

Global AI Chip Market Size Study & Forecast, by Chip Type, Processing Type, Technology, Application, Industry Vertical and Regional Forecasts 2025-2035

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Abstracts

The Global AI Chip Market is valued at approximately USD 28.46 billion in 2024 and is projected to grow at an astonishing CAGR of 38.20% during the forecast period 2025–2035. As artificial intelligence continues to permeate industries with disruptive potential, the demand for high-performance AI chips has escalated sharply. These chips, designed to handle complex computations, power the intelligence behind natural language processing, real-time decision-making, computer vision, and more—forming the digital cortex of autonomous machines and intelligent systems. AI chips are no longer just supplementary to processors; they are strategically engineered to accelerate algorithmic throughput, optimize machine learning tasks, and reduce energy consumption, making them essential to the future of computing.

The evolution of chip architecture has played a pivotal role in propelling this market forward. From GPUs and FPGAs to ASICs and neural processing units, each advancement has unlocked new efficiencies and functionalities tailored to specific AI workloads. As industries from healthcare to automotive and finance to retail leverage AI to revamp their operations, the need for faster, scalable, and adaptive chips has intensified. Furthermore, edge AI—where inference is performed locally on devices—has emerged as a game-changing paradigm. It reduces latency, bolsters data privacy, and enables real-time decision-making, opening up new growth avenues particularly in sectors like robotics, autonomous vehicles, and smart devices.

Regionally, North America is set to retain its dominance in the global AI Chip Market in 2025, driven by a deep-rooted tech ecosystem, high R&D intensity, and the presence of leading semiconductor players such as NVIDIA, AMD, and Intel. The U.S. continues to be a breeding ground for AI chip innovation, with extensive adoption in defense,

autonomous vehicles, and data centers. Meanwhile, Asia Pacific is expected to witness the fastest growth rate, attributed to rising investments in semiconductor manufacturing in China, South Korea, and Taiwan, coupled with AI integration in consumer electronics and smart infrastructure. Europe is also catching up, particularly in industrial automation and automotive AI applications, supported by strong regulatory initiatives around AI ethics and development.

Major market player included in this report are:

NVIDIA Corporation

Intel Corporation

Advanced Micro Devices, Inc.

Qualcomm Technologies Inc.

Samsung Electronics Co., Ltd.

Apple Inc.

Huawei Technologies Co., Ltd.

Alphabet Inc. (Google)

Amazon Web Services

Microsoft Corporation

Graphcore Ltd.

Cerebras Systems

Tenstorrent Inc.

Mythic Inc.

IBM Corporation

Global AI Chip Market Report Scope:

Historical Data – 2023, 2024

Base Year for Estimation – 2024

Forecast period – 2025-2035

Report Coverage – Revenue forecast, Company Ranking, Competitive Landscape, Growth factors, and Trends

Regional Scope – North America; Europe; Asia Pacific; Latin America; Middle East & Africa

Customization Scope – Free report customization (equivalent up to 8 analysts' working hours) with purchase. Addition or alteration to country, regional & segment scope*

The objective of the study is to define market sizes of different segments & countries in recent years and to forecast the values for the coming years. The report is designed to incorporate both qualitative and quantitative aspects of the industry within the countries involved in the study. The report also provides detailed information about crucial aspects, such as driving factors and challenges, which will define the future growth of the market. Additionally, it incorporates potential opportunities in micro-markets for stakeholders to invest, along with a detailed analysis of the competitive landscape and product offerings of key players. The detailed segments and sub-segments of the market are explained below:

By Chip Type:

GPU

ASIC

FPGA

CPU

Others

By Processing Type:

Edge

Cloud

By Technology:

System On Chip

System in Package

Multi Chip Module

Others

By Application:

Natural Language Processing

Robotics

Computer Vision

Network Security

Others

By Industry Vertical:

Media and Advertising

BFSI

IT and Telecom

Retail

Healthcare

Automotive and Transportation

Others

By Region:

North America

U.S.

Canada

Europe

UK

Germany

France

Spain

Italy

ROE

Asia Pacific

China

India

Japan

Australia

South Korea

RoAPAC

Latin America

Brazil

Mexico

Middle East & Africa

UAE

Saudi Arabia

South Africa

Rest of Middle East & Africa

Key Takeaways:

Market Estimates & Forecast for 10 years from 2025 to 2035.

Annualized revenues and regional level analysis for each market segment.

Detailed analysis of geographical landscape with Country level analysis of major regions.

Competitive landscape with information on major players in the market.

Analysis of key business strategies and recommendations on future market approach.

Analysis of competitive structure of the market.

Demand side and supply side analysis of the market.

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