

AI Chip Components for Servers



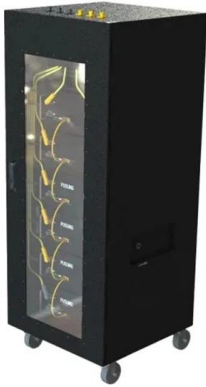


Overview

Coverage across current and emerging chip types, including GPUs, CPUs, custom AI ASICs, and other AI chips, from over 40 chip designers, historic market data from 2022-2024, and market forecasts from 2025 to 2035. AI model training and inference workloads are forcing the industry to rethink not only how much compute fits in a rack, but how servers are architected from end to end — transforming computing infrastructure as we know it. 2 Hyperscalers are spending \$380B+ on AI capex in 2025 while simultaneously building custom chips (TPU, Trainium, Maia, MTIA) that offer 40-65% TCO advantages over GPUs. 3 Broadcom and Marvell control ~95% of the custom ASIC co-design market — Google alone spends ~\$8B/year with Broadcom on TPU. Within this hardware ecosystem, printed circuit boards (PCBs) play a critical role as the structural foundation for electronic components and the provider of electrical. Our new AI Chip Components explorer tracks how much advanced-node logic, memory, and advanced packaging capacity is consumed by leading AI chip designers. Artificial intelligence (AI) is being adopted across all industry sectors and the growing need to run AI (as well as machine learning, or ML) workloads is placing considerable demands on servers.



AI Chip Components for Servers



AI server tracker: AI infrastructure arms race boosts

The AI infrastructure boom has entered a full-scale arms race in 2026, with US cloud giants dramatically ramping up capex. Taiwanese

Nvidia shift, AI chip shortages threatening to hike gadget

The AI infrastructure buildout is creating shortages of components including various types of chips that are also used in consumer electronics.



Nvidia's next-gen Blackwell AI Superchips could cost up

However, Nvidia may be more inclined to sell servers based on the Blackwell GPUs rather than selling chips separately, especially given that the

Building the AI Server

AI/ML demands are reshaping servers. Explore how CPUs, GPUs, FPGAs and AI accelerators drive performance for workloads like deep learning



MLCC Shortages Return as AI Server Demand Strains Capacity

Rising passive component lead times threaten non-AI hardware margins High-capacitance Multi-Layer Ceramic Capacitors (MLCCs) are entering a period of restricted availability



AI Chips for Data Centers and Cloud 2025-2035:

This report characterizes the AI chips for data centers and cloud markets, technologies, and players. Coverage across current and emerging chip types,

Artificial Intelligence (AI) Hardware - Intel

In both on-premises and cloud data center environments, a combination of CPUs, GPUs, and specialized AI accelerators are being used to handle large-scale AI



SoftBank explores homegrown AI servers with Nvidia, Foxconn: Report

SoftBank is exploring plans to manufacture artificial intelligence servers within Japan. The company is in talks with chip giant Nvidia and contract manufacturer Foxconn. Initially, SoftBank



As AI Eats Up The World's Chips, Memory Prices Take

At CES 2026, sleek new laptops dazzled--but soaring memory costs driven by AI chip demand threaten to make everyday PCs pricier and less powerful.



NVIDIA Kicks Off the Next Generation of AI With Rubin

NVIDIA today kickstarted the next generation of AI with the launch of the NVIDIA Rubin platform, comprising six new chips designed to deliver one

AI Server Hardware Components and Requirements

This article provides an in-depth exploration of the hardware components required for AI servers, focusing on their roles and importance in supporting artificial intelligence workloads.



Taiwan Semiconductor Market Report 2025: AI & HPC Drive Growth

Taiwan's semiconductor market is set for robust growth in 2025, driven by AI and HPC. Discover market size, key drivers, TSMC's dominance, and ecosystem insights.



How to Select AI Server Hardware

A guide to choosing the right server chassis, motherboards, and power supplies for building a dedicated AI machine.



AI now gobbling up power and management chips for servers

The chip shortage is spreading to power and management controller silicon, threatening server shipments as vendors prioritize capacity for higher-margin AI server products.

Intel's server chip dominance erodes as AMD expands

Intel's grip on the server CPU market is slipping, with Advanced Micro Devices (AMD) closing the gap at a pace that may soon bring the once-dominant



Samsung Electro-Mechanics bets \$1.2b on Vietnam AI chips

Samsung Electro-Mechanics to invest 1.8 trillion won (US\$1.21 billion), in Vietnam to expand output of FC-BGA semiconductor substrates used in AI servers and other high-performance



AI Chip Supply Chain Bottlenecks and Capacity , Epoch AI

Introducing the AI Chip Components Explorer Our new AI Chip Components explorer tracks how much advanced-node logic, memory, and advanced packaging capacity is consumed by



Prepare for the Coming AI Chip Shortage

Prepare for the Coming AI Chip Shortage At a Glance The AI-driven surge in demand for graphics processing units alone could increase total demand for

PCBs: Powering AI Servers 2025

Driven by surging demand for AI servers in China, domestic PCB firms like Shenzhen South Circuit, Huatong Circuit, and Jingwang Electronics are



Gartner Forecasts Worldwide Semiconductor Revenue to Exceed \$1.3

Global semiconductor revenue is projected to exceed \$1.3 trillion in 2026, exhibiting the highest growth in the last two decades, according to Gartner, Inc., a business and technology

CPU requirements for AI workloads are



multiplying, driving intensifying

PC Components CPUs CPU requirements for AI workloads are multiplying, driving intensifying shortages and price hikes -- Intel already shifting production from consumer chips to



Ibiden forecasts generative AI to triple IC substrate sales

The revenue contribution of generative AI in IC board sales is projected to exceed that of other areas (standard servers, PCs, etc.) in the near

The AI frenzy is driving a memory chip supply crisis

An acute global shortage of memory chips is forcing artificial intelligence and consumer-electronics companies to fight for dwindling supplies,



AI Chip Manufacturing Demand Creates Historic Shortage

AI demand is triggering a historic memory-chip shortage. Meeting exponential demand for chips will be expensive and maybe even impossible.



AI Data Center Value Chain: Every Layer from Chips to Cloud

AI data center value chain: chips to cloud. Semiconductor, GPU design, servers, networking, power, and cloud layers mapped by company. Interactive.



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