

# **United States Surgical Robotics Market Assessment, By Component Type [System, Accessories, Services], By Surgery Type [Gynaecology, Urology, Neurosurgery, Orthopaedic, General Surgery, Others], By End User [Hospitals, Ambulatory Surgical Centres], By Region, Opportunities, and Forecast, 2018-2032F**

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## **Abstracts**

The United States surgical robotics market size was estimated at USD 6.96 billion in 2024 and is projected to reach USD 16.29 billion in 2032, growing at a CAGR of 11.21% from 2025 to 2032. Multiple factors are contributing to the growth of United States surgical robotics market such as increasing use of minimally invasive procedures, growing incidence of chronic diseases, increasing geriatric population, technological advancements, increasing penetration of surgical robotics in ambulatory surgical centres and government schemes.

Surgical robotics technology is becoming increasingly popular in the United States as it offers several advantages over traditional surgery, such as precision, reduced blood loss, and faster recovery times. The United States surgical robotics market is focussing on expanding applications in new surgical fields such as neurosurgery, SBRT (stereotactic body radiotherapy) and orthopaedics.

### **Growing Incidence of Chronic Diseases and Increasing Geriatric Population**

The United States surgical robotics market is facing two significant trends that are expected to shape its growth in the coming years. First, there is a growing incidence of chronic diseases, which require surgical intervention. Chronic diseases such as cancer,

cardiovascular disease, and neurological disorders are becoming increasingly prevalent in the United States population, leading to a higher demand for surgical procedures. Second, the geriatric population in the United States is also increasing. As people age, they are more likely to develop chronic diseases and require surgical intervention. The geriatric population is expected to nearly double by 2060, reaching 98 million, which will further increase the demand for surgical procedures.

### Increasing Use of Surgical Robotics in Minimally Invasive Procedures

The use of surgical robotics in minimally invasive procedures has been steadily increasing in the United States. This method typically results in increased comfort, lower blood loss, decreased duration of hospital stays, and quicker recoveries, enabling surgeons to perform difficult-to-reach sections of the body and gauge over the obscured areas, boosting moral of the patients in United States to choose robotic surgery, which boosts the market.

### Growing Emphasis on Advanced Surgical Training

The growing emphasis on advanced surgical training is driving the growth of the United States surgical robotics market by ensuring surgeons are proficient in using these sophisticated surgical robots. As more healthcare professionals receive specialized training, the adoption of robotic-assisted surgeries increases, leading to improved surgical outcomes, reduced recovery times, and higher patient satisfaction. This trend is supported by technological advancements and a rising demand for minimally invasive procedures, further propelling the market's expansion. In order to ensure that medical professionals have appropriate training and education, leading players of the market are providing novel products and technologies to various innovation and education centers. For instance, in June 2024, Stryker partnered with Atrium Health's IRCAD North America to establish a state-of-the-art surgical training center in Charlotte, North Carolina. This center will focus on advanced education in minimally invasive and image-guided surgery, utilizing Stryker's innovative medical and robotic technologies. Stryker's involvement underscores its commitment to advancing medical education and healthcare delivery. Such efforts are expected to enhance the skills of the medical professionals and increase their proficiency in handling surgical robots, thus augmenting the market's demand.

### Technological advancements Driving Market Growth

The da Vinci Surgical System, developed by Intuitive Surgical, is currently the most

widely used surgical robot in the United States. It has been approved by the FDA for a variety of procedures, including prostatectomies, hysterectomies, and cardiac surgeries. Connectivity and data analytics are two ways by which Intuitive Surgical is continuing to innovate in surgical robotics. Intuitive Surgical's goal is to improve the operating room experience for robotic surgeons and deliver real-time data so that doctors can learn how to perform better surgery. Other companies are also developing surgical robots with new features and capabilities. For example, Medtronic's Hugo system allows for more natural and intuitive movements, while Asensus Surgical's Senhance Surgical system offers haptic feedback to surgeons. Additionally, researchers are exploring the use of artificial intelligence and machine learning in surgical robotics. These technologies have the potential to improve surgical outcomes by providing real-time analysis and guidance to surgeons.

### Increasing Penetration of Surgical Robotics in Ambulatory Surgical Centres (ASCs)

According to a survey conducted by Healthcare BlueBook and HealthSmart, ASCs reduce the cost of outpatient surgery by USD 38 billion per year since these facilities provide a lower-cost site of care than hospital outpatient departments. Every year, Medicare and its beneficiaries save more than USD 2.6 billion because they pay less for operations performed in ASCs than hospitals do for the identical procedures. When patients receive care in an ASC, their co-payments are also lower. Due to cost savings, the number of surgical procedures performed in ASCs and outpatient settings has increased rapidly, while hospital in-patient visits have decreased.

### Government Schemes Accelerating Market Expansion

One of the main initiatives is the National Robotics Initiative (NRI), which was launched by the United States government in 2011 to accelerate the development and deployment of robots that can work alongside humans to enhance productivity, safety, and quality of life. The NRI includes funding opportunities for research in a variety of fields, including healthcare robotics. In addition, the National Institute of Biomedical Imaging and Bioengineering (NIBIB), which is part of the National Institutes of Health (NIH), has been funding research in surgical robotics for many years. The NIBIB has funded research on a wide range of surgical robots, including those for minimally invasive surgery, microsurgery, and robot-assisted rehabilitation. Overall, the United States government has recognized the potential of surgical robotics to improve patient outcomes and reduce healthcare costs and has been actively investing in research and development in this field.

## Impact of COVID-19 on the United States Surgical Robotics Market

The COVID-19 pandemic had a significant impact on the United States surgical robotics market. While the market had been growing steadily prior to the pandemic, the pandemic led to a decrease in the number of elective surgeries and a shift in focus towards treating COVID-19 patients. But the demand for minimally invasive procedures increased due to the need for shorter hospital stays and reduced exposure to the virus. Manufacturing and trading of products and accessories were also hindered as a result of disrupted supply chains due to limited supplies and workforce.

## Impact of Russia-Ukraine War on the United States Surgical Robotics Market

The war between Russia and Ukraine indirectly impacted the United States surgical robotics market through economic and political factors. For example, the conflict led to economic sanctions and trade restrictions between the United States and Russia, this could have affected the market by disrupting supply chains or increasing the cost of materials required for surgical robotics.

## Key Player Landscape and Outlook

The United States Surgical Robotics Market is dominated by Intuitive Surgical with their da Vinci system being the most widely used in surgical robotics. Stryker's Mako robotic arm assisted surgery provides them a strong presence in the orthopaedic surgical robotics market. Medtronic, Zimmer Biomet, and Smith & Nephew and other players also have a significant presence in the market.

Johnson & Johnson's Ottava seeks to compete with Intuitive Surgical's da Vinci robot, implying that intense competition in the future will drive innovation for robotic surgery across a wide range of indications. CMR Surgical partnered with Johnson & Johnson's Ethicon division with the aim of increasing CMR Surgical's commercial reach in selective markets. The partnership will commence with private institutions in Italy, France, Germany, and Brazil, with CMR and Johnson & Johnson's sales teams offering bundled portfolios to surgeons.

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\*Companies mentioned above DO NOT hold any order as per market share and can be changed as per information available during research work

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