

JUPITER

Pioneering European Exascale Supercomputing

**A unique, outstanding tool for HPC and AI alike, 1 ExaFlop
HPL and about 70 ExaFlop of performance for AI training**



A Dynamic Union of Innovation

The dynamic Modular System Architecture (dMSA), powered by ParaStation Modulo Software Suite, is set to optimize the utilization of various computing modules specifically tailored to run complex simulations, and satisfy all needs for AI as well. This architecture also allows the system to be well prepared for the integration of future technologies, such as quantum computing and highly specialized, exotic processors like GS-2 from Cerebras. Through collaboration between ParTec and Eviden, and the use of advanced GPUs and CPUs from NVIDIA and SiPearl, Europe is set to unveil its first Exascale supercomputer. Owned by the EuroHPC JU, JUPITER will be installed at the Forschungszentrum Jülich campus in Germany and operated by the Jülich Supercomputing Centre.

The German-French consortium is committed to supporting the EuroHPC JU and JSC to exploit the power of next-generation supercomputing to advance science research, drive innovation and foster economic growth. This is a great milestone for Europe's technological sovereignty.

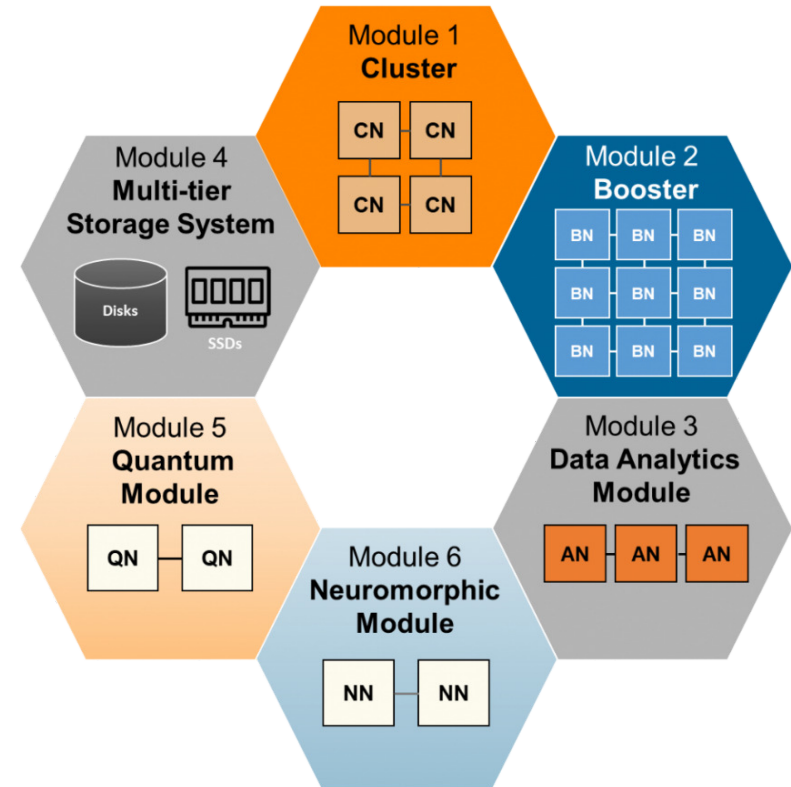
Driving Exascale Innovation

JUPITER is designed to tackle both, the most demanding simulations and as well compute intensive AI applications in science and industry. Applications will include training large foundation models for generative AI, simulations for developing advanced materials, creating digital twins of the human heart or brain for medical purposes, validating quantum computers, and high-resolution simulations of climate that encompass the entire Earth system.

JUPITER will be composed of three modules, a highly scalable accelerated Booster Module based on next-generation NVIDIA GPUs, a tightly integrated general-purpose Cluster Module with high memory bandwidth processors and an I/O Flash Module based on Spectrum Scale for seamless storage integration. The Cluster Module will be based on SiPearl Rhea1, the first HPC-dedicated European processor on the market.

Contact Us

For more information about JUPITER, visit www.par-tec.com or contact press@par-tec.com.



JUPITER System Architecture based on dMSA