Report Information

More information from: https://www.marketresearchfuture.com/reports/machine-control-system-market-2384

Machine Control System Market Research Report- Global Forecast 2030

Report / Search Code: MRFR/SEM/1759-CR **Publish Date:** March, 2018

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Description:

Global Machine Control System Market Overview:

The Machine Control System Market Size was valued at USD 7.38 Billion in 2022. The Machine Control System industry is projected to grow from USD 8.41 Billion in 2023 to USD 15.60 Billion by 2030, exhibiting a compound annual growth rate (CAGR) of 9.81% during the forecast period (2023 - 2030). Systems for controlling and observing machine behavior are employed. Machine control systems are used to precisely position earthwork equipment with the aid of a geographic information system or a global positioning system. Machine control systems are used by a variety of machines, including cold planers, excavators, pavers, rollers, and others.

Global Machine Control System Market Overview

Source: Secondary Research, Primary Research, MRFR Database, and Analyst Review

Machine Control System Market Trends

- **Increasing Demand for Accuracy and Precision in Control Systems**

By streamlining, automating, and integrating solutions, machine control systems boost job site quality, resulting in fewer errors and more time on the job. Machine control solutions lower the possibility of errors while enabling operators to learn more about the digital world. Operator performance is enhanced through intuitive 3D graphical interfaces with a custom-centered design that gives users more confidence in their ability to complete tasks.

- **Increased demand for Cordless Machine Control Systems**

It is widely known that the world's population is growing at a rate never before seen. Companies are making significant investments in cordless technology to provide the best products for consumers and business users. As the market develops, more attention will be paid to cordless equipment due to its improved performance and versatility. The global market for machine control systems is anticipated to grow as a result of the development of these cordless batteries with machine control systems.

Machine Control System Market Segment Insights:

Machine Control System Product Insights

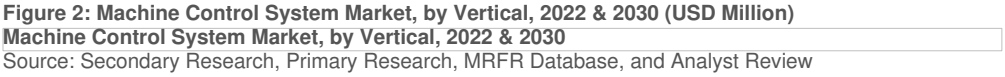
The market segmentation, based on Product, includes Total Stations, Global Navigation Satellite Systems (GNSS), Laser Scanners, and Airborne. The Global Navigation Satellite Systems (GNSS) segment holds the majority share in 2022, contributing to the global Machine Control System revenue. The use of GNSS equipment, including dozers, scrapers, graders, excavators, and aerial devices, is responsible for this high proportion. Another reason boosting demand for these systems is the use of GNSS for a range of applications, including ground mapping, agriculture, mining, unmanned aerial vehicles (UAV), military, and others. Additionally, GNNS offers excellent precision and efficiency for the proper deployment of large machines, which promises increased output.

Machine Control System Equipment Insights

Based on Equipment, the market segmentation includes Excavators, Loaders, Paving Systems, Graders, Others. The Excavators segment dominated the market. This significant percentage can be ascribed to the widespread use of excavators in forestry, excavating, trash management, snow removal, mining, and grading, among other applications.

Machine Control System Vertical Insights

Based on Vertical, the market segmentation includes Construction, Agriculture, Mining, Oil & Gas, Marine, Others. The Construction segment is the largest segment of the market. This is due to increased urbanization and other current infrastructure initiatives in emerging countries. Thousands of people work on building sites, and the growing need for safety measures has led to the introduction of machine control systems in the construction industry.

Figure 2: Machine Control System Market, by Vertical, 2022 & 2030 (USD Million)


Source: Secondary Research, Primary Research, MRFR Database, and Analyst Review

Machine Control System Regional Insights

By region, the study provides market insights into North America, Europe, Asia-Pacific, and the Rest of the World. The market for machine control systems was dominated by North America. This is linked to the region's developed building sector and advancements in farming practises. Additionally, the need for these systems has grown in Canada due to the development of new highways. The demand in this area is anticipated to be driven by the rising need for automation and process instrumentation in building projects.

Figure 3: Machine Control System Market SHARE BY REGION 2022 (%)

Source: Secondary Research, Primary Research, MRFR Database, and Analyst Review

The second-largest market share in the world belongs to Europe. Increasing demand for machine control systems in the food sector as a result of stringent regulations and high healthcare costs are examples of factors that favourably affect market growth. Along with the high demand for personal care and cosmetics items, the region's large pool of medical device manufacturers also contributes to the growth of the machine control system industry. Additionally, the region's growing need for machine control systems from the automotive and electronics sectors supports market expansion significantly.

Machine Control System Key Market Players & Competitive Insights

Major market players are spending a lot of money on R&D to increase their product lines, which will help the market grow even more. Market participants are also taking various strategic initiatives to grow their worldwide footprint, with key market developments such as new product launches, contractual agreements, mergers and acquisitions, increased investments, and collaboration with other organizations. Competitors in the Machine Control System industry must offer cost-effective items to expand and survive in an increasingly competitive and rising market environment.

Manufacturing locally to cut operating costs is one of the main business tactics manufacturers use in the global Machine Control System industry to benefit customers and expand the market sector. Major market players, including Leica Geosystems, ABB Group, Topcon Corporation, Mitsui Co, Schneider Electric, and others, are attempting to increase market demand by funding R&D initiatives.

Leica Geosystems USA makes tools and equipment for mapping and surveying. It offers airborne sensors, total stations, laser scanners and trackers, laser detection systems, and machine control systems.

Topcon Corporation designs manufacture and distributes equipment and automation solutions. It provides tools for ocular inspection, diagnosis, and therapy, including specular microscopes, auto refractometers, tonometers, slit lamps, retinal cameras, and slit lights. Additionally, the business offers solutions for crop analysis, data management, guiding and autosteering, measuring and weighing, mapping, implementing control, and feed management. Additional areas of expertise for Topcon include optical tools, GPS systems, laser scanning, mobile mapping, field controllers, elevation and alignment lasers, and other positioning and construction equipment.

Key Companies in the Machine Control System market include

- Leica Geosystems
- ABB Group
- Topcon Corporation
- Honeywell International Inc
- Trimble Inc
- Andritz

- Rockwell Automation
- Mitsui Co
- Schneider Electric
- Trimble Inc

Machine Control System Industry Developments

November 2021: Rockwell Automation introduced New Remote Access Solution. This new solution designed for OEMs is only the latest remote access offering from Rockwell Automation that offers a wide range of remote access services for manufacturers, including 24/7 remote application monitoring and support to help customers proactively address maintenance issues. Through this launch, the company has enhanced its product and services in the market.

December 2021: Honeywell International Inc. announced the acquisition of U.S Digital Designs, Inc., expanding public safety communication capabilities. This acquisition has resulted in the expansion of the line of solutions for the company. This acquisition helped the company in extending its product portfolio and help in enhancing revenue of the company.

Machine Control System Market Segmentation

Machine Control System Product Outlook

- Total Stations
- Global Navigation Satellite Systems (GNSS)
- Laser Scanners
- Airborne

Machine Control System Application Outlook

- Excavators
- Loaders
- Paving Systems
- Graders
- Others

Machine Control System Vertical Outlook

- Construction
- Agriculture

- Mining
- Oil & Gas
- Marine
- Others

Machine Control System Regional Outlook

- North America
    - US
    - Canada
- Europe
    - Germany
    - France
    - UK
    - Italy
    - Spain
    - Rest of Europe
- Asia-Pacific
    - China
    - Japan
    - India
    - Australia
    - South Korea

- Australia
- Rest of Asia-Pacific

- Rest of the World
  - Middle East
  - Africa
  - Latin America

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