+44 20 8123 2220
info@marketpublishers.com

High-performance Computing (HPC) Market Report by Component (Hardware, Software and Services), Deployment Type (On-premises, Cloud-based), End Use (Aerospace and Defense, Energy and Utilities, BFSI, Media and Entertainment, Manufacturing, Life Science and Healthcare, and Others), and Region 2024-2032

https://marketpublishers.com/r/H64E43A7AEFAEN.html
Date: July 2024
Pages: 143
Price: US$ 3,899.00 (Single User License)
ID: H64E43A7AEFAEN

Abstracts

The global high-performance computing (HPC) market size reached US$ 42.3 Billion in 2023. Looking forward, IMARC Group expects the market to reach US$ 64.4 Billion by 2032, exhibiting a growth rate (CAGR) of 4.7% during 2024-2032. The high-performance computing (HPC) market demand is experiencing steady growth driven by rapid digitization, increasing demand for high-performance computing solutions, and extensive research and development (R&D) activities.

High-performance Computing (HPC) Market Analysis:
Major Market Drivers: Rapid digitization and increasing volumes of data generated are driving the high-performance computing (HPC) market outlook.
Key Market Trends: High-performance computing (HPC) market trends include increasing adoption of cloud-computing HPC solutions. This is positively impacting the high-performance computing (HPC) market revenue.
Geographical Trends: North America leads the high-performance computing (HPC) market share due to rapid digitization. Statista forecasts that global spending on digital transformation will soar to $3.4 trillion by 2026. This suggests a significant investment in technology infrastructure. This substantial investment is likely to drive demand for high-performance computing solutions, as organizations seek to enhance their computational capabilities to support increasingly complex digital transformation initiatives. The high-

+44 20 8123 2220
info@marketpublishers.com

performance computing (HPC) market statistics for the Asia Pacific is also expected to witness growth.
Competitive Landscape: Cisco Systems Inc. and Dell Technologies Inc. are some of the market players driving the high-performance computing (HPC) market growth.
Challenges and Opportunities: Challenges include the increasing complexity of software and hardware systems. The high-performance computing (HPC) market opportunities lie in the growing demand for advanced simulation and modeling capabilities across various industries.

High-performance Computing (HPC) Market Trends:
Rapid digitization

The high-performance computing (HPC) market price is being driven by rapid digitization in all industries. When organizations are adopting digital transformation initiatives, they require computer systems that can handle large amounts of data and perform intensive tasks at high speeds. Therefore, HPC solutions provide the necessary computational power to process big data sets, run sophisticated simulations and efficiently execute complex algorithms. It is a fact that healthcare, finance, manufacturing, and research industry sectors depend on this kind of technology to speed up innovation, improve productivity, and give them an advantage over competitors This has led to increased demand for HPC solutions as a result of rapid digitization which has encouraged market growth and promotes innovations within different industries.

Increasing research and development activities

As per the high-performance computing (HPC) market overview, the market is increasingly being moved forward by more intense research and development (R&D) activities. The need for computing systems that can deal with intricate simulations, data analysis, and modeling exercises is increasing as industries become more competitive and innovative. HPC solutions are useful in advancing R&D operations in different sectors like pharmaceuticals, automotive, aerospace, and energy, through providing the computational power necessary. For this reason, HPC technologies have been adopted in these sectors to hasten product development cycles, optimize designs, and enhance decision-making processes. Therefore, market growth is driven by intensified R&D coupled with the need for faster and more efficient computing.

Rising volume of data generated

+44 20 8123 2220
info@marketpublishers.com

One of the key drivers of the high-performance computing (HPC) market is rising data volume from sectors. With the digital technology explosion, organizations generate huge amounts of data on a daily basis. It calls for HPC systems to process, analyze, and draw insights from this data at the real time. Big data analytics, predictive modeling, and machine learning algorithms are some elements in the healthcare finance and telecommunications industry where HPC solutions are used for big data handling. Additionally, emerging technologies like artificial intelligence and deep learning require massive computational power, further driving the demand for HPC solutions.

High-performance Computing (HPC) Industry Segmentation:
IMARC Group provides an analysis of the key trends in each segment of the market, along with forecasts at the global, regional, and country levels for 2024-2032. Our report has categorized the market based on component, deployment type, and end use.

Breakup by Component:

Hardware
Software and Services

Hardware accounts for the majority of the market share

The report has provided a detailed breakup and analysis of the market based on the component. This includes hardware, software and services. According to the report, hardware represented the largest segment.

The growth of the market is driven primarily by hardware advancements. As technology continues to develop, various components of the systems such as processors, memory, and interconnects become more powerful and efficient. The development of specialized accelerators such as GPUs and FPGAs further enhances computational capabilities. These advances allow HPC systems to execute complex calculations and analyze huge datasets at unprecedented speeds. Hardware vendors are also always striving to provide solutions tailored for HPC applications that have unique requirements. As a result, sustained improvements in hardware form an important aspect of shaping the HPC market.

Breakup by Deployment Type:

On-premises
Cloud-based

+44 20 8123 2220
info@marketpublishers.com

On-premises holds the largest share of the industry

A detailed breakup and analysis of the market based on the deployment type have also been provided in the report. This includes on-premises and cloud-based. According to the report, on-premises accounted for the largest market share.

Many organizations prefer on-premises deployments because they handle sensitive data or want to have full control over their computing infrastructure. This type of deployment allows for security, customization, and dedicated resources required for HPC workloads. On the other hand, on-premises deployments also offer higher flexibility when it comes to scaling resources according to specific requirements as well as workload demands. The demand for on-premises deployments is expected to grow as industries demand higher for HPC.

Breakup by End Use:

Aerospace and Defense
Energy and Utilities
BFSI
Media and Entertainment
Manufacturing
Life Science and Healthcare
Others
The report has provided a detailed breakup and analysis of the market based on the end use. This includes aerospace and defense, energy and utilities, BFSI, media and entertainment, manufacturing, life science and healthcare, and others.

Breakup by Region:

North America
United States
Canada
Asia-Pacific
China
Japan
India
South Korea
Australia

+44 20 8123 2220
info@marketpublishers.com

Indonesia
Others
Europe
Germany
France
United Kingdom
Italy
Spain
Russia
Others
Latin America
Brazil
Mexico
Others
Middle East and Africa

North America leads the market, accounting for the largest high-performance computing (HPC) market share

The market research report has also provided a comprehensive analysis of all the major regional markets, which include North America (the United States and Canada); Asia Pacific (China, Japan, India, South Korea, Australia, Indonesia, and others); Europe (Germany, France, the United Kingdom, Italy, Spain, Russia, and others); Latin America (Brazil, Mexico, and others); and the Middle East and Africa. According to the report, North America accounted for the largest market share.

North America is leading the market for several reasons. This region has a vibrant ecosystem of tech companies, research centers, and universities that promote creativity in HPC technologies. North America has made huge investments in R&D, infrastructure, and labor force competence, thus nurturing the growth and acceptance of progressive HPC solutions. Furthermore, their strong presence in significant sectors like healthcare, finance, and aerospace creates demand for HPC applications. Moreover, North American favorable government policies as well as initiatives supporting technological innovation help it to lead in the HPC marketplace. Through an innovative program, the U.S. Department of Energy (DOE) is granting U.S. companies access to its exceptional computing resources and technical proficiency. This initiative utilizes high-performance computing (HPC) to address urgent manufacturing and materials development challenges faced by industries.

+44 20 8123 2220
info@marketpublishers.com

Leading Key Players in the High-performance Computing (HPC) Industry:
The market is driven by key players who are innovating through strategic partnerships and investments. Companies are always coming up with state-of-the-art HPC hardware, software, and services aimed at serving the ever-rising industries' demands. These players spend heavily on research and development in order to improve their computational capabilities, lower energy consumption costs, and increase scalability. Furthermore, strategic collaborations with research institutions, government agencies, and industry partners allow key players to extend their market footprint by developing niche-targeted solutions for specific usages only. By staying at the forefront of technological advancements and addressing customer needs, key players play an important role in driving the high-performance computing (HPC) market recent developments.

The market research report has provided a comprehensive analysis of the competitive landscape. Detailed profiles of all major companies have also been provided. Some of the key players in the market include:

Advanced Micro Devices Inc.
Atos SE
Cisco Systems Inc.
Dell Technologies Inc.
Fujitsu Limited
Hewlett Packard Enterprise Development LP
Intel Corporation
International Business Machines Corporation
Lenovo Group Limited
Microsoft Corporation
NetApp Inc.
Nvidia Corporation

(Please note that this is only a partial list of the key players, and the complete list is provided in the report.)

Latest News:
March 5, 2024: Advanced Micro Devices Inc. announced the AMD Spartan™ UltraScale+™ FPGA family. It is the newest addition to the extensive portfolio of AMD Cost-Optimized FPGAs and adaptive SoCs.
December 7, 2023: Atos SE announced that it is strengthening its partnership network. It has initiated a cooperation agreement with Onepoint, a player in consulting for the

+44 20 8123 2220
info@marketpublishers.com

major transformations of corporate businesses and government agencies.
March 25, 2024: Cisco Systems Inc. announced new purpose-built, multifunctional devices that deliver modernized collaboration experiences to today’s hybrid workforce.

Key Questions Answered in This Report

1. What was the size of the global high-performance computing (HPC) market in 2023?
2. What is the expected growth rate of the global high-performance computing (HPC) market during 2024-2032?
3. What are the key factors driving the global high-performance computing (HPC) market?
4. What has been the impact of COVID-19 on the global high-performance computing (HPC) market?
5. What is the breakup of the global high-performance computing (HPC) market based on the component?
6. What is the breakup of the global high-performance computing (HPC) market based on the deployment type?
7. What are the key regions in the global high-performance computing (HPC) market?
8. Who are the key players/companies in the global high-performance computing (HPC) market?

+44 20 8123 2220
info@marketpublishers.com

Contents

+44 20 8123 2220
info@marketpublishers.com

7 MARKET BREAKUP BY DEPLOYMENT TYPE

8 MARKET BREAKUP BY END USE

9 MARKET BREAKUP BY REGION

+44 20 8123 2220
info@marketpublishers.com

+44 20 8123 2220
info@marketpublishers.com

+44 20 8123 2220
info@marketpublishers.com

+44 20 8123 2220
info@marketpublishers.com

+44 20 8123 2220
info@marketpublishers.com

I would like to order

Product name: High-performance Computing (HPC) Market Report by Component (Hardware, Software and Services), Deployment Type (On-premises, Cloud-based), End Use (Aerospace and Defense, Energy and Utilities, BFSI, Media and Entertainment, Manufacturing, Life Science and Healthcare, and Others), and Region 2024-2032

Product link: https://marketpublishers.com/r/H64E43A7AEFAEN.html

Price: US$ 3,899.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:
info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page https://marketpublishers.com/r/H64E43A7AEFAEN.html

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:
Last name:
Email:
Company:
Address:
City:
Zip code:
Country:
Tel:
Fax:
Your message:

**All fields are required

Custumer signature _____

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at https://marketpublishers.com/docs/terms.html

+44 20 8123 2220
info@marketpublishers.com

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970