

# **Global ROS-based Robot Market: Focus on ROS Application in Different Type of Robot (Service and Industrial) - Analysis and Forecast, 2019-2024**

<https://marketpublishers.com/r/GB485CE5D0EDEN.html>

Date: July 2019

Pages: 181

Price: US\$ 5,000.00 (Single User License)

ID: GB485CE5D0EDEN

## **Abstracts**

Hard copy option is available on any of the options above at an additional charge of \$500. Please email us at [order@marketpublishers.com](mailto:order@marketpublishers.com) with your request.

### **Key Questions Answered in this Report:**

What was the total revenue and volume generated by the global robot operating system-based robot market in 2018 and how is it expected to grow during the forecast period from 2019 to 2024?

What are the major driving forces, trends, challenges and growth opportunities that can tend to influence the global robot operating system-based robot market during the forecast period, 2019-2024?

What are the key developments by the leading players in the global robot operating system-based robot market?

How much revenue is expected to be generated by,

Different applications of industrial robots, such as automotive, electronics, metal & machinery, rubber & plastic, pharmaceuticals & cosmetics, food & beverages, and others of ROS-bases robot market, during the forecast period, 2019-2024?

Different applications of service robots, such as logistic & warehouse, defense & security, public relation, agriculture, healthcare, and others of

the ROS-based robot market, during the forecast period?

What is the volume for different types of ROS-based industrial and service robots among different regions such as North America, Europe, Asia-Pacific, and Rest-of-the-World (RoW)?

Which are the key companies operating in the ROS-based robot market?

## ROS-Based Robot Market Forecast, 2019-2024

The ROS-Based Robot Industry Analysis by BIS Research projects the market to grow at a significant CAGR of 20.02% during the forecast period from 2019 to 2024. Asia-Pacific dominated the global ROS-based industrial robot market with a share of 74% in 2019. Europe, including the major countries, such as the U.K., Germany, France, Spain, and Italy, is the most prominent region for the ROS-based service robot market. In Europe, France acquired a major market share in 2019, due to the setup of new start-ups of service robot in the region.

The global ROS-based market has gained widespread importance in service and industrial robots due to the increasing demand for productivity and quality at workplace, increasing need for automation in various industries, growing need for robots in defense and security, and increasing concerns for labor safety and human error. Increase in research and development activities and growth opportunities across developing countries are likely to increase opportunities for the ROS-based robot market. However, complexity and lack of safety associated with ROS-based robots along with unmapped navigation environments are expected to hamper the overall growth of the ROS-based robot market.

## Expert Quote on the Global ROS-Based Robot Market

“The proliferation in the adoption of open source operating system in industrial and service robot has resulted in the reduction of development cost and time for robotic applications as it enables the robotic application developers to reuse the programming code.”

## Scope of the Market Intelligence on Global ROS-Based Robot Market

The ROS-based robot market research provides detailed market information for ROS-

based robots and covers global robotic industry outlook, comparative analysis of ROS1.0 and ROS2.0, and futuristic outlook for ROS. The purpose of this market analysis is to examine the ROS-based robot market outlook in terms of factors driving the market, trends, technological developments, and funding scenario, among others.

The report further takes into consideration the market dynamics and the competitive landscape along with the detailed financial and product contribution of the key players operating in the market. The ROS-based robot market report is a compilation of different segments including market breakdown by industrial robots, service robots, and region.

## **MARKET SEGMENTATION**

The ROS-based robot market (on the basis of industrial robots application) is further segmented into automotive, electrical/electronics, metal and machinery, rubber and plastic, pharmaceutical and cosmetics, food and beverages, and others. The automotive segment dominated the global ROS-based robot market in 2018 and is anticipated to maintain its dominance throughout the forecast period (2019-2024).

The ROS-based robot market on the basis of service robot is segmented into professional and personal/domestic. The professional segment is further segmented into logistic and warehouse, defense and security, public relation, agriculture, healthcare, and others. The personal/domestic segment has been further segmented into household, and entertainment and leisure. ROS-enabled service robots dominated the global ROS-based robot market in 2018 and is anticipated to maintain its dominance throughout the forecast period.

The ROS-based market is segregated by region under four major regions, namely North America, Europe, APAC, and Rest-of-the-World. Data for each of these regions (by country) is provided.

### **Key Companies in the Global ROS-Based Robot Industry**

The key market players in the global ROS-based robot market include ABB Ltd., Clearpath Robotics, Comau SpA, Denso Robotics, Inc., Fanuc Corporation, Husarion, Inc., iRobot Corporation, Kuka AG, Nachi Robotic Systems, Inc., Omron Adept Technologies, Rethink Robotics GmbH, Stanley Innovation, Inc., Staubli International AG, Yaskawa Motoman, and YRG, Inc.

## Contents

### EXECUTIVE SUMMARY

### 1 MARKET DYNAMICS

#### 1.1 Overview

#### 1.2 Market Drivers

1.2.1 Increasing Demand for Productivity and Quality at Workplace

1.2.2 Increasing Need for Automation in Various Industries

1.2.3 Growing Need for Robots in Defense and Security

1.2.4 Increasing Concerns for Labor Safety and Human Error

#### 1.3 Market Challenges

1.3.1 Complexity and Lack of Safety with Robots Based on ROS

1.3.2 Unmapped Navigation Environments

#### 1.4 Market Opportunities

1.4.1 Increase in Research and Development Activities

1.4.2 Growth Opportunities Across Developing Countries

#### 1.5 Market Dynamics: Impact Analysis

### 2 STRATEGIES IMPLEMENTED AND DEVELOPMENTS MADE BY KEY ROBOTIC PLAYERS

#### 2.1 Overview

2.1.1 Product Launches and Developments

2.1.2 Partnerships/Collaborations/Joint Ventures

2.1.3 Mergers and Acquisitions

### 3 INTRODUCTION TO ROBOT OPERATING SYSTEM

#### 3.1 Global Robotic Industry Outlook

#### 3.2 Background to Open Source Robotics Foundation

#### 3.3 Open Source Robotics Projects

3.3.1 Hardware Projects

3.3.2 Software Projects

3.3.3 Robot Simulators

#### 3.4 Overview of Robot Operating System

3.4.1 Evolution of ROS

3.4.2 ROS Core Components

- 3.4.3 Useful Development Tools in ROS
- 3.5 Comparative Analysis of ROS1.0 vs ROS2.0
  - 3.5.1 New Technologies
  - 3.5.2 Improved Use Cases with ROS2
- 3.6 Analysis of Robots Built on ROS
- 3.7 Funding and Investment Scenario in Robotics

## **4 GLOBAL ROS-BASED ROBOT MARKET**

- 4.1 Assumptions and Limitations
- 4.2 Market Overview

## **5 ROS APPLICATION IN DIFFERENT TYPES OF ROBOT**

- 5.1 Overview
- 5.2 Industrial Robot
  - 5.2.1 Usage of ROS in Industrial Robots (by Application)
    - 5.2.1.1 Automotive
    - 5.2.1.2 Electrical/Electronics
    - 5.2.1.3 Metal and Machinery
    - 5.2.1.4 Rubber and Plastic
    - 5.2.1.5 Pharmaceuticals and Cosmetics
    - 5.2.1.6 Food and Beverages
    - 5.2.1.7 Others
  - 5.2.2 Usage of ROS in Industrial Robots (by Region)
    - 5.2.2.1 North America
      - 5.2.2.1.1 North America ROS-Based Industrial Robot Market (by Country)
    - 5.2.2.2 Europe
      - 5.2.2.2.1 Europe ROS-Based Industrial Robot Market (by Country)
    - 5.2.2.3 Asia-Pacific
      - 5.2.2.3.1 Asia-Pacific ROS-Based Industrial Robot Market (by Country)
    - 5.2.2.4 Rest-of-the-World
      - 5.2.2.4.1 Rest-of-the-World ROS-based Industrial Robot Market (by Region)
- 5.3 Service Robot
  - 5.3.1 Usage of ROS in Service Robots (by Application)
    - 5.3.1.1 Professional
      - 5.3.1.1.1 Logistic and Warehouse
      - 5.3.1.1.2 Defense and Security
      - 5.3.1.1.3 Public Relation

- 5.3.1.1.4 Agriculture
- 5.3.1.1.5 Healthcare
- 5.3.1.1.6 Others
- 5.3.1.2 Personal/Domestic
  - 5.3.1.2.1 Household
  - 5.3.1.2.2 Entertainment and Leisure
- 5.3.2 Usage of ROS in Service Robots (by Region)
  - 5.3.2.1 North America
    - 5.3.2.1.1 North America ROS-Based Service Robot Market (by Country)
  - 5.3.2.2 Europe
    - 5.3.2.2.1 Europe ROS-Based Service Robot Market (by Country)
  - 5.3.2.3 Asia-Pacific
    - 5.3.2.3.1 Asia-Pacific ROS-Based Service Robot Market (by Country)
  - 5.3.2.4 Rest-of-the-World
    - 5.3.2.4.1 Rest-of-the-World ROS-based Service Robot Market (by Region)

## **6 FUTURISTIC OUTLOOK FOR ROS**

- 6.1 Opportunity to Operating System and Cloud Service Providers
- 6.2 Road Toward Modular ROS-based Open-Source Robotic Hardware Platform

## **7 COMPANY PROFILES**

- 7.1 Overview
- 7.2 ABB Ltd.
  - 7.2.1 Company Overview
  - 7.2.2 Role of ABB Ltd in Global ROS-Based Robot Market
  - 7.2.3 Overall Financials
  - 7.2.4 SWOT Analysis
- 7.3 Clearpath Robotics
  - 7.3.1 Company Overview
  - 7.3.2 Role of Clearpath Robotics in Global ROS-Based Robot Market
  - 7.3.3 SWOT Analysis
- 7.4 Comau SpA
  - 7.4.1 Company Overview
  - 7.4.2 Role of Comau SpA in Global ROS-Based Robot Market
  - 7.4.3 SWOT Analysis
- 7.5 Denso Robotics, Inc.
  - 7.5.1 Company Overview

- 7.5.2 Role of Denso Robotics, Inc. in Global ROS-Based Robot Market
- 7.5.3 Overall Financials
- 7.5.4 SWOT Analysis
- 7.6 Fanuc Corporation
  - 7.6.1 Company Overview
  - 7.6.2 Role of Fanuc Corporation in Global ROS-Based Robot Market
  - 7.6.3 Overall Financials
  - 7.6.4 SWOT Analysis
- 7.7 Husarion, Inc.
  - 7.7.1 Company Overview
  - 7.7.2 Role of Husarion, Inc. in Global ROS-Based Robot Market
  - 7.7.3 SWOT Analysis
- 7.8 iRobot Corporation
  - 7.8.1 Company Overview
  - 7.8.2 Role of iRobot Corporation in Global ROS-Based Robot Market
  - 7.8.3 Overall Financials
  - 7.8.4 SWOT Analysis
- 7.9 Kuka AG
  - 7.9.1 Company Overview
  - 7.9.2 Role of Kuka AG in Global ROS-Based Robot Market
  - 7.9.3 Overall Financials
  - 7.9.4 SWOT Analysis
- 7.10 Nachi Robotic Systems, Inc.
  - 7.10.1 Company Overview
  - 7.10.2 Role of Nachi Robotic Systems, Inc. in Global ROS-Based Robot Market
  - 7.10.3 SWOT Analysis
- 7.11 Omron Adept Technologies
  - 7.11.1 Company Overview
  - 7.11.2 Role of Omron Adept Technologies in Global ROS-Based Robot Market
  - 7.11.3 Overall Financials
  - 7.11.4 SWOT Analysis
- 7.12 Rethink Robotics GmbH
  - 7.12.1 Company Overview
  - 7.12.2 Role of Rethink Robotics GmbH in Global ROS-Based Robot Market
  - 7.12.3 SWOT Analysis
- 7.13 Stanley Innovation, Inc.
  - 7.13.1 Company Overview
  - 7.13.2 Role of Stanley Innovation, Inc. in Global ROS-Based Robot Market
  - 7.13.3 SWOT Analysis



## 7.14 Staubli International AG

### 7.14.1 Company Overview

### 7.14.2 Role of Staubli International AG in Global ROS-Based Robot Market

### 7.14.3 SWOT Analysis

## 7.15 Yaskawa Motoman

### 7.15.1 Company Overview

### 7.15.2 Role of Yaskawa Motoman in Global ROS-Based Robot Market

### 7.15.3 Overall Financials

### 7.15.4 SWOT Analysis

## 7.16 YRG, Inc.

### 7.16.1 Company Overview

### 7.16.2 Role of YRG, Inc in Global ROS-Based Robot Market

### 7.16.3 SWOT Analysis

## 7.17 Other Key Players

### 7.17.1 Fetch Robotics

### 7.17.2 Kawasaki Heavy Industries Ltd.

### 7.17.3 Nvidia Corporation

### 7.17.4 Panasonic Corporation

### 7.17.5 Piaggio Fast Forward

### 7.17.6 Savioke

### 7.17.7 Seiko Epson Corporation

### 7.17.8 Simbe Robotics

### 7.17.9 Stryker Corporation

### 7.17.10 Toshiba Machine Company Ltd.

## 7.18 List of Emerging Companies

# 8 REPORT SCOPE AND METHODOLOGY

## 8.1 Scope of the Report

## 8.2 Global ROS-Based Robot Market Research Methodology

# 9 APPENDIX

## 9.1 Related Reports



## List Of Tables

### LIST OF TABLES

Table 1.1: Market Dynamics: Impact Analysis

Table 3.1: Differences between ROS1.0 and ROS2.0

Table 3.2: Analysis of Robots Built on ROS

Table 3.3: Funding and Investment Scenario in Robotics

Table 5.1: Global ROS-based Industrial Robot Market (by Region), Units, 2018-2024

Table 5.2: North America ROS-Based Industrial Robot Market (by Country), Units, 2018-2024

Table 5.3: Europe ROS-Based Industrial Robot Market (by Country), Units, 2018-2024

Table 5.4: Asia-Pacific ROS-Based Industrial Robot Market (by Country), Units, 2018-2024

Table 5.5: Rest-of-the-World ROS-based Industrial Robot Market (by Region), Units, 2018-2024

Table 5.6: Global ROS-based Service Robot Market (by Region), Thousand Units, 2018-2024

Table 5.7: North America ROS-Based Service Robot Market (by Country), Thousand Units, 2018-2024

Table 5.8: Europe ROS-Based Service Robot Market (by Country), Thousand Units, 2018-2024

Table 5.9: Asia-Pacific ROS-Based Service Robot Market (by Country), Thousand Units, 2018-2024

Table 5.10: Rest-of-the-World ROS-based Service Robot Market (by Region), Thousand Units, 2018-2024

Table 7.1: List of Other Key Players

## List Of Figures

### LIST OF FIGURES

Figure 1: Estimated Worldwide Supply of Industrial Robots

Figure 2: Global ROS-based Robot Market, Volume (Units), 2018-2024

Figure 3: Global ROS-based Robot Market (by Type), Units, 2018, 2019, and 2024

Figure 4: Global ROS-based Industrial Robot Market (by Application), Units, 2018, 2019, and 2024

Figure 5: Global ROS-based Service Robot Market (by Application Area), Units, 2018, 2019, and 2024

Figure 6: Global ROS-based Industrial Robot Market (by Region), Volume (Units), 2019

Figure 7: Global ROS-based Service Robot Market (by Region), Volume (Units), 2019

Figure 1.1: Market Dynamics

Figure 2.1: Some of the Organic and Inorganic Growth Strategies Adopted by the Key Players

Figure 2.2: Percentage Share of Strategies Adopted by the Market Players, January 2017-June 2019

Figure 2.3: Number of Strategic Developments by Leading Companies, 2017-2019

Figure 2.4: Product Launches and Developments (by Company), January 2017- June 2019

Figure 2.5: Partnerships/Collaborations/Joint Ventures (by Company), January 2017- June 2019

Figure 2.6: Mergers and Acquisitions (by Company), January 2017- February 2019

Figure 3.1: Robotic Industry Outlook

Figure 3.2: ROS Core Components

Figure 3.3: Useful Tools in ROS

Figure 3.4: ROS 2 Use Cases

Figure 3.5: Analysis of Robots Built on ROS

Figure 4.1: Global ROS-based Robot Market, Volume (Units), 2018-2024

Figure 5.1: Classification of Robots (by Type)

Figure 5.2: Global ROS-based Robot Market (by Type), Units, 2018, 2019, and 2024

Figure 5.3: Industrial Applications of ROS-Enabled Robots

Figure 5.4: Global ROS-based Industrial Robot Market (by Application), Units, 2018, 2019, and 2024

Figure 5.5: Global ROS-based Industrial Robot Market (Automotive Application), Units, 2018-2024

Figure 5.6: Global ROS-based Industrial Robot Market (Electrical/Electronic Application), Units, 2018-2024

Figure 5.7: Global ROS-based Industrial Robot Market (Metal and Machinery Application), Units, 2018-2024

Figure 5.8: Global ROS-based Industrial Robot Market (Rubber and Plastic Application), Units, 2018-2024

Figure 5.9: Global ROS-based Industrial Robot Market (Pharmaceuticals and Cosmetics), Units, 2018-2024

Figure 5.10: Global ROS-based Industrial Robot Market (Food and Beverage Application), Units, 2018-2024

Figure 5.11: Global ROS-based Industrial Robot Market (Other Application), Units, 2018-2024

Figure 5.12: Classification of Global ROS-based Industrial Robot Market (by Region)

Figure 5.13: North America ROS-based Industrial Robot Market, Units, 2018-2024

Figure 5.14: Europe ROS-based Industrial Robot Market, Units, 2018-2024

Figure 5.15: Asia-Pacific ROS-based Industrial Robot Market, Units, 2018-2024

Figure 5.16: Rest-of-the-World ROS-based Industrial Robot Market, Units, 2018-2024

Figure 5.17: Applications of ROS in Service Robots

Figure 5.18: Global ROS-based Service Robot Market (by Application), Units, 2018, 2019, and 2024

Figure 5.19: Global ROS-based Service Robot Market (Logistic and Warehouse Centers), Units, 2018-2024

Figure 5.20: Global ROS-based Service Robot Market (Defense and Security), Units, 2018-2024

Figure 5.21: Global ROS-based Service Robot Market (Public Relations), Units, 2018-2024

Figure 5.22: Global ROS-based Service Robot Market (Agriculture), Units, 2018-2024

Figure 5.23: Global ROS-based Service Robot Market (Healthcare), Units, 2018-2024

Figure 5.24: Global ROS-based Service Robot Market (Others), Units, 2018-2024

Figure 5.25: Global ROS-based Service Robot Market (Household), Units, 2018-2024

Figure 5.26: Global ROS-based Service Robot Market (Entertainment and Leisure), Units, 2018-2024

Figure 5.27: Classification of Global ROS-based Service Robot Market (by Region)

Figure 5.28: North America ROS-based Service Robot Market, Units, 2018-2024

Figure 5.29: Europe ROS-based Service Robot Market, Units, 2018-2024

Figure 5.30: Asia-Pacific ROS-based Service Robot Market, Units, 2018-2024

Figure 5.31: Rest-of-the-World ROS-based Service Robot Market, Units, 2018-2024

Figure 7.1: Share of Key Company Profiles

Figure 7.2: ABB Ltd. – Product Portfolio

Figure 7.3: ABB Ltd: Overall Financials, 2016-2018

Figure 7.4: ABB Ltd: Business Revenue Mix, 2016-2018

- Figure 7.5: ABB Ltd.: Regional Revenue Mix, 2016-2018
- Figure 7.6: ABB Ltd.: R&D Expenditure, 2016-2018
- Figure 7.7: SWOT Analysis – ABB Ltd.
- Figure 7.8: Clearpath Robotics – Product Portfolio
- Figure 7.9: SWOT Analysis – Clearpath Robotics
- Figure 7.10: SWOT Analysis – Comau SpA
- Figure 7.11: Denso Robotics – Product Portfolio
- Figure 7.12: Denso Robotics, Inc. - Overall Financials, 2016-2018
- Figure 7.13: Denso Robotics, Inc.: Business Revenue Mix, 2016-2018
- Figure 7.14: Denso Robotics, Inc.: Regional Revenue Mix, 2016-2018
- Figure 7.15: Denso Robotics, Inc.: R&D Expenditure, 2016-2018
- Figure 7.16: SWOT Analysis – Denso Robotics, Inc.
- Figure 7.17: Fanuc Corporation – Product Portfolio
- Figure 7.18: Fanuc Corporation - Overall Financials, 2016-2018
- Figure 7.19: Fanuc Corporation - Business Revenue Mix, 2016-2018
- Figure 7.20: Fanuc Corporation - Regional Revenue Mix, 2016-2018
- Figure 7.21: Fanuc Corporation: R&D Expenditure, 2016-2018
- Figure 7.22: SWOT Analysis – Fanuc Corporation
- Figure 7.23: Husarion, Inc. – Product Portfolio
- Figure 7.24: SWOT Analysis – Husarion, Inc.
- Figure 7.25: iRobot Corporation – Product Portfolio
- Figure 7.26: iRobot Corporation: Overall Financials, 2016-2018
- Figure 7.27: iRobot Corporation: R&D Expenditure, 2016-2018
- Figure 7.28: SWOT Analysis – iRobot Corporation
- Figure 7.29: Kuka AG – Product Portfolio
- Figure 7.30: Kuka AG - Overall Financials, 2016-2018
- Figure 7.31: Kuka AG - Business Revenue Mix, 2016-2018
- Figure 7.32: Kuka AG: Regional Revenue Mix, 2016-2018
- Figure 7.33: Kuka AG: R&D Expenditure, 2016-2018
- Figure 7.34: SWOT Analysis – Kuka AG
- Figure 7.35: Nachi Robotic Systems, Inc. – Product Portfolio
- Figure 7.36: SWOT Analysis – Nachi Robotics Systems Inc.
- Figure 7.37: Omron Adept Technologies – Product Portfolio
- Figure 7.38: Omron Adept Technologies - Overall Financials, 2016 and 2017
- Figure 7.39: Omron Adept Technologies - Business Revenue Mix, 2016 and 2017
- Figure 7.40: Omron Adept Technologies - Regional Revenue Mix, 2017
- Figure 7.41: Omron Adept Technologies - R&D Expenditure, 2015-2017
- Figure 7.42: SWOT Analysis – Omron Adept Technologies
- Figure 7.43: Rethink Robotics GmbH – Product Portfolio

Figure 7.44: SWOT Analysis – Rethink Robotics GmbH  
Figure 7.45: Stanley Innovation, Inc. – Product Portfolio  
Figure 7.46: SWOT Analysis – Stanley Innovation, Inc.  
Figure 7.47: Staubli International AG – Product Portfolio  
Figure 7.48: SWOT Analysis – Staubli International AG  
Figure 7.49: Yaskawa Motoman – Product Portfolio  
Figure 7.50: Yaskawa Motoman - Overall Financials, 2015-2017  
Figure 7.51: Yaskawa Motoman - Business Revenue Mix, 2015-2017  
Figure 7.52: Yaskawa Motoman - Regional Revenue Mix, 2015-2017  
Figure 7.53: Yaskawa Motoman - R&D Expenditure, 2015-2017  
Figure 7.54: SWOT Analysis – Yaskawa Motoman  
Figure 7.55: SWOT Analysis – YRG, Inc.  
Figure 8.1: Global ROS-Based Robot Market Segmentation  
Figure 8.2: Global ROS-Based Robot Market Research Methodology  
Figure 8.3: Data Triangulation  
Figure 8.4: Top-Down and Bottom-up Approach  
Figure 8.5: Global ROS-Based Robot Market Influencing Factors  
Figure 8.6: Assumptions and Limitations

## I would like to order

Product name: Global ROS-based Robot Market: Focus on ROS Application in Different Type of Robot (Service and Industrial) - Analysis and Forecast, 2019-2024

Product link: <https://marketpublishers.com/r/GB485CE5D0EDEN.html>

Price: US\$ 5,000.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

[info@marketpublishers.com](mailto:info@marketpublishers.com)

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/GB485CE5D0EDEN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:  
Last name:  
Email:  
Company:  
Address:  
City:  
Zip code:  
Country:  
Tel:  
Fax:  
Your message:

**\*\*All fields are required**

Customer signature \_\_\_\_\_

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970

