

JUPITER Exascale Supercomputer, lead customer for SiPearl

SiPearl, the company building the European energy-efficient HPC⁽¹⁾-dedicated microprocessor, wins an emblematic contract to equip the first Exascale⁽²⁾ supercomputer in Europe. Named JUPITER, this EuroHPC JU supercomputing infrastructure will be operated by Forschungszentrum Jülich. This first contract is a major milestone for SiPearl in fulfilling the mission assigned by the European Union to ensure European sovereignty through the return of high-performance, low-power microprocessor technologies in Europe. It will contribute to the development of high-precision models of complex systems and artificial intelligence applications to solve strategic, scientific, industrial, environmental challenges with a low-carbon footprint.

Maisons-Laffitte (France), October 5, 2023 – SiPearl, the company building the world's first energy-efficient HPC-dedicated microprocessor designed to work with any third-party accelerator (GPU, artificial intelligence, quantum), today announces a contract to equip JUPITER, the first European exascale supercomputer. Owned by the EuroHPC Joint Undertaking, JUPITER will be installed at the Forschungszentrum Jülich campus in North Rhine-Westphalia and built by a consortium composed of Eviden (the Atos Group business leading in advanced computing) and ParTec (the German modular supercomputing company). The expected budget is €273m.

JUPITER general-purpose Cluster Module will be based on SiPearl's first generation microprocessor, Rhea1. Using the Arm[®] Neoverse[™] V1 platform, Rhea1 is characterized by a very high memory bandwidth, an extraordinary compute performance and efficiency for an unmatched Byte/Flop ratio. It will help JUPITER to run complex simulations and artificial intelligence applications to solve strategic, scientific, industrial, environmental challenges with a low-carbon footprint. Rhea1 will sample in 2024.

This first contract is a major milestone for SiPearl in fulfilling its mission assigned by the European Union through the European Processor Initiative (EPI) consortium: to ensure European sovereignty with the return of high-performance, low-power microprocessor technologies in Europe.

"The core design philosophies behind Arm Neoverse are flexibility, performance, power efficiency and a mature software ecosystem, all of which are critical in empowering our partners to rapidly and successfully build custom solutions that are workload-optimized from the edge to exascale," said Mohamed Awad, Senior Vice President and General Manager, Infrastructure Line of Business,

⁽¹⁾ HPC: High Performance Computing.

⁽²⁾ Exascale: 1 billion billion calculations per second.

Arm. *"We are happy to congratulate SiPearl on this tremendous milestone and look forward to continuing our work together in enabling a robust HPC computing ecosystem across Europe."*

"SiPearl is pleased to take part in this very first European exascale supercomputer. This is a great achievement for us and we look forward to working hand-in-hand with Jülich, Eviden and ParTec, our partners from the EuroHPC ecosystem. The dream of a European machine crossing the exaflop threshold with a European microprocessor inside is coming true", concluded Philippe Notton, CEO and Founder of SiPearl.

About... SiPearl

SiPearl is building the world's first energy-efficient HPC-dedicated microprocessor designed to work with any third-party accelerator (GPU, artificial intelligence, quantum). This new generation of microprocessors will first target EuroHPC Joint Undertaking ecosystem, which is deploying world-class supercomputing infrastructures in Europe for solving major challenges in medical research, artificial intelligence, security, energy management and climate while reducing its environmental footprint.

SiPearl is working in close collaboration with its 27 partners from the European Processor Initiative (EPI) consortium - leading names from the scientific community, supercomputing centres and industry - which are its stakeholders, future clients and end-users.

SiPearl employs 150 people in France (Maisons-Laffitte, Grenoble, Massy, Sophia Antipolis), Germany (Duisburg) and Spain (Barcelona).



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