EMPOWERING THE NEW ERA OF DATA-DRIVEN HEALTHCARE

How to accelerate AI & HPC workloads to **deliver better outcomes for all**

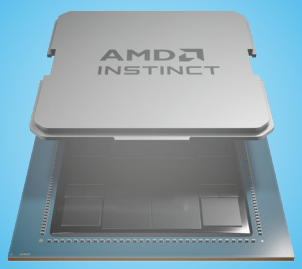
Healthcare providers and life sciences researchers are racing to scale their AI operations to improve the overall quality of care. But the massive datasets and advanced analytics are no match for legacy systems. It's time for heavy-duty compute delivered with rack-scale simplicity.

90% of health system executives say AI and digital transformation is a high priority.[1]

AI-enabled research methods reduce drug molecule discovery times by **10x**[2]

AI, machine learning, and deep learning are projected to save healthcare spending by up to **$360B**[3]

Supermicro servers with AMD Instinct™ MI300X are designed to **accelerate AI and HPC workloads in healthcare, with the leaps in performance, density, and efficiency** to improve patient outcomes in the most demanding environments.



NEXT-GENERATION RESEARCH AND TREATMENTS

Supermicro servers with AMD Instinct™ MI300X deliver breakthrough performance and acceleration for healthcare applications.

Advanced drug discovery: Enable simulations that shorten drug trials from years to months

Risk assessments & personalized care: Predict diseases and diagnose conditions with high accuracy

Enhanced diagnostics & imaging: Analyze huge imaging files almost instantly to improve care

Increased patient support: Transform care via self-service tools and real-time edge analytics

Supermicro servers with AMD Instinct™ MI300X deliver massive compute with rack-scale flexibility, as well as breakthrough power efficiency.

PERFORMANCE: GET MORE DONE WITH MASSIVE DATASETS

Powerful CPU + GPU + HBM3 memory accelerates HPC and AI workloads

Unmatched memory capacity with up to **192GB HBM3 dedicated to GPUs**[4]

Complete solutions ship pre-validated, ready for **day one deployment—at rack scale**

Double-precision power can serve up to 163.4 TFLOPS (FP64 HPC performance)[4]

FLEXIBILITY: SPEED DEPLOYMENT OF ADVANCED AI MODELS

Proven AI building-block architecture streamlines deployment at scale for the largest AI models

Open AI ecosystem with AMD ROCm™ open software and a foundation of heterogeneous portability

Unified computing platform with AMD Instinct™ MI300X plus AMD Infinity fabric and infrastructure

Modular design and build means faster path to the exact right configuration

EFFICIENCY: REDUCE COSTS WITHOUT SACRIFICING CARE

Dual-zone cooling innovation, used by some of the most efficient supercomputers on the Green500 supercomputer list[5]

Improved density with 3rd Gen AMD CDNA, delivering 19,456 stream cores

Chip-level power intelligence enables Instinct™ MI300X to deliver outstanding power performance

Purpose-built silicon design of the 3rd Gen AMD CDNA combines ultra-efficient 5nm and 6nm fabrication processes

READY TO UNLEASH THE POTENTIAL OF DATA-DRIVEN HEALTHCARE?

For more information:

SUPERMICRO | AMD

SOURCES:

1 https://www.mckinsey.com/industries/healthcare/our-insights/digital-transformation-health-systems-investment-priorities

2 https://arxiv.org/abs/2107.03896

3 https://www.nber.org/papers/w30857

4 https://www.amd.com/en/legal/claims/instinct.html

5 https://www.amd.com/content/dam/amd/en/documents/instinct-tech-docs/data-sheets/amd-instinct-mi300x-data-sheet.pdf