Surgical Robots - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

Market Report | 2025-07-01 | 120 pages | Mordor Intelligence

AVAILABLE LICENSES:

- Single User License $4750.00
- Team License (1-7 Users) $5250.00
- Site License $6500.00
- Corporate License $8750.00

Report description:

Surgical Robots Market Analysis

The surgical robotics market size is estimated at USD 8.31 billion in 2025 and is on track to reach USD 12.83 billion by 2030, advancing at a 9.07% CAGR throughout the forecast window. Demand stems from aging populations seeking joint-replacement precision, hospital consolidation that favors high-utilization platforms, and rapid reimbursement expansion in the United States and China. Artificial intelligence (AI) modules are extending robotic reach into soft-tissue, neurosurgical, and cardiac domains, while portable designs position the technology for ambulatory settings. Intensifying consolidation-typified by Karl Storz's 2024 acquisition of Asensus Surgical-signals a maturing competitive arena geared toward performance-guided and data-rich systems. Regulatory costs under the EU Medical Device Regulation (MDR) and periodic device recalls inject caution, but overall momentum remains firmly positive.

Global Surgical Robots Market Trends and Insights

Surge in Orthopedic-Robot Adoption Driven by Europe and Japan's Aging Population

Germany expects knee-replacement rates to rise 55% by 2040, underscoring the need for precise implant placement that robotic platforms deliver. Japanese hospitals mirror this demographic pressure, spurring Stryker to expand Mako installs across major networks. Clinical workflows center on reproducible bone resection and alignment, reducing revision risk in elderly cohorts. High procedure volumes create favorable payback, prompting national health systems to prioritize orthopedic robots. The demographic

tailwind is, therefore, a structural, independent growth pillar for the surgical robotics market.

AI-Enabled Vision and Haptics Expanding Complex Soft-Tissue Indications

Computer vision now identifies critical anatomy in real-time, while force-feedback sensors modulate grip to minimize tissue trauma. Johns Hopkins engineers have proven that robots learning from videos can suture at human-level proficiency. Such capabilities open neurosurgical and cardiac use cases where dexterity thresholds were formerly prohibitive. Hospitals prize the prospect of predictive analytics that flag errors before they occur, aligning with value-based care imperatives. AI expansion thus upgrades the surgical robotics market from a capital asset to a continuous-learning clinical partner.

Long Capital Pay-Back in Low-Volume MEA Hospitals

Resource-constrained settings in Africa struggle to reach the 200-case annual threshold that justifies robot ownership, forcing facilities to weigh alternative investment priorities. Service contracts often involve overseas engineers, inflating operational outlays. Although Saudi centers report 98% survival rates in robotic cardiac surgery, broad regional adoption remains tepid until financing models evolve.

Other drivers and restraints analyzed in the detailed report include:

US-CMS and China-NRDL Reimbursement Approvals Improving ROI / Hospital-Consolidation Budgets Favouring High-Utilization Platforms / Device-Recall Incidents (2022-24) Denting Surgeon Confidence /

For complete list of drivers and restraints, kindly check the Table Of Contents.

Segment Analysis

Surgical systems generated 65% of 2024 revenue, testament to the capital-intensive nature of platform acquisitions. Instruments and accessories produce steady procedure-linked cash flows, but services are projected to rise 12.5% annually to 2030 as hospitals require algorithm updates, cybersecurity patches, and multi-specialty training. Intuitive fifth generation da Vinci introduction triggered a significant refresh wave. That upgrade cycle elevates the surgical robotics market size for hardware while underpinning recurring services growth.

Service contracts now bundle predictive-maintenance analytics, extending uptime and smoothing OR scheduling. AI-enabled modules demand continuous calibration to preserve regulatory compliance, embedding vendors deeper into hospital IT ecosystems. Training revenue expands alongside surgeon credentialing mandates, particularly in emerging markets where fellowship capacity lags. The dual-engine dynamic positions services as the long-run margin accelerator within the broader surgical robotics market.

Gynaecological procedures captured 32% revenue in 2024, leveraging decades of minimally invasive adoption for hysterectomy and myomectomy. Clear evidence of reduced blood loss and shorter stays makes robotic intervention a standard of care across many U.S. sites. In contrast, orthopaedics comprises the fastest-growing slice, advancing 13.2% annually on aging-population implant demand. Orthopaedics therefore commands an expanding share of the surgical robotics market size for 2030 projections.

Innovation pace in joint-replacement navigation positions robots as alignment guarantors, mitigating revision surgeries. Zimmer Biomet's tie-up with Think Surgical on the TMINI handheld robot illustrates ergonomic evolution. Neurosurgery and cardiac applications remain nascent but benefit from AI-guided micro-manipulation. Diversity of indications cushions cyclicality, distributing procedural risk across specialties and reinforcing resilience in the surgical robotics market.

Surgical Robotics Market Segmented by Component (Surgical Systems, Instruments & Accessories, Services), Area of Surgery (Gynecological, Urological, and More), End-User (Hospitals, Ambulatory Surgical Centers, and More), Product Mobility (Non-Portable Systems, Portable/Cart-based Systems), and Geography. The Market Forecasts are Provided in Terms of Value (USD).

Geography Analysis

North America retained 45% of 2024 revenue, propelled by strong reimbursement and early adopter surgeon communities. More than 2.63 million procedures utilized da Vinci systems in 2024, emphasizing procedure-density economies. The surgical robotics market size for the United States alone is forecast to hit double-digit billions by decade's end as ASC penetration blooms.

Europe ranks second, anchored by Germany's orthopaedic demand surge and the EU's EUR 1 billion Med4Cure program. Yet MDR compliance costs dampen speedy platform launches, moderating near-term growth. The surgical robotics market finds steadier traction in France, Italy, and the Nordics, where centralized procurement promotes platform standardization.

Asia-Pacific exhibits the fastest 12.1% CAGR through 2030. China's 64% domestically manufactured deployment mix validates local manufacturing depth. India's Production-Linked Incentive scheme pairs tariffs with subsidies, cultivating a nascent export hub for robotic subsystems. Japan's super-aged demographic drives steady orthopaedic robot purchases, while South Korea and Australia leverage strong digital infrastructure for rapid adoption. Collectively these markets add significant weight to the global surgical robotics market trajectory.

List of Companies Covered in this Report:

Intuitive Surgical Inc. / Stryker Corporation / Johnson and Johnson (Ethicon Auris Health) / Medtronic PLC / Zimmer Biomet Holdings Inc. / CMR Surgical Ltd. / Accuray Incorporated / Renishaw PLC / THINK Surgical Inc. / Titan Medical Inc. / Smith and Nephew PLC / Asensus Surgical Inc. / EchoNous Inc. / Hocoma AG / Verb Surgical (Alphabet/JandJ JV) / MicroPort MedBot (China) / Meere Company / Vicarious Surgical Inc. / Apollo Endosurgery Inc. / Beijing TINAVI Medical Technologies Inc. /

Additional Benefits:

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

Table of Contents:

Surgical Robots - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

Market Report | 2025-07-01 | 120 pages | Mordor Intelligence

To place an Order with Scotts International:

- - Print this form
- - Complete the relevant blank fields and sign
- - Send as a scanned email to support@scotts-international.com

ORDER FORM:

Select license	License	Price
	Single User License	$4750.00
	Team License (1-7 Users)	$5250.00
	Site License	$6500.00
	Corporate License	$8750.00
	VAT	
	Total	

*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346.

** VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*		Phone*	
First Name*		Last Name*	
Job title*			
Company Name*		EU Vat / Tax ID / NIP number*	
Address*		City*	
Zip Code*		Country*	
		Date	2026-03-03
		Signature