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ARM

powers CPU/GPU hybrid supercomputer

Posted on November 14, 2011 - 10:48 by TG Daily Staff

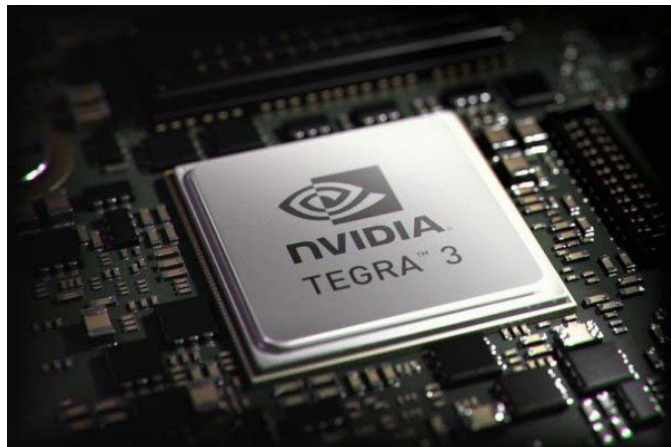
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Spanish engineers are developing a hybrid supercomputer that pairs Tegra ARM CPUs with Nvidia CUDA GPUs.

The large scale system - which is being designed by the Barcelona Supercomputing Center (BSC) - will demonstrate two to five times improvement in energy efficiency compared with today's most efficient systems.



Indeed, BSC's ultimate research goal is to deliver exascale-level performance while using 15 to 30 times less power than current supercomputer architectures.

This so-called EU Mont-Blanc Project will explore next-generation HPC architectures, while developing a portfolio of exascale applications that run efficiently on energy-efficient, embedded mobile technologies.

"In most current systems, CPUs alone consume the lion's share of the energy, often 40 percent or more," explained Alex Ramirez, leader of the Mont-Blanc Project.

"By comparison, the Mont-Blanc architecture will rely on energy-efficient compute accelerators and ARM processors used in embedded and mobile devices to achieve a four- to 10-times increase in energy-efficiency by 2014."

It should be noted that Nvidia is coding a new hardware and software development kit to support growing demand for similar ARM-based initiatives.

The kit, with hardware developed by SECO, is slated to feature a quad-core Nvidia Tegra 3 ARM CPU accelerated by a discrete Nvidia GPU. It is expected to be available in the first half of 2012, and will be supported by the Nvidia CUDA parallel programming toolkit.

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Strength & Conditioning Workout of the Day

Strength & Conditioning: Week 2, Day 2



Day two of week two of our three weeks with Olympic weightlifting coach, Sean

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Eagle Pose: Immune Stimulating Focus



Eagle pose stimulates the lymphatic system and improves immune function.

Women's Workout of the Day

**Women's Workout: Week 3, Day 1**

This cycle of the Women's WOD will focus on the development of upper

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