

Huawei Intelligent Data Center New Energy



Overview

Global Data Center Facility Summit 2025 | Huawei With reliable products, full-lifecycle services, and professional consulting and design capabilities, Huawei.

Key Takeaways

Huawei's New Energy Intelligent Data Centers combine AI-powered infrastructure, modular design, and green energy solutions to deliver high-density, energy-efficient, and reliable computing facilities. Overview of Huawei's AI-Powered Data Centers Huawei's intelligent data centers (AI DCs) are designed to meet the growing demand for high-density AI computing while addressing energy efficiency, reliability, and rapid deployment challenges. These centers integrate advanced power supply, cooling, energy storage, and operational management systems to optimize performance and reduce carbon emissions.

Huawei's solutions support gigawatt-level campuses capable of handling massive AI workloads, with full-link power supply innovations from grid to chips. Key Technologies and Solutions 1. AI-Powered Green Site Huawei's AI-Powered Green Site leverages intelligent algorithms to integrate weather, power generation, and load forecasts, enabling collaborative scheduling of photovoltaic generation, energy storage systems, and backup generators.

This approach reduces fuel consumption, lowers carbon emissions, and ensures business continuity with backup power availability up to 99.9%. Operators can also monetize energy storage assets through virtual power plant solutions, generating additional revenue.

2. **Modular PowerPOD Solution** The PowerPOD system adopts a fully decoupled, containerized architecture, allowing one power system per container. This modular design accelerates deployment, achieves over 90% prefabrication, reduces onsite manpower by 70%, and shortens time-to-market for AI DCs.

It supports high-density AI workloads while maintaining energy efficiency and operational reliability. 3.

Single Site

Power Architecture Huawei's next-generation site power architecture, Single SitePower, implements a three-level synergy mechanism across site power facilities, wireless networks, and power grids. It enables bidirectional interaction of power and information flows, improving site energy efficiency (SEE) and power availability (PAV) while reducing network carbon intensity. The architecture emphasizes resilience, green energy integration, and reliable lithium battery deployment.

Design and Operational Guidelines

Huawei provides comprehensive AI DC design guidelines, including the AI DC Computer Room Reference Design White Paper, which addresses challenges such as heat dissipation, power distribution, floor load capacity, and integrated cabling. These guidelines help operators optimize infrastructure for high-density AI workloads and ensure scalable, energy-efficient operations.

Global Impact and Market Outlook

The global AI DC capacity is projected to exceed 100 GW by 2028, with Huawei actively supporting the construction of high-quality intelligent computing centers. The company's solutions aim to reduce energy operating expenditure, enhance reliability, and accelerate the deployment of AI infrastructure, enabling operators to meet zero-carbon targets and maximize computing efficiency. SummaryHuawei's New Energy Intelligent Data Centers integrate AI-driven energy optimization, modular prefabrication, green power deployment, and resilient power architectures to deliver scalable, low-carbon, and high-performance AI computing facilities.

These innovations address the challenges of reliability, energy consumption, and rapid deployment, positioning Huawei as a leader in next-generation intelligent data center solutions.

Article Content

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With reliable products, full-lifecycle services, and professional consulting and design capabilities, Huawei works with partners to build the AI DC

Huawei Reveals a Next-Generation Site Power Facility Architecture

"The rise of network architectures centered on data centers in the intelligent era is driving higher demands for digital and intelligent energy." According to He Bo, Huawei Digital Power is

Huawei launches new-gen AI-powered Green Site and GW-Level

Huawei Data Center Facility reconstructs four core elements of data centre operations: power supply, cooling, energy storage and operational management. This approach delivers a

Huawei Releases AI DC Data Center Reference Design White Paper

Authoritative sources predict that the global scale of new intelligent computing centers will reach 112GW in the next five years. Huawei Digital Energy is committed to helping customers build

Huawei launches AIDC initiative, AI-powered green site

Operators will use facilities such as telecom sites and data centers to improve equipment energy efficiency, integrate solar power and energy storage. This will enable operators to transition

Huawei unveils Single SitePower architecture and AI data center ...

Huawei launched the Single SitePower architecture and RASTM guideline at MWC 2025, enhancing energy efficiency in AI data centers.

Huawei Reveals a Next-Generation Site Power Facility Architecture

From general-purpose computing to AI computing, data centers need to resolve four major challenges: reliability, uncertainty, rapid delivery, and high power demand.

Huawei's Bold Vision: Building Reliable Data Centers for the AI Future

Huawei drives the AI era with reliable, modular data centers, fast deployment, smart cooling, and 99.999% uptime—powering next-gen global infrastructure.

Huawei unveils AI Data Center solution, leading the industry into a

Charles Yang, Senior Vice President of Huawei and President of Global Marketing, Sales and Services, Huawei Digital Power, said in his opening speech that the golden era of computing infrastructure has

Huawei redefines AI infrastructure at MWC 2026

AI-powered Green Sites Announced at MWC 2026, Huawei AI-powered Green Site solution is targeted specifically at mobile operators to enhance network resilience, reduce energy

TechInsights Inc.

Using TechInsights Market Intelligence to Increase Battery Sales and New Logo Sales How TechInsights' Compute and Advanced Packaging Drove First-Mover

Huawei Unveils its Grid-Interactive AIDC Strategy, Shaping the Future ...

They shared insights on the next-generation AI data center (AIDC) architecture evolution and cutting-edge technological innovations, and witnessed the launch of Huawei's grid-interactive

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China unveils \$295 billion plan to build a nationwide AI data center ...

Energy, sustainability, and scale The plan raises questions that extend beyond technology. AI data centers consume vast amounts of electricity and water. Industry estimates place

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