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Automated Mobile Robot Market Forecasts to 2034 – Global Analysis By Offering (Standalone Robots, and Robotics-as-a-Service (RaaS)), Component (Hardware, Software, and Services), Type, Payload Capacity, Deployment, Battery Type, Navigation Technology, End User, and By Geography

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Abstracts

According to Stratistics MRC, the Global Automated Mobile Robot Market is accounted for $6.04 billion in 2026 and is expected to reach $31.44 billion by 2034 growing at a CAGR of 22.9% during the forecast period. Automated Mobile Robots are revolutionizing material handling and logistics across manufacturing, warehousing, and healthcare sectors by offering flexible, autonomous navigation without the need for fixed infrastructure. Unlike traditional automated guided vehicles, AMRs leverage advanced sensors and software to interpret and adapt to dynamic environments in real-time. This market growth is underpinned by the escalating adoption of Industry 4.0 principles and the urgent need for operational resilience in an increasingly complex global supply chain landscape.

Market Dynamics:

Driver:

Accelerated progress in robotics and AI

Breakthroughs in machine learning, computer vision, and natural language processing enable AMRs to navigate complex, crowded environments with human-like adaptability. These technological leaps allow robots to perform tasks such as real-time obstacle

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avoidance, dynamic path planning, and predictive maintenance without human intervention. The use of AI-based fleet management software helps multiple robots work together better in big facilities, making sure materials move smoothly. As component costs decline and processing power increases, the return on investment for end-users improves dramatically, accelerating adoption across both enterprise and small-to-medium business segments.

Restraint:

High upfront implementation costs

The initial investment encompasses not only the robotic hardware itself but also site assessment, integration with existing warehouse management systems, employee training, and ongoing software licensing fees. For organizations operating in regions with lower labor costs, the business case for automation requires scrutiny of payback periods and long-term value realization. Additionally, brownfield facilities may require infrastructure modifications to support optimal robot performance, adding unforeseen expenses to deployment projects. These financial considerations often delay purchasing decisions and limit market penetration in price-sensitive sectors.

Opportunity:

Rising demand for efficient last-mile delivery services

The rapid growth of e-commerce and omnichannel retail has put a lot of pressure on distribution networks to get orders out faster while dealing with rising labor costs. By automating sorting, picking, and short-distance transport within urban micro-fulfillment centers and local delivery hubs, AMRs uniquely address these challenges. Furthermore, advancements in outdoor navigation technology are enabling curbside delivery robots and sidewalk autonomous vehicles for final-mile logistics. Combining cloud-based warehouse management systems with real-time traffic optimization helps create flexible robotic fleets that can quickly adjust to changes in order amounts and busy times.

Threat:

Data integration complexities and system compatibility issues

Legacy enterprise resource planning and warehouse management systems, not designed to interface with modern robotic fleets, operate in many warehouses and

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manufacturing plants. Achieving seamless communication between robots, conveyor systems, automated storage equipment, and inventory databases requires substantial customization and middleware development. These integration hurdles can extend deployment timelines, increase project costs, and create data silos that undermine the promised efficiency gains. In areas where technical support is lacking, problems with compatibility become more serious; this can slow down the use of AMR and make it harder to expand across global supply chains.

Covid-19 Impact:

The COVID-19 pandemic served as a powerful catalyst for the automated mobile robot market, fundamentally altering perceptions of automation's strategic value. During the initial outbreak, supply chain disruptions and labor shortages forced warehouses and distribution centers to seek contactless solutions for maintaining operations. While the first half of 2020 saw project delays and order postponements, the second half witnessed unprecedented demand as businesses recognized the fragility of manual-dependent workflows. Retailers and logistics providers accelerated investments in AMRs to build resilient operations capable of withstanding future disruptions. This paradigm shift transformed robotics from a cost-saving consideration to a business continuity imperative, permanently elevating automation on corporate priority lists and creating sustained post-pandemic demand.

The hardware segment is expected to be the largest during the forecast period

The hardware segment is expected to account for the largest market share during the forecast period, driven by the fundamental requirement for robust physical components that form the backbone of every AMR deployment. This segment encompasses high-performance sensors, including LiDAR and 3D cameras, durable actuators and motors, advanced controllers, and sophisticated battery systems that determine operational runtime and reliability. As manufacturing volumes increase, hardware costs continue to moderate, yet the sheer quantity of components required for global deployments sustains this segment's revenue dominance. Industries investing in fleet expansion prioritize hardware acquisition to build tangible automation capacity, ensuring that physical robot infrastructure remains the primary expenditure category throughout the forecast period.

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

Over the forecast period, the software segment is predicted to witness the highest

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growth rate, reflecting the increasing value of intelligence over raw hardware in modern automation ecosystems. Advanced navigation algorithms, AI-powered perception systems, and sophisticated fleet management platforms are becoming the primary differentiators between basic material transport and truly intelligent automation. As deployments scale from individual robots to coordinated fleets of hundreds, the complexity of traffic management, task allocation, and system optimization drives demand for cloud-connected software solutions. Additionally, the rise of Robotics-as-a-Service business models is changing spending to focus more on ongoing software subscriptions, which boosts revenue growth in this area and makes software the key factor in the next generation of AMR systems.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share, underpinned by early technology adoption among major e-commerce and retail players. The region's mature logistics infrastructure, combined with persistent labor shortages and rising workforce costs, creates compelling economic justification for widespread AMR deployment. Major corporations, including Amazon and Walmart, have already deployed thousands of robots across fulfillment centers, demonstrating scalability and validating return on investment. A robust ecosystem of innovative startups, established technology vendors, and venture capital funding ensures continuous advancement in AMR capabilities. Additionally, supportive regulatory environments and strong intellectual property protections encourage ongoing investment in research and development across the United States and Canada.

Region with highest CAGR:

During the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR, driven by rapid industrialization and massive government support for automation initiatives. Countries including China, Japan, South Korea, and India are investing heavily in smart manufacturing and Industry 4.0 infrastructure to maintain global competitiveness. China's "Made in China 2025" strategy provides substantial subsidies and incentives for domestic robot adoption, while Japan's aging demographic creates urgent demand for labor-replacement technologies. The region's dominance in electronics manufacturing ensures robust local supply chains for sensors, batteries, and control systems. Rapid e-commerce expansion across Southeast Asia further accelerates warehouse automation requirements, positioning Asia Pacific as the most dynamic growth market for AMR adoption throughout the forecast period.

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Key players in the market

Some of the key players in Automated Mobile Robot Market include ABB Ltd., KUKA AG, FANUC Corporation, Yaskawa Electric Corporation, Omron Corporation, Toyota Industries Corporation, Daifuku Co., Ltd., JBT Corporation, Dematic Corp., Honeywell International Inc., Zebra Technologies Corporation, Geekplus Technology Co., Ltd., Hikrobot Co., Ltd., GreyOrange Pte Ltd., Mobile Industrial Robots A/S, Clearpath Robotics Inc., Locus Robotics Corp., inVia Robotics Inc., Fetch Robotics Inc., and IAM Robotics LLC.

Key Developments:

In February 2026, Apptronik raised $520 million in fresh funding backed by Google and Mercedes-Benz to scale production of its Apollo humanoid robot targeting logistics and manufacturing applications.

In January 2026, Husqvarna introduced three new wire-free autonomous robotic lawn mowers aimed at accelerating consumer adoption of mobile robots for residential automation.

In October 2025, SoftBank announced plans to acquire ABB’s robotics division in a $5.4 billion deal to expand its robotics portfolio and strengthen capabilities in industrial and mobile automation.

Offerings Covered:

- Standalone Robots
- Robotics-as-a-Service (RaaS)

Components Covered:

- Hardware
- Software
- Services

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Types Covered:

- Goods-to-Person Picking Robots
- Autonomous Forklifts
- Autonomous Inventory Robots
- Collaborative Mobile Robots
- Unmanned Aerial Mobile Robots
- Other Types

Payload Capacities Covered:

- Lightweight (Below 100 kg)
- Medium (100 kg – 500 kg)
- Heavy-Duty (Above 500 kg)

Deployments Covered:

- Indoor AMRs
- Outdoor AMRs

Battery Types Covered:

- Lead Battery
- Lithium-ion Battery
- Nickel-based Battery

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Navigation Technologies Covered:

- LiDAR / Laser SLAM
- Vision-Based Navigation
- Magnetic / QR Guided
- Hybrid Navigation

End Users Covered:

- Logistics & Warehousing
- Manufacturing
- Automotive
- E-commerce & Retail
- Healthcare & Pharmaceuticals
- Electronics & Semiconductor
- Food & Beverage
- Aerospace & Defense
- Hospitality & Services
- Other End Users

Regions Covered:

- North America
  - United States

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- Canada
- Mexico

Europe

- United Kingdom
- Germany
- France
- Italy
- Spain
- Netherlands
- Belgium
- Sweden
- Switzerland
- Poland
- Rest of Europe

Asia Pacific

- China
- Japan
- India
- South Korea

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- 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

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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

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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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Note: Tables for North America, Europe, APAC, South America, and Rest of the World (RoW) Regions are also represented in the same manner as above.

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