

Automated Guided Vehicle (AGV) Market by Type (Tow Vehicles, Unit Load Carriers, Pallet Trucks, Assembly Line Vehicles, Forklift Trucks), Navigation Technology (Laser, Magnetic, Inductive, Optical Tape, Vision, Inertial, Beacon) - Global Forecast to 2029

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Report description:

The global automated guided vehicle market is projected to reach USD 2.56 billion by 2024 and USD 3.78 billion by 2029, at a CAGR of 8.1%. This growth is driven by the increasing demand for efficient intralogistics systems as well as the rapidly proliferating e-commerce activities that need streamlined warehouse management. The improvements in battery technology in addition to the introduction of modular AGV designs have greatly improved the versatility and reliability of these systems. The growing trend toward sustainability has also led to increasing investment in electric and autonomous vehicles, which are essential in modernizing material handling processes.

"Tow vehicles to maintain largest market share during the forecast period."

Tow vehicles are expected to emerge as the leader in the automated guided vehicle market in terms of market share during the forecast period due to their versatile applications across various industries. These tow vehicles, being utilized mainly to transport heavy loads with ease, possess a higher advantage in material handling operations in terms of increased productivity, low labor cost, and minimal error rates. These AGVs are increasingly used in manufacturing, warehouses, and distribution centers due to the bulk goods movement over a distance. Advances in the navigation technologies along with integration with automation systems have made tow vehicles more reliable and adaptable. As industries increasingly adopt automation to achieve better efficiency in operations and increase demand, tow vehicles are expected to remain the leader in the automated guided vehicle market.

"Laser guidance technology to hold largest market share due to ability to support flexible and scalable operations in dynamic

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industrial settings."

Laser guidance technology is likely to hold the largest market share during the forecast period. Unlike other conventional guidance systems, laser-guided AGVs do not demand physical infrastructures like magnetic strips or tracks, making them cost-effective for those facilities planning to expand or reconfigure layouts. Furthermore, laser guidance enhances route optimization and operational efficiency, allowing real-time path adjustments that are helpful in those industrial sectors characterized by high throughput requirements, such as e-commerce and retail logistics. The growing emphasis focus on smart factories and initiatives around Industry 4.0 also fuel the adoption of laser-guided AGVs, given that their advanced sensors and mapping capabilities fit well with the growing need for digitized and autonomous workflows. sensors and mapping capabilities fit well with the growing need for digitized and autonomous workflows.

"3PL Segment is Projected to Witness a Substantially High CAGR in the market during the forecast period."

The 3PL segment is expected to be the dominant automated guided vehicle market, because of the increasing demand for efficient and cost-effective material handling solutions. An increase in e-commerce and international trade activities driving the adoption of advanced AGVs, streamlining the warehouse operations, enhancing inventory management and optimization of supply chain processes for leading 3PL providers. Features such as real-time tracking, route optimization, and predictive maintenance offered by the integration of smart technologies, IoT, and AI in AGVs have further increased their adoption. Therefore, as businesses are gradually focusing on increasing their speed, accuracy, and scalability in the offerings of their logistics, the demand for advanced AGV solutions in the 3PL industry is set to rise significantly. Accordingly, this is expected to be a contributing factor in innovation and market growth in the AGV market.

"Europe is set to hold a significant share in automated guided vehicle market"

Europe is expected to be the pivotal in the AGV market since driven by the region's intense focus on innovation; strong logistics networks, and demand for highly advanced material handling solutions. Emphasis on making the manufacturing sector digital and automated by the European Union has also contributed to fostering AGV adoption. Its programs related to smart manufacturing and transition toward connected factories are further boosting demand. The UK, Spain, and the Netherlands are significant traction due to their growing retail and logistics industries.

Breakdown of primaries

A variety of executives from key organizations operating in the automated guided vehicle market were interviewed in-depth, including CEOs, marketing directors, and innovation and technology directors.□

-□By Company Type: Tier 1 -30%, Tier 2 - 40%, and Tier 3 - 30%

-□By Designation: C-level Executives - 35%, Directors - 40%, and Others - 20%

-□By Region: North America - 30%, Europe - 25%, Asia Pacific - 30%, and RoW - 15%

Major players profiled in this report are as follows: Major Players:Daifuku Co., Ltd. (Japan), JBT (US), KION Group AG (Germany), Toyota Industries Corporation (Japan), and KUKA AG (Germany) and Others. These leading companies possess a wide portfolio of products, establishing a prominent presence in established as well as emerging markets.

The study provides a detailed competitive analysis of these key players in the automated guided vehicle market, presenting their company profiles, most recent developments, and key market strategies.

Research Coverage

In this report, the automated guided vehicle market has been segmented based on type, navigation technology, industry and region. The type segment consists of Tow Vehicles, Unit Load Carriers, Pallet Trucks, Assembly Line Vehicle, Forklift Vehicles and Other Types (AGCs, Hybrid AGVs, Customized AGVs). The navigation technology segment consists of Laser Guidance, Magnetic Guidance, Inductive Guidance, Optical Tape Guidance, Vision Guidance, and Other Guidance Technologies (Inertial, Beacon, Dead Reckoning Guidance). The industry segment consists of Automotive, Chemicals, Aviation, Semiconductor & Electronics, E-commerce, Food & Beverage, Healthcare, Metals & Heavy Machinery, 3PL, and Others (Printing & Paper, Textile). The market has been segmented into four regions-North America, Asia Pacific, Europe, and RoW.

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Reasons to buy the report

The report will help the leaders/new entrants in this market with information on the closest approximations of the revenue numbers for the overall market and the sub-segments. This report will help stakeholders understand the competitive landscape and gain more insights to position their businesses better and plan suitable go-to-market strategies. The report also helps stakeholders understand the automated guided vehicle market's pulse and provides information on key market drivers, restraints, challenges, and opportunities.

Key Benefits of Buying the Report

-□Analysis of key drivers (Rising demand for automation solutions in various industries, Increased focus on enhancing workplace safety, Marked shift to mass customization from mass production, Growing demand for material handling technology fuels automated guided vehicle sales, and Rising demand in E-commerce drives automated guided vehicle (AGV) adoption for efficient order fulfillment), restraints (High installation, maintenance, and switching costs associated with AGVs, Increasing preference for mobile robots over AGVs in retail and e-commerce industries, Lack of flexibility and obstacle resistance in AGVs, □and Challenges with infrastructure compatibility in developing countries) opportunities (Growing implementation of Industry 4.0 technologies in warehousing sector, Increasing focus on industrial automation by SMEs, Substantial growth of industrial sector in emerging economies, Presence of huge intralogistics sector in Southeast Asia, and Enhanced AGV Capabilities through technological integration), and challenges (Low labor costs restricting adoption of AGVs in emerging economies , Technical challenges related to sensing elements, and Maintenance challenges and downtime in AGV Operations) influencing the growth of the automated guided vehicle market.

-□Product Development/Innovation: Detailed insights on upcoming technologies, research and development activities, and new product launches in the automated guided vehicle market.

-□Market Development: Comprehensive information about lucrative markets - the report analyses the automated guided vehicle market across varied regions.

-□Market Diversification: Exhaustive information about new products/services, untapped geographies, recent developments, and investments in the automated guided vehicle market.

-□Competitive Assessment: In-depth assessment of market shares, growth strategies, and service offerings of leading players like Daifuku Co., Ltd. (Japan), JBT (US), KION Group AG (Germany), Toyota Industries Corporation (Japan), KUKA AG (Germany) and Others.

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