JEWELBLU OPTICAL SYSTEMS

Huawei AI computing servers

Overview

Ascend AI Cloud Service | Huawei Cloud Ascend AI Cloud Service offers instant access to immense yet cost-effective AI computing power, a reliable platform.

Key Takeaways

Huawei's AI computing servers, including the Atlas 950 and 960 SuperPoD clusters, deliver world-class performance with up to 524,288 Ascend AI chips, supporting exaFLOPS-scale AI workloads.Overview of Huawei AI Servers

Huawei has developed a full-stack AI computing platform designed to accelerate enterprise AI deployment and large-scale model training. Their offerings include the Atlas 950 and 960 SuperPoD clusters, the CloudMatrix 384, and the TaiShan series (950, 500, 200), providing both general-purpose and AI-optimized computing solutions . These servers are engineered to handle trillion-parameter models, high memory bandwidth requirements, and low-latency AI inference, addressing the growing demand for agentic AI and large-scale model training .

Atlas 950 and 960 SuperPoD Clusters
• Atlas 950 SuperPoD: Features 8,192 Ascend 950 AI chips per SuperPoD, delivering 8 exaFLOPS FP8 and 16 exaFLOPS FP16 performance with 16.3 PB/s interconnect bandwidth .

• Atlas 950 SuperCluster: Combines multiple SuperPoDs to scale up to 524,288 Ascend 950 AI chips, making it one of the largest AI clusters globally .

• Atlas 960 SuperCluster: Similar architecture with scalability up to 1 million processors, designed for extreme AI workloads .

• Each cabinet in the SuperPoD uses 64 graphics cards as a basic unit, supporting high-speed interconnection for neural processing units .

CloudMatrix 384

The CloudMatrix 384 cluster integrates 384 Ascend 910C chips, delivering 300 PetaFLOPS of BF16 compute performance, which is twice the compute of NVIDIA's GB200 NVL72 . While it consumes more power and costs more, it provides a fully domestic AI computing resource for China, emphasizing raw performance over efficiency .

Deployment and Optimization Services

Huawei's Intelligent Computing Platform Service Solution offers end-to-end deployment, including data center design, liquid cooling, cabling, and automated cluster integration . Key features include:

• Rapid deployment: 1,024-node super-clusters can be rolled out in 15 days using automated pipelines and stress-testing .

• Model adaptation: Over 150 mainstream AI models have been optimized, covering 90% of enterprise scenarios, with new models deployable in 5 days .

• Performance tuning: A 7-layer, 4-level system optimization improves throughput and latency by 30% for typical AI workloads .

• Reduced build times: Data center renovation cycles are compressed from 7–9 months to 4–6 months, lowering labor and logistics costs .

Competitive Positioning

Huawei positions its AI servers as a direct competitor to NVIDIA, particularly in rack-scale and supercluster solutions . While NVIDIA maintains higher computing density per rack, Huawei emphasizes massive scale and raw exaFLOPS performance, targeting enterprises and research institutions requiring ultra-large AI clusters .

Summary

Huawei's AI computing servers combine high-performance Ascend AI chips, scalable cluster architecture, and full-stack deployment services to support global AI workloads. From the Atlas SuperPoD clusters to CloudMatrix 384, these systems are designed for rapid deployment, model optimization, and extreme-scale AI computation, making them a key player in the global AI infrastructure market .

Article Content

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The Huawei CloudMatrix 384 is a high-density AI computing system featuring 384 Huawei

Huawei launches new AI architecture to rival Nvidia

Huawei Technologies has introduced a new AI infrastructure architecture called the CloudMatrix 384 Supernode.

Huawei redefines AI infrastructure at MWC 2026

At MWC 2026 in Barcelona, Huawei Digital Power unveiled several solutions designed to address the challenges that

OceanStor AI Storage

The Next-Gen High-Performance Distributed File Storage is designed for AI, providing bandwidth in hundreds of TB/s and 100 million

Huawei releases CloudMatrix 384 supernode: a milestone ...

CloudMatrix 384 supernode is Huawei''s latest masterpiece in the field of AI infrastructure. Its core innovation is to

Atlas 500 Pro AI Edge Server User Guide (Model 3000) 18

The Atlas 500 Pro (model 3000) is a 2 U AI edge server powered by Huawei Kunpeng 920 processors, featuring superb computing

Huawei outlines roadmap for Ascend AI chips

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Huawei Unveiled the Latest SuperPoD, Making an AI

He noted that the Atlas 950 SuperPoD, powered by UnifiedBus interconnect, enables

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Elastic Cloud Server (ECS) provides secure, scalable, on-demand compute resources for you to flexibly deploy applications and

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The Global Data Center Facility Summit 2025 gathered industry leaders to discuss AI data

Products-Huawei Cloud

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OceanStor AI Storage

And the answer? Huawei OceanStor Next-Gen High-Performance Distributed File Storage for AI provides

Huawei Ascend 950PR: The 1.56 PFLOP AI Chip vs

The Huawei Ascend 950PR packs 1.56 petaflops of FP4 compute and 112GB HBM,

Huawei Expands Global AI Push With Super-Node Launch at MWC 2026

The product lineup includes the Atlas 950 SuperPoD intelligent computing system, the TaiShan 950 SuperPoD general

Huawei Unveils World''s Most Powerful SuperPoDs and SuperClusters

With the world''s most powerful SuperPoDs and SuperClusters, Xu said Huawei has what it takes to provide abundant

Huawei Unveils Atlas 950 AI SuperPoD to Compete with Nvidia and

At MWC 2026, Huawei unveiled its Atlas 950 and TaiShan 950 SuperPoDs to a global audience for the first time,

Huawei Unveils End-to-End Computing Platform Deployment and ...

Leveraging core algorithms and deep domain expertise, Huawei''s Full-Stack Intelligent Computing Platform Services

Huawei and Cambricon lead China''s AI server chip surge, piling

Huawei and Cambricon are set to dominate China''s AI server market as geopolitics and self-reliance accelerate

Huawei Launches Open-Access SuperPoD Architecture for All

Unleashing the potential of cluster-based compute with the SuperPoD architecture As AI continues to evolve, demand

Huawei wields growing influence in China''s server industry with AI

Huawei Technologies, which was forced to divest its server subsidiary three years ago due to US tech sanctions, is

Data Center Portfolio Solution | Huawei Enterprise

Huawei has launched a series of data center portfolio and individual solutions to underpin the construction of new

Huawei rolls out AI computing platform for global enterprises at MWC

Huawei introduced its Intelligent Computing Platform Service Solution at MWC 2026 to help enterprises deploy AI

Huawei Unveils Next-Gen Atlas 950 & 960 SuperPoD AI Servers

Huawei claims that the Atlas 950 SuperPoD will be the world''s largest AI cluster, in terms of the chips onboard, since

Atlas 800 AI Server-Ascend Community

The Atlas 650E server, powered by eight 950DT NPUs, delivers up to 12.4 PFLOPS @ mxFP4. It features Huawei''s self-developed

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