

DEPLOYMENT

Nor-Tech deploys GPU cluster to Ireland for micromagnetic modeling

Nor-Tech has developed a 7168-core GPU cluster to be used for micromagnetic modeling by a well-known technology company in Europe.

Each node of the GPU cluster features two nVidia Tesla Fermi M2070 cards. The M2070 Computing Modules are based on the next-generation CUDA™ architecture codenamed “Fermi”, which enables seamless integration of GPU computing with host systems for high-performance computing and large data center, scale-out deployments. The massively parallel CUDA architecture consists of 100s of processor cores that operate together to crunch through the data set in the application.

The Tesla GPUs deliver greater than 10X the double-precision horsepower of a quad-core x86 CPU, as well as the standard benefits of GPU computing, while enabling maximum reliability and tight integration with system monitoring and management tools. This gives data center IT staff much greater choice in how they deploy GPUs, with a wide variety of rack-mount and blade systems and with remote monitoring and remote management capabilities they need.

Compared to CPU-only systems, servers with Tesla 20-series GPU Computing Modules deliver super-computing power at 1/10th the cost

and 1/20th the power consumption while providing the highest compute density.

Thanks to the increase in processing power gained from using GPU acceleration, the customer can expect significantly faster computing with a great ROI.

Nor-Tech’s wealth of experience with GPU Cluster technology and related applications includes working with the ORNL Future Technologies Group to improve their benchmarking software SHOC for GPU’s. SHOC is a collection of benchmark programs that test performance and stability of systems using computing devices with non-traditional architectures.

The cluster uses Rocks® Cluster Suite software and Torque/PBS for job management. Rocks in an open-source Linux cluster distribution for HPC clusters which includes integral applications that tie together the components of a cluster. Nor-Tech has been developing clusters using Rocks Cluster Suite for years and boasts a multitude of deployments.

