Press release

SiPearl: launch of Athena1, the sovereign processor dedicated to dual-use

A bespoke version of Rhea1 to meet the specific requirements of the government, defence and aerospace sectors in terms of computing power, security and integrity, with a reduced carbon footprint.

Maisons-Laffitte (France), October 2, 2025 – SiPearl, the European fabless designer of sovereign high-performance energy-efficient processors for HPC, AI and data centres, today announced the launch of the Athena1 processor for dual-use applications.

Based on the unique expertise in Europe developed for the design of Rhea1 (SiPearl's first generation processor, dedicated to HPC), Athena1 will offer features specifically tailored to the workloads of government, defence and aerospace applications. These include, for example, secure communications and intelligence, cryptography and encryption, intelligence processing, tactical networks, electronic detection or local data processing on vehicles.

In addition to its computing power, Athena1 will be characterised by its security and integrity. The Athena1 family will offer skus of 16, 32, 48, 64 or 80 Arm Neoverse V1 cores, depending on the power required for each application and their thermal constraints, among other factors. Detailed technical specifications will be announced at a later date.

The manufacturing of Athena1's die will be entrusted to TSMC, the world's leading independent foundry for advanced semiconductors. Packaging will initially be carried out in Taiwan, but packaging is targeted to be moved to Europe to help to grow this industrial ecosystem in Europe.

The commercial release of Athena1 is scheduled for the second half of 2027.

"*In an era of geopolitical uncertainty, with cybersecurity issues and armed conflicts on the rise, Europe's technological sovereignty is more and more inseparable from sovereign hardware, whether for civil applications or, more importantly, defence. It was therefore natural for SiPearl to capitalise on the expertise developed by its R&D teams in HPC to develop a new version of our first processor that perfectly meets the needs of dual-use purposes. As part of the roadmap entrusted to us by Europe to foster the return of high-performance processor*

technologies to the continent, Athena1 is the perfect complement to Rhea1 in helping to assert Europe's strategic independence", concluded Philippe Notton, CEO and founder of SiPearl.

About... SiPearl

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

SiPearl recently completed the design of the most complex processor ever designed in Europe, Rhea1. Featuring 80 Arm Neoverse V1 cores, with 61 billion transistors, it is currently in production at TSMC in Taïwan and will be available for sampling in early 2026. Rhea1 processors will equip JUPITER, Europe's first exascale supercomputer owned by EuroHPC JU and operated by Forschungszentrum Jülich.

Incubated within the European Processor Initiative (EPI) consortium and seed-funded by the European Union, SiPearl employs 200 people in France, Spain, and Italy. Following a successful €130 million Series A, the company is launching its Series B round.

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