

## Global AI Infrastructure Market

Market Research Report | 2025-12-26 | 273 pages | BCC Research

### AVAILABLE LICENSES:

- Single User License \$4650.00
- 2-5 Users License \$5580.00
- Site License \$6696.00
- Enterprise License \$8035.00

### Report description:

#### Description

#### Report Scope

This report analyzes the advances in the global market for AI infrastructure. It segments the market into component infrastructure; network infrastructure; storage infrastructure; and support infrastructure.

- Component infrastructure: Hardware, including graphics processing units (GPUs), application-specific integrated circuits (ASICs), and field-programmable gate arrays (FPGAs), AI compute clusters, and software
- Network infrastructure: Switches, routers, network interface cards (NICs) and software.
- Storage infrastructure: Storage systems, including direct-attached storage (DAS), storage area networks (SANs), and network-attached storage (NAS); storage media, including hard disk drives (HDDs) and solid-state drives (SSDs).
- Support infrastructure: Power systems, including uninterruptible power supplies (UPS), energy storage systems (ESS), and backup generation; onsite/renewable generation and advanced cooling systems, which include onsite/renewable generation, air cooling, liquid cooling and immersion cooling), physical access control (PAC) systems and physical identity and access management (PIAM) systems; video surveillance, and fire and life safety), and data center infrastructure management (DCIM).

The report also segments the market by end-use industry, including cloud service providers, BFSI, IT and telecom, healthcare, manufacturing, retail and e-commerce, media and entertainment, and government organizations.

The study also analyzes the market by region: the Americas, Europe, Asia-Pacific, and the Middle East and Africa (MEA). This report focuses on emerging technologies, patents, leading companies' strategies, market shares, and environmental, social and governance (ESG) initiatives, and macroeconomic factors, including economic growth, global interest rates, and the cost of capital.

It also includes global revenue (\$ millions) for the base year 2024, estimated data for 2025, and projections of compound annual growth rates (CAGRs) for the period of 2025 through 2030. All market values are in U.S. dollars (\$ millions).

#### Report Includes

- 143 data tables and 55 additional tables

- An overview of the global market for AI infrastructure
- In-depth analysis of global market trends, featuring historical revenue data for 2024, estimated figures for 2025, as well as forecasts for 2026 and 2029. This analysis includes projections of compound annual growth rates (CAGRs) through 2030
- Evaluation of the current market size and revenue growth prospects specific to the AI infrastructure market, accompanied by a market share analysis by component infrastructure, network infrastructure, storage infrastructure, support infrastructure, end-use industry, and region
- Analysis of current and future demand in the AI infrastructure market, along with a detailed analysis of the competitive environment, market regulations and reimbursement practices
- Analysis of drivers, challenges and opportunities affecting market growth
- Coverage of evolving technologies, the current and future market potential, R&D activities, growth strategies, new product pipeline, regulatory framework and reimbursement scenarios, and ESG trends of the market
- Market share analysis of the key market participants, along with their research priorities, product portfolios, global rankings and competitive landscape
- Profiles of major companies within the industry, including Nvidia Corp., Alphabet Inc. (Google), Amazon Web Services Inc., Microsoft, Advanced Micro Devices Inc.

## Executive Summary

### Summary:

The global market for artificial intelligence (AI) infrastructure is expected to grow from \$158.3 billion in 2025 and is projected to reach \$418.8 billion by the end of 2030, at a compound annual growth rate (CAGR) of 21.5% during the forecast period of 2025 to 2030.

## Technological Advances and Applications

Technological advances in the AI infrastructure market involve innovations in highly specialized hardware. The computational demands of large language models (LLMs) and other complex AI algorithms have necessitated a shift away from general-purpose processors toward specialized GPUs, which excel at the parallel processing required for deep learning, as well as ASICs such as Google's tensor processing units (TPUs) and custom chips from major hyperscalers. These custom chips are optimized for specific AI tasks -- either model training or inference -- through features such as lowprecision arithmetic and optimized on-chip memory access, which dramatically improve the speed and energy efficiency required to handle the power consumption demands of today's AI data centers.

Enhanced processing power fuels the development and scaling of generative AI applications, from creating hyper-realistic content to deploying AI agents capable of complex reasoning and multi-step workflows in enterprise environments. Furthermore, technological advances are driving the shift to edge AI, where inference and real-time processing are performed closer to the data source, such as on factory floors, in autonomous vehicles, or via IoT devices. This is enabled by more efficient, lower-power AI accelerators that can be seamlessly integrated with 5G networks, thereby reducing latency. This capability allows for instantaneous decision-making in safety-critical systems, predictive maintenance in manufacturing, and personalized customer experiences in various industries.

## Table of Contents:

- Table of Contents
- Chapter 1 Executive Summary
- Market Outlook
- Scope of the Report

**Scotts International. EU Vat number: PL 6772247784**

tel. 0048 603 394 346 e-mail: support@scotts-international.com  
www.scotts-international.com

Market Summary  
Technological Advances and Applications  
Market Dynamics  
Future Trends and Developments  
Segmental Analysis  
Regional Insights and Emerging Markets  
Conclusion

Chapter 2 Market Overview  
Current Market Overview  
Future of the AI Infrastructure  
AI Infrastructure vs. Traditional IT Infrastructure

Macroeconomic Factors  
Economic Growth  
Global Interest Rates and Cost of Capital  
U.S. Tariff Impact on the Global AI Infrastructure Market

Porter's Five Forces Analysis  
Bargaining Power of Suppliers  
Bargaining Power of Buyers  
Potential for New Entrants  
Competition in the Industry  
Threat of Substitutes

Case Studies  
Case Study 1:  
Case Study 2:  
Case Study 3:  
Case Study 4:

Chapter 3 Market Dynamics  
Overview  
Market Dynamics Snapshot  
Market Drivers  
Exponential Data Growth  
Widespread Adoption of AI by Enterprises and Industries  
Need for Automation and Operational Efficiency  
AI Hardware Innovation and Infrastructure Power Demand  
Market Restraints/Challenges  
Computational Power Constraints  
High Cost of Infrastructure  
Market Opportunities  
Increasing Number of Data Centers and Hyperscale Data Centers  
Generative AI-Optimized Hardware and Compute Power

Chapter 4 Emerging Technologies  
Emerging Technologies  
Generative AI  
Edge AI  
AI Explainability (XAI)  
Quantum Machine Learning  
Large Language Models

Patent Analysis

Key Published Patents

Findings

Chapter 5 Market Segmentation Analysis

Segmentation Breakdown

Market Breakdown, by Type

Takeaways

Market Breakdown, by Component Infrastructure

Takeaways

Hardware

Software

AI Compute Clusters

Market Breakdown, by Storage Infrastructure

Takeaways

Storage Systems

Storage Medium

Market Breakdown, by Network Infrastructure

Takeaways

Switches

Routers

Network Interface Cards

Network Software

Other Network Infrastructure Components

Market Breakdown, by Support Infrastructure

Takeaways

Power Systems

Onsite/Renewable Generation and Advanced Cooling Systems

Physical Security and Access Control Systems

Data Center Infrastructure Management

Market Breakdown, by End-Use Industry

Takeaways

Cloud Service Providers

Banking, Financial Services, and Insurance

Information Technology and Telecommunications

Healthcare

Manufacturing

Retail and E-Commerce

Media and Entertainment

Government Organizations

Other End-User Industries

Geographic Breakdown

Takeaways

The Americas

United States

Canada

Mexico

South America

**Scotts International. EU Vat number: PL 6772247784**

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

Americas AI Infrastructure Market Size and Forecast  
Europe  
Germany  
U.K.  
France  
Italy  
Rest of Europe  
Europe AI Infrastructure Market Size and Forecast  
Asia-Pacific  
China  
Japan  
South Korea  
India  
Rest of Asia-Pacific  
Asia-Pacific AI Infrastructure Market Size and Forecast  
Middle East and Africa  
Middle East  
Africa  
Middle East and Africa AI Infrastructure Market Size and Forecast

Chapter 6 Competitive Intelligence  
Leading Companies in the AI Infrastructure Market  
Nvidia Corp.  
Alphabet Inc. (Google)  
Amazon Web Services Inc.  
Microsoft  
Advanced Micro Devices Inc.  
Market Ecosystem  
Foundation and Sourcing  
Platform and Enablement  
Consumption and Deployment  
Optimization and Evolution  
Product Mapping Analysis  
Strategic Analysis  
M&A  
Collaborations and Partnerships  
Investments and Expansions

Chapter 7 Sustainability in the AI Infrastructure Market: An ESG Perspective  
Introduction to ESG  
Status of ESG in the Global AI Infrastructure Industry  
Case Studies  
Nvidia Corp.  
Caterpillar  
Concluding Remarks from BCC Research

Chapter 8 Appendix  
Methodology  
References  
Abbreviations

Company Profiles

ABB

ADVANCED MICRO DEVICES INC.

ALPHABET INC. (GOOGLE INC.)

AMAZON WEB SERVICES INC.

CATERPILLAR

CUMMINS INC.

DELL INC.

IBM CORP.

INTEL CORP.

MICRON TECHNOLOGY INC.

MICROSOFT

NVIDIA CORP.

ORACLE

SAMSUNG

SCHNEIDER ELECTRIC

**Scotts International. EU Vat number: PL 6772247784**

tel. 0048 603 394 346 e-mail: support@scotts-international.com

[www.scotts-international.com](http://www.scotts-international.com)

## Global AI Infrastructure Market

Market Research Report | 2025-12-26 | 273 pages | BCC Research

To place an Order with Scotts International:

- Print this form
- Complete the relevant blank fields and sign
- Send as a scanned email to support@scotts-international.com

### ORDER FORM:

Select license	License	Price
	Single User License	\$4650.00
	2-5 Users License	\$5580.00
	Site License	\$6696.00
	Enterprise License	\$8035.00
		VAT
		Total

\*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346.

\*\* VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*	Phone*
<input type="text"/>	<input type="text"/>
First Name*	Last Name*
<input type="text"/>	<input type="text"/>
Job title*	
<input type="text"/>	
Company Name*	EU Vat / Tax ID / NIP number*
<input type="text"/>	<input type="text"/>
Address*	City*
<input type="text"/>	<input type="text"/>
Zip Code*	Country*
<input type="text"/>	<input type="text"/>
	Date
	<input type="text" value="2026-02-11"/>

Signature

**Scotts International. EU Vat number: PL 6772247784**

tel. 0048 603 394 346 e-mail: support@scotts-international.com

[www.scotts-international.com](http://www.scotts-international.com)



**Scotts International. EU Vat number: PL 6772247784**

tel. 0048 603 394 346 e-mail: support@scotts-international.com

[www.scotts-international.com](http://www.scotts-international.com)