

## Disinfectant Robot - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

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#### Report description:

The Disinfectant Robot Market size is estimated at USD 1.40 billion in 2025, and is expected to reach USD 4.19 billion by 2030, at a CAGR of 24.6% during the forecast period (2025-2030).

The rapid rise in healthcare and sanitation spending due to the COVID-19 Outbreak and high investments in the field of disinfectant robots has increased the demand for growth in the market.

#### **Key Highlights**

- Recently, the need for disinfection robots increased in order to decrease HAIs without adding to personnel expenditures. Processes like hydrogen peroxide and ultraviolet disinfection are carried out by manual labor because disinfection robots are still relatively recent inventions in the healthcare market in many nations. The pharmaceutical sector has been utilizing UV-C in cleanroom settings for more than ten years.
- The industry is primarily observing a trend of mobile robots that can UV-sanitize spaces. The market under study will advance due to the rising need for service robots, particularly in the healthcare sector.
- Sanitizing and disinfectant have become an area of concern, especially in highly populated areas, including hospitals, restaurants, hotels, airports, and schools. Due to this, the market is witnessing more companies and institutions that shifted to automation for disinfecting applications, hence, investing in robots.
- The higher costs of disinfectant robots are associated with effective and robust hardware and efficient software. Automation equipment includes higher capital expenditure required to invest in automation technologies (an automated system can cost millions of dollars to design, fabricate, and install). And with increasing advancement and functionality, the cost also increases.
- The COVID -19 pandemic increased and highlighted the value of robotic and automated technology. In addition to assisting in overcoming the difficulties faced by the human workforce during the pandemic, these technologies substantially reduce the

virus's impact.

#### Disinfectant Robot Market Trends

Technological Advancements to Enable Robots to Operate as a Value-added Entity (Collaborative) in the Disinfection Process

- Most of the first generation of automated disinfectant systems were complex machines that were neither too flexible nor limited in scope. Therefore, most of its customers were high-end hospitals that wanted performance enhancement. However, the robots' advancement with the advent of second-generation robots has added extra value to the disinfectant process.
- Furthermore, most of these robots work as collaborative robots with many safety features and disinfectant features. For instance, as UV-C light exposure should be avoided, many robots contain several safety features. For example, many robots come with a tablet on the patient room door that acts as a motion sensor, which automatically disengages the UV-C light if someone wants to enter the room.
- For instance, in April 2021, TMI Robotics, a Shanghai-based company, produced autonomous disinfection robots that can be pre-programmed. These robots use ultraviolet, ultra-dry vaporized hydrogen peroxide, and air filtration methods to disinfect surfaces. UV disinfection combined with air filtration will enable these robots to disinfect the surfaces and the air around them.
- Several robots now also come with various safety features, including an auto-shutdown function if a person goes in the room while it is on and door motion sensors to detect people trying to enter. Autonomous is another feature and software integration that further adds value to the overall disinfectant process.
- The third-generation disinfectant robots mainly leverage machine learning and IoT-enabled smart wireless connectivity and safety features. Standard features include touch screens, Integrated sensors, surveillance, automated reports, and IoT. Recently, UVD robots showcased their 3rd generation of autonomous mobile UV-C disinfection robot. The robot has the latest safety system that utilizes four safety layers, enabling the robot to move around in different environments. It has a distinct capability to sense, document, and show the users how well-disinfected an area is, enabling the user to easily and quickly adjust the process and optimize the quality if needed.

Asia-Pacific is Expected to Hold the Largest Market Share

- The Asia Pacific is quickly becoming one of the significant regions driving disinfectant robot production and use. Leveraging the market under study is also made possible by the region's expanding market share in the global robot industry.
- Countries like Australia, South Korea, Japan, India, China, and Singapore are investing in the market studied across the value chain. South Korea, Japan, India, and China are global robot manufacturing hubs. Hong Kong, India, and Singapore are also emerging as robotic start-up hubs globally. Southeast Asia is emerging as a significant investment due to the upgrade of its healthcare facility and support of its economy.
- For instance, in February 2021, Reliance Industries' subsidiary Reliance Strategic Business Ventures Limited (RSBVL) purchased a further equity position in its investee firm skyTran Inc. for USD 26.76 million, bringing its shareholding to 54.46% on a fully diluted basis. SkyTran is a technological business based in the United States. It has created ground-breaking passive magnetic levitation and propulsion technology for personal transportation to alleviate traffic congestion globally.
- The china region is witnessing many local vendors and start-ups participating and investing in the global disinfectant robot market, helping the area create dominance in the market studied; for instance, Xenex Disinfectant Systems, a Chinese agritech company, recently released a fund of CNY 5 million (~USD 0.7 million) to initiate drone disinfection operations amidst the pandemic. The company leveraged its agricultural drones to disinfect the public spaces in the nation. Drones are an impactful robotic disinfectant solution since they can be operated in a contactless manner and can cover a broader area in less time.

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#### Disinfectant Robot Industry Overview

The competitive rivalry among major players is high in the disinfectant robot market. By introducing new products, providing items with proprietary technology, and reaching agreements with end-users, the industry's vendors are increasing their overall market share.

- January 2022 - Blue Ocean Robotics announced the roll expansion of mobile robot solutions globally with an investment of DKK 335 million (USD 43.55 million) to meet the growing demand for service robots that can assist companies and institutions.

#### Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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