



# NVIDIA Tesla GPUs Accelerate Science on HP ProLiant Generation 8 Servers With New Intel CPUs

## New Servers Designed From Ground Up for GPU Computing; Deliver Up to 20X Acceleration for Top Scientific Application

SANTA CLARA, CA -- NVIDIA today announced that its NVIDIA® Tesla™ GPUs will be included in HP ProLiant Generation 8 (Gen8) servers, delivering new levels of computational performance for [scientific applications](#) at world-class power efficiency.

HP ProLiant SL250 Gen8 CPU-GPU hybrid servers combine the world's most powerful parallel processors, NVIDIA Tesla M2090 GPUs, with new Intel Xeon E5-2600 series CPUs based on the Sandy Bridge microarchitecture.

With an average of 12 percent higher performance for scalar processing, the new Intel E5-2600 CPUs relieve sequential bottlenecks for GPUs to tackle and complete parallel tasks significantly faster<sup>1</sup>. This results in dramatically higher GPU utilization and [overall increased application performance](#).

Based on testing with LAMMPS, one of world's most popular [molecular simulation applications](#), the HP ProLiant SL250 Gen8 server accelerated key benchmark workloads by over 20X with the addition of three NVIDIA Tesla M2090 GPUs<sup>2</sup>.

In addition, by allowing the combination of up to four CPUs and six GPUs in a 2U server configuration, two side-by-side HP ProLiant SL250 Gen8 servers deliver up to 4.6 teraflops of peak performance to accelerate compute- and data-intensive applications<sup>3</sup>.

"The HPC industry is rapidly embracing hybrid computing architectures based on their superior performance and energy efficiency," said Sumit Gupta, director of Tesla GPU computing at NVIDIA. "Higher-performance Sandy Bridge CPUs unleash the power of NVIDIA GPUs to an even greater degree, enabling them to maximize acceleration for a range of commercial and scientific HPC applications, include AMBER, GROMACS, LAMMPS, Simulia Abaqus, seismic processing, and others."

"HP ProLiant Gen8 servers with NVIDIA GPUs accelerate applications in high performance computing environments, enabling clients to drive innovation and scientific discovery," said McLeod Glass, director, product marketing, Industry Standard Servers and Software, HP.

NVIDIA Tesla GPUs are massively parallel accelerators based on the NVIDIA CUDA® parallel computing platform. Tesla GPUs are designed from the ground up for [high performance computing \(HPC\)](#), computational science and supercomputing, delivering dramatically higher application acceleration for a range of scientific and commercial applications than a CPU-only approach. Today, Tesla GPUs power three of the world's top five supercomputers.

For more information about NVIDIA Tesla GPUs, visit the [NVIDIA web site](#). To learn more about CUDA, visit the [CUDA web site](#). For more NVIDIA news, company and product information, videos/images, and other information, visit the [NVIDIA newsroom](#).

1. Source: <http://www.tomshardware.com/reviews/core-i7-3960x-x79-sandy-bridge-e.3071-20.html>

2,3. Based on NVIDIA internal testing with of the HP SL250 system that included: dual-socket, Intel Xeon E5-2660, 8-core, 2.20 GHz; 66GB DDR3, RHEL 6.1, Driver v295.20; 3x Tesla M2090 GPUs

### About NVIDIA

[NVIDIA](#) (NASDAQ: NVDA) awakened the world to computer graphics when it invented the [GPU](#) in 1999. Today, its [processors](#) power a broad range of products from [smart phones](#) to [supercomputers](#). NVIDIA's [mobile processors](#) are used in [cell phones](#), [tablets](#) and [auto infotainment systems](#). [PC gamers](#) rely on GPUs to enjoy spectacularly immersive worlds. Professionals use them to create visual effects in movies and design everything from golf clubs to jumbo jets. And researchers utilize GPUs to advance the frontiers of science with [high-performance computing](#). The company holds more than 2,200 patents worldwide, including ones covering ideas essential to modern computing. For more information, see [www.nvidia.com](http://www.nvidia.com).

Certain statements in this press release including, but not limited to statements as to: the impact and benefits of NVIDIA Tesla GPUs; the inclusion and availability of NVIDIA Tesla GPUs in HP ProLiant Generation 8 (Gen8) servers; and the effects of the company's patents on modern computing are forward-looking statements that are subject to risks and uncertainties that could cause results to be materially different than expectations. Important factors that could cause actual results to differ materially include: global economic conditions; our reliance on third parties to manufacture, assemble, package and test our products; the impact of technological development and competition; development of new products and

technologies or enhancements to our existing product and technologies; market acceptance of our products or our partners products; design, manufacturing or software defects; changes in consumer preferences or demands; changes in industry standards and interfaces; unexpected loss of performance of our products or technologies when integrated into systems; as well as other factors detailed from time to time in the reports NVIDIA files with the Securities and Exchange Commission, or SEC, including its Form 10-Q for the fiscal period ended October 30, 2011. Copies of reports filed with the SEC are posted on the company's website and are available from NVIDIA without charge. These forward-looking statements are not guarantees of future performance and speak only as of the date hereof, and, except as required by law, NVIDIA disclaims any obligation to update these forward-looking statements to reflect future events or circumstances.

© 2012 NVIDIA Corporation. All rights reserved. NVIDIA, the NVIDIA logo, CUDA, and Tesla are trademarks and/or registered trademarks of NVIDIA Corporation in the U.S. and other countries. Other company and product names may be trademarks of the respective companies with which they are associated. Features, pricing, availability, and specifications are subject to change without notice.

Ken Brown  
Corporate Communications  
+1-408-486-2626  
[kebrown@nvidia.com](mailto:kebrown@nvidia.com)