

Computer-Aided Engineering Market: Global Industry Trends, Share, Size, Growth, Opportunity and Forecast 2023-2028

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Abstracts

Market Overview:

The global computer-aided engineering market size reached US\$ 9.3 Billion in 2022. Looking forward, IMARC Group expects the market to reach US\$ 16.6 Billion by 2028, exhibiting a growth rate (CAGR) of 10.4% during 2023-2028.

Computer-aided engineering (CAE) refers to the process of developing and simulating the performance of a product using software and virtual tools. It enables the developer to improve the product design and performance while resolving various engineering problems. CAE involves the replication of a product's physical properties and performing thermal and finite element analysis, and multiple optimizations. It also supports faster product development by eliminating the need for building physical prototypes in early developmental stages. Owing to these benefits, CAE finds extensive applicability across the automotive, aerospace, plant engineering, electronics, energy and healthcare industries.

The growing integration of computer-aided drafting (CAD) with CAE, along with the increasing cloud deployment of software, represent as the key factors driving the growth of the market. The CAD technology aids in the timely calculation of stress distribution and deformations in a product without influencing the modeling process. Furthermore, user-friendly technological advancements in the CAE software have enabled developers and designers to upload their analysis on the cloud platform, which offers increased mobility and significant cost reductions. The rapid growth of the smart and wearable device industry, along with the increasing penetration rate of internet services, is also creating a positive outlook for the market. The increasing usage of smartphones, tablets

and smartwatches is further favoring the widespread acceptance of CAE for medicinal, fitness, transportation, education and entertainment purposes. Moreover, advancements in the automotive sector, including the advent of driverless and semi-autonomous cars, which use the technology for collision avoidance, parking assistance systems and interactive infotainment systems, are projected to drive the market further.

Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each sub-segment of the global computer-aided engineering market report, along with forecasts at the global, regional and country level from 2023-2028. Our report has categorized the market based on type, deployment type and end-use industry.

Breakup by Type:

- Finite Element Analysis (FEA)
- Computational Fluid Dynamics (CFD)
- Multibody Dynamics
- Optimization & Simulation

Breakup by Deployment Type:

- On-premises
- Cloud-based

Breakup by End-Use Industry:

- Automotive
- Defense & Aerospace
- Electronics
- Medical Devices
- Industrial Equipment
- Others

Breakup by Region:

North America

United States

Canada

Asia Pacific

China

Japan

India

South Korea

Australia

Indonesia

Others

Europe

Germany

France

United Kingdom

Italy

Spain

Russia

Others

Latin America

Brazil

Mexico

Others

Middle East and Africa

Competitive Landscape:

The competitive landscape of the industry has also been examined with some of the key players being Altair Engineering Inc., Ansys Inc., Aspen Technology Inc., Autodesk Inc., BenQ Asia Pacific Corp., Bentley Systems Inc., Casio Computer Co. Ltd., Dassault

Systemes, ESI Group, Exa Corporation, Mentor Graphics Corporation, MSC Software Corporation, NUMECA International, Seiko Epson Corporation, Siemens Digital Industries Software, etc.

Key Questions Answered in This Report:

What is the expected growth rate of the global computer-aided engineering market?
What has been the impact of COVID-19 on the global computer-aided engineering market?

What are the key factors driving the global computer-aided engineering market?

What is the breakup of the global computer-aided engineering market based on the type?

What is the breakup of the global computer-aided engineering market based on the development type?

What is the breakup of the global computer-aided engineering market based on the end-use industry?

What are the key regions in the global computer-aided engineering market?

Who are the key players/companies in the global computer-aided engineering market?

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