

Computer Hardware Components Market Forecasts to 2034 – Global Analysis By Component Type (Processing Units, Memory & Storage, Motherboards & Chipsets, Power & Cooling Systems, Networking Hardware and Input/Output Hardware), Device Category, Distribution Channel, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Computer Hardware Components Market is accounted for \$785.7 billion in 2026 and is expected to reach \$1261.8 billion by 2034 growing at a CAGR of 6.1% during the forecast period. Computer hardware components refer to the tangible elements of a computer system that collaborate to carry out various tasks. The CPU handles processing and instruction execution, while RAM temporarily stores data for rapid use. Storage units, including HDDs and SSDs, preserve information long-term. Users interact with computers through input devices like keyboards and mice, and results are presented via output devices such as monitors and printers. The motherboard serves as the central hub connecting all hardware, and the power supply delivers necessary energy. These elements collectively enable efficient and effective computer performance.

According to the Semiconductor Industry Association (SIA), global semiconductor sales — the backbone of computer hardware — totaled \$526.8 billion in 2023, underscoring their critical role in CPUs, GPUs, and memory devices.

Market Dynamics:

Driver:

Growing demand for high-performance computing

Rising requirements for high-speed and powerful computing across industries like IT, scientific research, and gaming are fueling the market for computer hardware components. Users need faster processors, larger RAM, and efficient storage to manage AI, big data, and complex software applications. Gaming communities also push for advanced GPUs, CPUs, and thermal solutions. As computing tasks grow more demanding, manufacturers continue developing high-performance hardware, boosting the overall growth of the computer hardware components market worldwide.

Restraint:

High cost of advanced hardware components

Expensive high-performance hardware, including graphics cards, processors, and NVMe drives, restricts market growth as many consumers and small businesses find them unaffordable. Sophisticated production, costly materials, and ongoing R&D contribute to higher retail prices. Price-sensitive users, especially in developing regions, may choose cheaper alternatives or postpone upgrades. Even enterprises with limited IT budgets often prefer refurbished or mid-range solutions. Consequently, the steep cost of cutting-edge hardware serves as a major restraint for the computer hardware components market worldwide.

Opportunity:

Expansion of cloud computing services

The rise of cloud computing offers promising growth opportunities for computer hardware components. Cloud providers need powerful servers, storage systems, networking devices, and high-speed processors to manage virtualized and data-heavy workloads. Increasing enterprise migration to public, private, and hybrid clouds boosts demand for scalable and dependable hardware. Manufacturers can cater to this need with energy-efficient, high-capacity components designed for cloud infrastructure. Continuous advancements in virtualization and containerization further drive hardware upgrades, providing sustained growth potential in the global computer hardware components market.

Threat:

Dependence on semiconductor suppliers

Heavy reliance on semiconductor suppliers exposes the computer hardware components market to supply chain risks. Disruptions from natural disasters, political tensions, or chip shortages can delay production of processors, graphics cards, memory, and storage. Dependence on a few major suppliers may cause price fluctuations and component scarcity. Such disruptions increase costs and delay deliveries, impacting customer satisfaction. Consequently, this dependence on semiconductor sources represents a significant threat that can limit steady growth in the global computer hardware components market.

Covid-19 Impact:

The COVID-19 pandemic had a dual impact on the computer hardware components market, causing challenges and driving demand simultaneously. Factory shutdowns and supply chain disruptions delayed production and delivery of processors, graphics cards, RAM, and storage devices. At the same time, remote work, e-learning, and increased online entertainment boosted the need for laptops, desktops, and advanced hardware. Companies and individuals upgraded IT systems to support virtual operations. Thus, while the pandemic caused logistical and manufacturing obstacles, it also accelerated hardware adoption, producing a complex yet transformative effect on the global computer hardware components market.

The processing units segment is expected to be the largest during the forecast period

The processing units segment is expected to account for the largest market share during the forecast period because they are fundamental to computing operations. They handle instruction execution, data processing, and support for complex applications, making them indispensable in desktops, laptops, servers, and high-performance systems. Rising adoption of AI, cloud services, gaming, and enterprise IT has amplified the demand for high-performance, energy-efficient processors and graphics units. Processing units largely dictate system performance and operational efficiency, establishing them as the leading segment and the primary driver of growth within the global computer hardware components market.

The laptops & notebooks segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the laptops & notebooks segment is predicted to witness the highest growth rate. Growing trends like remote working, e-learning, and hybrid office models are boosting demand for portable, high-performance devices. Both consumers and businesses are upgrading to modern laptops with enhanced processors, memory, and storage capabilities. Innovations in battery efficiency, display technology, and design also support rising adoption. The mobility, flexibility, and functionality offered by laptops and notebooks make them a leading growth segment, contributing significantly to the expansion and increasing market share of the global computer hardware components market.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share due to widespread technology adoption and advanced IT infrastructure. The U.S. and Canada host key hardware manufacturers and cloud service providers, driving demand for processors, graphics cards, memory, storage, and networking equipment. Rising investments in AI, data centers, and gaming further stimulate growth. High consumer demand for laptops, desktops, and gaming platforms, alongside enterprise infrastructure upgrades, reinforces North America's leading position, establishing it as the most significant regional contributor to the global computer hardware components market.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR. Increasing digital transformation, growing IT infrastructure, and rising adoption of cloud services, AI, and gaming solutions are boosting demand. Key countries including China, India, Japan, and South Korea are seeing higher requirements for CPUs, GPUs, memory, storage, and networking components. Expansion of consumer electronics, the rise of remote work and online learning, along with government programs promoting technology adoption, are driving rapid growth, making Asia-Pacific the leading region in terms of market expansion and growth rate.

Key players in the market

Some of the key players in Computer Hardware Components Market include Dell Technologies Inc., Western Digital Corporation, Seagate Technology plc, Quanta Computer, Inc., Wiwynn Corp, Pure Storage, Inc., HP Inc., Super Micro Computer, Inc., Dawning Information Industry Co. Ltd, Wistron Corp, Lenovo Group Ltd, ASUSTeK

Computer, Inc., Lite-On Technology Corp, Phison Electronics Corp, Intel Corporation, Advanced Micro Devices (AMD), NVIDIA Corporation and Samsung Electronics.

Key Developments:

In September 2025, Seagate Technology Holdings plc announced a strategic alliance with Acronis, a global leader in cybersecurity and data protection. This collaboration aims to equip managed service providers (MSPs) and global enterprises with secure, scalable archival storage solutions to meet the demands of AI-accelerated, rapid data growth.

In May 2025, Western Digital and Ingrasys announced a strategic collaboration to deliver a new flagship Top-of-Rack (TOR) switch with embedded storage. This new TOR EBOF (Ethernet Bunch of Flash) will provide distributed storage at the network edge for lower latency storage access, reducing the need for separate storage networks and avoiding trips to centralized storage arrays.

In November 2024, Quanta Computer Inc. and Bloom Energy announced a major expansion of an existing agreement to power the production of critical hardware serving the AI industry. The new agreement increases the power capacity of Quanta's existing Bloom SOFC installation by more than 150 percent and will circumvent a costly utility interconnection delay to keep up with rapidly growing demand for orders.

Component Types Covered:

Processing Units

Memory & Storage

Motherboards & Chipsets

Power & Cooling Systems

Networking Hardware

Input/Output Hardware

Device Categories Covered:

Desktops & Workstations

Laptops & Notebooks

Servers & Data Center Systems

Embedded Computing Systems

Gaming Hardware Platforms

Distribution Channels Covered:

OEMs (Original Equipment Manufacturers)

Retail & E-commerce Platforms

System Integrators & VARs

End Users Covered:

Consumer IT & Personal Computing

Enterprise IT & Data Centers

Healthcare Computing Systems

Automotive Computing & Mobility Hardware

Industrial Automation Hardware

Defense & Aerospace Computing Systems

Regions Covered:

North America

United States

Canada

Mexico

Europe

United Kingdom

Germany

France

Italy

Spain

Netherlands

Belgium

Sweden

Switzerland

Poland

Rest of Europe

Asia Pacific

China

Japan

India

South Korea

Australia

Indonesia

Thailand

Malaysia

Singapore

Vietnam

Rest of Asia Pacific

South America

Brazil

Argentina

Colombia

Chile

Peru

Rest of South America

Rest of the World (RoW)

Middle East

Saudi Arabia

United Arab Emirates

Qatar

Israel

Rest of Middle East

Africa

South Africa

Egypt

Morocco

Rest of Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2023, 2024, 2025, 2026, 2027, 2028, 2030, 2032 and 2034
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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