

EPI Forum

Barcelona, 9–10.10.2024.





Overview of Seine Platform

October 2024



A dedicated team behind the Seine Platform & its motherboard

The System & Board Design Team
based in Grenoble and Massy



Vincent Casillas
VP R&D System
& Software



Christophe Baget
System Design
Team Leader



Mariam El Hassouni
Senior PCB Engineer



Bruno Many
Senior Electronic
Technician



Fabrice Ledogar
PCB Package Engineer



Pierre Saëz
Board & System
Engineer



Olivier Brocandel
Senior PCB Engineer



Server board design as reference design

A key step in the development of high-performance microprocessors

- Internal testing and characterization of silicon
- Software development and integration
- Demos

An essential prerequisite for the server design of our direct customers

- Reduced design costs

A platform to be used by our partners, EU & local projects, customers

- Software development and integration
- Performance evaluation

A design meeting all the functional requirements of different uses

#1 Reference design

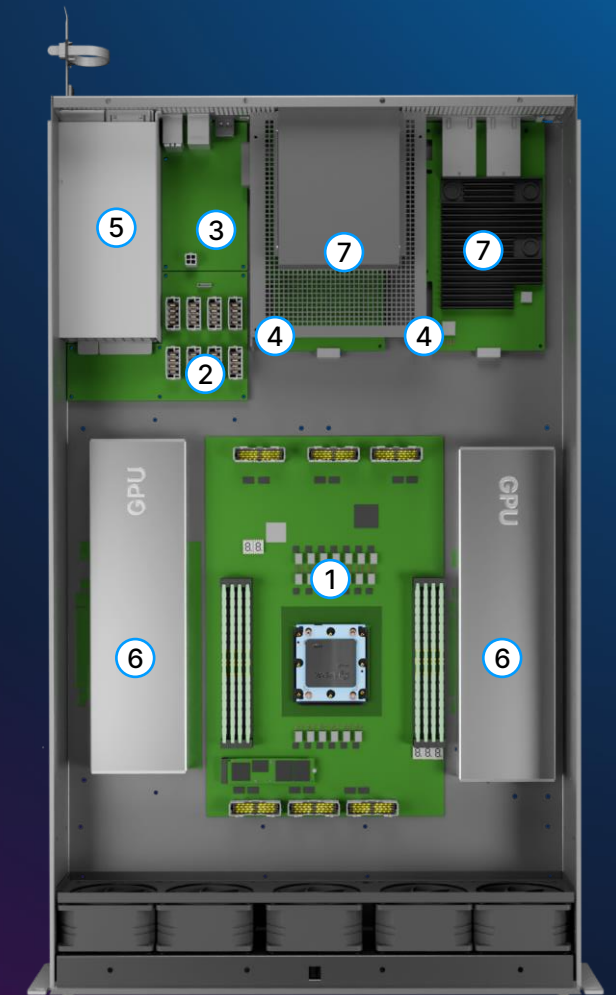
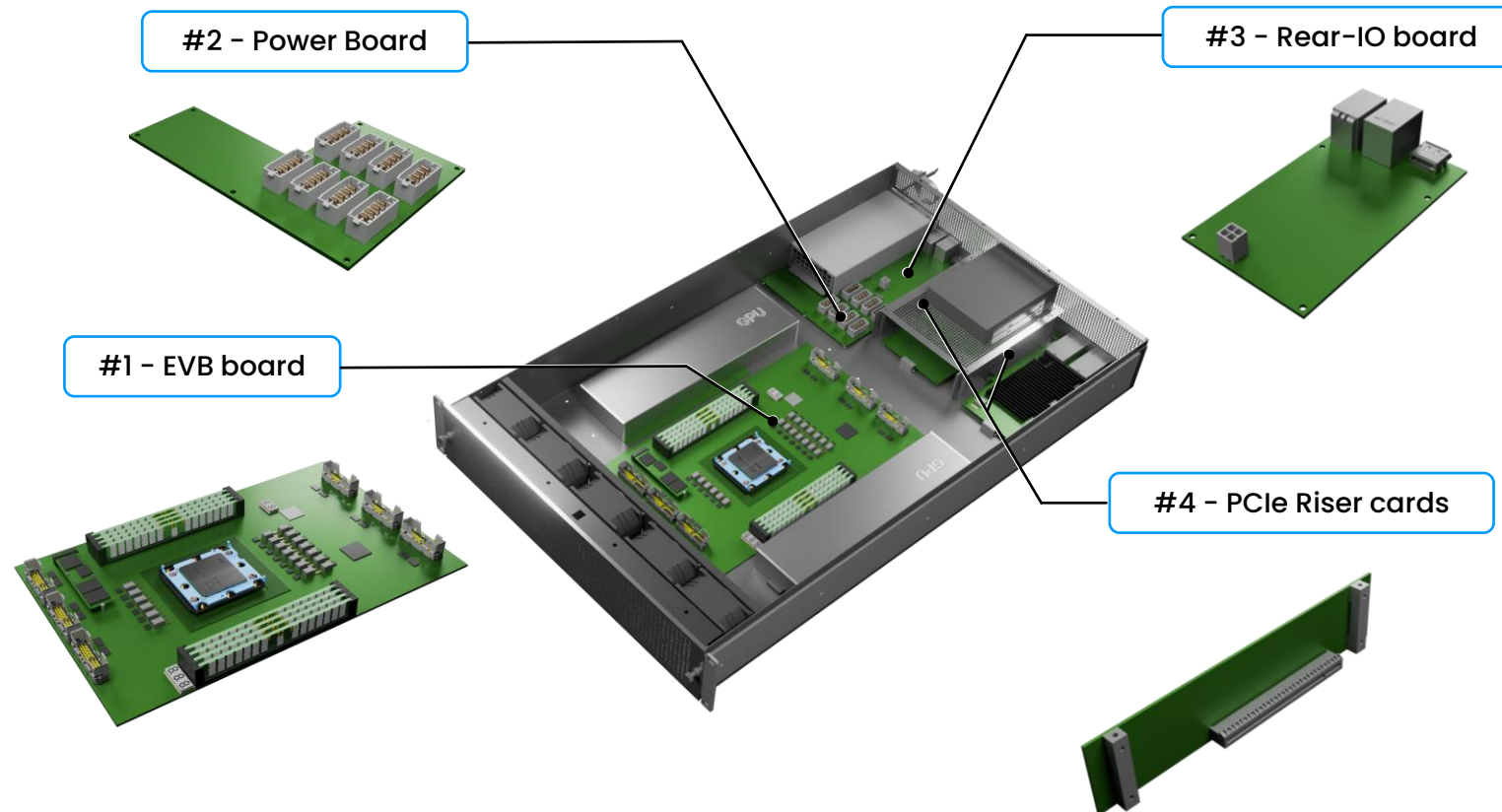
#2 Validation & testing

#3 Multiple demos

A multifunctional,
flexible & versatile
platform

In response: a single modular reference server solution

Overview of Seine Platform

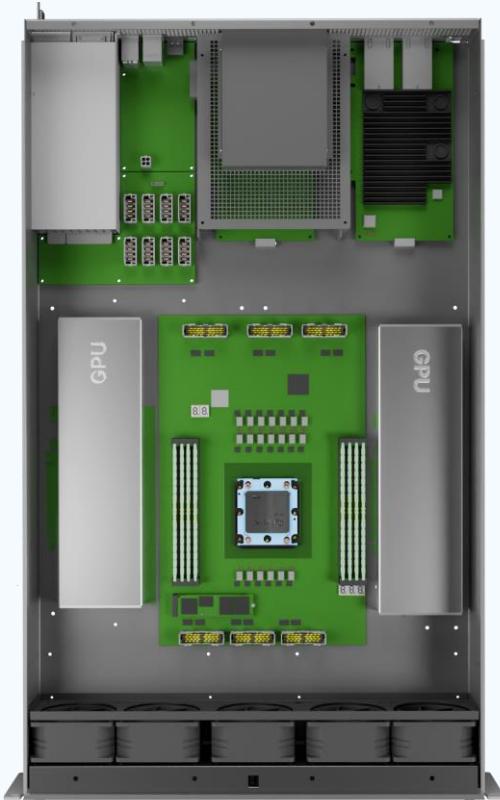


- #1 EVB Board
- #2 Power Board
- #3 Rear-IO board
- #4 PCIe Riser cards
- #5 ACDC power supply
- #6 GPU boards connected to PCIe
- #7 PCIe IO boards (Example: NIC) connected to PCIe riser cards

A modular solution for every application (1/3)

Config #1

Single-CPU with 2xGPU for...

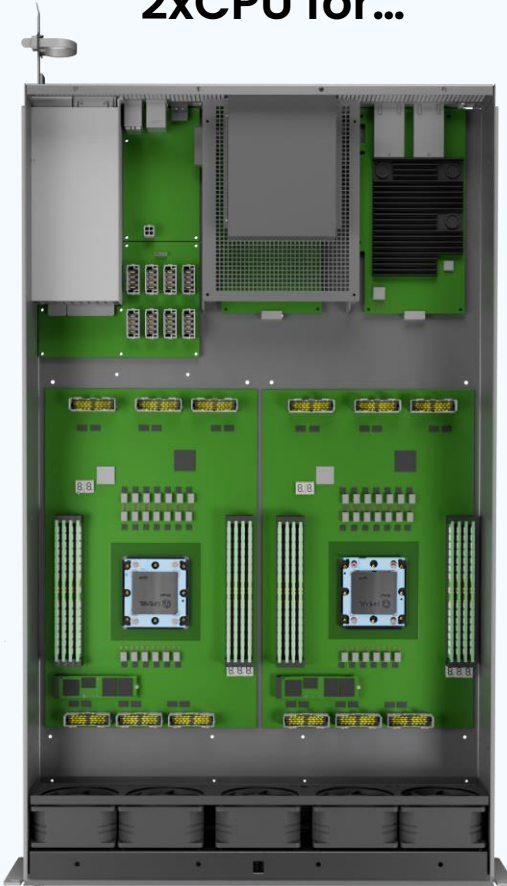


- **AI inference:** Bert, Stable Diffusion, Llama7b
- **Molecular simulation:** GROMACS, CHARMM, LAMMPS, NAMD
- **Chemistry:** Quantum Espresso
- **Materials Science:** Quantum Espresso, Yambo, Fleur, Siesta
- **Electromagnetic simulation:** Trilinos, WARPX

A modular solution for every application (2/3)

Config #2

2xCPU for...

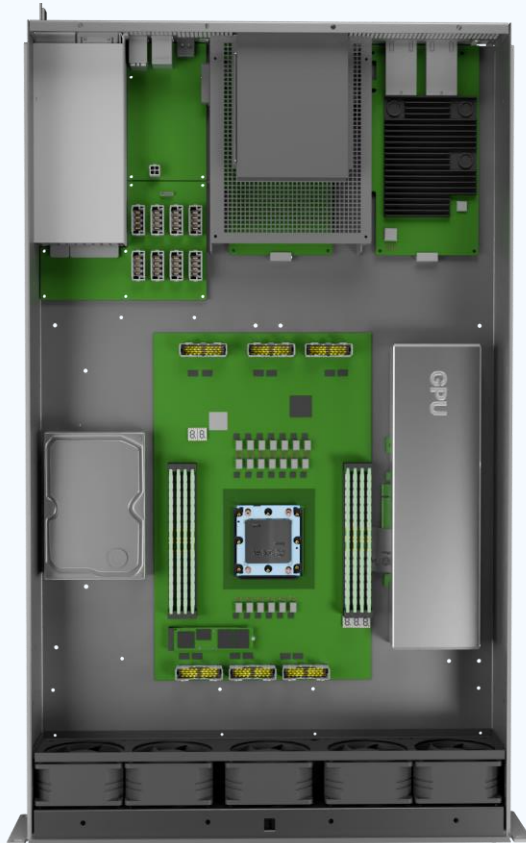


- **Weather forecast:** ECMWH codes, MESONH, MEMO
- **Astrophysics simulations:** Dyablo, PHARE, PLUTO, RAMSES

A modular solution for every application (3/3)

Config #3

Single-CPU with 1xGPU & 1xSATA



- **Energy:** PLASMA
- **Fundamental Research:**
Abnit, BigDFT, CP2K, Lammmps
- **Computational Fluid Dynamics:**
AVBP, Alya, CODA, ElmerFEM, FLEW, m-AIA, Neko, OpenFOAM

MAX DRIVING
THE EXASCALE
TRANSITION

PLASMA
PEPSC

EXCELLERAT P2

Seine server is now available and ready for Rhea1



EPI FORUM



EuroHPC
Joint Undertaking

PLATINUM SPONSORS



EVIDEN



GOLD SPONSORS

