurate three-dimensional (3D) models.

The LiDAR market is segmented by type into terrestrial, aerial and satellite. The aerial market will be the largest segment of the LiDAR market segmented by type, accounting for 54% or $3,234 million of the total in 2029. The aerial market will be supported by the growing use of UAVs and drones for large-scale surveying and mapping projects, advancements in aerial LiDAR systems for higher efficiency and accuracy, increasing demand for environmental monitoring and forest management applications, the need for high-resolution topographic mapping for construction and mining, growing adoption in disaster management for rapid assessment and the development of cost-effective solutions for remote sensing in inaccessible areas.

The LiDAR market is segmented by technology into 2D, 3D and 4D. The 3D market will be the largest segment of the LiDAR market segmented by technology, accounting for 52% or $3,124 million of the total in 2029. The 3D market will be supported by the growing need for accurate 3D modeling in construction and architecture, rising adoption in autonomous vehicles for detailed environment scanning, increasing demand for 3D mapping in geospatial applications for urban planning, advancements in LiDAR technology for improved depth perception and data precision, adoption in environmental monitoring for detailed topographic analysis and the expanding use in mining and forestry for resource management and terrain analysis.

The LiDAR market is segmented by applications into mapping and cartography, ADAS (advanced driver-assistance system), environment, exploration and detection, and other applications. The ADAS (advanced driver-assistance system) market will be the largest segment of the LiDAR market segmented by applications, accounting for 36% or $2,133 million of the total in 2029. The ADAS (advanced driver-assistance system) market will be supported by the increasing adoption of autonomous vehicles, the need for enhanced safety features like collision avoidance and pedestrian detection, advancements in LiDAR technology for precise object detection, rising

regulatory requirements for vehicle safety, growing demand for ADAS in both consumer and commercial vehicles and the integration of LiDAR with other sensors for better driver assistance in various driving conditions.

The LiDAR market is segmented by end user into defense and aerospace, civil engineering, archaeology, automotive, forestry and agriculture, mining and transportation and other end users. The forestry and agriculture market will be the largest segment of the LiDAR market segmented by end user, accounting for 26% or $1,533 million of the total in 2029. The forestry and agriculture market will be supported by the growing need for precise vegetation mapping and forest inventory management, adoption in crop monitoring for precision farming, advancements in LiDAR technology for improved vegetation height and density analysis, increasing demand for LiDAR-based solutions for sustainable forest management, rising use in land use planning for agricultural efficiency and the expanding application of LiDAR in wildlife monitoring and habitat preservation.

What is the expected CAGR for the LIDAR Market leading up to 2029?
The expected CAGR for the LiDAR market leading up to 2029 is 19%.

What Will Be The Growth Driving Factors In The Global LiDAR Market In The Forecast Period?The rapid growth of the global LiDAR market leading up to 2029 will be driven by the following key factors that are expected to reshape autonomous mobility, geospatial intelligence, and next-generation industrial automation worldwide.

Increasing Demand For Autonomous Vehicles- The increasing emphasis on autonomous vehicles will become a key driver of growth in the LiDAR market by 2029. Automakers and technology companies are investing heavily in advanced driver-assistance systems (ADAS) and fully autonomous driving capabilities, which rely on LiDAR for precise object detection, mapping, and navigation. LiDAR sensors enhance vehicle safety by providing real-time 3D environmental data, improving obstacle detection and response times. The expansion of autonomous vehicle testing and regulatory approvals further accelerates demand for LiDAR technology. Additionally, as consumer interest in self-driving features rises, manufacturers are integrating LiDAR into production models to improve performance and reliability. As a result, the growing deployment of autonomous vehicles is anticipated to contributing to a 2.0% annual growth in the market.

Increasing Smart City Initiatives- The growing focus on smart city initiatives will emerge as a major factor driving the expansion of the LiDAR market by 2029. Governments and urban planners are increasingly adopting LiDAR technology to enhance infrastructure planning, traffic management, and environmental monitoring. LiDAR enables accurate 3D mapping of urban landscapes, improving city-wide surveillance, road safety, and disaster response planning. Consequently, the accelerating adoption of smart city initiatives capabilities is projected to contributing to a 2.0% annual growth in the market.

Rising Urbanization- The expanding integration of urbanization processes will serve as a key

growth catalyst for the LiDAR market by 2029. As cities expand, governments and developers require precise mapping and surveying solutions to optimize land use, enhance road networks, and improve utility management. LiDAR enables accurate 3D modeling of urban landscapes, facilitating efficient construction planning and reducing project timelines. Therefore, this growing integration of urbanization operations is projected to supporting to a 1.0% annual growth in the market.

Increased Focus On Disaster Management- During the forecast period, the increased focus on disaster management will serve as a key growth catalyst for the LiDAR market by 2029. LiDAR enables high-resolution topographic mapping for disaster risk assessment, aiding in flood modeling, wildfire prevention and earthquake monitoring. It helps predict hazards, supports mitigation strategies and provides real-time post-disaster damage assessments. Governments use LiDAR data for early warnings, infrastructure planning and emergency response, enhancing overall disaster preparedness and resilience. Consequently, the increased focus on disaster management is projected to contributing to annual growth in the market.

Access the detailed LIDAR Market report here:
https://www.thebusinessresearchcompany.com/report/lidar-global-market-report

What Are The Key Growth Opportunities In The LiDAR Market in 2029?
The most significant growth opportunities are anticipated in the aerial LiDAR market, the LiDAR and 3D imaging market, the laser scanner LiDAR market, the LiDAR-based advanced driver-assistance systems market, and the LiDAR-based precision forestry and agriculture market. Collectively, these segments are projected to contribute over $8 billion in market value by 2029, driven by the expanding adoption of high-resolution 3D mapping, increasing integration of LiDAR sensors in autonomous and semi-autonomous vehicles, and growing demand for precise terrain and environmental data across industrial applications. This surge reflects the accelerating shift toward sensor-driven intelligence, enabling real-time spatial awareness, enhanced navigation, and precision analytics, all of which are fueling transformative growth within the broader LiDAR and laser-based sensing industry.

The aerial LiDAR market is projected to grow by $2,023 million, the LiDAR and 3D imaging market by $2,020 million, the laser scanner LiDAR market by $1,608 million, the LiDAR-based advanced driver-assistance systems market by $1,479 million, and the LiDAR-based precision forestry and agriculture market by $1,114 million over the next five years from 2024 to 2029.

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