

Robotic Picking Market Forecasts to 2034 – Global Analysis By Robot Type (Fixed Robotic Picking Systems, Collaborative Picking Robots (Cobots), Mobile Picking Robots (AMR-integrated), and Hybrid Picking Systems), Component (Hardware, Software, and Services), Payload Capacity, Picking Type, Deployment Mode, Application, End User, and By Geography

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Abstracts

According to Statistics MRC, the Global Robotic Picking Market is accounted for \$3.8 billion in 2026 and is expected to reach \$15.5 billion by 2034 growing at a CAGR of 19.1% during the forecast period. Robotic picking systems automate the identification, grasping, and transfer of individual items within warehouses and distribution centers. These technologies combine robotic arms, advanced grippers, and sophisticated vision systems to handle diverse product shapes and sizes. By addressing labor shortages and improving fulfillment accuracy, robotic picking solutions are becoming essential infrastructure for e-commerce, retail, and manufacturing sectors seeking operational efficiency and scalability.

Market Dynamics:

Driver:

E-commerce growth and labor shortages

Intensifying e-commerce demands are compelling warehouse operators to automate

picking operations traditionally dependent on manual labor. Online order fulfillment requires processing thousands of unique items daily with speed and accuracy impossible to sustain through human workers alone. Concurrent labor shortages across logistics hubs create operational vulnerabilities, with vacant positions directly impacting service levels. Robotic picking systems offer consistent performance regardless of shift timing or workforce availability, enabling 24/7 operations while reducing injury risks associated with repetitive tasks, fundamentally transforming warehouse economics and capacity planning.

Restraint:

High implementation costs

Significant capital investment required for robotic picking deployment continues to limit adoption among small and medium warehouse operators. Complete systems including robotic arms, vision sensors, end effectors, and integration software represent substantial upfront expenditure. Additional costs for facility modifications, conveyor integration, and staff training further extend payback periods. Return on investment calculations become challenging for operations with variable order volumes or diverse product catalogs requiring frequent gripper changes. These economic barriers confine advanced picking automation primarily to large-scale distribution centers with consistent throughput justifying the investment.

Opportunity:

AI-powered vision and grasping advancements

Rapid progress in artificial intelligence and computer vision is expanding robotic picking capabilities to previously unmanageable product categories. Deep learning algorithms enable systems to recognize thousands of SKUs without pre-programming, adapting to packaging variations and novel items. Improved grasp planning allows robots to handle delicate, irregular, or translucent objects reliably. These technological advances reduce changeover times between product runs and expand addressable applications beyond uniform case picking to include individual item selection, fresh produce handling, and multi-SKU order assembly previously requiring human dexterity.

Threat:

Integration complexity with legacy systems

Technical challenges in connecting robotic picking solutions with existing warehouse management systems pose significant deployment risks. Legacy infrastructure often lacks standardized communication protocols required for seamless robot integration, necessitating custom middleware development. Incompatibilities between new robotic equipment and older conveyor systems, sortation equipment, or inventory databases create operational bottlenecks. These integration difficulties extend implementation timelines and increase project costs, sometimes exceeding initial equipment investments. Warehouse operators facing complex integration scenarios may delay automation decisions, slowing market penetration despite available technology.

Covid-19 Impact:

The COVID-19 pandemic accelerated robotic picking adoption as social distancing requirements and illness-related absenteeism disrupted manual warehouse operations. Sudden e-commerce demand surges overwhelmed facilities dependent on labor-intensive picking, exposing automation deficits. Health concerns prompted warehouse operators to fast-track automation projects reducing human density in fulfillment areas. Government stimulus and low interest rates facilitated capital investments during the period. These pandemic-driven shifts permanently elevated automation priorities within logistics strategies, establishing sustained momentum for robotic picking solutions beyond the immediate crisis.

The Collaborative Picking Robots (Cobots) segment is expected to be the largest during the forecast period

The Collaborative Picking Robots (Cobots) segment is expected to account for the largest market share during the forecast period, combining automation benefits with human worker flexibility. These systems operate safely alongside warehouse staff without safety cages, handling heavy or repetitive picks while humans manage complex tasks requiring judgment. Cobots require minimal facility modifications and offer rapid deployment compared to traditional automation. Their adaptability to changing workflows and ability to augment existing workforces rather than replace them entirely drives widespread adoption across diverse warehouse environments and operational scales.

The AI & Machine Vision segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the AI & Machine Vision segment is predicted to witness the highest growth rate, representing the intelligence layer enabling robotic picking flexibility. Advanced vision systems capture real-time product data while AI algorithms identify items, determine optimal grasp points, and detect defects or orientation issues. This software intelligence reduces dependency on precisely organized input streams, allowing robots to handle mixed SKUs and random presentations. Continuous learning capabilities improve performance over time, adapting to new products without reprogramming and expanding automation possibilities across previously challenging applications.

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 severe logistics labor shortages. Major retailers and third-party logistics providers operate extensive distribution networks requiring automation to maintain competitiveness. The region's technology leadership attracts early adoption of advanced picking solutions, with headquarters of leading robotics manufacturers facilitating close customer collaboration. Favorable investment climate and established warehouse automation culture create receptive market conditions. Private equity and venture capital funding accelerate startup innovation and deployment across North American fulfillment operations.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR, fueled by exponential e-commerce growth and manufacturing hub evolution. China's massive logistics infrastructure investments incorporate advanced picking automation as labor costs rise and workforce demographics shift. Japan and South Korea leverage strong robotics heritage for domestic automation adoption while exporting solutions regionally. Southeast Asian markets modernize supply chains to support expanding consumer economies. Government automation incentives and foreign investment in regional distribution centers accelerate technology transfer. The convergence of manufacturing expertise and logistics demand positions Asia Pacific for fastest market growth.

Key players in the market

Some of the key players in Robotic Picking Market include ABB Ltd., FANUC Corporation, KUKA AG, Yaskawa Electric Corporation, Kawasaki Heavy Industries, Ltd.,

Universal Robots A/S, Boston Dynamics, Inc., Covariant, Berkshire Grey, Inc., GreyOrange Pte Ltd., Exotec SAS, KNAPP AG, SSI Schaefer Group, Dematic Corp., Zebra Technologies Corporation, and Ocado Group plc.

Key Developments:

In November 2025, Zivid launched its Zivid 3 XL250 3D camera designed for high-performance depalletizing and mixed-SKU robotic picking, improving large-bin picking accuracy and speed for warehouse automation applications.

In September 2025, Brightpick deployed its AI-powered autonomous picking robots for fulfillment automation, highlighting growing commercial adoption of mobile robotic picking systems in logistics environments.

In February 2025, Ocado reported increasing use of robotic picking in its warehouses, with over one-third of items already picked by robots and expectations to reach higher automation levels driven by AI-enabled fulfillment technologies.

Robot Types Covered:

Fixed Robotic Picking Systems

Collaborative Picking Robots (Cobots)

Mobile Picking Robots (AMR-integrated)

Hybrid Picking Systems

Components Covered:

Hardware

Software

Services

Payload Capacities Covered:

Up to 5 kg

5–10 kg

10–20 kg

Above 20 kg

Picking Types Covered:

Piece Picking

Case Picking

Bin Picking

Mixed-item Picking

Deployment Modes Covered:

On-Premise Robotics

Robotics-as-a-Service (RaaS)

Cloud-connected Robotics

Applications Covered:

Order Fulfillment

Sorting & Consolidation

Packaging & Kitting

Depalletizing / Palletizing

Reverse Logistics

End Users Covered:

E-commerce & Retail Fulfillment

Logistics & Warehousing (3PL)

Grocery & FMCG

Pharmaceutical & Healthcare

Electronics

Food & Beverage

Automotive & Industrial 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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