



SIPEARL



Press release

SiPearl delivers the first Rhea1 CPUs to Bull for integration into JUPITER, Europe's fastest operating supercomputer

A major milestone towards European 1st supercomputer CPU cluster



Maisons-Laffitte, Les Clayes-sous-Bois (France) – 22 September 2026 – SiPearl, the fabless designer of European high-performance energy-efficient CPUs built for sovereign supercomputing, AI and data centre, has delivered the first samples of Rhea1 to Bull, a leader in advanced computing and AI. This turning point marks a major milestone. It illustrates Europe's success in asserting its technological sovereignty in advanced computing and AI, as Rhea1 will become the first European-designed CPU deployed in a European-built platform.

Bull has begun integration of Rhea1 onto its BullSequana XH3000 platform for JUPITER, Europe's first exascale supercomputer. Procured by the EuroHPC Joint Undertaking, JUPITER is hosted at the Jülich Supercomputing Centre (JSC), Forschungszentrum Jülich, Germany. This milestone will contribute to the development of JUPITER's CPU blade, complementary to the GPU partition, paving the way for the full modular integration of the machine.

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Most complex server CPU ever designed in Europe, Rhea1 includes in a single package 80 Arm® Neoverse V1 cores - each with 2 x 256-bit Scalable Vector Extension -, 4 stacks of HBM and 4 DDR5 interfaces. Thanks to these key features, Rhea1 is ideally suited to the most demanding HPC workloads whilst offering back-door free and kill switch free security, energy-efficiency and flexibility. During the ongoing benchmarking phases at SiPearl's laboratories, Rhea1 is delivering very encouraging performance: the early data is strong, and in some cases, performance is exceeding expectations. The performance figures, which are still to be consolidated, will be published this autumn. The equipment supplied for JUPITER represents SiPearl's first order for Rhea1 and therefore constitutes its first significant revenue.

From dramatically improving extreme weather forecasts to accelerating breakthroughs in climate science, sustainable energy, AI, quantum research, and structural biology, JUPITER will empower researchers, industries, public organizations across Europe to drive innovation at an unprecedented scale.

"The delivery of the first Rhea1 CPUs marks an important milestone for Europe's supercomputing sovereignty. Through the European Processor Initiative, EuroHPC JU has supported the development of a European processor that is now moving from innovation to deployment in JUPITER, Europe's first exascale supercomputer. This achievement demonstrates what Europe can accomplish by bringing together research, industry and world-class infrastructure to build a stronger European HPC ecosystem," said Anders Dam Jensen, Executive Director of EuroHPC JU.

"Rhea1 plays an important role in JUPITER's Cluster Module, complementing the GPU-based Booster with a CPU-based architecture designed for a broad range of complex and data-intensive workloads. Its high memory bandwidth is particularly well suited to applications that benefit from efficient access to large amounts of data. Bringing this European processor technology into JUPITER is an important step in making these capabilities available to the scientific community," noted Prof. Dr. Thomas Lippert, Director of the Jülich Supercomputing Centre at Forschungszentrum Jülich.

"This key milestone is the result of a long-term and strategic collaboration between two European tech players, federating a stronger HPC and AI ecosystem. With the arrival of the first Rhea1 CPUs and their integration into our BullSequana XH supercomputing platform, our ambition is becoming reality. Integrating a European processor onto a European platform for Europe's flagship exascale system is a milestone we can all be proud of, and a powerful demonstration of what we can achieve together when vision is matched with execution. Thank you EuroHPC JU and Forschungszentrum Jülich for trusting us," highlighted Bruno Lecointe, Head of HPC, AI and Quantum at Bull

"Together with Bull, our long-standing partner, we are taking a major step towards Europe's digital sovereignty by equipping the CPU cluster of the European exascale supercomputer JUPITER with European hardware. This will be a first in Europe. I am very proud of this, as it is also a wonderful human endeavour in which teams from SiPearl, Bull, Forschungszentrum Jülich and all our European partners have worked together to ensure the success of this ambitious project, with the unwavering support of EuroHPC JU and the European authorities," concluded Philippe Notton, CEO and Founder of SiPearl.

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About... SiPearl

SiPearl is the European fabless designer of secure high-performance energy-efficient CPUs built for sovereign HPC, AI and data centre. These CPUs will help address strategic challenges in the fields of security, defence, medical research, energy, climate and engineering with a reduced environmental footprint.

Featuring 80 Arm Neoverse V1 cores with 61 billion transistors, SiPearl's first-generation CPU, Rhea1, will be released end of 2026. SiPearl's CPUs will equip the two first European exascale supercomputers: Rhea1 will be integrated into the JUPITER machine based in Germany and Rhea2 will be part of Alice Recoque in France.

Supported by the European Union and France, SiPearl employs 200 people in France, Spain, and Italy.

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About... Bull

Leveraging nearly a century of innovations, Bull is a global leader for High-Performance Computing, Artificial Intelligence and Quantum technologies with c.720m€ in revenue and 3,000 professionals operating in 32 countries.

Built on an open, end-to-end and trusted approach, Bull designs, deploys and operates hardware, software and strategic services that unlock enterprise value, accelerate scientific research and advance society. Driven by world-class R&D, backed by 1,600 patents, manufacturing excellence and data sciences expertise, Bull enables nations and industries to fully control their AI and data and to drive progress for the benefit of the planet.

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