Press release

SiPearl: launch of Seine Reference Server, a modular solution for reference design, test and demos

SiPearl, the company building high-performance energy-efficient European processors dedicated to supercomputing and AI, unveils its Seine Reference Server, a modular reference server hosting Rhea1, its first family of processors. Multifunctional, flexible and versatile, the Seine Reference Server can be used for validation and testing, as a reference design, for software porting and for demonstrations and customer testing. In this last role, Seine Reference Server is a key component of European collaborative projects such as Aero, OpenCUBE, Riser and Plasma-PEPSC which aim to strengthen Europe's technological sovereignty, independence and competitiveness.

Meet the SiPearl team at:

- **ISC High Performance in Hamburg – June 10-12, 2025 – Booth #G11**
- **Vivatech in Paris – June 11-13 – Ile-de-France Region booth #J33 Hall1**

Maisons-Laffitte (France), June 10, 2025 – On the occasion of ISC High Performance and Vivatech, SiPearl, the company building high-performance energy-efficient processors for HPC and AI workloads, is introducing Seine Reference Server, its modular reference server solution.

A multifunctional, flexible and versatile solution

Designed to host Rhea1, Seine Reference Server is a multifunctional, flexible and versatile solution for various uses cases:

- **Validation and testing,** a key step in the development of a high-performance energy-efficient processor for internal testing, silicon characterization, software development, porting and integration.
- **Reference design** supporting SiPearl direct customers to lower their design costs and speed Time-To-Market.
- **Demonstrations** for partners, customers and end-users.

The Seine Reference Server is available in two configurations: a single Rhea1 processor connecting to up to two GPUs in a single chassis, or as a dual socket Rhea1. Each configuration supports up to two SATA (Serial Advanced Technology Attachment) disks and up to two PCIe NICs. It is suitable for a wide range of applications such as: molecular simulation, Defense, energy, AI inference, weather forecast, computational fluid dynamics, materials science, astrophysics simulation, chemistry, etc. This modular solution is conceived by SiPearl's System & Board Design team based in Grenoble and Massy (France).

At the heart of Aero, OpenCUBE, Riser and Plasma-PEPSC collaborative projects

Today, the Seine Reference Server is used in four European collaborative projects addressing the future of Europe's technological sovereignty, independence and competitiveness:

- The **Aero**, **OpenCUBE**, and **Riser** projects aim to promote the emergence of a sovereign European cloud, whether in terms of infrastructures and hardware for Aero and Riser or in terms of software for OPenCUBE.
- The **Plasma-PEPSC** project uses the Seine Reference Server to make plasma simulations applications ready for the upcoming European exascale supercomputers

In all of these projects funded by the European Union, SiPearl is a key stakeholder among universities, research institutes, supercomputing centres, start-ups and large corporations.

"Launched by EuroHPC, the European Processor Initiative aims at delivering European sovereign solutions for high performance computing and federating an ecosystem gathering key players from the whole supply chain. It irrigates several European projects gathering scientific and industrial applications and user communities such as OpenCUBE, Aero, Riser and Plasma-PEPSC. In those projects, scientists specialized in aeronautics, mechanics, meteorological simulation, or plasma sciences benefit from SiPearl Seine Reference Server to port, exercise and optimize their code on our processor Rhea1 toward future European HPC deployment", concluded Anna Riverola, Group International Development & Research Program.

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About... SiPearl

SiPearl is building European high-performance energy-efficient processors dedicated to HPC and AI. This new generation of processors first targets EuroHPC Joint Undertaking ecosystem, which is deploying world-class supercomputing infrastructures in Europe for solving strategic challenges in security, defense, generative AI, medical research, energy management and climate with a reduced environmental footprint.

SiPearl is working in close collaboration with its 30 partners from the European Processor Initiative (EPI) consortium - leading names from the scientific community, supercomputing centers and industry - which are its stakeholders, future clients and end-users.

Funded by the European Union, the company employs 200 people.

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