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Global AI Computing Hardware: AI Accelerators and AI Server Systems Market 2026 by Manufacturers, Regions, Type and Application, Forecast to 2032

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Abstracts

According to our (Global Info Research) latest study, the global AI Computing Hardware: AI Accelerators and AI Server Systems market size was valued at US$ 294280 million in 2025 and is forecast to a readjusted size of US$ 968651 million by 2032 with a CAGR of 15.4% during review period.

AI computing hardware refers to specialized or heterogeneous computing devices designed to run artificial intelligence training, fine-tuning, inference, and edge AI workloads. The category primarily includes data center AI accelerators, GPUs, ASICs, TPUs, NPUs, RDUs, LPUs, accelerator cards, AI modules, GPU servers, AI servers, rack-scale AI computing systems, and embedded AI processors used in intelligent vehicles, robotics, industrial vision, smart devices, and AIoT applications. This study focuses on hardware that directly enables tensor operations, matrix multiplication, low-precision floating-point or integer computation, model parallelism, high-bandwidth memory access, high-speed accelerator interconnects, and large-scale AI cluster deployment. The research objects include AI chip designers, accelerator card and module suppliers, AI server OEMs/ODMs, rack-scale system providers, and major cloud platforms with in-house custom AI silicon.

Based on our research, AI computing hardware has evolved from a standalone “AI chip” market into a full-stack hardware competition across chips, accelerator cards, servers, racks, clusters, and software ecosystems. Training workloads remain heavily dependent on high-end GPUs and tightly coupled GPU interconnect systems, while inference workloads are becoming more diversified across GPUs, ASICs, TPUs, NPUs, RDUs, LPUs, and edge AI SoCs. For industry sizing, it is essential to separate the broad vendor universe from the revenue model. The broad universe includes chip

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designers, accelerator card suppliers, server OEMs/ODMs, edge AI chipmakers, and cloud providers with captive silicon. However, the revenue model must avoid double counting between accelerator vendor revenue and AI server system revenue. This study therefore uses a moderately narrow system-level hardware shipment value, excluding cloud service revenue, HBM, networking switches, cooling infrastructure, power systems, and AI software subscriptions from the core market.

From a supply-side perspective, North America continues to hold the strongest global capabilities in high-end AI accelerators and cloud providers' in-house AI silicon, while Taiwan serves as the core global hub for AI server ODM/OEM manufacturing and rack-scale system production. Taiwanese suppliers play a critical role in manufacturing, system integration, and scale-up delivery across the NVIDIA, AMD, and hyperscale cloud supply chains.China is building a more independent supply system around Ascend, domestic GPUs, AI servers, and automotive AI chips, although advanced process nodes, HBM, advanced packaging, and software ecosystem maturity remain structural constraints.

Demand growth in 2025 and 2026 is primarily driven by frontier model training, large-scale inference clusters, cloud capital expenditure, sovereign AI projects, enterprise private AI deployments, and high-compute intelligent driving platforms. Training demand is highly concentrated among hyperscalers, AI labs, and GPU cloud providers, whereas inference demand is gradually spreading across enterprises, governments, telecom operators, industrial users, and endpoint device makers. Edge AI chips, automotive AI SoCs, and physical AI hardware generally have lower average selling prices than data center GPUs, but their shipment scale, application diversity, and real-time local processing requirements make them a strategically important long-term growth segment.

From a technology standpoint, competition is shifting from peak chip-level FLOPS to system-level throughput, memory capacity, memory bandwidth, accelerator interconnect efficiency, power density, liquid cooling readiness, software stack maturity, and supply availability. The latest product directions from NVIDIA Blackwell, AMD MI350, Huawei Atlas SuperPoD, Qualcomm AI200/AI250, Google TPU, AWS Trainium, and Meta MTIA all indicate that the next phase of competition will be defined by rack-scale architecture, inference cost, energy efficiency, and ecosystem switching cost. The main substitution risks are custom cloud ASICs replacing part of general-purpose GPU demand, inference-specific processors diverting workloads from training-oriented GPUs, and edge AI hardware localizing selected workloads that previously depended on cloud inference.

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This report is a detailed and comprehensive analysis for global AI Computing Hardware: AI Accelerators and AI Server Systems market. Both quantitative and qualitative analyses are presented by manufacturers, by region & country, by Type and by Application. As the market is constantly changing, this report explores the competition, supply and demand trends, as well as key factors that contribute to its changing demands across many markets. Company profiles and product examples of selected competitors, along with market share estimates of some of the selected leaders for the year 2025, are provided.

Key Features:

Global AI Computing Hardware: AI Accelerators and AI Server Systems market size and forecasts, in consumption value ($ Million), sales quantity (Units), and average selling prices (US$/Unit), 2021-2032

Global AI Computing Hardware: AI Accelerators and AI Server Systems market size and forecasts by region and country, in consumption value ($ Million), sales quantity (Units), and average selling prices (US$/Unit), 2021-2032

Global AI Computing Hardware: AI Accelerators and AI Server Systems market size and forecasts, by Type and by Application, in consumption value ($ Million), sales quantity (Units), and average selling prices (US$/Unit), 2021-2032

Global AI Computing Hardware: AI Accelerators and AI Server Systems market shares of main players, shipments in revenue ($ Million), sales quantity (Units), and ASP (US$/Unit), 2021-2026

The Primary Objectives in This Report Are:

To determine the size of the total market opportunity of global and key countries

To assess the growth potential for AI Computing Hardware: AI Accelerators and AI Server Systems

To forecast future growth in each product and end-use market

To assess competitive factors affecting the marketplace

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This report profiles key players in the global AI Computing Hardware: AI Accelerators and AI Server Systems market based on the following parameters - company overview, sales quantity, revenue, price, gross margin, product portfolio, geographical presence, and key developments. Key companies covered as a part of this study include Inspur, Dell, HPE, Huawei, Lenovo, IBM, Fujitsu, Cisco, Nvidia, H3C, etc.

This report also provides key insights about market drivers, restraints, opportunities, new product launches or approvals.

Market Segmentation

AI Computing Hardware: AI Accelerators and AI Server Systems market is split by Type and by Application. For the period 2021-2032, the growth among segments provides accurate calculations and forecasts for consumption value by Type, and by Application in terms of volume and value. This analysis can help you expand your business by targeting qualified niche markets.

Market segment by Type

CPU+GPU

CPU+FPGA

CPU+ASIC

Other

Market segment by Compute Architecture

GPU / GPGPU

ASIC / XPU

TPU-like Matrix Accelerator

NPU

RDU / LPU / Dataflow Processor

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Neuromorphic Processor

Other

Market segment by Application

Internet

Telecommunications

Healthcare

Government

Other

Major players covered

Inspur

Dell

HPE

Huawei

Lenovo

IBM

Fujitsu

Cisco

Nvidia

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H3C

Enginetech

Nettrix

Kunqian

PowerLeader

GIGABYTE

Digital China

ADLINK

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Market segment by region, regional analysis covers

North America (United States, Canada, and Mexico)

Europe (Germany, France, United Kingdom, Russia, Italy, and Rest of Europe)

Asia-Pacific (China, Japan, Korea, India, Southeast Asia, and Australia)

South America (Brazil, Argentina, Colombia, and Rest of South America)

Middle East & Africa (Saudi Arabia, UAE, Egypt, South Africa, and Rest of Middle East & Africa)

The content of the study subjects, includes a total of 15 chapters:

Chapter 1, to describe AI Computing Hardware: AI Accelerators and AI Server Systems product scope, market overview, market estimation caveats and base year.

Chapter 2, to profile the top manufacturers of AI Computing Hardware: AI Accelerators

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and AI Server Systems, with price, sales quantity, revenue, and global market share of AI Computing Hardware: AI Accelerators and AI Server Systems from 2021 to 2026.

Chapter 3, the AI Computing Hardware: AI Accelerators and AI Server Systems competitive situation, sales quantity, revenue, and global market share of top manufacturers are analyzed emphatically by landscape contrast.

Chapter 4, the AI Computing Hardware: AI Accelerators and AI Server Systems breakdown data are shown at the regional level, to show the sales quantity, consumption value, and growth by regions, from 2021 to 2032.

Chapter 5 and 6, to segment the sales by Type and by Application, with sales market share and growth rate by Type, by Application, from 2021 to 2032.

Chapter 7, 8, 9, 10 and 11, to break the sales data at the country level, with sales quantity, consumption value, and market share for key countries in the world, from 2021 to 2026.and AI Computing Hardware: AI Accelerators and AI Server Systems market forecast, by regions, by Type, and by Application, with sales and revenue, from 2027 to 2032.

Chapter 12, market dynamics, drivers, restraints, trends, and Porters Five Forces analysis.

Chapter 13, the key raw materials and key suppliers, and industry chain of AI Computing Hardware: AI Accelerators and AI Server Systems.

Chapter 14 and 15, to describe AI Computing Hardware: AI Accelerators and AI Server Systems sales channel, distributors, customers, research findings and conclusion.

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