

Robot Operating System Market to Exceed USD 1678 Million by 2032, at 12.83% CAGR | SNS Insider

The Robot Operating System Market Driven by demand for open-source robotics frameworks, enabling AI-driven automation in healthcare, logistics & manufacturing.

AUSTIN, TX, UNITED STATES, February 7, 2025 /EINPresswire.com/ -- Market Size & Industry Insights

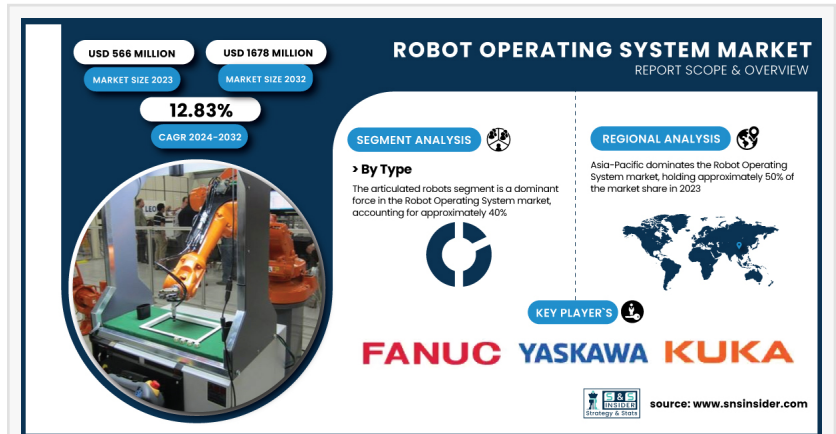
As Per the SNS Insider, "The [Robot Operating System \(ROS\) Market](#) was valued at USD 566 million in 2023 and is projected to expand to USD 1678 million by 2032, growing at a compound annual growth rate (CAGR) of 12.83% during the forecast period from 2024 to 2032.

Fueled by the growing deployment of robotics within numerous sectors, improvements in artificial intelligence, as well as a growing demand for global automation solutions.

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SWOT Analysis of Key Players as follows:

- ABB Ltd.
- Fanuc Corporation
- Yaskawa Electric Corporation
- KUKA AG
- Universal Robots
- Rethink Robotics
- Omron Corporation
- iRobot Corporation
- Boston Dynamics



Robot Operating System Market Size & Growth Report

- Fetch Robotics
- NVIDIA Corporation
- Clearpath Robotics
- Microsoft Corporation
- Denso Robotics
- Staubli International AG
- Seiko Epson Corporation
- Autodesk Inc.
- Amazon Robotics
- Honda Robotics
- Cyberdyne Inc.

By Type, Articulated Robots Dominate Robot Operating System Market with Precision and Versatility

In 2023, the articulated robots segment commands roughly 40% of the total Robot Operating System (ROS) market share. Due to their numerous rotational joints, articulated robots are revered for their precision, adaptability, and flexibility, making them well-suited for a variety of industries. In manufacturing, they are mostly used for welding, assembly, and material handling, where accuracy of movement and flexibility are vital. These robots move similarly to human arms, which allow for delicate operations that require high dexterity.

By Application, Dominating and Fastest-Growing Segments: Pick and Place vs. Home Automation

Pick and Place is the most popular segment in the Robot Operating System (ROS) market, as it is used in multiple sectors, including electronics, automotive, and manufacturing sectors. It handles repetitive tasks like sorting, packaging, and assembly, fueling demand for improved productivity, precision, and the reduction of labor costs.

The Home Automation and Security segment leads the market for growth. With the increasing demand for smarter homes, ROS integration in home automation systems is growing faster. The emergence of advanced AI-based, Internet of Things (IoT) and robotics tech along with home automation/security systems with real-time monitoring and customized concierge services is driving this growth.

By End Use, Automotive Sector Leads Robot Operating System Market with Advanced Automation

The automotive sector is the leading segment in terms of Robot Operating System (ROS) market share, with approx 30% share in 2023. Automotive manufacturers use ROS-powered robots to achieve higher precision, efficiency, and scaling in production, improving authoring processes such as welding and assembly, painting, and quality testing.

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KEY MARKET SEGMENTS:

By Type

- Articulated Robots
- Cartesian Robotics
- Collaborative Robots
- SCARA Robots
- Others

By Application

- Pick and Place
- Plastic Injection and Blow Molding
- Testing and Quality Inspection
- Metal Sampling and Press Trending
- End of Line Packaging
- Mapping and Navigation
- Inventory Management
- Home Automation and Security
- Personal Assistance

By End Use

- Automotive
- Electrical and Electronics
- Metal and Machinery
- Plastics
- Rubber and Chemicals
- Food and Beverages
- Healthcare
- Others

Regional Dominance in the Robot Operating System Market: North America vs. Asia-Pacific

Asia-Pacific also represents the biggest market share, with 50% of the market, growing rapidly through industrialization, government support, and robotics innovation in nations like China, Japan, and South Korea. Automation in manufacturing and logistics further drives the region's growth.

North America emerged as the fastest-growing region in the Robot Operating System market in 2023, led by advancements in industrial automation and significant investments in R&D. The U.S. leads with federal initiatives boosting ROS adoption across sectors like manufacturing and

healthcare.

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Table of Content - Major Points Analysis

Chapter 1. Introduction

Chapter 2. Executive Summary

Chapter 3. Research Methodology

Chapter 4. Market Dynamics Impact Analysis

Chapter 5. Statistical Insights and Trends Reporting

Chapter 6. Competitive Landscape

Chapter 7. Robot Operating System Market Segmentation, by Robot Type

Chapter 8. Robot Operating System Market Segmentation, by Application

Chapter 9. Robot Operating System Market Segmentation, by End Use

Chapter 10. Regional Analysis

Chapter 11. Company Profiles

Chapter 12. Use Cases and Best Practices

Chapter 13. Conclusion

Continued...

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