

# **Automated Storage Market Forecasts to 2034 – Global Analysis By System Type (Unit Load ASRS, Mini Load ASRS, Mid Load ASRS, Vertical Lift Modules, Carousel-Based Systems, Shuttle-Based Systems, Cube-Based / Robotic Storage Systems, Automated Pallet Storage Systems, and Other System Types), Load Type, Function, Deployment Type, Warehouse Type, Technology, End User, and By Geography**

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## **Abstracts**

According to Statistics MRC, the Global Automated Storage Market is accounted for \$14.5 billion in 2026 and is expected to reach \$31.9 billion by 2034 growing at a CAGR of 10.3% during the forecast period. Automated storage systems utilize computer-controlled technologies to efficiently store, retrieve, and manage inventory without direct human intervention. These solutions optimize warehouse space utilization, improve inventory accuracy, and enhance operational throughput across manufacturing, distribution, and retail sectors. The market encompasses diverse configurations including unit load systems, vertical lift modules, shuttle-based technologies, and robotic storage solutions designed to accommodate varying load capacities and facility constraints.

### **Market Dynamics:**

Driver:

E-commerce growth and labor shortages

Exponential expansion of online retail creates unprecedented demand for efficient order fulfillment capabilities that automated storage systems provide. Warehouses face intensifying pressure to process increasing order volumes with faster turnaround times while managing persistent labor shortages. Automated storage solutions address both challenges by accelerating picking processes and reducing workforce requirements. Facilities implementing these systems achieve significant productivity gains while maintaining accuracy during peak demand periods. The structural shift toward omnichannel retail ensures sustained investment in automation technologies as companies compete on delivery speed and operational efficiency.

#### Restraint:

##### High initial capital investment

Substantial upfront costs associated with automated storage implementation create significant barriers for small and medium-sized enterprises. Comprehensive systems require significant expenditure beyond hardware, including facility modifications, software integration, and workforce training. Payback periods extending several years challenge organizations with limited capital access or short-term financial priorities. Economic uncertainties further amplify investment hesitation as companies prioritize liquidity over automation projects. This cost barrier restricts market penetration primarily to large enterprises with substantial financial resources, limiting broader adoption across the wider industrial landscape despite demonstrated operational benefits.

#### Opportunity:

##### Integration with artificial intelligence

Advanced AI algorithms are transforming automated storage capabilities through predictive analytics and intelligent decision-making. Machine learning optimizes inventory positioning based on historical demand patterns, reducing travel times and improving throughput. AI-powered systems continuously adapt to changing product mixes and seasonal fluctuations without manual reprogramming. Predictive maintenance algorithms minimize unexpected downtime by identifying potential equipment failures before they occur. These intelligent capabilities deliver enhanced return on investment through sustained operational optimization, making automated storage increasingly attractive to cost-conscious operators seeking continuous improvement beyond initial efficiency gains.

Threat:

### Cybersecurity vulnerabilities

Increasing connectivity exposes automated storage systems to potential cyberattacks that could disrupt operations and compromise sensitive inventory data. Ransomware incidents targeting warehouse management systems can halt fulfillment operations completely, causing significant revenue losses and customer dissatisfaction. Supply chain interruptions stemming from security breaches cascade through customer operations, damaging reputational trust. As storage systems integrate more deeply with enterprise resource planning platforms and share data across organizational boundaries, attack surfaces expand correspondingly. Operators must continuously invest in security upgrades and employee training to mitigate evolving threats in an increasingly hostile digital environment.

### **Covid-19 Impact:**

The COVID-19 pandemic fundamentally accelerated automated storage adoption as supply chain disruptions exposed vulnerabilities in manual-dependent operations. Lockdowns created urgent need for contactless fulfillment while e-commerce surges overwhelmed traditional warehouse capacity. Companies rapidly accelerated automation investments to reduce human dependency and build operational resilience. Labor availability uncertainties during and after the pandemic reinforced automation's strategic importance beyond pure efficiency calculations. These shifted perspectives have proven durable, with automated storage now viewed as essential infrastructure for supply chain robustness rather than optional efficiency enhancement

The Shuttle-Based Systems segment is expected to be the largest during the forecast period

The Shuttle-Based Systems segment is expected to account for the largest market share during the forecast period, offering exceptional throughput and scalability for high-volume operations. These systems utilize independent vehicles traveling on rails within storage racks to deliver items to picking stations with remarkable speed. Their modular architecture enables gradual capacity expansion aligned with business growth, optimizing capital deployment. E-commerce fulfillment centers increasingly prefer shuttle technology for processing large order volumes with diverse product ranges. The segment's proven reliability, combined with continuous technological enhancements, ensures sustained dominance across multiple application sectors.

The Mixed Loads segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the Mixed Loads segment is predicted to witness the highest growth rate, reflecting evolving inventory complexity across modern supply chains. Mixed loads containing various product types, sizes, and handling requirements within single storage locations challenge traditional uniform-load systems. Retailers and third-party logistics providers increasingly handle diverse inventories requiring flexible storage solutions capable of accommodating heterogeneity. Advanced robotic storage systems with intelligent gripping technologies enable efficient mixed-load handling previously impossible with conventional automation. This capability proves essential for omnichannel operations where single facilities manage everything from individual items to full pallets.

#### **Region with largest share:**

During the forecast period, the North America region is expected to hold the largest market share, driven by rapid e-commerce penetration and extensive warehouse automation adoption. Major logistics operators continuously upgrade facilities with advanced storage technologies to maintain competitive positioning. Labor cost pressures and workforce shortages across the region accelerate automation payback calculations. Strong presence of leading automation manufacturers ensures ready access to cutting-edge solutions and technical support. Favorable regulatory environment and established venture capital funding for logistics technology startups further reinforce North America's market leadership throughout the forecast period.

#### **Region with highest CAGR:**

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR, fueled by manufacturing expansion and modernizing retail infrastructure across developing economies. China's massive industrial base drives demand for automated storage to improve production efficiency and supply chain visibility. India's organized retail growth creates new warehousing requirements addressed through automation adoption. Southeast Asian countries attract logistics investments as regional supply chain hubs, implementing advanced storage solutions. Government industrial modernization initiatives and foreign investment in warehouse infrastructure accelerate technology deployment. As regional operators recognize automation's competitive necessity, Asia Pacific emerges as the fastest-growing automated storage market.

## Key players in the market

Some of the key players in Automated Storage Market include Daifuku Co., Ltd., SSI SCHAEFER Group, Dematic, Murata Machinery, Ltd., TGW Logistics Group GmbH, Vanderlande Industries B.V., Honeywell International Inc., Swisslog Holding AG, Kardex Holding AG, Mecalux, S.A., KNAPP AG, Bastian Solutions, LLC, BEUMER Group GmbH & Co. KG, System Logistics S.p.A., Westfalia Technologies, Inc., and AutoStore AS.

## Key Developments:

In December 2025, Ocado received about \$350 million in compensation after Kroger scaled back several automated warehouse projects in the U.S., reflecting changing economics of centralized robotic fulfillment centers and prompting Ocado to revisit its global expansion strategy.

In August 2025, Marks & Spencer announced a \$340 million investment in a highly automated food distribution center in Northamptonshire, integrating robotics and crane-based storage systems to modernize its supply chain and expand grocery operations.

In 2025, GreenBox Systems (a Symbotic–SoftBank venture) announced a \$144 million automated warehouse in Georgia leveraging AI-driven storage and robotic fulfillment to scale next-gen distribution infrastructure.

## System Types Covered:

Unit Load ASRS

Mini Load ASRS

Mid Load ASRS

Vertical Lift Modules

Carousel-Based Systems

Shuttle-Based Systems

Cube-Based / Robotic Storage Systems

Automated Pallet Storage Systems

Other System Types

#### Load Types Covered:

Pallet Loads

Tote / Carton Loads

Unit Loads

Mixed Loads

#### Functions Covered:

Storage and Buffering

Order Picking (Goods-to-Person)

Kitting and Sequencing

Assembly Support

Distribution and Fulfillment

Cold Storage Applications

#### Deployment Types Covered:

New Installations

Retrofit / Brownfield Installations

### Warehouse Types Covered:

- Distribution Centers
- Manufacturing Warehouses
- Cold Storage Facilities
- Micro-Fulfillment Centers
- Urban Warehousing

### Technologies Covered:

- Robotics Integration
- AI and Machine Learning-Based Systems
- IoT-Enabled Storage Systems
- Warehouse Management Software Integration
- Vision-Guided Systems

### End Users Covered:

- Automotive
- Retail and E-Commerce
- Food and Beverage
- Healthcare and Pharmaceuticals
- Semiconductor and Electronics
- Aerospace and Defense

Metals and Heavy Machinery

Chemicals

Aviation and Logistics

General Manufacturing

Other End Users

Regions Covered:

North America

United States

Canada

Mexico

Europe

United Kingdom

Germany

France

Italy

Spain

Netherlands

Belgium

Sweden

Switzerland

Poland

Rest of Europe

#### Asia Pacific

China

Japan

India

South Korea

Australia

Indonesia

Thailand

Malaysia

Singapore

Vietnam

Rest of Asia Pacific

#### South America

Brazil

Argentina

Colombia

Chile

Peru

Rest of South America

Rest of the World (RoW)

Middle East

Saudi Arabia

United Arab Emirates

Qatar

Israel

Rest of Middle East

Africa

South Africa

Egypt

Morocco

Rest of Africa

**What our report offers:**

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2023, 2024, 2025, 2026, 2027, 2028, 2030, 2032 and 2034
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market

estimations

- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

### **Free Customization Offerings:**

All the customers of this report will be entitled to receive one of the following free customization options:

#### Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

#### Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

#### Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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