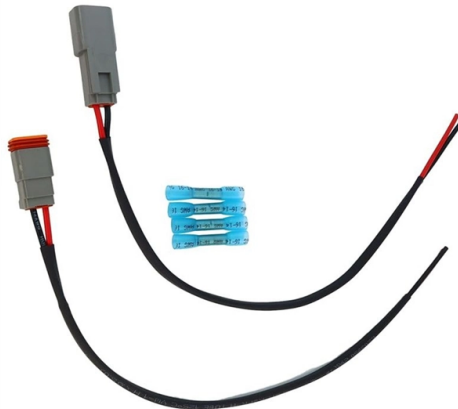


East Asian AI Server Industry Chain



Overview

Asia AI Server Market Size and Forecasts 2031 In Asia, enterprises across industries including healthcare, finance, retail, and manufacturing are increasing.

Key Takeaways

East Asia, led by Taiwan, dominates the AI server industry chain, integrating semiconductor production, server assembly, thermal and power systems, and regional cloud infrastructure to support global AI deployment. Taiwan: The Core of AI Server Manufacturing Taiwan has emerged as the central hub for AI server production, controlling over 90% of global AI server manufacturing capacity and approximately 80% of total server shipments worldwide. Key players include Foxconn, Quanta Computer, Wistron, and Wiwynn, which have pivoted from consumer electronics to AI infrastructure.

Foxconn alone accounts for roughly 40% of global AI server rack assembly, producing high-value systems like Nvidia's GB200 NVL72 with liquid cooling and high-speed interconnects. Taiwan's competitive edge stems from decades of electronics manufacturing expertise, vertical integration, and proximity to semiconductor fabs like TSMC.

Semiconductor and Memory Supply

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The server chain relies heavily on semiconductors and high-bandwidth memory (HBM). Taiwan's TSMC, South Korea's Samsung and SK Hynix, and China's SMIC are critical suppliers of GPUs, TPUs, and custom AI accelerators. Advanced packaging, HBM integration, and ASIC development are bottlenecks where East Asian companies hold pricing power.

Taiwan OD

US firms collaborate closely with Nvidia and AMD to integrate these chips into AI servers, while China develops domestic accelerators like Baidu Kunlun and Huawei Ascend to reduce reliance on imports. Server Assembly, Thermal Management, and Power Systems East Asian manufacturers provide rack-scale assembly, thermal solutions, and electrification infrastructure. Companies like Asia Vital Components specialize in liquid cooling, while Kstar, Hitachi, Mitsubishi Heavy, and CATL supply UPS, transformers, and energy storage systems to power hyperscale data centers.

This integration ensures high-density AI workloads can be deployed efficiently and reliably. China: Domestic AI Platforms and Onshore Demand China's AI ecosystem is rapidly expanding, anchored by Alibaba, Tencent, Baidu, and emerging startups like DeepSeek. These platforms drive onshore demand for AI servers, memory, and accelerators, mirroring the US.

US hyperscaler model. Domestic production of AI-optimized servers and chips is increasing, with SMIC and local memory suppliers supporting self-reliance amid export controls. South Korea and Japan: Memory and Tooling Hubs South Korea contributes HBM and NAND memory through SK Hynix and Samsung, while Japan provides semiconductor manufacturing tools and testing equipment via companies like Tokyo Electron and Advantest.

These nations are critical for sustaining the high-performance computing backbone of AI servers. Southeast Asia: Emerging Data Center Infrastructure Southeast Asia is rapidly developing AI-ready data centers to meet growing demand for low-latency, high-density computing. Countries like Singapore, Thailand, and Malaysia are investing in edge computing, renewable energy integration, and hyperscale facilities to support AI workloads.

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AI adoption is projected to add US\$1 trillion to regional GDP by 2030, highlighting the strategic importance of local infrastructure.

Market Trends and Growth Drivers

Generative AI

Large and small language models are driving demand for high-performance AI servers. Hybrid and cloud-based deployments are becoming mainstream, enabling scalability and cost efficiency. Energy-efficient designs and advanced cooling solutions are critical to manage operational costs and sustainability.

Government investments in AI R&D and digital infrastructure strengthen the regional ecosystem.

Strategic Implications

East Asia's AI server industry chain is vertically integrated and geographically concentrated, giving it a competitive advantage but also exposing it to geopolitical risks. Companies are expanding production to the U. S., Mexico, and other regions to mitigate trade tensions and tariffs.

The region's dominance in semiconductors, server assembly, and data center infrastructure positions it as the global flywheel for AI deployment, with Taiwan at the center, supported by China, South Korea, Japan, and Southeast Asia. In summary, the East Asian AI server industry chain is a complex, multi-layered ecosystem encompassing chip fabrication, memory supply, server assembly, thermal and power systems, and cloud infrastructure. Taiwan leads manufacturing, China drives domestic AI demand and accelerator development, South Korea and Japan supply memory and tools, and Southeast Asia is emerging as a critical hub for data center deployment, collectively shaping the global AI infrastructure landscape.

Article Content

Asia AI Server Market Size and Forecasts 2031

In Asia, enterprises across industries including healthcare, finance, retail, and manufacturing are increasingly relying on AI servers to handle complex workloads. These servers

Asia Pacific AI Servers Market: A Deep Dive into Market ...

The Asia Pacific region is emerging as a powerhouse in the AI Servers Market due to surging investments in smart city infrastructure, digital transformation, and AI-powered technologies.

Asia's Rising Tier in the AI & Datacenter Value Chain | Equity Insights

For two years the AI conversation has centered on U.S. hyperscalers and with reason. But the world's ability to ship compute, scale memory, assemble racks, and keep “powered shells”

Taiwan Leads Global AI Server Shift, Surpassing iPhones in 2025

Taiwan now dominates about 80% of global server shipments and 90%+ of AI servers, but others are expanding. New manufacturing bases in the U.S., Europe, and elsewhere could chip away at

AI Server Market Size & Share, Statistics Report 2025-2034

There is a clear shift to edge AI infrastructure and hybrid AI oriented deployments especially around data intensive applications. The Asia-Pacific region is developing as a fast-paced AI server market, fueled

Taiwan's AI Supply Chain Dominance: Beyond Silicon

The AI supply chain is global, with significant R&D concentrated in China, Europe, and North America and with semiconductor and hardware manufacturing concentrated in East Asia and

Southeast Asia's data centres and AI infrastructure imperative

Artificial intelligence (AI) is fuelling an unprecedented surge in data demand - and Southeast Asia is not yet ready to meet this challenge.

Asia Pacific Artificial Intelligence Market Size, Share [2025-2032]

The Asia Pacific artificial intelligence (AI) market report provides a comprehensive analysis of the region's rapidly growing AI landscape, spotlighting emerging trends, investment

AI server Market Size, Growth Report, 2026-2033

The demand for AI servers in the Asia Pacific is expected to be the fastest growing and is anticipated to register a lucrative CAGR from 2026 to 2033. The region's fast-growing e-commerce and digital

AI Server Market report 2024-2030 [314 Pages & 252 Tables]

The AI server ecosystem comprises a tightly integrated value chain spanning AI chip and memory suppliers, component vendors, server manufacturers, and global end users.

Research, News, and Perspectives | Trend Micro (US)

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In-depth analysis and commentary on events across the Asia-Pacific region, with a focus on geopolitics, defense, economics, social, and environmental issues.

Chemical Industry Outlook 2026: Resilience, Growth,

Explore the 2026 chemical industry outlook, highlighting regional shifts, specialty growth, AI-driven cost transformation, and strategies to rebuild resilience.

Decoding Taiwan's True AI Potential

Taiwan's contributions to the global AI industry extend beyond integrated circuit (IC) production. The country has also pivoted to producing complete AI hardware solutions.

AI Server Market Size & Share, Statistics Report 2025-2034

AI Server Market Size A comprehensive report by Global Market Insights Inc. projects the global AI server market was valued at USD 128 billion in 2024. The market is expected to grow from USD

Global server supply chain status and analysis, 2023-2025: Top-6 EMS

Considering the ongoing global supply chain shift and US-China trade policies, which have prompted a supply chain division serving US and Chinese server customers separately, the report includes ...

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