Artificial Intelligence in Cloud and Enterprise Data Center Hardware Report

Part of the AI & Intelligent Automation Service Area Package

Aditya Kaul, Research Director
Alan A. Varghese, Principal Analyst

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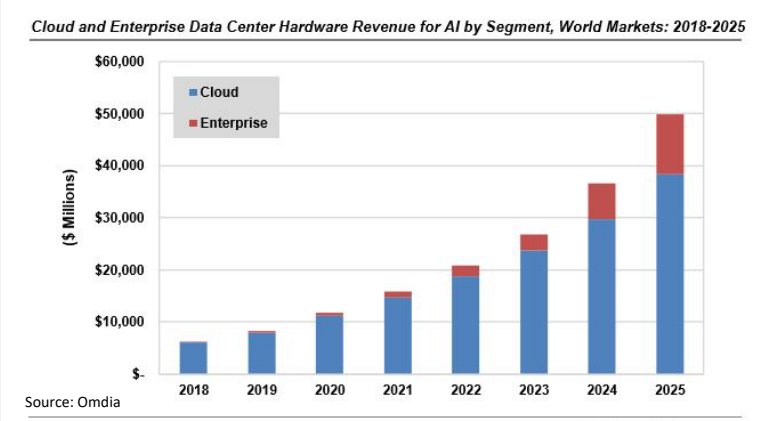

Servers, Workstations, Cards, Storage, and Networking Infrastructure: Global Market Analysis and Forecasts

The first movers in artificial intelligence (AI) have been the hyperscaler operators. This is partly because their businesses had progressed to the point where they needed AI. Google needed AI to optimize web searches; Amazon to do customization of its online retail offerings; and Facebook to enhance its activity feed, photo, and social media applications. The other reason is that the hyperscalers are the ones with the deep pockets to fund the high costs of research in AI. These companies are now attempting to democratize AI technology and make it pervasive.

Data center infrastructure, specifically computing, memory, storage, and networking, is in the process of going through a reboot to support AI. Though AI represents just a small portion of a cloud data center's workload and an even smaller portion of an enterprise's workload, it drives a different type of application profile and thus requires different architectures and components. Advances in technology have played a major part in enabling AI expansion and market penetration. In turn, AI applications are driving the development of new silicon and system architectures, storage and networking options, and delivery models. Meanwhile, Omdia's research indicates that enterprises are not abandoning on-premise computing. While the hyperscalers have been driving AI implementation in the cloud, there is corresponding demand for on-premise and colocated solutions from early adopter enterprises.

This report examines the AI applications in business, consumer, and government that are driving requirements in AI infrastructure, especially the compute, storage, and networking functions in cloud and enterprise data centers. The report also catalogs the changing nature of the market, ecosystem, vendors, and technologies, including the underlying semiconductors powering the next generation in AI. Market forecasts include infrastructure hardware spend from 2018 to 2025 segmented by region, function, chipset, delivery model, and enterprise vertical.

Report Coverage

KEY ISSUES ADDRESSED

- What is the current state of the AI market and how will it develop over the next decade?
- What are the key market drivers and barriers and ecosystem trends with cloud and enterprise data center hardware for AI?
- How will AI be implemented in the cloud, enterprise, or colocation site?
- What are the key technologies that will affect computing, storage, and networking in the cloud and enterprise data center?
- Which companies are the key players in the AI market and what are their initiatives and offerings for cloud and enterprise data center hardware?
- What is the size of the cloud and enterprise hardware infrastructure market to support AI, and what is its trajectory over the next 7 years?

COVERAGE

- Cloud and Enterprise Data Center Hardware Revenue for AI, World Markets: 2018-2025
  - By Vertical
  - By Segment
  - By Region
  - By Function
  - By Compute Category
- AI Initiatives, Industry vs. Research Focus, U.S., China, and Europe: 2018

Verticals

- Banking & Financial
- Retail
- Automotive & Transportation
- Telecom & Broadband
- Healthcare
- Manufacturing
- Consumer Packaged Goods
- Government
- Travel & Tourism
- Education
- Other

Functions and Delivery Models

- Computing
- Storage
- Networking
- Infrastructure as a service (IaaS)
- Platform as a service (PaaS)
- Software as a service (SaaS)

Regions

- North America
- Europe
- Asia Pacific
- Latin America
- Middle East and Africa

APPLICABLE TO

- Cloud hyperscaler operators
- Colocation operators
- Data center server and workstation vendors
- Memory and storage vendors
- Switching, routing, and networking vendors
- AI semiconductor vendors
- Enterprises
- Governments and regulatory bodies
- Investor community

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CUSTOMER SUCCESS
customersuccess@omdia.com

SALES
US: +1 (212) 652 5335
APAC: +61 (0)396 016 700
EMEA: +44 (0)7771 980 316

@OmdiaHQ | omdia.com

ABOUT OMDIA

Omdia is a global technology research powerhouse, established following the merger of the research division of Informa Tech (Ovum, Heavy Reading, and Tractica) and the acquired Omdia technology research portfolio.* We combine the expertise of more than 400 analysts across the entire technology spectrum, covering 150 markets. We publish over 3,000 research reports annually, reaching more than 14,000 subscribers, and cover thousands of technology, media, and telecommunications companies. Our exhaustive intelligence and deep technology expertise enable us to uncover actionable insights that help our customers connect the dots in today's constantly evolving technology environment and empower them to improve their businesses–today and tomorrow.

*The majority of Omdia technology research products and solutions were acquired by Informa in August 2019 and are now part of Omdia.

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Tables, Charts and Figures

Tables

Charts

Figures

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