



# NVIDIA Launches World's Fastest Accelerator for Supercomputing and Big Data Analytics

## NVIDIA Tesla K40 Accelerator Doubles Memory of Its Predecessor, Enabling New Categories of Accelerated Applications

DENVER, CO -- **SC13** - NVIDIA today unveiled the NVIDIA® Tesla® K40 GPU accelerator, the world's highest performance accelerator ever built, delivering extreme performance to a widening range of scientific, engineering, high performance computing (HPC) and enterprise applications.

Providing double the memory and up to 40 percent higher performance than its predecessor, the Tesla K20X GPU accelerator, and 10 times higher performance than today's fastest CPU, the Tesla K40 GPU is the world's first and highest-performance accelerator optimized for big data analytics and large-scale scientific workloads.

Featuring intelligent NVIDIA GPU Boost™ technology, which converts power headroom into a user-controlled performance boost, the Tesla K40 GPU accelerator enables users to unlock the untapped performance of a broad range of applications.

"GPU accelerators have gone mainstream in the HPC and supercomputing industries, enabling engineers and researchers to consistently drive innovation and scientific discovery," said Sumit Gupta, general manager of Tesla Accelerated Computing products at NVIDIA. "With the breakthrough performance and higher memory capacity of the Tesla K40 GPU, enterprise customers can quickly crunch through massive volumes of data generated by their big data analytics applications."

### Ultimate Performance for Science, Big Data

Based on the NVIDIA Kepler™ compute architecture -- the highest performance, most efficient architecture ever built -- the Tesla K40 GPU accelerator surpasses all other accelerators on two common measures of computational performance: 4.29 teraflops single-precision and 1.43 teraflops double-precision peak floating point performance.

Key features of the Tesla K40 GPU accelerator include:

- **12GB of ultra-fast GDDR5 memory** allows users to process 2X larger datasets, enabling them to rapidly analyze massive volumes of data.
- **2,880 CUDA® parallel processing cores** deliver application acceleration by up to 10X compared to using a CPU alone.
- **Dynamic Parallelism** enables GPU threads to dynamically spawn new threads, enabling users to quickly and easily crunch through adaptive and dynamic data structures.
- **PCIe Gen-3 interconnect support** accelerates data movement by 2X compared to PCIe Gen-2 technology.

In a related announcement, the [Texas Advanced Computing Center](#) (TACC) at The University of Texas at Austin -- one of the leading advanced computing centers in the United States -- plans to deploy "Maverick," a new interactive, remote visualization and data analysis system powered by NVIDIA Tesla K40 GPU accelerators. Maverick is expected to be fully operational in January 2014.

"The Tesla K40 GPU accelerators will help researchers crunch through massive volumes of big data and gain new insights through large-scale, sophisticated visualizations," said Kelly Gaither, director of Visualization at TACC. "With NVIDIA GPUs, Maverick will provide researchers powerful interactive capabilities to advance their most complex scientific challenges."

The Tesla K40 GPU accelerates the broadest range of scientific, engineering, commercial and enterprise HPC and data center applications. Today, more than 240 software applications take advantage of GPU acceleration. The complete catalog of [GPU-accelerated applications](#) is available as a free download.

More information about the Tesla K40 GPU accelerator is available at NVIDIA booth 613 at SC13, Nov. 18-21, and on the NVIDIA [high performance computing website](#). To learn more about CUDA or download the latest version, visit the [CUDA website](#).

Users can also try the Tesla K40 GPU accelerator for free on remotely hosted clusters. Visit the [GPU Test Drive website](#) for more information.

### Availability

Shipping today, the NVIDIA Tesla K40 GPU accelerator is available now and in the coming months from a variety of server manufacturers, including Appro, ASUS, Bull, Cray, Dell, Eurotech, HP, IBM, Inspur, SGI, Sugon, Supermicro and Tyan, as well as from NVIDIA reseller partners.

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