

Automated Material Handling (AMH) - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029

Market Report | 2024-02-17 | 249 pages | Mordor Intelligence

AVAILABLE LICENSES:

- Single User License \$4750.00
- Team License (1-7 Users) \$5250.00
- Site License \$6500.00
- Corporate License \$8750.00

Report description:

The Automated Material Handling Market size is estimated at USD 70.35 billion in 2024, and is expected to reach USD 126.20 billion by 2029, growing at a CAGR of 12.40% during the forecast period (2024-2029).

The rising technological advancements, rising labor costs and safety concerns, rising efficiency and productivity of manufacturing and warehouse operating companies, a significant recovery in global manufacturing, growing demand for automation in industries, rising demand for robots in manufacturing units and warehousing facilities, and rising emerging markets are just a few of the key factors driving the growth of the automated material handling market. Additionally, throughout the projection period, the global automated material handling market would benefit from the expanding digitization of supply chain operations. This expansion will be complemented by increasing order customization and personalization.

Key Highlights

- Automated material handling (AMH) systems help efficiently transfer materials to different places in the manufacturing area, warehouse, retail shops, airports, distribution, and logistics centers. These systems help transfer materials from one place to another within the same bay, department opposite manufacturing ends, or between two separate buildings. An AMH system uses a route or path provided by the Manufacturing Execution System (MES). Material identification is made by these vehicles using optical character recognition (OCR), barcode, RFID, ultra-wideband indoor tracking, and near-field communication for locating the position of materials.
- Over the last 70 years, material handling has undergone various transformations that have changed the industry's outlook. Material-handling machines and robots have replaced individual workers. Owing to this transformation, many industries have grown, especially the automotive industry, which has experienced a 10-fold growth.
- Industry 4.0 innovations and next-generation manufacturing capabilities developed in Canada are changing the way products and

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

components are designed, delivered, and maintained across various industries and climate conditions. Robotics, automation, and technologies like additive manufacturing (3D printing) have a wide range of applications in Canadian industries, such as e-commerce, automotive, agriculture, and pharmaceuticals. Canadian innovators are producing a comprehensive range of technologically complex, increased-value products for domestic and competitive global markets, sharing enhanced practices and laying the groundwork for collaborations that shape the future of advanced automation technologies.

-Although the first form of AGV was used in 1953, AGVs have been mostly unable to gain widespread adoption across all the production/warehousing firms due to several mitigating factors (cost being a significant factor impeding growth). The average price of a typical guided vehicle is expected to be around USD 60,000-100,000. At the same time, an integrated system equipped with navigation aids, sensors, safety equipment, and communication components could be much more expensive. The high initial prices and maintenance issues continue to have an adverse impact on the market studied. Major companies have concerted efforts to keep the total costs in check while ensuring that innovation and R&D activities remain unaffected.

-The COVID-19 pandemic complicated the situation of automation adoption in various sectors. It has changed the standard operating procedure by bringing in unique challenges of social distancing and contactless operation. Organizations were forced to limit their workforce and deal with the increasing demand. The COVID-19 outbreak has infected several workers in the United States since 2020, leading companies on the front lines to implement new safety processes. While the spread of the virus has been severe enough to warrant shutdowns, for instance, food production facilities, multiple other businesses have been able to continue operations with the addition of new health measures.

Automated Material Handling (AMH) Market Trends

Industry 4.0 Investments Significantly Drive the Market Growth

- The market is driven by the developments occurring due to countries adopting Industry 4.0 and IOT technologies. Through the use of robotics, industry 4.0 is revolutionizing how material handling is done. In warehouses and distribution facilities, robotics is becoming more and more prevalent. In addition to picking and packaging orders, loading and unloading trucks, and even cleaning the warehouse floor, they can also be employed for these activities. Workplace accuracy and productivity can both be enhanced by robotics. Robots can also enable company save money by lowering the quantity of necessary manual work.

- For instance, as warehouses are huge, associates must walk considerable distances to locate SKUs and deliver orders to the packing and shipping regions. Every year, an average warehouse wastes 6.9 weeks on unnecessary walking and other movements, equating to 265 million hours of work at the cost of USD 4.3 billion. During each stage of the selection process, collaborative robots also minimize the need for extended walks between functional areas. The rise in material handling equipment orders will significantly drive the studied market.

- Moreover, robotics, automation, and technologies like additive manufacturing (3D printing) have a wide range of applications in Canadian industries such as e-commerce, automotive, agriculture, and pharmaceuticals. Canadian innovators are producing a comprehensive range of technologically complex, increased-value products for domestic and competitive global markets, sharing enhanced practices and laying the groundwork for collaborations that shape the future of advanced automation technologies.

- Moreover, Germany is also focused on the 2030 vision for Industry 4.0 in three strategic fields of action: Autonomy, Interoperability, and Sustainability. In this 2030 vision, the stakeholders of the platform Industry 4.0 presents a holistic approach to shaping the digital ecosystem. The goal is to create a framework for a future data economy that is by the demands of a social market economy, emphasizing open ecosystems, diversity, and supporting competition between all market stakeholders based on the specific situation and established strengths of the German industry base for the automation market.

- Furthermore, the government's strong support in the acquisition program has enabled China to move toward Industry 4.0. For instance, Siasun, a China-based industrial robot maker, has affiliations with the Chinese Academy of Sciences, which is further linked to the government. The country's adoption of industrial control systems by various companies is a notable trend. The advanced systems allow ease of production in factories. This also points to the gradual shift of companies from depending on

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

manual labor to advanced technology-based systems that will enable the facility's automation.

- A significant trend impacting the market studied is the focus on smart manufacturing practices. According to the data from IBEF, the Government of India set an ambitious target of increasing manufacturing output contribution to 25% of the Gross Domestic Product (GDP) by 2025 from 16%. The Smart Advanced Manufacturing and Rapid Transformation Hub (SAMARTH) Udyog Bharat 4.0 initiative aim to enhance awareness about Industry 4.0 within the Indian manufacturing industry and enable stakeholders to address challenges related to automation material handling.

Asia-Pacific is Expected to be the Fastest Growing Market

- China has been a prominent contributor to the growth of the AMH market in the Asia-Pacific region. The increasing demand for AMH products across industries, such as manufacturing, automotive, and e-commerce, boosts the market's growth. China has a vast population and pursues an industrial policy. Measured on the PPP basis, the country became the global largest economy and the global largest exporter and trader during the current decade. The country is currently transitioning from a manufacturing and construction-led economy to a consumer-led economy.

- According to China's National Bureau of Statistics, total retail sales in China's consumer products market were around CNY 43,973.3 billion in 2022. The number of Chinese online buyers has risen rapidly from under 34 million in 2006 to over 845 million in 2022, enabling China's e-commerce business to proliferate. Hence, with growing e-commerce, the demand for material-handling equipment will likely rise in the forecasted years.

- Japan is predominantly a manufacturing nation. Its manufacturing industry contributes close to 20% to the nominal GDP, whereas it is close to 10% for other developed countries. According to the IMF, the country's manufacturing sector has achieved significant industrial productivity gains over the services sector, owing to the increased adoption of ICT. The automotive and electronics sectors are the most productive manufacturing sectors in the country.

- An increase in infrastructure investment by the government and investments from industries coupled with the 'Make in India' initiative is expected to drive AMH systems' demand. The Government of India aims to increase the manufacturing sector's share of the gross domestic product (GDP) to 25% by 2022, from 17% in 2018. Thus, manufacturers are expected to incorporate Industry 4.0 and other digital technologies to achieve this target.

- South Korea adopted the 4th Industrial Revolution. In Korea, smart factories will be one of the most important fields. By 2022, South Korea plans to construct 30,000 smart factories. The government of South Korea established a support program to help old companies become carbon-neutral smart factories. Those wishing to transform their factories in Korea into smart factories will receive USD 360,000 in financial assistance from the Korean government if they reach medium two levels. In addition, USD 180,000 will be awarded for reaching medium one levels. These Smart Factories will be fully integrated, automated systems that will be employed in manufacturing. The automated solutions will also follow automation for material handling and storage solutions, which will boost the studied market.

Automated Material Handling (AMH) Industry Overview

The automated material handling (AMH) market is highly competitive in nature. Product launches, high expenses on research and development, partnerships and acquisitions, etc., are the prime growth strategies adopted by the key players in the market to sustain the intense competition.

In August 2022, Interroll opened a new plant in Suzhou during its 20th anniversary year in China. After two decades of success in the Chinese material-handling market, Interroll has now fully prepared for future opportunities in the Asia-Pacific and China by putting a new plant in Suzhou, China, into full operation, effectively doubling production capacities.

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

In February 2022, KION Group launched the European research project IMOCO. The project could aim to facilitate intelligent trucks to navigate autonomously in a warehouse or factory. IMOCO, which stands for 'intelligent motion control,' is devoted to the safe usage of mobile robotic systems in fast-moving intralogistics environments.

Additional Benefits:

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

Table of Contents:

1 INTRODUCTION

- 1.1 Study Assumptions and Market Definition
- 1.2 Scope of the Study

2 RESEARCH METHODOLOGY

3 EXECUTIVE SUMMARY

4 MARKET INSIGHTS

- 4.1 Market Overview
- 4.2 Industry Value Chain Analysis
- 4.3 Industry Attractiveness - Porter's Five Forces Analysis
 - 4.3.1 Bargaining Power of Suppliers
 - 4.3.2 Bargaining Power of Consumers
 - 4.3.3 Threat of New Entrants
 - 4.3.4 Intensity of Competitive Rivalry
 - 4.3.5 Threat of Substitute Products
- 4.4 Impact of COVID-19 on the Market

5 MARKET DYNAMICS

- 5.1 Market Drivers
 - 5.1.1 Incremental Technological Advancements aiding Market Growth
 - 5.1.2 Industry 4.0 Investments driving the Demand for Automation and Material Handling
 - 5.1.3 Rapid Growth of E-commerce Sector
- 5.2 Market Challenges
 - 5.2.1 High Initial Equipment Cost
 - 5.2.2 Unavailability for Skilled Workforce

6 MARKET SEGMENTATION

- 6.1 By Product Type
 - 6.1.1 Hardware
 - 6.1.2 Software
 - 6.1.3 Services
- 6.2 By Equipment Type
 - 6.2.1 Mobile Robots
 - 6.2.1.1 Automated Guided Vehicle (AGV)
 - 6.2.1.2 Autonomous Mobile Robot (AMR)

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

- 6.2.2 Automated Storage and Retrieval System
 - 6.2.2.1 Fixed Aisle
 - 6.2.2.2 Carousel
 - 6.2.2.3 Vertical Lift Module
- 6.2.3 Automated Conveyor
 - 6.2.3.1 Belt
 - 6.2.3.2 Roller
 - 6.2.3.3 Pallet
 - 6.2.3.4 Overhead
- 6.2.4 Palletizer
 - 6.2.4.1 Conventional
 - 6.2.4.2 Robotic
- 6.2.5 Sortation System
- 6.3 By End User
 - 6.3.1 Airport
 - 6.3.2 Automotive
 - 6.3.3 Food And Beverages
 - 6.3.4 Retail/Warehousing/Distribution Centers/Logistic Centers
 - 6.3.5 General Manufacturing
 - 6.3.6 Pharmaceuticals
 - 6.3.7 Post and Parcel
 - 6.3.8 Other End Users
- 6.4 By Geography
 - 6.4.1 North America
 - 6.4.1.1 United States
 - 6.4.1.2 Canada
 - 6.4.2 Europe
 - 6.4.2.1 United Kingdom
 - 6.4.2.2 Germany
 - 6.4.2.3 France
 - 6.4.2.4 Italy
 - 6.4.2.5 Spain
 - 6.4.2.6 Rest of Europe
 - 6.4.3 Asia-Pacific
 - 6.4.3.1 China
 - 6.4.3.2 Japan
 - 6.4.3.3 India
 - 6.4.3.4 Rest of Asia-Pacific
 - 6.4.4 Latin America
 - 6.4.4.1 Brazil
 - 6.4.4.2 Mexico
 - 6.4.4.3 Rest of Latin America
 - 6.4.5 Middle-East and Africa
 - 6.4.5.1 United Arab Emirates
 - 6.4.5.2 Saudi Arabia
 - 6.4.5.3 South Africa
 - 6.4.5.4 Rest of Middle East and Africa

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

7 COMPETITIVE LANDSCAPE

7.1 Company Profiles

- 7.1.1 Daifuku Co. Ltd
- 7.1.2 Kardex Group
- 7.1.3 KION Group AG
- 7.1.4 JBT Corporation
- 7.1.5 Jungheinrich AG
- 7.1.6 TGW Logistics Group GmbH
- 7.1.7 SSI Schaefer AG
- 7.1.8 KNAPP AG
- 7.1.9 Mecalux SA
- 7.1.10 System Logistics SpA
- 7.1.11 Viastore Systems GmbH
- 7.1.12 BEUMER Group GmbH & Co. KG
- 7.1.13 Interroll Holding AG
- 7.1.14 WITRON Logistik
- 7.1.15 Siemens AG
- 7.1.16 KUKA AG
- 7.1.17 Honeywell Intelligrated Inc. (Honeywell International Inc.)
- 7.1.18 Murata Machinery Ltd
- 7.1.19 Toyota Industries Corporation
- 7.1.20 Visionnav Robotics
- 7.1.21 Dearborn Mid-West Company

8 INVESTMENT ANALYSIS

9 FUTURE OF THE MARKET

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

Automated Material Handling (AMH) - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029

Market Report | 2024-02-17 | 249 pages | Mordor Intelligence

To place an Order with Scotts International:

- ☐ - Print this form
- ☐ - Complete the relevant blank fields and sign
- ☐ - Send as a scanned email to support@scotts-international.com

ORDER FORM:

Select license	License	Price
	Single User License	\$4750.00
	Team License (1-7 Users)	\$5250.00
	Site License	\$6500.00
	Corporate License	\$8750.00
		VAT
		Total

*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346.

** VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*		Phone*	
First Name*		Last Name*	
Job title*			
Company Name*		EU Vat / Tax ID / NIP number*	
Address*		City*	
Zip Code*		Country*	
		Date	2026-02-26
		Signature	

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com



Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com
www.scotts-international.com