

Global Swarm Robotics Market Size study & Forecast, by Platform (Unmanned Ground Vehicles (UGV), Unmanned Aerial Vehicles (UAV), Others) By Application (Security Inspection & Monitoring, Mapping & Surveying, Search & Rescue, Warehouse Management, Others) By End Use (Military & Defense, Agriculture, Manufacturing, Healthcare, Logistics & Transportation, Others) and Regional Analysis, 2023-2030

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Abstracts

Global Swarm Robotics Market is valued approximately at USD 635 million in 2022 and is anticipated to grow with a healthy growth rate of more than 25% over the forecast period 2023-2030. Swarm Robotics Swarm robotics is a field of robotics that studies how a group of relatively simple robots can work together to achieve complex tasks. It is inspired by the collective behavior of social insects, such as ants and bees, which can perform amazing feats without any central control. The Swarm Robotics market is expanding because of factors such as rising warehouse automation and growing demand for agriculture robots. As a result, the demand of Swarm Robotics has progressively increased in the international market during the forecast period 2023-2030.

Warehouses are dynamic environments with constantly changing layouts and inventory. Swarm robotics systems excel in adaptability, as they can autonomously adjust their behaviors based on real-time data and environmental changes. This flexibility is valuable in warehouse automation where tasks could vary, and robots need to work together to handle unforeseen situations. According to the Statista, in 2023, the global

warehouse automation market accounts USD 23 billion and projected to increase at a CAGR of almost 15% reaching up to USD 41 billion by the year 2027. Another important factor drives the Swarm Robotics market is increasing demand for agriculture robots. Agriculture robots, including swarm robotics, are designed to perform various tasks in the agricultural field, such as planting, monitoring, harvesting, and pest control. Swarm robotics can enhance the efficiency of these operations by deploying multiple robots working collaboratively. This simultaneous and coordinated approach allows for quicker and more precise completion of tasks, ultimately leading to increased overall efficiency in farming operations. In addition, as per Statista, the global agricultural robot's industry is anticipated to reach USD 30.5 billion by the year 2032. Moreover, rising integration of robotics in airlines and technological advancements in Swarm Robotics is anticipated to create a lucrative growth opportunity for the market growth over the forecast period. However, scalability issues and limited real-world testing is going to impede overall market growth throughout the forecast period of 2023-2030.

The key regions considered for the Global Swarm Robotics Market study includes Asia Pacific, North America, Europe, Latin America, and Middle East & Africa. North America dominated the market in 2022 with largest market share owing to the increasing demand for route analytics and automation in retail e-commerce in the region. Swarm robots equipped with sensors and analytics capabilities can contribute to dynamic inventory management. They can constantly monitor stock levels, track product movements, and update inventory data in real-time. This ensures accurate stock information, minimizes errors, and helps in preventing stockouts or overstock situations. The region's dominant performance is anticipated to propel the overall demand of Swarm Robotics. Furthermore, Asia Pacific is expected to grow at a fastest CAGR during the forecast period, owing to factors such as increasing demand for precision agriculture in the region. Precision agriculture relies heavily on data collection and monitoring to make informed decisions. Swarm robotics can be equipped with various sensors and imaging devices to collect real-time data on soil conditions, crop health, and other relevant parameters. This data can be used to optimize farming practices and enhance overall productivity.

Major market player included in this report are:

Hydromea SA

Boston Dynamics Inc

Swarmfarm robotics pty ltd

Swarm Technologies, Inc

Sentinen Robotics Inc

Berkeley Marine Robotics Inc

Swisslog Holding AG

Dobot Robotics

Unanimous AI Inc

Axon Enterprise, Inc

Recent Developments in the Market:

In September 2022, FARobot, the swarm robotics pioneer for enterprise robotics automation, has introduced Swarm Autonomy, a new type of software platform for autonomous intralogistics operations. The company claimed that their platform is going to become the go-to software for factories and warehouses due to its emphasis on Agile Collaboration.

Global Swarm Robotics Market Report Scope:

Historical Data – 2020 - 2021

Base Year for Estimation – 2022

Forecast period - 2023-2030

Report Coverage - Revenue forecast, Company Ranking, Competitive Landscape, Growth factors, and Trends

Segments Covered - Platform, Application, End Use, Region

Regional Scope - North America; Europe; Asia Pacific; Latin America; Middle

East & Africa

Customization Scope - Free report customization (equivalent up to 8 analyst's working hours) with purchase. Addition or alteration to country, regional & segment scope*

The objective of the study is to define market sizes of different segments & countries in recent years and to forecast the values to the coming years. The report is designed to incorporate both qualitative and quantitative aspects of the industry within countries involved in the study.

The report also caters detailed information about the crucial aspects such as driving factors & challenges which will define the future growth of the market. Additionally, it also incorporates potential opportunities in micro markets for stakeholders to invest along with the detailed analysis of competitive landscape and product offerings of key players. The detailed segments and sub-segment of the market are explained below:

By Platform

Unmanned Ground Vehicles (UGV)

Unmanned Aerial Vehicles (UAV)

Others

By Application

Security Inspection & Monitoring

Mapping & Surveying

Search & Rescue

Warehouse Management

Others

By End Use

Military & Defense

Agriculture

Manufacturing

Healthcare

Logistics & Transportation

Others

By Region:

North America

U.S.

Canada

Europe

UK

Germany

France

Spain

Italy

ROE

Asia Pacific

China

India

Japan

Australia

South Korea

RoAPAC

Latin America

Brazil

Mexico

Middle East & Africa

Saudi Arabia

South Africa

Rest of Middle East & Africa

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