

# **Global Computer Graphics Market Size study & Forecast, by Component (Hardware, Application Software), by Application (CAD, Image Processing, Entertainment, User Interfaces, Others) and Regional Analysis, 2023-2030**

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## **Abstracts**

Global Computer Graphics Market is valued at approximately USD 193.20 billion in 2022 and is anticipated to grow with a CAGR growth rate of more than 6.00% over the forecast period 2023-2030. Computer graphics involves the creation, manipulation, and display of visual content using computers. It encompasses 2D graphics, which deal with images in a two-dimensional space, utilizing raster graphics (pixel-based) and vector graphics (shape-based). Additionally, 3D graphics focuses on the generation and rendering of three-dimensional objects and scenes, including modeling, rendering, and animation. Computer graphics find applications in various fields, such as entertainment, virtual reality, CAD, scientific visualization, and data visualization. It enables the creation of realistic and immersive visual experiences, driving industries forward with advancements in technology and enhancing communication and problem-solving capabilities. Moreover, the increasing use of electronic devices and the growing development of innovative & advanced technology anticipated to be the growth drivers of this market. Furthermore, expanding the entertainment industry and cross-industry collaboration may accelerate the growth in the market.

According to India Brand Equity Foundation (IBEF) in 2022, the Indian electronics manufacturing industry is experiencing significant growth, with projections indicating a market size of USD 520 billion by 2025. The demand for electronic products is expected to rise to USD 400 billion by 2025, showing a substantial increase from USD 33 billion in FY20. The electronics system market is anticipated to witness 2.3 times increase in demand by FY25, reaching USD 160 billion. Among the top products in the Electronic

System Design and Manufacturing (ESDM) sector, IT/OA holds the highest CAGR at 54%, followed by industrial electronics at 38% and automotive electronics at 10%. These insights highlight the strong growth potential and emerging opportunities in the Indian electronics manufacturing industry. According to the United Nations Conference on Trade and Development (UNCTAD) in 2023, the market size of frontier technology is expected to boom by 2030 reaching an approximate market size of USD 9,469 billion. Frontier technology includes technology such as Internet of Things (IoT), Artificial Intelligence (AI) and more that further contribute to the expansion of the global frontier technology market with USD 4422 billion and USD 1582 billion respectively which is accounted for 47% and 17% of the total contribution respectively that simply elevates the overall growth of the innovation and advance technology. However, the high cost of software & hardware development and security & privacy concerns may hamper the growth of the market during the forecasted period of 2023-2030.

The key regions considered for the Global Computer Graphics Market study includes Asia Pacific, North America, Europe, Latin America, and Middle East & Africa. North America dominates the market in the computer graphics market in 2022. The region boasts a substantial number of visual effects (VFX) companies, including renowned industry leaders such as Walt Disney Animation Studios, Warner Bros Animation, DreamWorks Animation, and Industrial Light & Magic. It is also home to prominent providers of computer graphics hardware components and application software, such as Autodesk Inc., Adobe Systems Inc., Microsoft Corporation, and Siemens PLM Software, among others. The United States, in particular, serves as a primary production hub for a significant portion of film entertainment work. Asia Pacific is the fastest-growing region in the computer graphics market due to various factors including, the region's expanding entertainment and gaming industry, particularly in countries such as China, Japan, and South Korea, drives the demand for visually appealing gaming experiences. The rising adoption of virtual reality (VR) and augmented reality (AR) technologies across multiple industries further fuels the need for advanced computer graphics in the region.

Major market player included in this report are:

Advanced Micro Devices (AMD), Inc.

ARM Ltd.

Intel Corporation

Imagination Technologies

Nvidia Corporation

Sony Corporation

Adobe Systems Ltd.

Siemens PLM Software

Autodesk Inc.

Microsoft Corporation

Recent Developments in the Market:

In February 2022, AMD made an announcement about its acquisition of Xilinx. This acquisition positioned AMD as the foremost player in high-performance and adaptive computing within the industry, boasting a significant scale advantage and the most robust portfolio of computing, graphics, and adaptive SoC products. AMD anticipates that this acquisition may have a positive impact on non-GAAP margins, non-GAAP EPS, and free cash flow generation within the first year. By combining complementary products, customers, and markets, NXP has successfully created the industry's leading high-performance and adaptive computing company.

In November 2021, Threekit, a prominent platform for 3D visual commerce catering to brands, successfully secured USD 35 million in Series B funding led by Leaders Fund. Notably, strategic investors including Capgemini and ServiceNow, as well as existing investors Salesforce and Shasta Ventures, also participated in the funding round. This infusion of capital may empower Threekit to expedite investments in its product platforms, eCommerce integration, global sales organization, and partner network, thereby fueling its growth trajectory.

Global Computer Graphics Market Report Scope:

Historical Data – 2020 - 2021

Base Year for Estimation – 2022

Forecast period - 2023-2030

Report Coverage - Revenue forecast, Company Ranking, Competitive Landscape, Growth factors, and Trends

Segments Covered – Component, Application, Region

Regional Scope - North America; Europe; Asia Pacific; Latin America; Middle East & Africa

Customization Scope - Free report customization (equivalent up to 8 analyst's working hours) with purchase. Addition or alteration to country, regional & segment scope\*

The objective of the study is to define market sizes of different segments & countries in recent years and to forecast the values to the coming years. The report is designed to incorporate both qualitative and quantitative aspects of the industry within countries involved in the study.

The report also caters detailed information about the crucial aspects such as driving factors & challenges which will define the future growth of the market. Additionally, it also incorporates potential opportunities in micro markets for stakeholders to invest along with the detailed analysis of competitive landscape and product offerings of key

players. The detailed segments and sub-segment of the market are explained below:

By Component:

Hardware

Application Software

By Application:

CAD

Image Processing

Entertainment

User Interfaces

Others

By Region:

North America

U.S.

Canada

Europe

UK

Germany

France

Spain

Italy

ROE

Asia Pacific

China

India

Japan

Australia

South Korea

RoAPAC

Latin America

Brazil

Mexico

Middle East & Africa

Saudi Arabia

South Africa

Rest of Middle East & Africa

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