

CAM Software Market by Application (Machining & Production (CNC Machining, Sheet Metal Fabrication), Product Design & Prototyping (Additive/3D Printing, Tool & Die Manufacturing), Quality Control & Inspection), 2D, and 3D - Global Forecast to 2030

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Report description:

The global computer-aided manufacturing market will grow from USD 3.39 billion in 2024 to USD 5.69 billion by 2030 at a compounded annual growth rate (CAGR) of 9.0% during the forecast period. Trends and developments in computer-aided manufacturing (CAM) are reshaping the face of manufacturing by improving productivity and providing benefits to businesses. With CAD integration, such possibilities enable manufacturers to optimize processes with minimal manual work. Modern CAM tools include machine learning-powered features that enhance the quality of toolpathing and machining strategies, leading to quicker turnaround and lower material wastage. Moreover, advanced analytics offerings and simulation capabilities are also part of the package CAM, making it possible for manufacturers to foresee the behavior of machines and reduce manual interventions during manufacturing. Automation is being applied to all aspects of the business, including job scheduling, quality assurance, and predictive maintenance, allowing personnel to channel efforts into more value-adding and creative activities. Such technological changes enable industries to meet changing market requirements while encouraging aerospace, automotive, and medical device manufacturing development.

"The software segment holds the largest market share by offering type during the forecast period."

The software segment is expected to hold the largest market share in the CAM market during the forecast period due to its pivotal role in optimizing manufacturing processes. With CAM software, the operation of a CNC machine can be optimized; thereby enhancing the production processes' efficiency, accuracy, and flexibility. In recent years, as businesses have adapted to radical changes and customizations in products, advanced CAM solutions compatible with other design and manufacturing processes have become increasingly needed. In addition, the growing demand can also be attributed to cloud-based CAM innovations and the application of artificial intelligence and machine learning in software. With these improvements, manufacturers can improve

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productivity, shorten manufacturing cycles, and cut production costs. Therefore, with the increasing need for businesses to transform digitally and embrace automation, the expansion of the CAM software segment is expected to boost in an upward wave, making it the largest segment in the market during the forecast period.

"Based on capability, the multi-axis segment is expected to grow at highest CAGR during the forecast period."

The multi-axis segment in the CAM market is expected to grow at the highest CAGR during the forecast period due to its superior capability to handle complex geometries and intricate designs. Multi-axis systems, which include 4-axis and 5-axis machines, offer the benefit of concurrent motion across multiple planes, hence facilitating the manufacture of complex shape details more easily. This has particularly benefited the aerospace, automotive, and medical industries, which manufacture parts with complex shapes that must comply with particular dimensions. Additionally, multi-axis machining reduces manual labor intervention, speeds up manufacturing times, and helps decrease material costs, benefiting any business. Additionally, CAM software systems linked to multi-axis machines promote further automation and precision, resulting in their popularity. The rapidly changing CAM market is growing as consumers want unique, high-class products and new technological solutions.

"Based on the services, the training, support & maintenance segment holds the largest share during the forecast period."

The training, support, and maintenance segment holds the largest share in the computer-aided manufacturing (CAM) market due to its essential role in ensuring the seamless operation of CAM systems. With manufacturers moving towards more complex software, there is an imperative need for effective training programs to train the staff on using sophisticated tools. In addition, there are also support services that provide solutions for problems encountered during the day-to-day running of the organization so that there is little or no wasted time in business operations. Maintenance ensures the availability of CAM tools per current and future manufacturing demands and technologies by providing services such as system enhancement and software installation. Implementing ideas constituting Industry 4.0 and smart manufacturing systems has increased these services since organizations need to ensure the reliability and efficient operations of their systems. The growth of this segment is also supported by the prolonged sustained interactions with existing customers, which entail the provision of constant assistance to guarantee their satisfaction and efficiency in operations, cementing its status in the CAM performed forecasts.

Breakdown of primaries

We interviewed Chief Executive Officers (CEOs), directors of innovation and technology, system integrators, and executives from several significant computer-aided manufacturing market companies.

-□By Company: Tier I: 30%, Tier II: 45%, and Tier III: 25%

-□By Designation: C-Level Executives: 50%, Director Level: 35%, and Others: 15%

-□By Region: North America: 50%, Europe: 30%, Asia Pacific: 15%, Rest of World: 5%

Some of the significant computer-aided manufacturing market vendors are Autodesk (US), Siemens (Germany), Hexagon (Sweden), Dassault Systemes (France), Hypertherm (US), PTC (US), SolidCAM (US), TopSolid (France), CAMWorks (US) and MasterCAM (US).

Research coverage:

The market report covered the computer-aided manufacturing market across segments. We estimated the market size and growth potential for many segments based on offering, capability, application, deployment mode, organization size, vertical, and region. It contains a thorough competition analysis of the major market participants, information about their businesses, essential observations about their product and service offerings, current trends, and critical market strategies.

Reasons to buy this report:

With information on the most accurate revenue estimates for the whole computer-aided manufacturing industry and its subsegments, the research will benefit market leaders and recent newcomers. Stakeholders will benefit from this report's increased understanding of the competitive environment, which will help them better position their companies and develop go-to-market strategies. The research offers information on the main market drivers, constraints, opportunities, and challenges, as well as aids players in understanding the pulse of the industry.

The report provides insights on the following pointers:

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Analysis of key drivers (Increasing demand for cloud-based and SaaS solutions, Growing adoption of smart manufacturing and industry 4.0 initiatives, Addressing Complex Supply Chain Demands with Agile Production, Emphasis on sustainability and resource efficiency, Improving Traceability for End-to-End Product Lifecycle Management, Enhancing worker safety in hazardous manufacturing environments), restraints (Integration of CAM software with legacy systems), opportunities (Adoption of precision manufacturing for specialized high-performance parts, Increasing demand for shorter product development cycle, Increasing demand for additive manufacturing, Increasing investment in digital twin and simulation technologies), and challenges (Lack of skilled workforce, Limited customization options for complex manufacturing process) influencing the growth of the computer-aided manufacturing market.

-□Product Development/Innovation: Comprehensive analysis of emerging technologies, R&D initiatives, and new service and product introductions in the computer-aided manufacturing market.

-□Market Development: In-depth details regarding profitable markets: the paper examines the global computer-aided manufacturing market.

-□Market Diversification: Comprehensive details regarding recent advancements, investments, unexplored regions, new goods and services, and the computer-aided manufacturing market.

-□Competitive Assessment: Thorough analysis of the market shares, expansion plans, and service portfolios of the top competitors in the computer-aided manufacturing industry, such as Autodesk (US), Siemens (Germany), Hexagon (Sweden), Dassault Systemes (France) and Hypertherm (US).

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