SiPearl: collaboration with Intel to accelerate exascale[1] supercomputing deployment in Europe

SiPearl, the company designing the microprocessor for European supercomputers, collaborates with Intel to accelerate exascale supercomputing deployment in Europe. The two partners will give European customers the opportunity to combine SiPearl's CPU Rhea with Intel's GPU Ponte Vecchio obtaining a high-performance heterogeneous HPC compute node. To enable this combination, SiPearl will use the open unified software stack, oneAPI.

Maisons-Laffitte (France), October 27, 2021 - SiPearl, the company that is designing the high-performance and low-power microprocessor for European supercomputers, collaborates with Intel, the microprocessor manufacturer, to provide a joint offering for the first European exascale supercomputers.

This partnership will offer European customers the possibility to combine SiPearl's high-performance and low-power CPU Rhea with Intel's family of general-purpose GPU Ponte Vecchio making a high-performance compute node fostering European exascale deployment.

To enable this powerful combination, SiPearl plans to port and optimize oneAPI for the Rhea processor. As an open, standards-based programming model oneAPI increases developer productivity and workload performance by providing a single programming solution across the heterogenous compute node. The paired solution will also underline the value of CXL standardization in connecting compute elements, providing lower latency, coherent connectivity relative to PCIe connections.

"*We are pleased that Ponte Vecchio, based on the Intel Xe HPC architecture, has been selected by SiPearl as their HPC accelerator to deliver Europe's first exascale supercomputers, Intel is proud to support SiPearl in adopting oneAPI's unified programming model to increase developer productivity and workload performance. We see great potential in our work with SiPearl as we execute on our IDM 2.0 strategy to bring leading-edge technologies to our European partners*", said Jeff McVeigh, Intel Vice President and General Manager of the Super Compute Group.

"*We welcome this collaboration with Intel, whose GPU Ponte Vecchio, optimized for HPC workloads, is a great engineering innovation. A solution incorporating our European HPC CPU Rhea with the Intel Ponte Vecchio GPU under the unified programming model oneAPI allows us to rapidly develop heterogenous nodes to meet the needs of European exascale supercomputing*", concluded Philippe Notton, SiPearl's CEO and founder.

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1) *1 billion billion calculations per second.*

About SiPearl

Created by Philippe Notton, SiPearl is the company that is bringing to life the European Processor Initiative (EPI) project, designing the high-performance, low-power microprocessor for European exascale supercomputers.

This new generation of microprocessors will enable Europe to set out its technological sovereignty on the strategic markets for high performance computing and artificial intelligence and connected mobility.

SiPearl is developing and will bring to market its solutions through close collaboration with its 27 partners from the EPI - scientific community, supercomputing centres and leading names from the IT, electronics and automotive industries - which are its stakeholders and future clients. It is supported by the European Union[2]

SiPearl is also a member of the Mont-Blanc 2020 consortium to equip Europe with a dedicated modular and energy-efficient high-performance computing microprocessor and is a member of the PlayFrance.Digital collective for Europe to lead the field for digital technology.

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