

Data Center Accelerator Market: Global Industry Trends, Share, Size, Growth, Opportunity and Forecast 2023-2028

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Abstracts

The global data center accelerator market size reached US\$ 15.5 Billion in 2022. Looking forward, IMARC Group expects the market to reach US\$ 71.1 Billion by 2028, exhibiting a growth rate (CAGR) of 28.90% during 2022-2028.

Data center accelerators perform complex computational functions to facilitate a significant increase in the performance of data centers. They consume less power due to their resource-sharing capability with the main processor and reduce the overall cost by improving power efficiency. They can also speed up deep learning, machine learning (ML), and high-performance computing (HPC) workloads of modern data centers. At present, the rising need to increase the networking bandwidth is propelling the use of data center accelerators for managing complex data sets and analytics workloads with optimal performance and rapid efficiency.

Data Center Accelerator Market Trends:

A shift towards remote working culture on account of the coronavirus disease (COVID-19) outbreak and strict lockdown in various countries has positively influenced the use of artificial intelligence (AI) to ease business operations. This is driving the need for data center accelerators to manage AI workloads. Apart from this, due to escalating demand for accelerated computing, there is a rise in the adoption of on-demand graphics processing unit (GPU) cloud computing-based solutions that can run compute-intensive workloads and offer high bandwidth. This is contributing to the growth of the market. Moreover, gaming companies are focusing on expanding their online cloud gaming services using hardware-based GPU virtualization to support real personal computer (PC) gameplay. This, in confluence with the increasing number of individuals who want to experience realistic online games, is strengthening the market growth.

Furthermore, rising number of enterprises are offering machine learning (ML) as a cloud service for applications in voice recognition, fraud detection, voice search, recommendation engines, sentiment analysis, image recognition, and motion detection. This is anticipated to expand the applications of data center accelerators worldwide.

Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each sub-segment of the global data center accelerator market report, along with forecasts at the global, regional and country level from 2023-2028. Our report has categorized the market based on accelerator type, processor type and application.

Breakup by Accelerator Type:

- High-performance Computing
- Cloud Accelerator

Breakup by Processor Type:

- Central Processing Unit (CPU)
- Graphics Processing Unit (GPU)
- Field-Programmable Gate Array (FPGA)
- Application-specific Integrated Circuit (ASIC)

Breakup by Application:

- Deep Learning Training
- Public Cloud Interface
- Enterprise Interface

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 along with the profiles of the key players being Achronix Semiconductor Corporation, Advanced Micro Devices Inc., Cisco Systems Inc., Dell Technologies Inc., Gyrfalcon Technology Inc., Intel Corporation, International Business Machines Corporation, Marvell Technology Inc., Microsemi Corporation (Microchip Technology Inc.), Nvidia Corporation, Qualcomm, and Xilinx Inc.

Key Questions Answered in This Report:

How has the global data center accelerator market performed so far and how will it perform in the coming years?
What has been the impact of COVID-19 on the global data center accelerator market?
What are the key regional markets?
What is the breakup of the market based on the accelerator type?
What is the breakup of the market based on the processor type?
What is the breakup of the market based on the application?
What are the various stages in the value chain of the industry?
What are the key driving factors and challenges in the industry?
What is the structure of the global data center accelerator market and who are the key players?
What is the degree of competition in the industry?

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