

ISC 2026 Vendor Showdown

Yoshihiro Kusano - Fujitsu

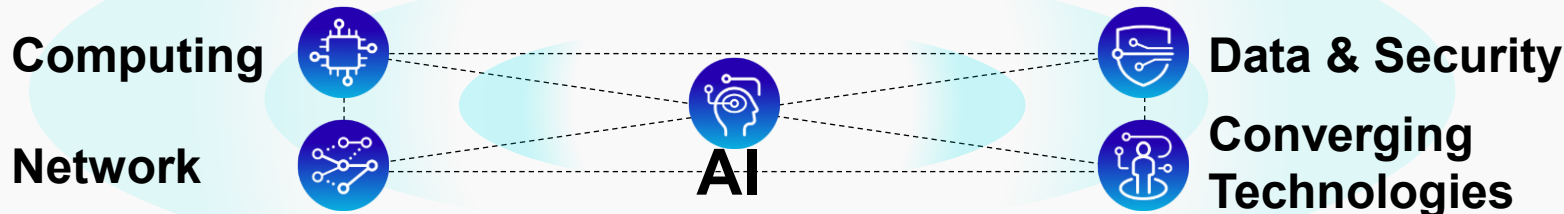


Purpose and Technologies

Fujitsu's Purpose

Make the world more sustainable by building trust in society through innovation.

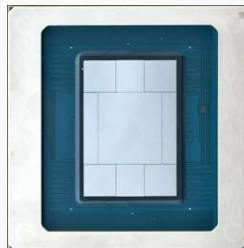
Fujitsu's Key Technologies



FUJITSU-MONAKA

- Fujitsu designed Arm-based CPU
- Across data center and edge
- High-performance, energy-efficient
- Rack mount servers available in 2027

FUJITSU-MONAKA



Air cooled server



Water cooled server



AI-HPC platform, FugakuNEXT



Trends in HPC

Ever-Growing data volumes and needs for computational power

Needs for higher computational density and power efficiency

Rapid AI evolution and expansion of applicable areas

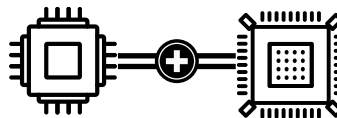
AI-HPC platform, FugakuNEXT

- CPU+GPU node architecture
- 100x app performance over Fugaku
- Application modernization for CPU+GPU
- Targeted for operation around 2030
- Co-developed by



Complementary compute design

FUJITSU-MONAKA-X



NVIDIA GPU

NVLink™ Fusion

Irregular data structures

Sparse matrices, graphs

Regular data structures

Dense matrices, tensors, grids

Complex control flow

Branching, adaptive algorithms

Massive parallel throughput

SIMT / SIMD, bulk GEMM

Real-time, low-latency inference

In-situ steering, online decisions

Large-scale AI training

High-throughput learning

FUJITSU-MONAKA-X

CPU powering AI-HPC convergence



Armv9-A Architecture



Arm SVE2 + SME2 for on-CPU AI processing



> 200 Cores x 2 sockets
(> 400 cores per node)



Confidential Computing for security

Revolutionizing Simulation with FugakuNEXT



⚡ AI-enhanced Simulation

Significantly improve accuracy and speed of simulation using AI

🔄 Faster Computation

📈 Higher Prediction Accuracy

🔍 Simulated Data-Driven Science

Discover unknown behaviors hidden within the complexity of real-world physics

🗄️ Massive Data Exploration

🧠 Hidden Pattern Detection

🤖 Agentic Simulation

AI agents autonomously plan, execute, and refine multi-step simulation loops

⚙️ Autonomous Trial & Error

🚀 Beyond Human Intuition

2020

A64FX



Fugaku

2027

FUJITSU-MONAKA



Cluster
Supercomputers

2029

FUJITSU-MONAKA-X



FugakuNEXT
AI-HPC platform

2031

FUJITSU-MONAKA-XX



Future AI-HPC
CPU-integrated NPU

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