

Europe Data Center GPUs Market: Focus on Product, Application, and Country - Analysis and Forecast, 2024-2034

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Abstracts

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This report will be delivered in 7-10 working days. Introduction to Europe Data Center GPUs Market

The Europe data center GPUs market is projected to reach \$82.2 billion by 2034 from \$10.6 billion in 2024, growing at a CAGR of 22.75% during the forecast period 2024-2034. The growing need for high-performance computing to support AI, deep learning, and big data analytics is driving the GPU market's robust expansion in Europe. Similar to precision tools on a high-speed production line, GPUs operate as specialised processors that can quickly and effectively handle complicated jobs. Similar to modernising a factory with state-of-the-art automation, technological developments like increased memory capacity, better computing power, and increased energy efficiency are propelling market expansion and modernising Europe's digital infrastructure.

The fast growth of hyperscale data centres around the region and strategic partnerships between leading GPU manufacturers and European cloud providers are improving supply chain resilience and operational scalability, much like a more efficient, integrated logistics system. Increased R&D expenditures are also spurring the development of GPU technology, which will assist satisfy changing processing needs and comply with Europe's strict sustainability and energy efficiency laws. All of these elements are working together to create a digital ecosystem that is scalable, effective, and ecologically conscious throughout Europe.

Market Introduction

The market for GPUs for data centres in Europe is expanding significantly as the need for high-performance computing increases across a number of industries, including big data analytics, cloud computing, machine learning, and artificial intelligence (AI). Because of their capacity to manage enormous parallel processing jobs, graphics processing units (GPUs) are quickly becoming indispensable parts of data centres. This makes them especially useful for AI workloads and real-time data processing. The requirement for strong, effective processing resources has fuelled the use of GPUs in data centres as AI applications grow, ranging from predictive analytics to autonomous systems.

The market is also being driven by AI and the growing use of cloud and edge computing. GPUs are well-suited to manage the ever-increasing need for computational capacity, especially for jobs that are graphics-intensive and latency-sensitive, and data centres must scale to meet this demand.

Furthermore, there are chances for GPU technologies that are more power-efficient because sustainability programs are becoming more popular in Europe, where many data centres are concentrating on energy efficiency and lowering their carbon footprints.

High operating expenses, intricate system integration, and supply chain limitations are some of the market's obstacles, though. Notwithstanding these obstacles, the market for GPU-powered infrastructure is expected to grow further due to new developments in technology and growing industry acceptance.

Market Segmentation

Segmentation 1: Data Center GPUs Market (by Application)

Hyperscale

Colocation

Enterprise

Others

Segmentation 2: Data Center GPUs Market (by Product)

Conventional GPUs

Accelerated GPUs

Segmentation 3: Data Center GPUs Market (by Country)

Germany

France

U.K.

Italy

Netherlands

Ireland

Rest-of-Europe

Europe Data Center GPUs Market Trends, Drivers and Challenges

Market Trends

Growing integration of AI and machine learning across industries.

Expansion of cloud computing and edge computing infrastructures.

Increased focus on green and energy-efficient data center operations.

Development of large-scale AI-focused data centers with high GPU density.

Rising adoption of hybrid and multi-cloud environments needing GPU acceleration

Market Drivers

Surging demand for AI-driven applications across sectors like healthcare, finance, and manufacturing.

Continuous innovation in GPU architecture and performance.

Growth in data-intensive workloads such as real-time analytics, 3D rendering, and autonomous systems.

Government and institutional support for digital transformation and AI infrastructure.

Increasing demand for high-performance computing (HPC) in research and industrial applications.

Market Challenges

High capital and operational expenditure for GPU-based infrastructure.

Ongoing semiconductor supply chain disruptions impacting GPU availability.

Elevated power consumption and cooling requirements of GPU systems.

Difficulty in sourcing skilled professionals for managing GPU-based workloads.

Integration complexity with legacy systems and software environments.

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