

Global Collaborative Robots Market Size, Share, Trends & Analysis by Payload (Up to 5 Kg, Up to 10 Kg, Above 10 Kg), by Application (Machine Tending, Assembly, Material Handling, Quality Testing, Others), by Industry (Automotive, Electronics & Electrical, Metals & Machining, Food & Beverages, Others), and Region, with Forecasts from 2024 to 2034.

https://marketpublishers.com/r/G12DA85A47B3EN.html

Date: July 2024 Pages: 163 Price: US\$ 3,850.00 (Single User License) ID: G12DA85A47B3EN

Abstracts

Market Overview

The Global Collaborative Robots (Cobots) Market is poised for significant growth, marked by a robust compound annual growth rate (CAGR) of XX.XX%. This sector is projected to expand from a valuation of USD XX.XX million in 2024 to an impressive USD XX.XX million by 2034. The Asia-Pacific (APAC) region is expected to continue its dominance, capturing XX% of the global market share.

Collaborative robots, or cobots, are designed for direct human-robot interaction within shared environments. Unlike traditional industrial robots, which operate in isolation from human workers, cobots are engineered with safety in mind, using lightweight materials, rounded edges, and advanced sensors and software to ensure safe operation. The International Federation of Robotics (IFR) categorizes robots into two main groups: industrial robots for automation and service robots for domestic and professional use. Cobots serve diverse applications, from information robots in public areas to logistics and industrial robots. The IFR outlines four levels of collaboration between industrial robots and human workers: coexistence, sequential partnership, cooperation, and responsive collaboration. Typically, in industrial settings, cobots and human workers share the same workspace, performing tasks either independently or sequentially.



Market Drivers - Labor Shortages and Cost-Effectiveness

The widespread shortage of skilled labor is a significant driver for the adoption of cobots. Deloitte reports that by 2030, 2.1 million manufacturing jobs may remain unfilled due to the lack of skilled workers. Cobots can bridge this gap by complementing the existing workforce, taking on repetitive and physically demanding tasks, thereby enhancing productivity and reducing human strain.

Cobots also offer cost-effective automation solutions, especially for small and medium-sized enterprises (SMEs) with limited budgets. Unlike traditional industrial robots, which require substantial investments in infrastructure, safety measures, and specialized programming, cobots are less expensive to purchase, easier to maintain, and can be integrated into existing production lines with minimal disruption. According to SNECI, a single cobot can save three times the cost of one worker.

The rise of Industry 4.0 and the digital transformation of industries are driving the adoption of cobots. Technological advancements, such as the Industrial Internet of Things (IIoT), enable cobots to connect seamlessly with nearby machinery, enhancing precision, flexibility, and efficiency. Innovations like 5G network slice allocation optimize mobile network resource usage, thereby improving automation service quality. Moreover, artificial intelligence (AI) algorithms allow cobots to mimic human emotions and decisions, further integrating them into human-centric tasks.

A study forecasts that the automation market will reach USD XX.XX billion by 2027, fueled by advancements that enhance cobot operational efficiency, lower operating costs, and improve return on investment (ROI). These advancements enable real-time monitoring, data analytics, and production process optimization, thereby driving the growth of the cobot market.

Market Restraints

Despite their advantages, cobots face limitations in terms of power efficiency and speed. Cobots typically operate at speeds of around 1 meter per second, which is considerably slower than traditional industrial robots with similar payload capacities. This lower speed and power efficiency limit their application.



in heavy-duty manufacturing industries. Consequently, traditional industrial robots with higher speed and payload capacities are often preferred, potentially hindering the market growth of cobots during the forecast period.

Opportunities - Adoption in SMEs

SMEs, which constitute 90% of firms worldwide, present a significant opportunity for cobot adoption. Cobots are particularly attractive to SMEs due to their affordability, flexibility, adaptability, easy programming, and space efficiency. They require lower upfront costs, minimal infrastructure changes, and can be quickly integrated into existing workflows. SMEs can easily reprogram and reconfigure cobots to meet evolving production needs, thereby enhancing productivity and responsiveness to market fluctuations. Cobots' enhanced safety features, productivity improvements, and scalability make them a viable solution for SMEs.

Market Segmentation Analysis

By Payload Up to 5 Kg Up to 10 Kg Above 10 Kg

Cobots with a payload capacity of up to 5 Kg dominate the market due to their versatility, flexibility, and cost-effectiveness. These cobots are lighter, easier to program, and more scalable than heavier robots. They offer safety, ease of use, and adaptability, making them ideal for various industries and human-robot collaboration, leading to efficient production line optimization.

By Application

Machine Tending



Assembly

Material Handling

Quality Testing

Others

The assembly segment is expected to maintain its leading position over the forecast period.

By Industry Automotive Electronics & Electrical Metals & Machining Food & Beverages

Others

The automotive sector currently leads the market with a 33% revenue share. Collaborative robots in automotive manufacturing provide advanced safety features, cost efficiency, and quality control, reducing accidents, improving accuracy, and enhancing overall productivity.

Regional Analysis

North America

U.S.

Canada

Mexico

Global Collaborative Robots Market Size, Share, Trends & Analysis by Payload (Up to 5 Kg, Up to 10 Kg, Above 1...



Europe

Germany

France

Italy

Switzerland

U.K.

Rest of Europe

Asia-Pacific

Japan

China

India

Rest of Asia-Pacific

LAMEA

Brazil

Israel

South Africa

Saudi Arabia

Rest of LAMEA

Competitive Landscape



The global collaborative robots market features several key players, including:

Techman Robot

YASKAWA

ABB

KUKA

Denso Corporation

FANUC

Universal Robots

Rethink Robotics

Doosan Robotics

F&P Robotics

Precise Automation

MIP Robotics

Wyzo

Elite Robot

Neura Robotics



Contents

1. EXECUTIVE SUMMARY

- 1.1. Market Overview
- 1.2. Key Findings
- 1.3. Market Outlook

2. INTRODUCTION

- 2.1. Report Description
- 2.2. Research Methodology
- 2.3. Scope and Limitations

3. MARKET DYNAMICS

- 3.1. Market Drivers
 - 3.1.1. Advancements in Robotic Technology
 - 3.1.2. Growing Demand for Automation in Various Industries
 - 3.1.3. Increasing Adoption of Collaborative Robots in SMEs
- 3.2. Market Restraints
 - 3.2.1. High Initial Investment
- 3.2.2. Technical Challenges and Integration Issues
- 3.3. Market Opportunities
 - 3.3.1. Expansion in Emerging Markets
- 3.3.2. Development of AI and Machine Learning in Robotics
- 3.4. Market Trends
 - 3.4.1. Rising Collaboration between Humans and Robots
 - 3.4.2. Emergence of Industry 4.0

4. MARKET SEGMENTATION

- 4.1. By Payload Capacity
 - 4.1.1. Up to 5 Kg
 - 4.1.2. Up to 10 Kg
 - 4.1.3. Above 10 Kg
- 4.2. By Application
 - 4.2.1. Machine Tending
 - 4.2.2. Assembly

Global Collaborative Robots Market Size, Share, Trends & Analysis by Payload (Up to 5 Kg, Up to 10 Kg, Above 1...



- 4.2.3. Material Handling
- 4.2.4. Quality Testing
- 4.2.5. Others
- 4.3. By Industry
 - 4.3.1. Automotive
 - 4.3.2. Electronics & Electrical
 - 4.3.3. Metals and Machining
 - 4.3.4. Food and Beverages
 - 4.3.5. Others

5. REGIONAL ANALYSIS

- 5.1. North America
 - 5.1.1. Market Overview
 - 5.1.2. Key Market Trends
 - 5.1.3. Country-wise Analysis
 - 5.1.3.1. United States
 - 5.1.3.2. Canada
- 5.2. Europe
 - 5.2.1. Market Overview
 - 5.2.2. Key Market Trends
 - 5.2.3. Country-wise Analysis
 - 5.2.3.1. Germany
 - 5.2.3.2. France
 - 5.2.3.3. United Kingdom
 - 5.2.3.4. Rest of Europe
- 5.3. Asia-Pacific
 - 5.3.1. Market Overview
 - 5.3.2. Key Market Trends
 - 5.3.3. Country-wise Analysis
 - 5.3.3.1. China
 - 5.3.3.2. Japan
 - 5.3.3.3. South Korea
 - 5.3.3.4. Rest of Asia-Pacific
- 5.4. Latin America
 - 5.4.1. Market Overview
 - 5.4.2. Key Market Trends
 - 5.4.3. Country-wise Analysis
 - 5.4.3.1. Brazil



- 5.4.3.2. Mexico
- 5.4.3.3. Rest of Latin America
- 5.5. Middle East and Africa
 - 5.5.1. Market Overview
 - 5.5.2. Key Market Trends
 - 5.5.3. Country-wise Analysis
 - 5.5.3.1. GCC Countries
 - 5.5.3.2. South Africa
 - 5.5.3.3. Rest of Middle East and Africa

6. COMPETITIVE LANDSCAPE

- 6.1. Market Share Analysis
- 6.2. Key Players and Their Strategies
- 6.3. Recent Developments
- 6.4. Strategic Analysis
- 6.4.1. Mergers and Acquisitions
- 6.4.2. Partnerships and Collaborations
- 6.4.3. New Product Launches

7. COMPANY PROFILES

- 7.1. ABB Ltd.
- 7.2. FANUC Corporation
- 7.3. KUKA AG
- 7.4. Universal Robots A/S
- 7.5. Rethink Robotics, Inc.
- 7.6. Yaskawa Electric Corporation
- 7.7. Kawasaki Heavy Industries, Ltd.
- 7.8. DENSO Corporation
- 7.9. Techman Robot Inc.
- 7.10. Other Prominent Players

8. FUTURE OUTLOOK AND MARKET FORECAST

- 8.1. Market Forecast by Value and Volume
- 8.2. Market Forecast by Region
- 8.3. Expert Opinions and Market Projections



+357 96 030922 info@marketpublishers.com

9. CONCLUSION

- 9.1. Key Takeaways
- 9.2. Recommendations for Stakeholders



I would like to order

Product name: Global Collaborative Robots Market Size, Share, Trends & Analysis by Payload (Up to 5 Kg, Up to 10 Kg, Above 10 Kg), by Application (Machine Tending, Assembly, Material Handling, Quality Testing, Others), by Industry (Automotive, Electronics & Electrical, Metals & Machining, Food & Beverages, Others), and Region, with Forecasts from 2024 to 2034.

Product link: https://marketpublishers.com/r/G12DA85A47B3EN.html

Price: US\$ 3,850.00 (Single User License / Electronic Delivery) If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <u>https://marketpublishers.com/r/G12DA85A47B3EN.html</u>