# EINPRESSWIRE

LiDAR Market Size to Surpass USD 8.86 Billion by 2032 | Report by SNS Insider

The LiDAR Market is growing with demand for high-precision 3D mapping in autonomous vehicles, robotics, and geospatial applications.

AUSTIN, TX, UNITED STATES, February 13, 2025 /EINPresswire.com/ -- Market Size & Industry Insights

According to the SNS Insider Report,"The LiDAR Market Size is valued at USD 1.77 Billion in 2023 and expected to reach USD 8.86 Billion by 2032, growing at a CAGR of 19.60% during 2024-2032."

LiDAR Market Size & Growth Analysis
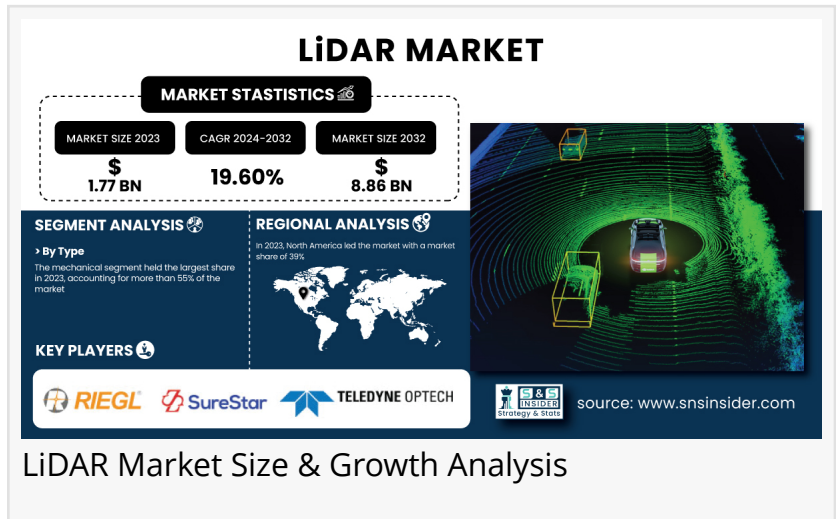
Key factors fueling this growth include rising investments in smart cities, advancements in semiconductor technology, and the growing adoption of LiDAR in automotive applications, particularly for autonomous navigation and ADAS. Additionally, the semiconductor industry's trends, such as wafer production volumes by region, evolving chip design methodologies, and fab capacity utilization in 2023, significantly impact LiDAR sensor manufacturing. Supply chain metrics also play a crucial role in ensuring a steady flow of components required for LiDAR systems, influencing production efficiency and cost-effectiveness.

Get Free Sample PDF of LiDAR Market (with Full TOC & Graphs) @ https://www.snsinsider.com/sample-request/1887

SWOT Analysis of Key Players as follows:
- Teledyne Optech
- Leica Geosystems
- RIEGL Laser Measurement
- Beijing SureStar Technology
- Geokno
- Leddartech Inc
- Trimble

- FARO Technologies
- Quantum Spatial
- Velodyne Lidar
- Phoenix LiDAR Systems
- Quanergy Systems

By Type, Mechanical Lidar Dominating and Solid-State Lidar Fastest Growing

In 2023, the mechanical LiDAR segment dominated the market, accounting for over 55% of the total share. Mechanical LiDAR systems rely on rotating or oscillating mirrors and prisms to steer laser pulses across a wide field of view, enabling comprehensive environmental scanning. These systems typically consist of a laser source, a scanning mechanism, detectors that capture reflected pulses, and a control unit managing both scanning and data acquisition.

The solid-state LiDAR segment is expected to witness the fastest growth during the forecast period. Unlike mechanical systems, solid-state LiDAR is built on a silicon chip and operates without moving components, making it more compact, durable, and cost-efficient. This category includes microelectromechanical systems (MEMS), optical phased arrays (OPA), flash LiDAR, and electromagnetic light phase array technologies. These advanced architectures are increasingly preferred in industries such as automotive, aerospace, robotics, and defense due to their reliability, scalability, and integration potential with modern electronic systems.

By Services, aerial surveying services Dominating and Geographic Information Systems (GIS) Fastest Growing

In 2023, aerial surveying services dominated the LiDAR market, holding a share of over 35%. These services are widely used for monitoring infrastructure such as roads, highways, railways, and bridges, with government agencies often overseeing their implementation. Aerial LiDAR plays a crucial role in managing natural resources like forestry and agriculture by assessing plant health, measuring biomass, and tracking land-use changes. This technology enables highly precise 3D mapping, delivering accurate topographic data and elevation models.

Geographic Information Systems (GIS) are expected to experience the fastest growth during the forecast period 2024-2032. The rising demand for detailed geospatial data across industries such as urban planning, infrastructure, forestry, and agriculture is driving this expansion. Integrating LiDAR with GIS enhances mapping and spatial analysis, improving decision-making processes in various sectors. As industries increasingly rely on high-precision geospatial insights, the demand for GIS-based LiDAR services is projected to surge in the coming years.

Connect with Our Expert for any Queries @ https://www.snsinsider.com/request-analyst/1887

By Component, laser scanner dominating and navigation and positioning systems Fastest Growing

In 2023, the laser scanner segment dominated the LiDAR market, holding a share of over 43%. Laser scanners play a crucial role in measuring the intensity of return signal strength, aiding classification algorithms in distinguishing objects based on reflectivity, such as metallic surfaces versus natural backgrounds. These scanners emit laser pulses toward a target and measure the time taken for the reflected pulses to return, allowing precise 3D modeling of the environment.

Navigation and Positioning systems are expected to witness significant growth from 2024 to 2032, driven by increasing adoption in ADAS, autonomous vehicles, and drone technology. These systems enhance LiDAR accuracy by geo referencing data with high precision, ensuring spatial context is correctly modeled. As industries demand greater precision in mapping and automation, the integration of advanced navigation with LiDAR is set to play a vital role in expanding multi-industry applications.

By Application, ADAS and Driverless Cars Dominating and Urban Planning Fastest Growing

The ADAS and Driverless Cars segment dominated the LiDAR market in 2023, driven by the increasing adoption of advanced safety technologies in the automotive industry. Regulations mandating features like Adaptive Cruise Control (ACC), Automatic Emergency Braking (AEB), and Lane-Keeping Assistance (LKA) have accelerated LiDAR integration in vehicles. Automakers are heavily investing in LiDAR for improved perception and real-time navigation, enhancing autonomous driving capabilities.

The Urban Planning segment is projected to grow at the fastest CAGR from 2024 to 2032. The rising demand for smart city initiatives, infrastructure development, and precise 3D mapping is fueling adoption. LiDAR technology enables accurate spatial analysis, supporting efficient city planning, traffic management, and disaster mitigation, making it a crucial tool for urban development.

KEY MARKET SEGMENTS:

By Type
Mechanical
Solid-state

By Technology
2D
3D
4D

By Service
Aerial surveying
Asset management

GIS services
Ground-based surveying
Other services

By Component
Laser Scanner
Navigation and positioning systems
Others

By Application
Corridor mapping
Engineering
Environment
ADAS and Driverless Cars
Exploration
Urban Planning
Cartography
Meteorology
Others

Purchase Single User PDF of LiDAR Market Forecast Report @
https://www.snsinsider.com/checkout/1887

North America Leads, Asia Pacific Emerges as Fastest-Growing LiDAR Market

In 2023, North America dominated the LiDAR market with a 39% share, driven by stringent automotive safety regulations and increasing adoption in industries like agriculture and robotics. The region's strong investment in LiDAR research and development further fuels innovation.

Asia Pacific is set to grow at the fastest CAGR from 2024 to 2032, with China and India leading demand. Applications range from surveying and mapping to Returnable Aerial Vehicles (RAVs), supported by advancements in AI and machine learning. As automation enhances LiDAR deployment, the technology is becoming smarter and more efficient, positioning Asia Pacific as a key growth hub for LiDAR adoption across multiple industries.

TABLE OF CONTENT - Key Points

Chapter 1. Introduction

Chapter 2. Executive Summary

Chapter 3. Research Methodology

Continued...

Make an Inquiry Before Buying @ https://www.snsinsider.com/enquiry/1887

Akash Anand
SNS Insider
+1 415-230-0044
info@snsinsider.com

This press release can be viewed online at: https://www.einpresswire.com/article/785660303