AI Server HDI Board



Overview

AI servers primarily involve three key PCB product categories: GPU substrates commonly employ high-layer boards exceeding 20 layers; compact AI accelerator modules predominantly rely on 4–5-layer HDI for high-density interconnections; while traditional CPU motherboards form the. AI servers primarily involve three key PCB product categories: GPU substrates commonly employ high-layer boards exceeding 20 layers; compact AI accelerator modules predominantly rely on 4–5-layer HDI for high-density interconnections; while traditional CPU motherboards form the. AI server PCBs serve as the fundamental electronic platform, connecting and supporting the processors, memory, accelerators, and power management systems required for artificial intelligence computational workloads. Within AI servers, PCB design addresses high-speed signal transmission, high power. This guide explores HDI PCB technology from design to manufacturing, addressing signal integrity, reliability, and cost optimization for AI applications. As a HDI PCB manufacturer, EBest Circuit (Best Technology) delivers superior HDI PCB solutions for AI server motherboards through advanced. Highleap Electronics provides critical AI Server PCB manufacturing solutions for high-performance computing in AI and machine learning, supporting applications from data centers to edge AI with speed and quality. As the global AI server shipments soar at a growth rate of over 80%, the number of layers of traditional server motherboards has exceeded the 18-layer technical threshold, and the demand for high-end HDI boards. HDI PCB for AI hardware uses high density interconnect structures, microvias, via-in-pad, sequential lamination, ELIC, fine-line routing, low-loss materials, high-layer-count stackups, and advanced thermal control to support GPU systems, TPU platforms, AI accelerator modules, graphics cards, and. AI Server HDI (high-density interconnect) PCB by Application (Universal Server, Logical Server, Training Server), by Types (20 Layers, 24 Layers, Other), by North America (United States, Canada, Mexico), by South America (Brazil, Argentina, Rest...

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Article Content

Jul 27, 2025

ITPro Today, Network Computing, IoT World Today combine

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Apr 13, 2026

AI Server PCB Solutions | High-Density GPU & Accelerator PCB

We provides advanced AI server PCB solutions for GPU servers and AI accelerators. 16–32L HDI boards & certified quality for high-performance computing systems.

Dec 08, 2025

Taiwan PCB supply chain tightens capex scale; leaders

Benefiting from rising demand for AI servers and HPC applications, Unimicron''s ABF substrates and HDI boards operations have steadily improved.

Jan 12, 2026

How Does the 2025 AI Server HDI Boards Market Outlook Address

Explore the 2025 AI Server HDI Boards Market Size Outlook: Valued at USD 5.2 billion, driven by AI data center demands for microvia tech at 112 Gbps speeds. Delve into thermal

Nov 10, 2025

HDI PCB, HDI PCB Board for AI Server Motherboard

In summary, HDI PCB technology is revolutionizing AI server motherboards with its high-density interconnects, superior signal integrity, and

Sep 27, 2025

AI servers trigger PCB demand: high-end HDI leads with a ...

AI servers and HPC systems have become an important driving force for the development of low-loss, high-layer boards and HDI boards.

May 01, 2026

HDI PCB Design for AI Servers

This guide breaks down HDI PCB design for AI servers in simple terms, starting with basics and gradually moving to practical design steps. Whether you''re troubleshooting your first AI

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Jun 21, 2026

HDI PCB, HDI PCB Board for AI Server Motherboard

Why choose HDI PCB for AI server motherboards? Let''s explore HDI PCB from design to manufacturing, addressing signal integrity, reliability, cost

Jun 13, 2026

Global AI Server HDI (high-density interconnect) PCB Market Insights ...

The term "AI Server PCB" typically refers to the printed circuit board (PCB) used in an Artificial Intelligence (AI) server. An AI server is a computer system specifically designed to handle complex

Apr 28, 2026

Application and Development of HDI PCB in AI Servers

HDI PCB applies microwire and micro-hole technology, which greatly improves the density of circuits. The feature is particularly significant and critical in AI servers that process large amounts of data and

Dec 30, 2025

AI servers trigger PCB demand

AI servers mainly involve three products: the GPU substrate requires a high-layer board with more than 20 layers; small AI accelerator modules usually use 4-5

Aug 20, 2025

Filling the Gap in High-End PCB Manufacturing to

The rapid pace of AI innovation has exposed significant weaknesses in the supply chain. According to Prismark''s 2023 report, fewer than 10 PCB

Apr 30, 2026

Victory Giant IPO Jumps 60% on AI PCB Demand Surge

Demand for high-build-up high-density interconnect (HDI) boards—critical for AI servers—has surged, driving a 388.2% year-on-year increase in HDI revenue in 2025. A shift toward

Apr 29, 2026

Global AI Server HDI PCB Market 2025 by Manufacturers, Regions,

Chapter 2, to profile the top manufacturers of AI Server HDI PCB, with price, sales quantity, revenue, and global market share of AI Server HDI PCB from 2020 to 2025.

Jan 08, 2026

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AI Server HDI (high-density interconnect) PCB Market

The AI Server HDI (high-density interconnect) PCB market is projected to reach USD 4780000000.00 Million by 2029, up from USD 2140000000.00 Million in 2023.

Jun 10, 2026

AI servers trigger PCB demand: high-end HDI leads with a ...

AI servers mainly involve three products: the GPU substrate requires a high-layer board with more than 20 layers; small AI accelerator modules usually use 4-5-order HDI to achieve high

Sep 25, 2025

AI server drives PCB performance and price to rise

AI servers are high-performance computers specially designed to run artificial intelligence algorithms and process large-scale data. They usually have

Jun 17, 2026

Buy a Raspberry Pi 4 Model B – Raspberry Pi

Your tiny, dual-display, desktop computer and robot brains, smart home hub, media centre, networked AI core, factory controller, and much more.

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AI Servers and HDI PCB Demand 2026: What Buyers Need to Know

AI servers drove HDI PCB demand past 25% of global output in 2026. SCM Group HK explains the supply concentration challenge, CES 2026 technology trends, and what international

Feb 15, 2026

Nvidia supplier Victory Giant jumps on debut after $332m IPO

Demand for high-build-up high-density interconnect (HDI) boards, densely packed circuit boards for AI servers, surged. Victory Giant''s HDI revenue climbed 388.2% year over year in 2025 1.

Dec 11, 2025

How Chinese PCB Manufacturers Are Supporting the AI Industry

AI server PCB designs must support high computational loads, high-speed data movement, and demanding power integrity requirements. For PCB manufacturers, this means the AI industry is

Sep 23, 2025

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AI Server PCB

AI server PCBs are the core electronic platform, linking processors, memory, accelerators, and power systems for AI workloads.

Feb 21, 2026

Zhen Ding Technology stock (TW0004958004): Board approves bond

Headquarters/country: Taiwan Core markets: Global automotive, consumer electronics, AI servers Key revenue drivers: High-speed PCBs, HDI boards Home exchange/listing venue: Taiwan

Oct 17, 2025

AI Server PCB

As AI servers undergo iterative upgrades, GPU motherboards are progressively transitioning towards HDI structures. This trend positions advanced HDI as the fastest-growing segment within the AI

Aug 07, 2025

HDI PCB Manufacturer for AI Servers, Accelerators, and

HDI PCB (high-density-interconnected printed circuit board), with 24+ layers, is the foundation that supports and connects all electronic components of AI devices.

Jun 11, 2026

UGREEN NAS DH2300 2-Bay Desktop NASync,

UGREEN NAS DH2300 2-Bay Desktop NASync, Support Capacity 64TB (Diskless), Remote Access, AI Photo Album, Beginner Friendly System, 4GB RAM on

Jun 28, 2025

AI Server HDI (high-density interconnect) PCB Industry Analysis and ...

The AI server HDI PCB market, projected to surpass millions of units by 2033, exhibits a concentrated landscape. Key players like Victory Giant Technology, Unimicron, and Shengyi Technology hold

Apr 29, 2026

2025 Overview of China''s PCB Industry: Transformation,

-Significant upgrading of product structure: multi-layer boards dominate the market (accounting for 47.6%), HDI boards have increased their

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AI Server HDI (high-density interconnect) PCB Industry Analysis and ...

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The AI server market is experiencing explosive growth, fueled by advancements in artificial intelligence and the increasing demand for high-performance computing. This surge is directly impacting the

Jul 18, 2025

HDI PCB for AI Hardware Manufacturing

HDI PCB for AI hardware uses high density interconnect structures, microvias, via-in-pad, sequential lamination, ELIC, fine-line routing, low-loss materials, high-layer-count stackups, and

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