

North America Mini Load ASRS Market Size and Forecast (2021 - 2031)

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Abstracts

The North America mini load ASRS (Automated Storage and Retrieval System) market is projected to grow from US\$ 144.1 million in 2024 to US\$ 280.4 million by 2031, registering a CAGR of 10.2% during the 2025–2031 period.

Executive Summary and Market Analysis (North America):

The North America mini load ASRS market is experiencing strong growth, driven by rising labor costs, the rapid expansion of e-commerce, and increasing pressure to optimize warehouse space in urban distribution hubs. Across the region, companies are increasingly adopting automation to enhance storage density, accelerate order fulfillment, and reduce reliance on manual labor.

The integration of advanced technologies such as artificial intelligence (AI), the Internet of Things (IoT), and robotics is further improving system capabilities. These technologies enable real-time inventory visibility, higher accuracy in operations, and improved overall warehouse efficiency across distribution networks.

In June 2025, Integrated Systems Design (ISD) launched its UltraStore and Mid-Load ASRS solution in North America. Designed to maximize vertical storage utilization up to 45 feet and manage loads of up to 2,500 lbs, the system supports applications including bulk storage, buffering, sortation, work-in-progress handling, and goods-to-person picking. This development highlights the increasing demand for flexible, high-density, and scalable automation systems in modern warehousing environments.

The market is expected to maintain steady growth, supported by strong adoption across industries such as retail, pharmaceuticals, food and beverage, and manufacturing.

Rising investments in modular automation systems, along with growing emphasis on sustainability and supply chain resilience, are further driving market expansion.

Market Segmentation Overview:

By Type: Includes storage, order picking, distribution, kitting, assembly, and others, with storage segment leading in 2024.

By End Use Industry: Includes automotive, food & beverage, electronics & semiconductors, e-commerce, chemicals, aerospace, retail, pharmaceutical, and others, with automotive holding the largest share.

Market Outlook:

A major trend influencing the market is the increasing preference for modular and scalable ASRS solutions. Businesses are adopting systems that can be easily expanded or reconfigured in response to changing demand patterns and operational requirements.

Modular ASRS solutions enable companies to start with a basic configuration and gradually expand capacity, reducing upfront capital investment while improving operational flexibility. These systems also simplify maintenance and upgrades, as individual modules can be serviced or replaced without disrupting the entire operation.

Such flexibility is especially valuable in fast-changing sectors like e-commerce and retail, where product assortments and demand volumes fluctuate frequently. By optimizing storage configurations based on product size, weight, and handling needs, modular ASRS systems significantly enhance space utilization and operational efficiency.

Country Insights:

The United States dominates the North America market, supported by its advanced logistics infrastructure and high adoption of warehouse automation technologies. Companies are increasingly deploying mini load ASRS solutions to improve order accuracy, reduce labor dependency, and increase throughput efficiency.

A key example is Stellantis' May 2025 announcement of a US\$ 388 million investment

in a highly automated Metro Detroit Megahub in Michigan. The facility will integrate advanced ASRS technology from AutoStore Holdings Ltd., underscoring the growing importance of automation in large-scale distribution operations.

With continued investment in digital supply chains, automation technologies, and sustainable logistics practices, the U.S. market is expected to sustain strong growth in mini load ASRS adoption.

Key Market Players:

Leading companies operating in the market include SSI SCHAEFER Group, Swisslog Holding AG, System Logistics SpA, Bastian Solutions LLC, Daifuku Co Ltd, Kardex Holding AG, KNAPP AG, Mecalux SA, Vanderlande Industries BV, Autocrib Inc, Gonvarri Material Handling, Beijing Geekplus Technology Co Ltd, Exotec SAS, Hai Robotics Co Ltd, Modula GROUP, Ferretto Group SpA, Hanel GmbH & Co. KG, Craftsman Storage Systems, and Weland Solutions AB.

These players are actively focusing on innovation, geographic expansion, and strategic acquisitions to strengthen their market position and meet the growing demand for advanced warehouse automation solutions.

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