

AI substrate AI server



AI Overview

AI servers rely on both advanced hardware substrates like ABF for high-performance semiconductor packaging and software platforms such as Substrate AI or SUBSTRATE MCP to run, manage, and scale AI workloads.

Hardware: ABF Substrates for AI Servers

ABF (Ajinomoto Built-Up Film) substrates are high-performance insulating films used in advanced semiconductor packaging, particularly for flip-chip ball grid array (FCBGA) designs. They act as high-speed interconnect layers between the silicon chip and the printed circuit board (PCB), providing high I/O density, signal integrity, and thermal performance. ABF substrates are essential for AI servers because modern AI workloads require dense, high-speed GPU and CPU interconnects to handle massive parallel computations. Due to skyrocketing demand in AI data centers, ABF substrate prices are rising, with spot prices increasing by over 30% and supply-demand gaps expected to persist through 2027 .

Software Platforms: Substrate AI

Substrate AI is a European sovereign AI platform that allows organizations to build, deploy, and run AI workloads on infrastructure they control, ensuring full data residency and compliance with EU regulations . Its product suite includes:

- AI-optimized compute powered by NVIDIA H100, H200, Blackwell, and Vera Rubin architectures.
- Bare-metal or virtual clusters with auto-scaling API access.
- Storage and networking integrations (NVMe, S3, POSIX, SD-WAN, VPN) with immutable storage for audit-ready compliance.

Article Content

Substrate AI — The Operating System for AI™

At Substrate AI we are pioneering a new paradigm: Servers become digital properties where AI agents live, and humans earn rent in

Substrate

Substrate is a comprehensive platform for agentic AI that provides optimized models, vector database, code interpreter, and model

AI server Market Size, Growth Report, 2026-2033

AI server market size was valued at \$131.7B in 2025 and is projected to grow from \$157.0B in 2026 to \$598.1B by 2033, at a CAGR

Substrate MCP Server

A Rust-based Model Context Protocol server enabling dynamic querying and interaction with Substrate blockchains,

HDI PCB in AI Servers: Ultimate Guide to Mastering 2026 Tech

The market has responded: HDI PCB shipments grew 17.8% in 2024, making it the fastest-growing PCB category that

AI-Substrate · GitHub

AI coding agent, built for the terminal. AI-Substrate has 16 repositories available. Follow their code on GitHub.

Zo Computer | Build something seriously powerful

Zo comes with the latest AI models for chatting, generating media, and transcribing audio. Zo is a capable agent harness with tons of

Glass Substrates Are Breaking Through the AI Chip Packaging

This week: glass substrates. Related report: T-Glass Supply Shortages: AI Rack Fiberglass Trends As AI chips grow

Substrate AI

Substrate AI is an AI Operating Platform providing Agentic Software and GPU Infrastructure, fully European. Production-ready.

Substrate MCP Server

The server is fully configurable via environment variables and designed for seamless integration with tools such as

Data Center and AI Server PCB Market Size & Share Statistics 2031

By substrate material, high-speed low-loss laminates held 41.50% share of the Data Center and AI Server Printed

The Full Sovereign AI Product Suite | Substrate AI

Substrate AI provides sovereign compute rooted in Europe, extended globally. Our sovereign AI infrastructure powered by NVIDIA's

AI server growth lifts ABF market, while BT substrates struggle with ...

A surge in demand for ABF substrates driven by AI applications has created ripple effects across the semiconductor

The quiet duopoly powering AI server substrates: Taiwan and Japan's ...

Chairman Chou Cheng-chun said demand from major AI server chipmakers remains strong, driving Taiwan's IC

China Jushi: World's Top Fiberglass Maker Rides AI Server Materials ...

China Jushi, the world's largest fiberglass maker with 30% global market share, is capitalizing on AI server substrate

Intel Rio Rancho Targets World's First Mass — AtlasPCB

Intel Foundry's New Mexico facility moves toward becoming the first factory to mass-produce glass substrates, a

AI server boom to fuel PCB industry optimism in 2025

The shipment volume in 2025 is anticipated to increase each quarter. Reportedly, the substrate and PCB suppliers focusing on AI

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Substrate Dev Center provides resources and tools for developers to build applications leveraging Microsoft 365 substrate data.

La plataforma operativa soberana de IA para Europa | Substrate AI

Substrate AI es la plataforma de IA soberana de Europa: crea, implementa y ejecuta IA en una infraestructura con plena residencia

Welcome to Serenity Cloud Documentation

Automate the platform from Python or your terminal: Advanced features for enterprise deployments: Based on the console

Serverless for AI Tasks: Automate Workloads Without Infrastructure

Discover how serverless functions help AI teams automate preprocessing, batch jobs, and pipelines without managing

Apple Reportedly Sources Glass Substrate Samples Directly ...

Apple may be moving to bring AI server chip development further in house, as recent developments suggest.

Bridging AI and Blockchain: A Deep Dive into the Substrate MCP Server

Unlock the potential of AI and blockchain with our deep dive into the Substrate MCP Server. Learn key features,

Nvidia supplier Ibiden to expand IC substrate output amid AI boom

Ibiden will set up a facility for IC package substrates used in AI servers at its Ono plant. (Ibiden)

Glass Core Substrates for AI Packaging — AtlasPCB

Glass Core Substrates for AI Packaging Intel's high-volume glass substrate manufacturing for Xeon 6+ processors

M9 CCL Guide: NVIDIA AI Server PCB Standards

Engineer's guide to M9 CCL: NVIDIA's next-gen PCB material for AI servers. We cover Q-glass, M8 vs M9, suppliers,

Substrate AI

Substrate AI is Europe's sovereign AI platform: build, deploy, and run AI on infrastructure you control, with full data residency.

Pushed by glass core and high-end ICs substrates for AI, the

This growth reflects sustained demand for larger, complex, high-ASP substrates capable of supporting generative AI,

Services

Deploy, train, and scale AI workloads on dedicated high-density AI Factories or in the Cloud, with enterprise-grade GPUs, global

ABF substrate crunch reshapes market: Unimicron leads and rivals

AI server architectures are rapidly shifting toward ultra-high-density designs, keeping advanced CoWoS packaging

Contact Us

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