Fujitsu Arm-based Processor FUJITSU-MONAKA

ISC High Performance 2024

Vendor Showdown

Toshio Yoshida - Fujitsu

FUJITSU

Our Purpose

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

5 Key Technologies

Combining technologies to generate trusted quality data and deliver new value

AI & Computing

AI is evolving rapidly and requires significant computing power

FUJITSU-MONAKA - Fujitsu Arm-based Processor

FUJITSU

Fujitsu microarchitecture | **3D many-core architecture** | **Confidential Computing**

High-performance

- Cloud native 3D many-core design by Fujitsu's proven microarchitecture
- High memory bandwidths

Energy Efficient

- Leading-edge process technology
- Ultra-low voltage operation

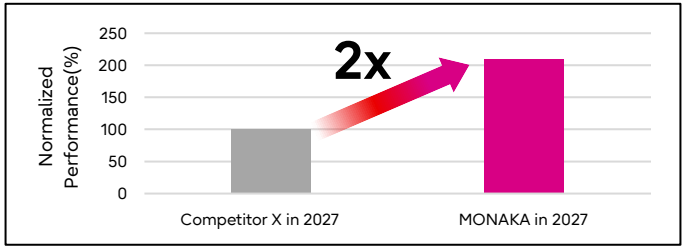
High Reliability

- Multiple VM Confidential Computing
- Mainframe class RAS for stable operation

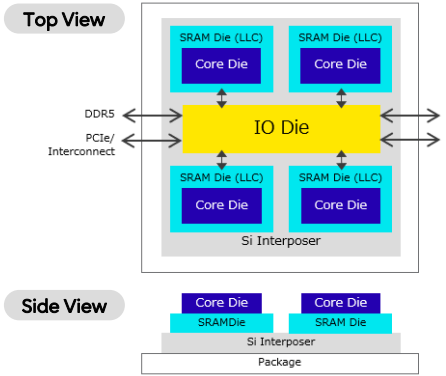
Easy to Use

- Open & de facto standard software stacks
- Fujitsu compiler technology
- Air cooling for easy deployment

Performance per Watt



This presentation is based on results obtained from a project subsidized by the New Energy and Industrial Technology Development Organization (NEDO).



subject to change

- Armv9-A architecture
  - SVE2 for AI and HPC
  - Confidential Computing for security
- 144 cores x 2 sockets
- Ultra low voltage
- 3D chiplet
  - Core die 2nm
  - SRAM die/IO die 5nm
- DDR 12 channels
  PCI Express6.0(CXL3.0)
- Air cooling

Fujitsu's AI & Computing Direction

- FUJITSU-MONAKA advances AI performance in addition to HPC performance, on both data centers and the edge
- The direction of FUJITSU-MONAKA will pave the way for next-generation supercomputing

HPC x AI on Data Center and Edge

Next-Generation CPU
FUJITSU-MONAKA

arm

UXL
Unified Acceleration Foundation

Linaro

Research

Feasibility Studies on Next-Generation Supercomputing Infrastructures

Thank you