

Automated Storage and Retrieval System - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029

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Report description:

The Automated Storage and Retrieval System Market size is estimated at USD 18.07 billion in 2024, and is expected to reach USD 30.54 billion by 2029, growing at a CAGR of 11.07% during the forecast period (2024-2029).

The explosion of e-commerce, changing consumer demands, and global labor shortages are driving the need for flexible automated solutions that make order fulfillment and distribution faster and more efficient. ASRS technology is finding application in manufacturing units, warehouses, and distribution centers for materials transport and inventory management purposes. These systems are commonly utilized in cold storage, automotive, pharmaceutical manufacturing, food and beverage, and e-commerce applications.

Key Highlights

- ASRS is most beneficial in warehouse applications. These systems save ample floor space, which is a crucial factor in warehouse operations. With the evolution of technology, the flow and control of materials have improved. The equipment offers better visualization and the ability to handle variability, variety, and volume at higher speeds, thus generating increased value.
- The expansion activities carried out by the airports for advanced technologies will boost the studied market growth. For instance, in July 2022, The U.S. Department of Transportation's Federal Aviation Administration (FAA) announced the award of nearly USD 1 billion to 85 airports across the country for improving terminals of all sizes. Building airport terminals will ensure better customer experiences, move goods through the economy with more efficiency, minimize prices, and increase U.S. competitiveness.
- Furthermore, increasing need for efficient and effective solutions for managing warehouses, traffic, logistics, and others, the need for ASRS has been growing. With the growing demand for automated storage and retrieval systems, various companies have been undertaking various initiatives to strengthen their position in the market. For instance, in January 2023, OPEX Corporation, through its subsidiary, OPEX GmbH, entered into a strategic partnership with Transition to launch its leading-edge warehouse

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automation technology to customers in France. Through its comprehensive suite of technology solutions (including Perfect Pick, a goods-to-person (AS/RS), and Sure Sort, a robotic sorting system), OPEX enables its clients to reduce costs, improve workflow, and drive efficiencies in infrastructure around the world. Such initiatives by the companies in the market are expected to fuel the automated storage and retrieval system market during the forecast period.

-In addition, in February 2022, AddverbTechnologies announced the establishment of a subsidiary office in the United States to serve its North and South American customers. Addverbis focuses on creating fully automated warehouses and manufacturing facilities. It is collaborating with several industries, including e-commerce, retail, and grocery. The company offers six robots comprising a mobile robot, a pallet robot, a shuttle robot, a sorting robot, and a U.V. disinfection robot. It also provides a shuttle-based ASRS system and software to create high-speed robotic fulfillment centers.

-However, the need for skilled operators to enable the adequate functioning and maintenance of automated material-handling systems could be a significant impediment in emerging countries. However, automated material-handling vendors have been trying to offset this issue by offering periodic maintenance. In addition to high initial costs, the need for skilled workers to perform various activities throughout the vehicles' shelf life is widely considered a significant concern in the market studied.

-On the contrary, during the post-pandemic, the significantly increased awareness of digital and automated technologies is expected to support the studied market's growth in the forecast period. For instance, in January 2023, AutoStore, one of the significant warehouse automation companies, launched Pio ("Product In/Out"), which is a plug-and-play version of acclaimed AutoStore cube storage technology tailored for small and medium-sized businesses (SMBs).

Automated Storage & Retrieval System (ASRS) Market Trends

Growth of E-commerce in Developing Countries to Drive the Market

- As more companies turn to automation to boost efficiency, lower costs, and remain competitive, they also make the workplace safer for workers. One of the main causes for the ASRS market is improving working and safety conditions.

- E-commerce businesses are forming their delivery networks. Flipkart's logistics, which India calls "eKart," is one instance. On the other hand, logistics companies such as Express Logistics deliver bulk shipments to retailers and distributors. Such developments are anticipated to boost the penetration of AS/RS systems. In addition, according to Edge by Ascential, the sale of online retailer Alibaba acquired USD 780.70 billion in 2022 and is believed to reach USD 1,137.5 billion in 2027.

- The immense growth in the e-commerce industry is a significant growth driver for the Market studied. According to IBEF, the Indian e-commerce sector reached USD 74.8 billion in 2022 and is predicted to increase to USD 188 billion by 2025, further to USD 350 billion by 2030. Furthermore, in June 2022, 10.35 million orders totaling USD 33.07 billion were fulfilled by 4.56 million registered sellers and service providers through the Government e-Marketplace (GeM) platform for 60,632 purchasers.

- The existence of retail and e-commerce giants, such as Amazon and Walmart, contributes immensely to the region's demand for warehouse and storage services. According to Walmart, as of 2022, the organization uses 31 dedicated e-commerce fulfillment hubs and 4,700 stores within 10 miles of 90 percent of the United States population to fulfill online orders. According to Google and Temasek Holdings' studies, the GMV for the Singaporean e-commerce market is predicted to reach USD 5 billion. In contrast, the Malaysian and Indonesian markets will surpass USD 7 billion and USD 53 billion, respectively, by 2025.

- Moreover, according to the International Trade Administration, Australia is considered the eleventh-largest e-commerce market in the world, and revenue is predicted to reach USD 32.3 billion by 2024. The popularity of sales events, marketplaces, and innovative buy now, pay later (BNPL) payment options contribute significantly to the increase in e-commerce activities. Furthermore, the same report predicted that e-commerce would account for 12 percent of retail spending within three years.

- Additionally, according to the International Trade Administration, the Philippines' eCommerce market sales reached USD 17 billion recently, due mainly to 73 million online active consumers. This is expected to reach USD 24 billion by 2025, with a 17 percent increase.

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Asia-Pacific?to Experience Significant Market Growth

- The Asia-Pacific is witnessing an increasing focus on automation by warehousing companies, which is expected to drive the automated storage and retrieval systems (ASRS) market. According to IBEF, the grade-A warehousing market has grown steadily in the recent past due to the growth of e-commerce in the country. It is expected to grow at a rate of 15 percent by 2025.
- China is a significant adopter of Industry 4.0, and the country is home to some of the most advanced manufacturing facilities in the world, ahead of the European Union, the United States, and Japan. For instance, according to the World Economic Forum, of the 69 factories worldwide now considered leaders using Industry 4.0 technologies, China is currently home to 20, followed by 19 in the European Union, 7 in the United States, and 5 in Japan. Besides being the foundation for plant-wide automation, the automated storage and retrieval system also serves as a foundation for Industry 4.0.
- There has been a significant increase in packaged food, snacks, meat, and flavored drinks consumption. For instance, according to Agriculture and Agri-Food Canada, packaged food retail sales in China are forecasted to reach USD 366.75 billion by 2025. In addition, according to Statistics Bureau Japan, the revenue in the manufacture of Food Products is projected to amount to USD 206.60 billion in 2023. Also, it is further anticipated to reach 239.60 billion in 2027.
- Further, the growth of the automotive industry is expected to drive the studied Market. According to JADA, in 2022, Toyota, the leading car manufacturer in Japan, sold around 1.25 million vehicles domestically. Despite a decrease of 12.1 percent compared to the prior year, Toyota reported more than twice as many unit sales as the runner-up. Suzuki, which came in second, sold slightly over 600 thousand vehicles in 2022.
- The increasing initiatives to modernize airports and equip them with the latest technology to make them efficient, safe, and cost-effective are also expected to drive the growth of the studied Market. In addition, by 2025, the three public-private partnership (PPP) airports in Delhi, Hyderabad, and Bengaluru will likely invest USD 3.9 billion (INR 300 billion) in expansion development. Such initiatives to modernize airports and equip them with the latest technology to make them efficient, safe, and cost-effective are expected to drive the growth of the studied Market.
- According to the Civil Aviation Minister, India plans to build 100 new airports with an investment of USD 60 billion in the next 10-15 years to make air travel more affordable. These factors are expected to boost the demand for AMH equipment in the country. The automotive end-user industry in the country, which handles a large volume of materials and has a high throughput ratio, is expected to opt for AMH systems.
- According to DataReportal, in January 2022, Indonesia had 204.7 million internet users. At the start of 2022, Indonesia's internet penetration rate was 73.7 percent of the overall population. The possibility of the automation of work activities is expected to drive the demand for ASRS during the forecast period.

Automated Storage & Retrieval System (ASRS) Industry Overview

The studied market appears favorably competitive, with significant players adopting strategies like product innovation and mergers and acquisitions. The growing presence of major manufacturers in the automated storage and retrieval sector is expected to intensify competitive rivalry during the forecast period. Market incumbents, such as Daifuku and Schaefer Systems International Pvt Ltd., considerably influence the overall market. Moreover, the growing deployment of such systems, especially in warehouse automation, is also having a significant impact on the competitiveness of the major players.

In July 2023, the Kraft Heinz Company announced an investment of more than USD 400 million to build one of the largest automated CPG distribution centers in North America. The facility?s design includes a 24/7 automated storage and retrieval system with the ability to drive twice the volume for Kraft Heinz customers, distributing more than 60 percent of the Company?s food service business and approximately 30 percent of all dry goods.

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In April 2023, ABB Robotics announced the enhancement of its industry-leading logistics automation portfolio with the launch of the Robotic Item Picker, which is a new AI and vision-based solution that can accurately detect and pick items in unstructured environments in warehouses and fulfillment centers. The Item Picker reduces engineering effort and accelerates time-to-market by easily integrating into existing automated storage and retrieval solutions, such as shuttle, cubic, and 3D storage solutions.

Additional Benefits:

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

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