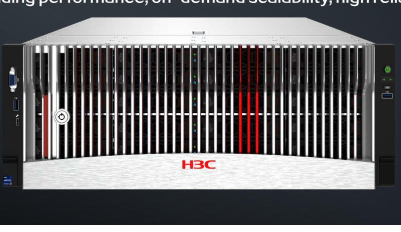
H3C UniServer R5300 G6
Server Hardware Highlights

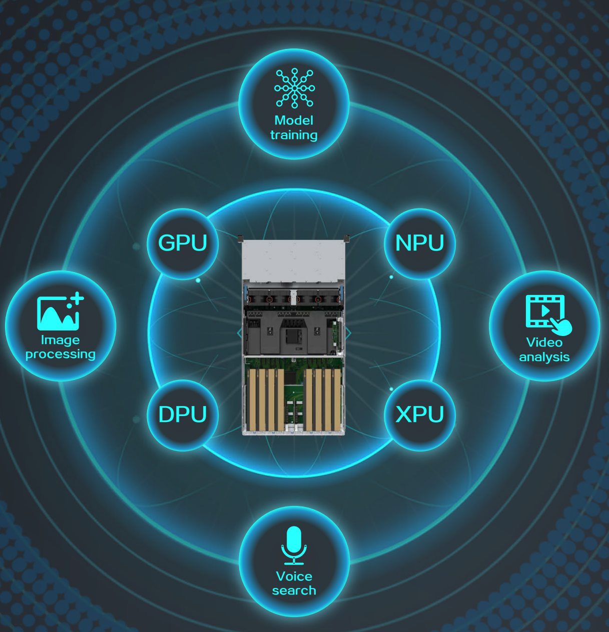
H3C UniServer R5300 G6 server is a new generation 4U dual-processor AI server independently developed by H3C. It has significant improvements in CPU and GPU specifications compared to the previous generation. The server features outstanding performance, on-demand scalability, high reliability, easy maintenance, and optimized thermal design. It is ideally suited for diverse application scenarios including deep learning model training, inference, high-performance computing, and data analytics. With its unified computing-storage architecture and simplified management and deployment capabilities, this server acts as a versatile computing powerhouse for the AI era.



Innovative Applications, Outstanding Performance

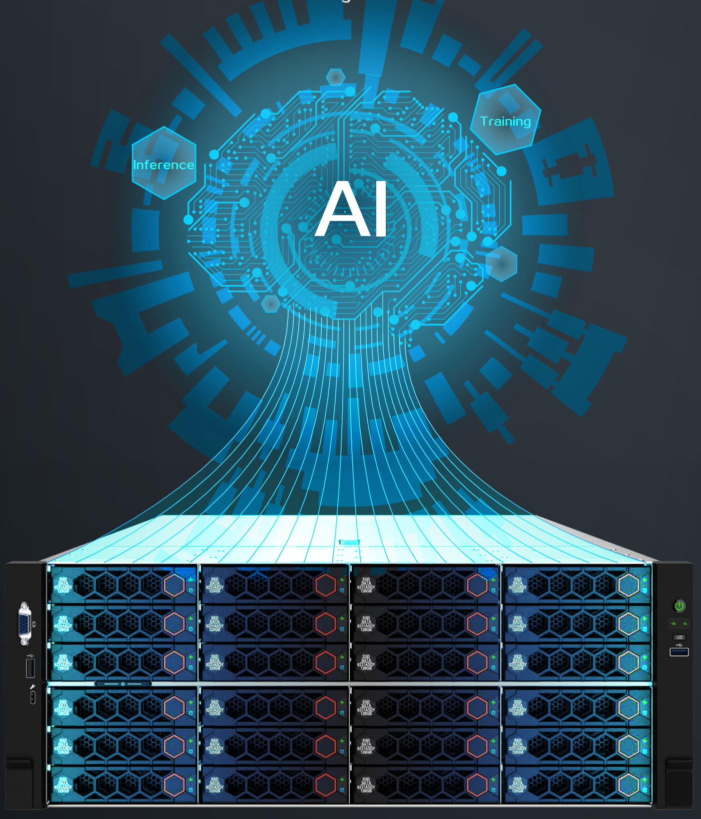
Intelligent Orchestration of Hybrid Computing Power

Supports various types of AI accelerators, including GPU, DPU, NPU, and XPU
Accelerated service development & deployment
Meets the extreme demands of heterogeneous computing for diverse AI scenarios



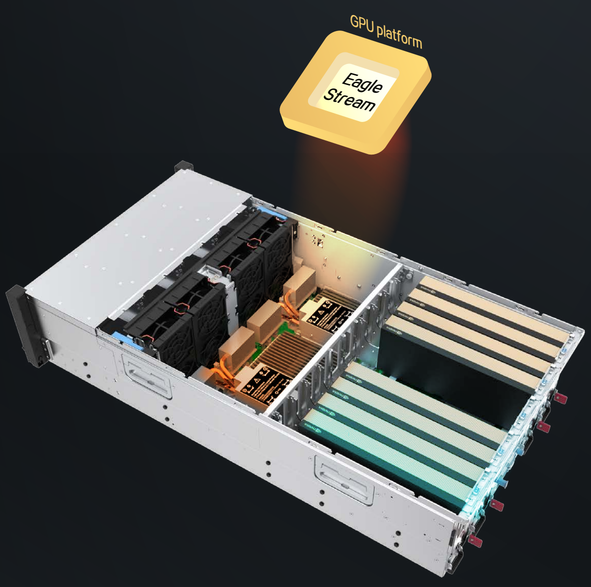
AI-Driven Compute and Storage Integration

Offering powerful AI computing capabilities, integrating both training and inference
Massive storage, meeting the demand for memory space in AI data
Training Inference



Advanced CPU Platform

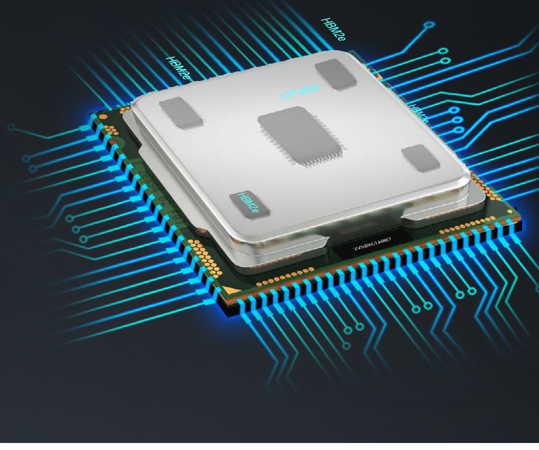
Supports the latest Intel CPU Eagle Stream platform
Provides outstanding computing power and stability



HBM2e High-Bandwidth Memory Technology

Significantly improve memory performance and overcome the bandwidth bottleneck between the CPU and memory

Meeting the demand for high-bandwidth memory technology in CPUs for high performance computing and AI application scenarios



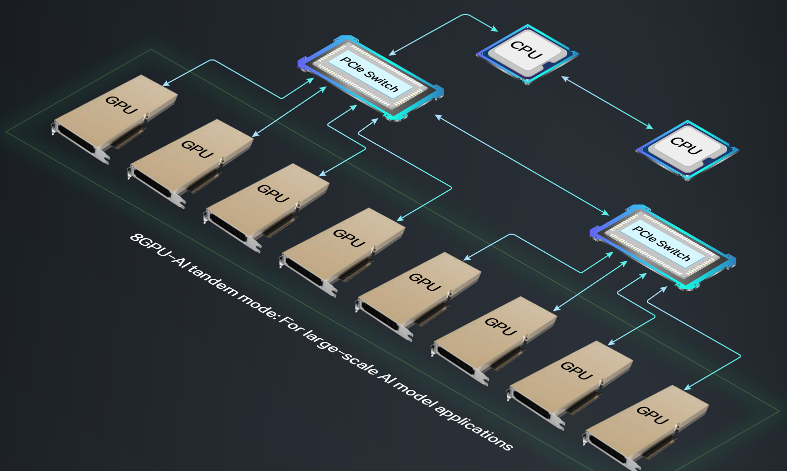
Rearchitect for On-Demand Expansion

Intelligent Topology Adaptable to Diverse AI Scenarios

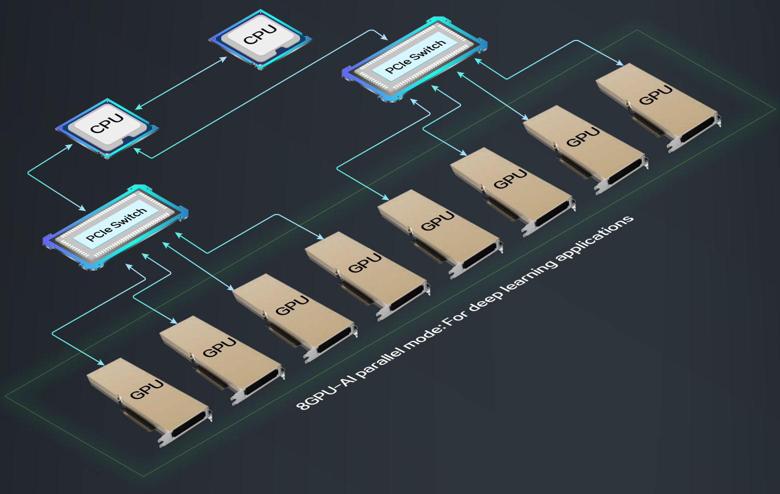
Five types of GPU configurations for different application scenarios

Intelligent resource orchestration for maximized computing efficiency

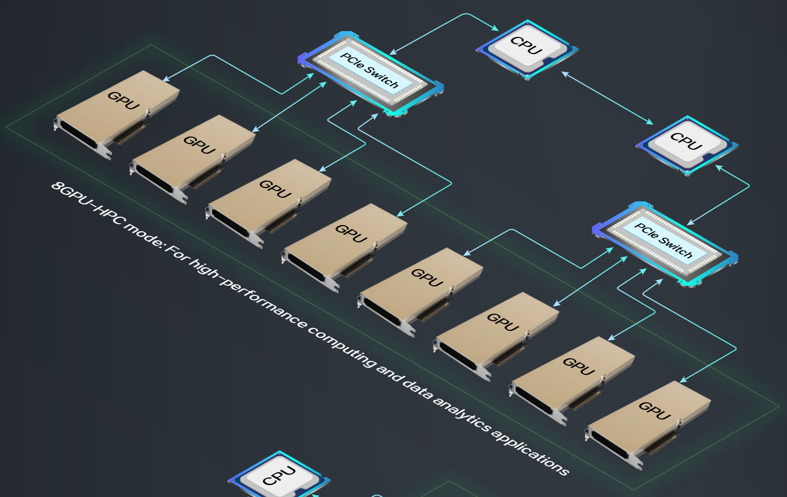
Adapts to diverse AI application needs



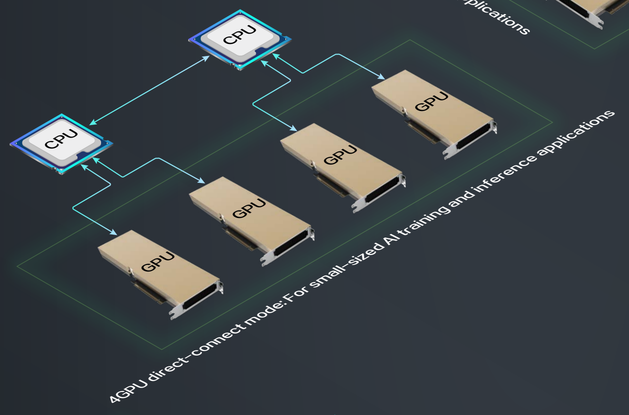
8GPU-AI tandem mode:For large-scale AI model applications



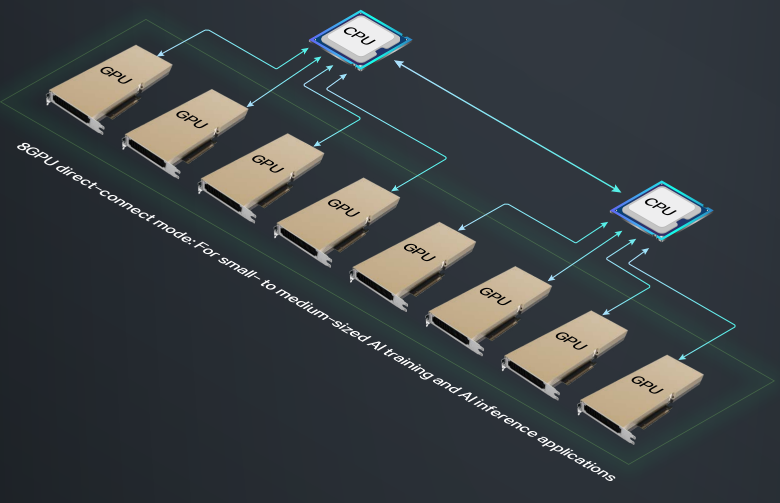
8GPU-AI parallel mode:For deep learning applications



8GPU-HPC mode:For high-performance computing and data analytics applications



4GPU direct-connect mode:For small-sized AI training and inference applications



8GPU direct-connect mode:For small- to medium-sized AI training and AI inference applications

Flexible CPU Accelerator Options

To maximize system efficiency, the CPU accelerator function can be flexibly configured for different application scenarios

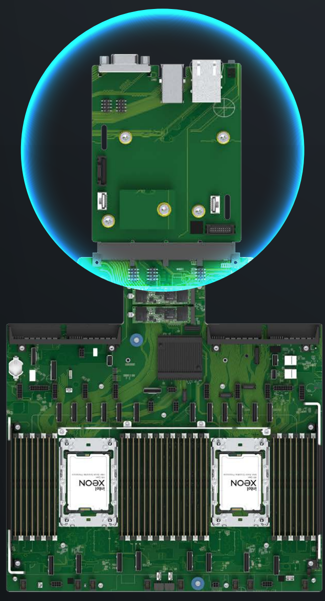
SGX accelerator
Provides data protection and acceleration

QAT accelerator
Enhances database performance

IAA accelerator
Improves first-level compression throughput for network and storage applications

BMC Modular Design

Independent BMC module for enhanced configuration flexibility and serviceability

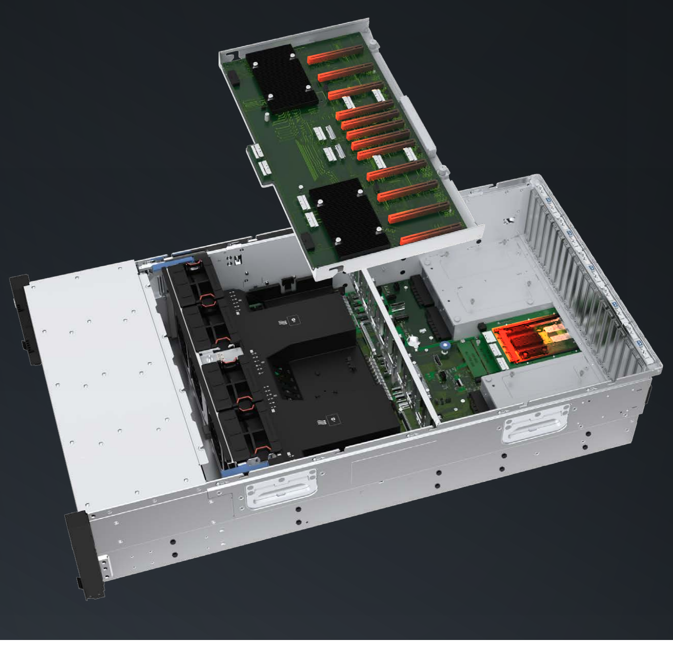


Rich Drive Storage Types

Supports 24LFF and 12LFF drive backplanes
Supports 24 2.5/3.5-inch drives with up to 22 T capacity per drive and a maximum of 528 T in total
Up to eight NVMe drives, meeting the massive data storage requirements of AI applications

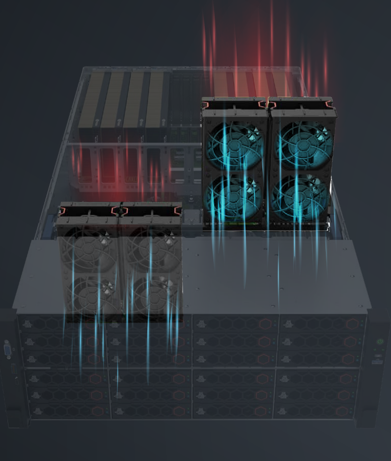
High-Density PCIe Slots

Supports up to 12 PCIe5.0 slots
Supports the brand-new CXL interconnection protocol*
Uses 400GE network adapters to meet the high speed requirements of AI applications



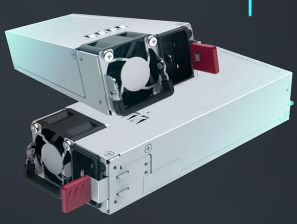
Precisely Engineered for Reliability

System availability ⩾ 99.999%, MTTR ⩽ 0.5h



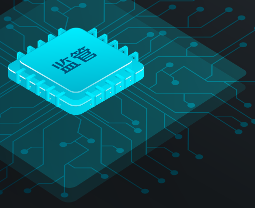
Fan Hot Backup

Four fan modules, eight fans
Fans support N+1 redundancy and hot swapping
Intelligently adjusts the rotation speed based on the temperature inside the chassis, keeping the device away from high-temperature risks



Power Supply Redundancy

Power supplies support N+N redundancy and hot swapping
Human-controlled cold backup, enhancing system reliability



Integrated Management Monitoring Chip and Sensors on System Board

Supports 180+ RAS features
Monitors the system status comprehensively
to ensure stable operation

Vibration Isolation Design

Sound-absorbing foam design on the drive backplanes and intake vents of fans
Dual protection to mitigate fan-induced vibration transmission to drives, ensuring uninterrupted service operation
Ensures drive data read/write reliability

Upgraded Safeguards for Enhanced Reliability

Comprehensive Security Protection

Supports memory encryption, trusted silicon root technology, TCM/TPM, and secure encryption virtualization

Memory encryption technology
Trusted Silicon Root Technology
TCM/TPM
Secure encrypted virtualization

Trusted Silicon Root Technology

Enhances server firmware ability to resist external attacks

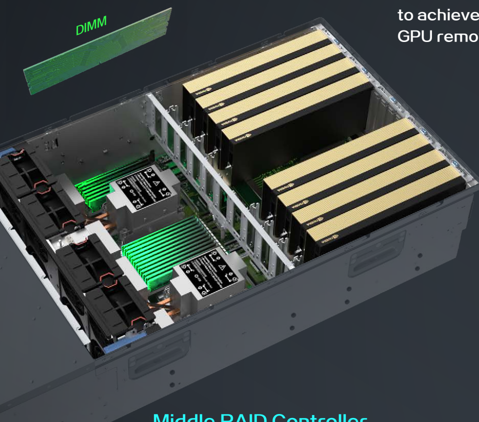
Intel SGX 2.0 Technology Ensures Data Security

Hardware-based memory encryption to enhance system protection
Isolates specific application codes and data in memory to provide a trusted execution environment and ensure data security

Compact Design, Easy Maintenance

DIMM Maintainability

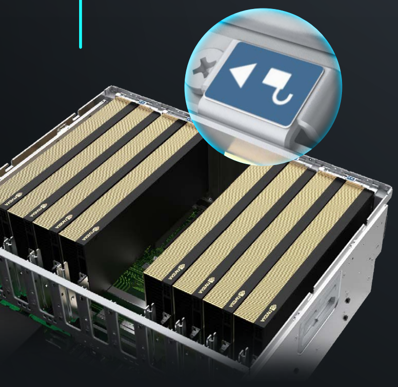
Optimized GPU and node board layout within compact chassis,
to achieve DIMM maintenance without GPU removal



Middle RAID Controller

Design

Utilizes the space on the side wall above the system board in the chassis to place the RAID installation brackets and adapters
Add support for one more RAID controller

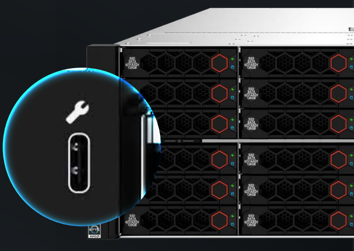


Tool-Free GPU Maintenance

GPUs can be installed and removed without tools, making maintenance more convenient

Distinctive Dedicated Management Interface Design

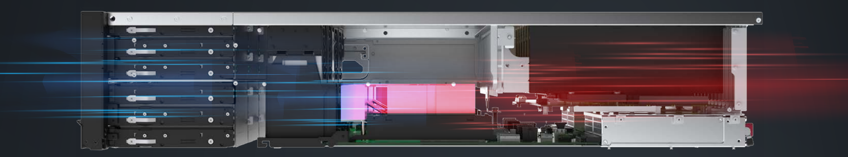
Allows connecting a USB Wi-Fi module through a Type-C to USB cable
Seamless Wi-Fi access to HDM2 from mobile devices anytime anywhere
Management software
Simplified server configuration & management



Comprehensive Heat Dissipation with Optimal Power Consumption

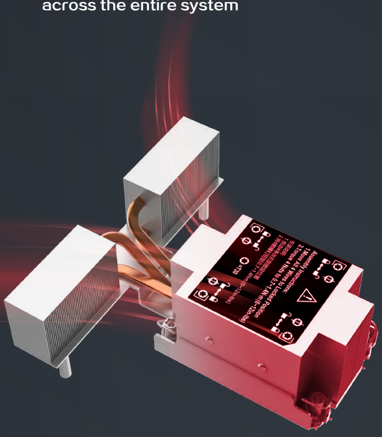
Midplane-Free Architecture

Adopts a midplane-free architecture, which reduces airflow resistance and significantly enhances overall thermal performance



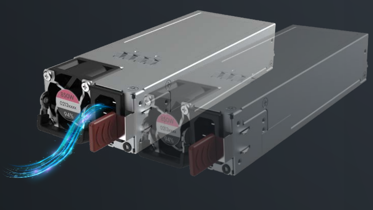
T-Shape Heatsink Design

2U T-shape heat pipe heatsink, providing expanded cooling surface area
Reduces preheating of components behind the CPUs, ensures efficient cooling for high-power CPUs, and maintains balanced thermal performance across the entire system

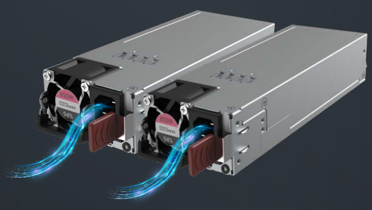


Intelligent Power Saving for PSUs

Dynamic power redundancy
Switch to active/standby mode under low load, and switch to load balancing mode under high load
Ensure optimal power efficiency by autonomously switching, effectively reducing server power consumption and achieving low-carbon emission



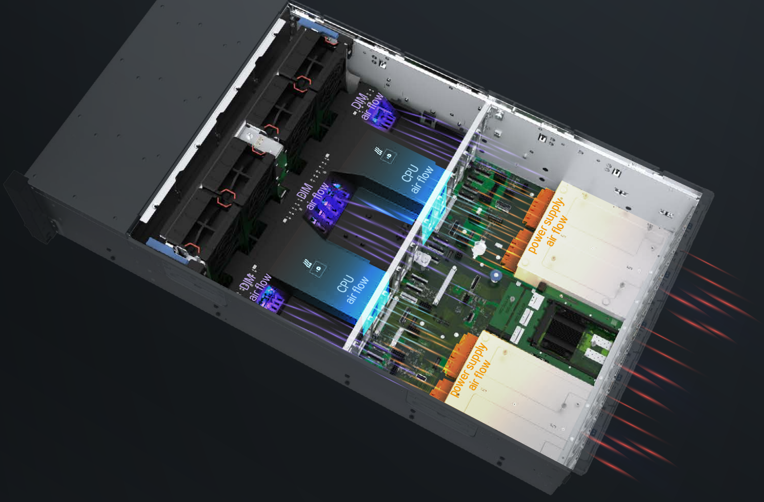
Low-load active/standby mode



high-load balancing mode

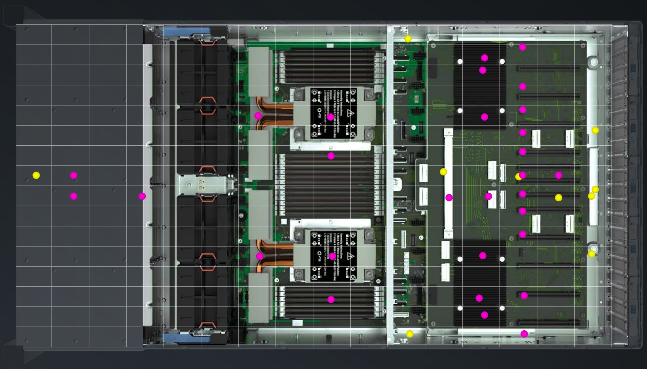
Air Baffle Design

Responsible for the heat dissipation of the CPUs, DIMMs, and power supplies
Ensures even heat dissipation for all key parts to avoid local hot spots
DM air flow, CPU airflow, power supply airflow



Inside Temperature Sensor Design

Up to 49 temperature sensors in the chassis
Ultra-granular fan control, allowing each fan to independently monitor every temperature sensor
Maximizes cooling airflow usage to ensure optimal thermal performance while reducing overall power consumption



Software Infographics

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