

North America Simultaneous Localization and Mapping Market Forecast to 2031 - Regional Analysis - by Offerings (2D SLAM and 3D SLAM), System Type (Camera Based and LiDAR Based), and Application (Robotics, UAV, AR or VR, Automotive, RTLS, and Others)

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Abstracts

The North America simultaneous localization and mapping market was valued at US\$ 202.33 million in 2023 and is expected to reach US\$ 2,099.57 million by 2031; it is estimated to register a CAGR of 34.0% from 2023 to 2031.

Rising Adoption of Autonomous Vehicles Globally Fuel North America Simultaneous Localization and Mapping Market

Simultaneous localization and mapping (SLAM) is a technological mapping method that allows autonomous vehicles to fabricate a map and localize themselves on the map at the same time. Localization and mapping are required to be combined to get an updated estimate of the map along with an efficient location of the vehicle. SLAM solutions can help autonomous vehicles locate themselves where maps are not available currently or have low connectivity. Moreover, using SLAM, the vehicle can autonomously navigate an unfamiliar environment by developing a map and simultaneously localizing itself.

The growing development in the automotive industry with the integration of advanced technologies is driving the adoption of autonomous vehicles globally. SLAM is employed by leveraging multi-sensor fusion-driven techniques. Sensors include an inertial navigation system (INS), light detection and ranging (LiDAR), high-definition maps (HD

Map), and a global positioning system (GPS). The rising number of autonomous vehicles boosts the growth of the simultaneous localization and mapping market. In 2021, Microsoft partnered with Volkswagen Group's CarSoftware Organization to fabricate self-driving cars. General Motors purchased the self-driving startup Cruise in 2016. Cruise began its San Francisco autonomous driving taxi services in 2021. In 2024, the Cruise self-driving vehicle inventory counts was 300 cars, and the company predicts to reach ~US\$ 1 billion in revenue by 2025. In September 2024, Uber Technologies, Inc. and Waymo LLC expanded their existing partnership to make the availability of Waymo Driver for users. Starting in early 2025, Waymo and Uber are anticipated to bring autonomous ride-hailing to Atlanta and Austin.

Thus, the growing development in the automotive sector with the advancement of autonomous vehicles propels the growth of the North America simultaneous localization and mapping market.

North America Simultaneous Localization and Mapping Market Overview

North America is one of the primary adopters of autonomous vehicle technology, owing to the adoption of high-end technological integration and the presence of key market players such as Ford Motor Company, Tesla Inc., The Lucid Group Inc., and General Motors Company. These players drive the automotive industry's development through strategic initiatives such as new product introduction and advancing features of existing products through research and development and collaborations. The automotive market in North America is demonstrating a positive indication with the rising autonomous vehicle production. The automotive industry is observing a rapid evolution toward electrification and integrating smart technologies such as localization and mapping.

North America Simultaneous Localization and Mapping Market Revenue and Forecast to 2031 (US\$ Million)

North America Simultaneous Localization and Mapping Market Segmentation

The North America simultaneous localization and mapping market is categorized into offerings, system type, application, and country.

By offerings, the North America simultaneous localization and mapping market is divided into 2D SLAM and 3D SLAM. The 2D SLAM segment held a larger share of the North America simultaneous localization and mapping market share in 2023.

In terms of system type, the North America simultaneous localization and mapping market is bifurcated into camera based and LiDAR based. The camera based segment held a larger share of the North America simultaneous localization and mapping market share in 2023.

Based on application, the North America simultaneous localization and mapping market is segmented into robotics, UAV, AR or VR, automotive, RTLS, and others. The robotics segment held the largest share of the North America simultaneous localization and mapping market share in 2023.

Based on country, the North America simultaneous localization and mapping market is segmented into the US, Canada, and Mexico. The US segment held the largest share of North America simultaneous localization and mapping market in 2023.

ANAVS GmbH; Applanix; Exyn Technologies Inc; FARO Technologies Inc; Kudan Inc; Kuka AG; Leica Geosystems AG; Leishen Intelligent System Co., Ltd; MAXST Co Ltd; NavVis GmbH; Nexxis; Rethink Robotics GmbH; Sevensense Robotics AG; Slamcore Ltd; and Visimind AB are some of the leading companies operating in the North America simultaneous localization and mapping market.

Reason to buy

Save and reduce time carrying out entry-level research by identifying the growth, size, leading players, and segments in the North America simultaneous localization and mapping market.

Highlights key business priorities to assist companies to realign their business strategies.

The key findings and recommendations highlight crucial progressive industry trends in North America simultaneous localization and mapping market , thereby allowing players across the value chain to develop effective long-term strategies.

Develop/modify business expansion plans by using substantial growth offering developed and emerging markets.

Scrutinize in-depth North America market trends and outlook coupled with the factors driving North America simultaneous localization and mapping market, as well as those hindering it.

Enhance the decision-making process by understanding the strategies that underpin commercial interest with respect to client products, segmentation, pricing, and distribution.

The List of Companies - North America Simultaneous Localization and Mapping Market

ANAVS GmbH

Applanix

Exyn Technologies Inc

FARO Technologies Inc

Kudan Inc

Kuka AG

Leica Geosystems AG

Leishen Intelligent System Co., Ltd

MAXST Co Ltd

NavVis GmbH

Nexxis

Rethink Robotics GmbH

Sevensense Robotics AG

Slamcore Ltd

Visimind AB

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