

# **Global Data Center Accelerator Market Size Study, by Processor (GPU, CPU, FPGA, ASIC), Type (HPC, Cloud), Application (Deep Learning Training, Public Cloud Interface), and Regional Forecasts 2022-2032**

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## **Abstracts**

The Global Data Center Accelerator Market is valued at approximately USD 14.17 billion in 2023 and is anticipated to grow with a remarkable CAGR of 24.70% over the forecast period 2024-2032. Data center accelerators are specialized hardware units designed to offload computationally intensive tasks from general-purpose processors, thereby enhancing processing speed, energy efficiency, and overall data center performance. These accelerators, leveraging GPUs, CPUs, FPGAs, and ASICs, are at the core of modern computing systems, enabling seamless support for applications such as deep learning, artificial intelligence, and cloud computing. With the surge in data-driven operations and the ever-expanding demands of cloud-based services, the role of data center accelerators has transitioned from optional enhancement to a critical necessity for organizations seeking to stay competitive in the digital age.

The proliferation of AI, machine learning, and big data analytics has significantly fueled the adoption of data center accelerators across industries. These devices are instrumental in supporting workloads that demand high computational capabilities, such as predictive analytics, image recognition, and real-time data processing. In addition, the growing shift toward cloud computing, coupled with the increasing need for energy-efficient and high-performance computing solutions, has further boosted the deployment of accelerators. However, challenges such as the high cost of deployment and the complexity of integrating these systems with existing infrastructures might impede market growth during the forecast period.

The global landscape of the data center accelerator market showcases dynamic

regional growth patterns. North America continues to dominate, primarily due to the region's advanced technological infrastructure, significant investments in AI and data analytics, and the presence of major cloud service providers such as AWS, Microsoft Azure, and Google Cloud. Europe is steadily growing, driven by government-backed digital transformation initiatives and the increasing adoption of HPC systems across industries. Meanwhile, the Asia-Pacific region is emerging as a lucrative market, fueled by rapid digitalization, a burgeoning IT ecosystem, and increasing investments in data center expansion in countries such as China, India, and Japan.

Major market players included in this report are:

NVIDIA Corporation

Intel Corporation

Advanced Micro Devices (AMD)

Xilinx, Inc.

Google LLC

Microsoft Corporation

Amazon Web Services (AWS)

Graphcore Limited

IBM Corporation

Qualcomm Technologies, Inc.

Cisco Systems, Inc.

Huawei Technologies Co., Ltd.

Mellanox Technologies (NVIDIA Subsidiary)

Oracle Corporation

Broadcom Inc.

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

#### By Processor

GPU

CPU

FPGA

ASIC

#### By Type

HPC

Cloud

#### By Application

Deep Learning Training

Public Cloud Interface

#### By Region:

##### North America

U.S.

Canada

## Europe

UK

Germany

France

Spain

Italy

Rest of Europe

## Asia Pacific

China

India

Japan

Australia

South Korea

Rest of Asia Pacific

## Latin America

Brazil

Mexico

## Middle East & Africa

Saudi Arabia

South Africa

Rest of Middle East & Africa

Years considered for the study are as follows:

Historical year – 2022

Base year – 2023

Forecast period – 2024 to 2032

Key Takeaways:

Comprehensive market estimates and forecasts for a 10-year period from 2022 to 2032.

Regional-level analysis for all major segments and sub-segments of the market.

Insights into market drivers, challenges, and growth opportunities across different regions.

Competitive landscape analysis with detailed information on major players and their strategies.

Recommendations for business strategies to capitalize on market opportunities.

Analysis of both demand-side and supply-side factors influencing market dynamics.

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