

# **Artificial Intelligence (AI) Powered Storage System Market Forecasts to 2034 – Global Analysis By Offering (Hardware, Software and Other Offerings), Storage System (Direct Attached Storage Systems, Network Attached Storage Systems and Other Storage Systems), Storage Medium, Storage Architecture, End User and By Geography**

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## **Abstracts**

According to Statistics MRC, the Global AI Powered Storage Market is accounted for \$47.0 billion in 2026 and is expected to reach \$275.1 billion by 2034 growing at a CAGR of 24.70% during the forecast period. Artificial intelligence (AI)-powered storage is a term used to describe storage solutions that use AI technologies to improve data storage system performance, efficiency, and management. These systems analyze data patterns, forecast usage, and optimize storage resources in real-time by using machine learning algorithms. With the help of this creative solution, businesses can improve the responsiveness, scalability, and affordability of their storage infrastructure.

### **Market Dynamics:**

#### **Driver:**

Data center modernization

Businesses look to improve their infrastructure to handle the growing demands of AI workloads. Large datasets are produced by AI applications, necessitating effective storage options for speedy access and analysis. Improved performance, scalability, and responsiveness are made possible by modernizing data centers with AI-powered

storage solutions, which also optimize data processing for AI algorithms. These solutions frequently make use of cutting-edge technologies, like predictive analytics machine learning algorithms, to improve data management and guarantee smooth integration with developing AI applications.

**Restraint:**

Data security and privacy concerns

Large-scale sensitive data collection and analysis by these systems increases the possibility of unwanted access and security breaches. To reduce these risks, it becomes essential to have strong encryption, access controls, and compliance with data protection laws. The difficulty is striking a careful balance between protecting people's privacy and utilizing AI's potential to optimize storage. Increased awareness of data privacy concerns and stricter regulations highlight the necessity of having robust security features in AI-powered storage solutions.

**Opportunity:**

Smart data backup and recovery

By utilizing cutting-edge algorithms and machine learning, intelligent data backup and recovery offers a substantial opportunity in the AI-powered storage market. Artificial intelligence (AI) can improve data security by anticipating possible threats and streamlining backup plans. Through intelligent analytics and automation, AI-driven recovery solutions facilitate quicker and more precise data restoration, improving overall system resilience. Furthermore, the use of AI in backup and recovery procedures gives organizations a competitive edge by meeting their changing needs for managing and protecting their vital data.

**Threat:**

Vendor lock-in

In the AI-powered storage market, vendor lock-in refers to the danger of becoming unduly reliant on the proprietary technologies and formats of a single provider. Organizations implementing AI storage solutions might incorporate vendor-specific, specialized formats or algorithms. This can make it difficult to switch providers, limiting flexibility and resulting in expensive switching expenses. In the context of AI storage,

the risk of vendor lock-in highlights the value of open-source solutions and standardization, which free users from vendor lock-in and promote a more competitive and interoperable market.

### **Covid-19 Impact:**

There is a growing need for scalable and effective storage solutions to handle the spike in data volume as remote work becomes more common. AI-powered storage is being used by businesses to improve security, accessibility, and data management. Investments in cutting-edge storage technologies have been fuelled by the necessity for a solid infrastructure to support AI and machine learning applications. Additionally, the market has recovered robustly despite early supply chain disruptions as companies prioritize digital transformation initiatives, which is driving up the adoption of AI-powered storage solutions.

The hard disk drive segment is expected to be the largest during the forecast period

The Hard Disk Drive (HDD) segment has seen strong growth because of its high storage capacities and affordability, which enable it to meet the enormous data requirements of AI applications. For enterprises looking for scalable storage solutions, HDDs are the better option because they provide a dependable and affordable means of storing large datasets produced by AI algorithms. Furthermore, the performance of HDDs has also been improved by developments in technology, such as increased areal density and faster rotational speeds, which are in line with AI's intensive data processing needs.

The network attached storage systems segment is expected to have the highest CAGR during the forecast period

The growing need for effective and scalable storage solutions in the artificial intelligence era is driving the network attached storage systems segment. Large dataset handling requires high-speed data access and storage capabilities, which are provided by NAS systems with seamless integration with AI workflows. Strong and easily accessible storage solutions are becoming more and more necessary as AI applications are being used in a wider range of industries, including manufacturing, healthcare, and finance. Because of their improved data management capabilities, NAS systems are becoming essential for businesses implementing AI projects, which have led to the significant growth this market segment has seen.

### **Region with largest share:**

North America has played a significant role in the global AI industry, and the region's growth in AI-powered storage solutions is due to the fact that artificial intelligence is being adopted more widely in a variety of industries. The region is seeing an increase in the use of AI-powered storage solutions due to region's strong technological infrastructure, large R&D investments, and vibrant start-up ecosystem. North America's AI-powered storage market is predicted to grow steadily due to the region's increasing need for sophisticated data management and analytics capabilities. Further, this will encourage innovation and technological advancements in storage technologies of this region.

### **Region with highest CAGR:**

The market for AI-powered storage has grown significantly in the Asia-Pacific region, primarily due to the region's increased adoption of cutting-edge technologies and the region's widespread digital transformation. The incorporation of artificial intelligence into storage systems has been facilitated by the increase in demand for effective data management solutions. This growth has been further fuelled by expanding cloud infrastructure, a rapidly developing IT landscape, and rapid economic development. Leading nations like China, India, and Japan are utilizing AI-powered storage to boost scalability, optimize resource usage, and improve data analytics.

### **Key players in the market**

Some of the key players in AI Powered Storage market include Advanced Micro Devices, CISCO, Datadirect Network, Dell Technologies, Flextronics International, Hitachi, HPE , IBM, Lenovo, Micron Technology, NetApp, NVIDIA Corporation, Pure Storage, Samsung Electronics, Seagate Technology PLC, Tintri , Toshiba and Western Digital.

### **Key Developments:**

In December 2023, Dell is collaborating with NVIDIA to validate PowerScale with NVIDIA DGX SuperPOD, an AI infrastructure solution. This collaboration promises a validated blend of NVIDIA DGX systems, Dell PowerScale storage, and advanced networking technologies to deliver faster and more efficient AI storage. Notably, Dell's PowerScale is set to be the first ethernet storage solution validated on NVIDIA DGX SuperPOD, ensuring customers access to industry-leading network-attached storage for

their AI initiatives.

In October 2023, Seagate Technology and Perifer, announced a new on-premises solution for scaling out object storage. Integration between Periphery Swarm and Seagate Exos CORVAULT provides users in high-growth edge markets, including media and entertainment, health care, retail, and manufacturing, with a high-performance, scalable, and secure object storage solution that dramatically lowers CPU requirements, reduces costs, and improves the end-user experience.

#### Offerings Covered:

Hardware

Software

Other Offerings

#### Storage Systems Covered:

Direct Attached Storage Systems

Network Attached Storage Systems

Storage Area Network

Other Storage Systems

#### Storage Mediums Covered:

Hard Disk Drive

Solid State Drive

Other Storage Mediums

#### Storage Architectures Covered:

Block Storage

File Based Storage

Object Based Storage

Other Storage Architectures

End Users Covered:

Enterprises

Government Bodies

Telecom Companies

Cloud Service Providers

Other End Users

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & 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

## Contents

### **1 EXECUTIVE SUMMARY**

### **2 PREFACE**

- 2.1 Abstract
- 2.2 Stake Holders
- 2.3 Research Scope
- 2.4 Research Methodology
  - 2.4.1 Data Mining
  - 2.4.2 Data Analysis
  - 2.4.3 Data Validation
  - 2.4.4 Research Approach
- 2.5 Research Sources
  - 2.5.1 Primary Research Sources
  - 2.5.2 Secondary Research Sources
  - 2.5.3 Assumptions

### **3 MARKET TREND ANALYSIS**

- 3.1 Introduction
- 3.2 Drivers
- 3.3 Restraints
- 3.4 Opportunities
- 3.5 Threats
- 3.6 End User Analysis
- 3.7 Emerging Markets
- 3.8 Impact of Covid-19

### **4 PORTERS FIVE FORCE ANALYSIS**

- 4.1 Bargaining power of suppliers
- 4.2 Bargaining power of buyers
- 4.3 Threat of substitutes
- 4.4 Threat of new entrants
- 4.5 Competitive rivalry

### **5 GLOBAL AI POWERED STORAGE MARKET, BY OFFERING**

- 5.1 Introduction
- 5.2 Hardware
- 5.3 Software
- 5.4 Other Offerings

## **6 GLOBAL AI POWERED STORAGE MARKET, BY STORAGE SYSTEM**

- 6.1 Introduction
- 6.2 Direct Attached Storage Systems
- 6.3 Network Attached Storage Systems
- 6.4 Storage Area Network
- 6.5 Other Storage Systems

## **7 GLOBAL AI POWERED STORAGE MARKET, BY STORAGE MEDIUM**

- 7.1 Introduction
- 7.2 Hard Disk Drive
- 7.3 Solid State Drive
  - 7.3.1 All Flash Arrays
  - 7.3.2 Hybrid Flash Arrays
  - 7.3.3 Other Solid State Drives
- 7.4 Other Storage Mediums

## **8 GLOBAL AI POWERED STORAGE MARKET, BY STORAGE ARCHITECTURE**

- 8.1 Introduction
- 8.2 Block Storage
- 8.3 File Based Storage
- 8.4 Object Based Storage
- 8.5 Other Storage Architectures

## **9 GLOBAL AI POWERED STORAGE MARKET, BY END USER**

- 9.1 Introduction
- 9.2 Enterprises
  - 9.2.1 Media and Entertainment
  - 9.2.2 BFSI
  - 9.2.3 Healthcare

- 9.2.4 Retail
- 9.2.5 Consumer Goods
- 9.2.6 Manufacturing
- 9.2.7 Other Enterprises
- 9.3 Government Bodies
- 9.4 Telecom Companies
- 9.5 Cloud Service Providers
- 9.6 Other End Users

## **10 GLOBAL AI POWERED STORAGE MARKET, BY GEOGRAPHY**

- 10.1 Introduction
- 10.2 North America
  - 10.2.1 US
  - 10.2.2 Canada
  - 10.2.3 Mexico
- 10.3 Europe
  - 10.3.1 Germany
  - 10.3.2 UK
  - 10.3.3 Italy
  - 10.3.4 France
  - 10.3.5 Spain
  - 10.3.6 Rest of Europe
- 10.4 Asia Pacific
  - 10.4.1 Japan
  - 10.4.2 China
  - 10.4.3 India
  - 10.4.4 Australia
  - 10.4.5 New Zealand
  - 10.4.6 South Korea
  - 10.4.7 Rest of Asia Pacific
- 10.5 South America
  - 10.5.1 Argentina
  - 10.5.2 Brazil
  - 10.5.3 Chile
  - 10.5.4 Rest of South America
- 10.6 Middle East & Africa
  - 10.6.1 Saudi Arabia
  - 10.6.2 UAE

- 10.6.3 Qatar
- 10.6.4 South Africa
- 10.6.5 Rest of Middle East & Africa

## **11 KEY DEVELOPMENTS**

- 11.1 Agreements, Partnerships, Collaborations and Joint Ventures
- 11.2 Acquisitions & Mergers
- 11.3 New Product Launch
- 11.4 Expansions
- 11.5 Other Key Strategies

## **12 COMPANY PROFILING**

- 12.1 Advanced Micro Devices
- 12.2 CISCO
- 12.3 Datadirect Network
- 12.4 Dell Technologies
- 12.5 Flextronics International
- 12.6 Hitachi
- 12.7 HPE
- 12.8 IBM
- 12.9 Lenovo
- 12.10 Micron Technology
- 12.11 NetApp
- 12.12 NVIDIA Corporation
- 12.13 Pure Storage
- 12.14 Samsung Electronics
- 12.15 Seagate Technology PLC
- 12.16 Tintri
- 12.17 Toshiba
- 12.18 Western Digital

## List Of Tables

### LIST OF TABLES

Table 1 Global AI Powered Storage Market Outlook, By Region (2023-2034) (\$MN)

Table 2 Global AI Powered Storage Market Outlook, By Offering (2023-2034) (\$MN)

Table 3 Global AI Powered Storage Market Outlook, By Hardware (2023-2034) (\$MN)

Table 4 Global AI Powered Storage Market Outlook, By Software (2023-2034) (\$MN)

Table 5 Global AI Powered Storage Market Outlook, By Other Offerings (2023-2034) (\$MN)

Table 6 Global AI Powered Storage Market Outlook, By Storage System (2023-2034) (\$MN)

Table 7 Global AI Powered Storage Market Outlook, By Direct Attached Storage Systems (2023-2034) (\$MN)

Table 8 Global AI Powered Storage Market Outlook, By Network Attached Storage Systems (2023-2034) (\$MN)

Table 9 Global AI Powered Storage Market Outlook, By Storage Area Network (2023-2034) (\$MN)

Table 10 Global AI Powered Storage Market Outlook, By Other Storage Systems (2023-2034) (\$MN)

Table 11 Global AI Powered Storage Market Outlook, By Storage Medium (2023-2034) (\$MN)

Table 12 Global AI Powered Storage Market Outlook, By Hard Disk Drive (2023-2034) (\$MN)

Table 13 Global AI Powered Storage Market Outlook, By Solid State Drive (2023-2034) (\$MN)

Table 14 Global AI Powered Storage Market Outlook, By All Flash Arrays (2023-2034) (\$MN)

Table 15 Global AI Powered Storage Market Outlook, By Hybrid Flash Arrays (2023-2034) (\$MN)

Table 16 Global AI Powered Storage Market Outlook, By Other Solid State Drives (2023-2034) (\$MN)

Table 17 Global AI Powered Storage Market Outlook, By Other Storage Mediums (2023-2034) (\$MN)

Table 18 Global AI Powered Storage Market Outlook, By Storage Architecture (2023-2034) (\$MN)

Table 19 Global AI Powered Storage Market Outlook, By Block Storage (2023-2034) (\$MN)

Table 20 Global AI Powered Storage Market Outlook, By File Based Storage

(2023-2034) (\$MN)

Table 21 Global AI Powered Storage Market Outlook, By Object Based Storage

(2023-2034) (\$MN)

Table 22 Global AI Powered Storage Market Outlook, By Other Storage Architectures

(2023-2034) (\$MN)

Table 23 Global AI Powered Storage Market Outlook, By End User (2023-2034) (\$MN)

Table 24 Global AI Powered Storage Market Outlook, By Enterprises (2023-2034)

(\$MN)

Table 25 Global AI Powered Storage Market Outlook, By Media and Entertainment

(2023-2034) (\$MN)

Table 26 Global AI Powered Storage Market Outlook, By BFSI (2023-2034) (\$MN)

Table 27 Global AI Powered Storage Market Outlook, By Healthcare (2023-2034) (\$MN)

Table 28 Global AI Powered Storage Market Outlook, By Retail (2023-2034) (\$MN)

Table 29 Global AI Powered Storage Market Outlook, By Consumer Goods (2023-2034)

(\$MN)

Table 30 Global AI Powered Storage Market Outlook, By Manufacturing (2023-2034)

(\$MN)

Table 31 Global AI Powered Storage Market Outlook, By Other Enterprises (2023-2034)

(\$MN)

Table 32 Global AI Powered Storage Market Outlook, By Government Bodies

(2023-2034) (\$MN)

Table 33 Global AI Powered Storage Market Outlook, By Telecom Companies

(2023-2034) (\$MN)

Table 34 Global AI Powered Storage Market Outlook, By Cloud Service Providers

(2023-2034) (\$MN)

Table 35 Global AI Powered Storage Market Outlook, By Other End Users (2023-2034)

(\$MN)

Note: Tables for North America, Europe, APAC, South America, and Middle East & Africa Regions are also represented in the same manner as above.

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