

North America Automated Guided Vehicle (Agv) Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

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Report description:

The North American automated guided vehicles (AGV) market (henceforth, referred to as the market studied) was valued at USD 1,217.9 million in 2021, and it is expected to reach USD 6,222.1 million by 2027, registering a CAGR of 31.48% during the forecast period (2022-2027).

Key Highlights

Modern manufacturing facilities rely on new technologies and innovations to produce higher quality products at faster speeds and lower costs. Implementing more intelligent software and hardware is proving to be the only way to survive in the current competitive scenario, as the region suffers from a workforce shortage.

Automated guided vehicle technology provides manufacturers with many prominent and measurable benefits, such as decreased operating costs and increased throughput of materials, but they can extend further. Optimizing the first-mile using material handling automation improves a company's profitability and customer satisfaction throughout warehouses.

For example, leading logistics companies, such as XPO, UPS, and DHL, which have a considerable high degree of automation in their fulfillment centers, are experiencing higher revenues compared to companies depending on traditional practices.

The market trend is pointing toward the fact that more and more companies, large and small, are turning to solutions involving automated guided vehicles (AGVs). The development of new vehicle types and technology breakthroughs in fields like AI leads to more intelligence in AGV solutions and expands the scope of what an AGV can do. The rapidly growing e-commerce sector and the paradigm shift in the automotive industry are other important driving factors.

Wireless communication systems used in industrial environments must guarantee that the information is sent and received within precise time bounds. However, the nature of the radio channels and the medium access control (MAC) generates random communication delays. For networked control systems, these delays can cause severe performance problems in automated guided vehicles.

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COVID-19 infected several essential workers in the United States, resulting in companies on the front lines implementing new safety processes. While the spread of the virus had been grave enough to warrant shutdowns, for instance, food production facilities, many other businesses have been able to continue operations with the addition of new health measures.

North America Automated Guided Vehicle Market Trends

Retail to Hold Major Market Share

Increasing globalization and the rise of online and bulk retail have increased the demand for automated guided vehicles (AGVs) in the retail industry due to their growing deployment in factories and warehouses. Service quality and customer happiness are the primary competitive factors in the e-commerce market.

Companies are providing a single-day delivery option with certain additional charges. With growing disposable income in advanced and emerging economies, the commercial viability of these schemes is increasing significantly. E-commerce warehouses carry out the single-day delivery method with the aid of AGVs.

Deploying AGVs in the retail industry has enabled companies to automate intralogistics tasks, like sorting, selection, and palletizing, thus increasing efficiency. The adoption of AGVs by the e-commerce industry is increasing substantially as industry incumbents try to roll out a reliable storage process and improve efficiency.

For instance, Movexx AGV1000 can automatically connect and disconnect trolleys with two swivels and two fixed castors, and it is capable of moving a load of 1000 kg. It is a low-maintenance machine with a quick-change battery system for 36 Ah lithium batteries, making charging quick and easy.

Retailers like amazon.com and Walmart are already using mobile robots in their warehouses and retail stores for inventory scanning, materials handling, and cleaning. The automated guided vehicles (AGVs) need operating systems and data-collection and data-analysis tools that are robust and compatible with the existing retail systems.

The United States to Hold Major Share

The United States is one of the largest and most advanced markets for automated solutions globally. The strong economy, with notable port traffic, increased e-commerce activity, and key manufacturing indices, all resulting in significant growth in manufacturing, drive the demand for automated solutions across the logistics sector in the country.

Sectors including retail, automotive, food and beverage, and pharmaceutical are the largest sources of demand for automated guided vehicles in the country. Food and beverage is the largest industry and represents more than 35% of US packaging shipments annually.

This factor creates a significant demand for AGV equipment, such as automated forklifts, unit load AGVs, tug AGVs, assembly lines, and special purpose products, which are extensively deployed in food and beverage manufacturing establishments. Moreover, the stringent food safety regulations and preference for low human intervention in the production process are expected to increase the demand for the food and beverage industry over the forecast period.

The country is witnessing the decline of middle-skill occupations, like manufacturing and production jobs, and the growth in high and low-skill occupations, like managerial jobs on one end and jobs that assist or care for others. This trend is now popularly known as job polarization, which is driving the adoption of automation of various repetitive, manual, and low-skill tasks.

Additionally, owing to low vacancy and a surge in the rental prices of warehouses, enterprises are progressively looking for smaller places to rent out for warehouse purposes. To optimize the productivity of these narrow spaces, they are expected to deploy more automated solutions soon.

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North America Automated Guided Vehicle Market Competitor Analysis

The North American automated guided vehicle market is competitive and consists of several major players. These major players with a prominent share in the market are focusing on mergers and acquisitions, partnerships, and expanding customer base across foreign countries. They are also leveraging on strategic collaborative initiatives to increase their profitability.

December 2021 - Lotus Cars Ltd introduced AGVs, robots, and other state-of-the-art automation, including assembly lines, to improve flexibility and productivity. It introduced aluminum chassis and steel subassembly manufacturing businesses into one facility to reduce production downtime and achieve operational efficiency.

April 2021 - JBT introduced the Warehouse Freezer AGV, which can operate from -10°F to 110°F. The automated guided vehicle (AGV) has a three-stage hydraulic mast with integrated side shift and tilt and can lift 2,500 pounds. It also has a range of lift heights, ranging from 357 inches (or less) to 422 inches to the top of its forks. The Warehouse Freezer AGV can also travel bidirectionally at up to 5.9 feet per second and has a minimum aisle width of 11.5 feet. It also includes a 48 VDC battery and two lift rates of 10 inches per second for lowering and 11 inches per second for raising. The freezer is the 'last frontier' for AGVs, as a part of a food machinery company.

Additional Benefits:

The market estimate (ME) sheet in Excel format
3 months of analyst support

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