

NVIDIA Unveils NVLink Fusion for Industry to Build Semi-Custom AI Infrastructure With NVIDIA Partner Ecosystem

- *MediaTek, Marvell, Alchip Technologies, Astera Labs, Synopsys and Cadence to Create Custom AI Silicon With NVIDIA NVLink Ecosystem*
- *Fujitsu and Qualcomm Each Plan to Build Custom CPUs Coupled With NVIDIA GPUs, NVLink Scale-Up and Spectrum-X Scale-Out Technologies*

COMPUTEX—NVIDIA today unveiled NVIDIA NVLink Fusion™ — new silicon that lets industries build semi-custom AI infrastructure with the vast ecosystem of partners building with [NVIDIA NVLink™](#), the world's most advanced and widely adopted computing fabric.

MediaTek, Marvell, Alchip Technologies, Astera Labs, Synopsys and Cadence are among the first to adopt NVLink Fusion, enabling custom silicon scale-up to meet the requirements of demanding workloads for model training and agentic AI inference. Using NVLink Fusion, Fujitsu and Qualcomm Technologies CPUs can also be integrated with NVIDIA GPUs to build high-performance NVIDIA AI factories.

“A tectonic shift is underway: for the first time in decades, data centers must be fundamentally rearchitected — AI is being fused into every computing platform,” said Jensen Huang, founder and CEO of NVIDIA. “NVLink Fusion opens NVIDIA's AI platform and rich ecosystem for partners to build specialized AI infrastructures.”

NVLink Fusion also equips cloud providers with an easy path to scale out AI factories to millions of GPUs, using any ASIC, NVIDIA's rack-scale systems and the NVIDIA end-to-end networking platform — which delivers up to 800Gb/s of throughput and features [NVIDIA ConnectX@-8 SuperNICs](#), [NVIDIA Spectrum-X™](#) Ethernet and [NVIDIA Quantum-X800 InfiniBand](#) switches, with [co-packaged optics](#) available soon.

A Technology Ecosystem Interconnected

Using NVLink Fusion, hyperscalers can work with the NVIDIA partner ecosystem to integrate NVIDIA rack-scale solutions for seamless deployment in data center infrastructure.

AI chipmaking partners creating custom AI compute deployable with NVIDIA NVLink Fusion include MediaTek, Marvell, Alchip, Astera Labs, Synopsys and Cadence.

“By leveraging our world-class ASIC design services and deep expertise in high-speed interconnects, MediaTek is collaborating with NVIDIA to build the next generation of AI infrastructure,” said Rick Tsai, vice chairman and CEO of MediaTek. “Our collaboration, which began in the automotive segment, now extends even further, enabling us to deliver scalable, efficient and flexible technologies that address the rapidly evolving needs of cloud-scale AI.”

“Marvell is collaborating with NVIDIA to redefine what's possible for AI factory integration,” said Matt Murphy, chairman and CEO of Marvell. “Marvell custom silicon with NVLink Fusion gives customers a flexible, high-performance foundation to build advanced AI infrastructure — delivering the bandwidth, reliability and agility required for the next generation of trillion-parameter AI models.”

“Alchip is supporting adoption of NVLink Fusion by broadening its availability through a design and manufacturing ecosystem, encompassing advanced processes and proven packaging and supported by the ASIC industry's most flexible engagement,” said Johnny Shen, CEO of Alchip. “It's our contribution to ensuring that the next generation of AI models can be trained and deployed efficiently to meet the demands of tomorrow's intelligent applications.”

“Building on our rich history of close collaboration with NVIDIA, we are thrilled to add purpose-built connectivity solutions to address the NVLink Fusion ecosystem,” said Jitendra Mohan, CEO of Astera Labs. “Low-latency and high-bandwidth scale-up interconnects with native support for memory semantics is critical for maximizing AI server utilization and performance. By expanding our scale-up connectivity portfolio with NVLink solutions, we are providing more optionality with faster time to market for our hyperscaler and enterprise AI customers.”

“Data centers are transforming into AI factories, and Synopsys' industry-leading AI chip design solutions and standards-based interface IP are mission-critical enablers,” said Sassine Ghazi, president and CEO of Synopsys. “Our support for NVIDIA NVLink Fusion reflects our commitment to fostering an open and scalable ecosystem for next-generation AI and high-performance computing.”

“HPC and AI workload demands are unique and evolving rapidly, and hyperscalers architecting the most advanced custom

AI systems rely on Cadence to deliver enabling technology from data centers to the edge,” said Boyd Phelps, senior vice president and general manager of the Silicon Solutions Group at Cadence. “Our comprehensive IP portfolio, including design IP, chiplet infrastructure, subsystems and other critical IP, complements the NVIDIA NVLink ecosystem, accelerating the delivery of AI factories that are powerful, energy-efficient and production-ready at scale.”

NVLink Fusion also enables AI innovators like Fujitsu and Qualcomm Technologies to each couple their custom CPUs with NVIDIA GPUs in a rack-scale architecture to boost AI performance.

“Combining Fujitsu’s advanced CPU technology with NVIDIA’s full-stack AI infrastructure delivers new levels of performance,” said Vivek Mahajan, CTO at Fujitsu. “Fujitsu’s next-generation processor, FUJITSU-MONAKA, is a 2-nanometer, Arm-based CPU aiming to achieve extreme power efficiency. Directly connecting our technologies to NVIDIA’s architecture marks a monumental step forward in our vision to drive the evolution of AI through world-leading computing technology — paving the way for a new class of scalable, sovereign and sustainable AI systems.”

“Qualcomm Technologies’ advanced custom CPU technology with NVIDIA’s full-stack AI platform brings powerful, efficient intelligence to data center infrastructure,” said Cristiano Amon, president and CEO of Qualcomm Technologies. “With the ability to connect our custom processors to NVIDIA’s rack-scale architecture, we’re advancing our vision of high-performance, energy-efficient computing to the data center.”

NVIDIA NVLink Demonstrates Industry-Proven Scale

To maximize AI factory throughput and performance in the most power-efficient way, the fifth-generation NVIDIA NVLink platform includes [NVIDIA GB200 NVL72](#) and [GB300 NVL72](#), compute-dense racks that provide a total bandwidth of 1.8 TB/s per GPU — 14x faster than PCIe Gen5.

Leading hyperscalers are already deploying NVIDIA NVLink full-rack solutions and can speed time to availability by standardizing their heterogeneous silicon data centers on the NVIDIA rack architecture with NVLink Fusion.

Software Crafted for AI Factories

AI factories connected with NVIDIA NVLink Fusion are powered by [NVIDIA Mission Control](#)™, a unified operations and orchestration software platform that automates the complex management of AI data centers and workloads.

NVIDIA Mission Control enhances every aspect of AI factory operations — from configuring deployments to validating infrastructure to orchestrating mission-critical workloads — to help enterprises get frontier models up and running faster.

Availability

NVIDIA NVLink Fusion silicon design services and solutions are available now from MediaTek, Marvell, Alchip, Astera Labs, Synopsys and Cadence.

Watch the [COMPUTEX](#) keynote from Huang and learn more at NVIDIA GTC Taipei.

About NVIDIA

[NVIDIA](#) (NASDAQ: NVDA) is the world leader in accelerated computing.

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