NVIDIA Announces OVX Computing Systems — the Graphics and Simulation Foundation for the Metaverse — Powered by Ada Lovelace GPU

GIGABYTE, H3C, Inspur, Lenovo, QCT and Supermicro to Offer OVX Systems; BMW Group and Jaguar Land Rover Among First Customers to Receive OVX Systems

GTC -- NVIDIA today announced the second generation of NVIDIA OVX™, powered by the NVIDIA Ada Lovelace GPU architecture and enhanced networking technology, to deliver groundbreaking real-time graphics, AI and digital twin simulation capabilities.

The new NVIDIA OVX systems are designed to build 3D virtual worlds using leading 3D software applications and to operate immersive digital twin simulations in NVIDIA Omniverse™ Enterprise — a scalable, end-to-end platform enabling enterprises to build and operate metaverse applications.

Launched in March, NVIDIA OVX — a computing system designed to power large-scale Omniverse digital twins — will be delivered to some of the world's most sophisticated design and engineering teams at companies like BMW Group and Jaguar Land Rover.

"Large-scale digital twins are redefining how nearly every industry plans, designs and builds in the physical world," said Bob Pette, vice president of professional visualization at NVIDIA. "NVIDIA OVX will provide the next generation of compute power required for the most complex digital twins of factories, buildings and entire cities."

Powering the new OVX systems is the NVIDIA® L40 GPU, also based on the NVIDIA Ada Lovelace GPU architecture, which brings the highest levels of power and performance for building complex industrial digital twins.

The L40 GPU's third-generation RT Cores and fourth-generation Tensor Cores will deliver powerful capabilities to Omniverse workloads running on OVX, including accelerated ray-traced and path-traced rendering of materials, physically accurate simulations and photorealistic 3D synthetic data generation. The L40 will also be available in NVIDIA-Certified Systems™ servers from major OEM vendors to power RTX workloads from the data center.

In addition to the L40 GPU, the new NVIDIA OVX includes the NVIDIA ConnectX®-7 SmartNIC, providing enhanced network and storage performance and the precision timing synchronization required for true-to-life digital twins. ConnectX-7 includes support for 200G networking on each port and fast in-line data encryption to speed up data movement and increase security for digital twins.

Worldwide Adopters Accelerate Performance
BMW Group and Jaguar Land Rover will be among the first equipped with the power of the new systems.

"Planning our factories of the future starts with building state-of-the-art digital twins using NVIDIA Omniverse," said Jürgen Wittmann, head of innovation and virtual production at BMW Group. "Using NVIDIA OVX systems to run our digital twin workloads will provide the performance and scale needed to develop large-scale photorealistic models of our factories and conduct true-to-reality simulations that will transform our manufacturing, design and production processes."

"NVIDIA OVX and DRIVE Sim deliver a powerful platform that enables us to simulate a wide range of real-world driving scenarios to safely and efficiently test our next generation of connected and autonomous vehicles as well as to recreate the customer journey to demonstrate vehicle features and functions," said Alex Heslop, director of electrical, electronic and software engineering at Jaguar Land Rover. "Using this technology to generate large volumes of high-fidelity, physically accurate scenarios in a scalable, cost-efficient manner will accelerate our progress towards our goal of a future with zero accidents and less congestion."

Computing System Specifications
Each OVX server node combines eight NVIDIA L40 GPUs with three NVIDIA ConnectX-7 network adapters, bringing the power of 100/200/400G networking. For Omniverse workloads that require a higher level of performance and scale, the servers can be deployed in NVIDIA OVX POD and SuperPOD configurations with the NVIDIA Spectrum™-3 Ethernet platform.

Availability
Second-generation NVIDIA OVX systems will be available from Inspur, Lenovo and Supermicro by early 2023, with GIGABYTE, H3C and QCT offering them in the future.

To learn more about NVIDIA OVX, watch NVIDIA founder and CEO Jensen Huang's GTC 2022 keynote. Register for GTC for free to attend sessions with NVIDIA and industry leaders.

About NVIDIA
Since its founding in 1993, NVIDIA (NASDAQ: NVDA) has been a pioneer in accelerated computing. The company's invention of the GPU in 1999 sparked the growth of the PC gaming market, redefined computer graphics and ignited the era of modern AI. NVIDIA is now a full-stack computing company with data-center-scale offerings that are reshaping industry. More information at https://nvidianews.nvidia.com/.

Kasia Johnston
+1-415-813-8859
kasiaj@nvidia.com