

NVIDIA DRIVE Hyperion Platform Achieves Critical Automotive Safety and Cybersecurity Milestones for AV Development

Adopted and Backed by Automotive Manufacturers and Safety Authorities, Latest Iteration to Feature DRIVE Thor on NVIDIA Blackwell Running NVIDIA DriveOS

CES—NVIDIA today announced that its autonomous vehicle (AV) platform, NVIDIA DRIVE AGX™ Hyperion, has passed industry-safety assessments by TÜV SÜD and TÜV Rheinland — two of the industry's foremost authorities for automotive-grade safety and cybersecurity. This achievement raises the bar for AV safety, innovation and performance.

DRIVE Hyperion™ is the industry's first and only end-to-end autonomous driving platform. It includes the DRIVE AGX™ system-on-a-chip (SoC) and reference board design, the NVIDIA DriveOS automotive operating system, a sensor suite, and an active safety and level 2+ driving stack.

Automotive safety pioneers such as Mercedes-Benz, JLR and Volvo Cars are adopting the platform, which is designed to be modular, so customers can easily use what they need. It is also scalable and built to be upgradeable and compatible across future DRIVE SoC generations.

Available in the first half of this year, the latest iteration of DRIVE Hyperion — designed for both passenger and commercial vehicles — will feature the high-performance DRIVE AGX Thor SoC built on the NVIDIA Blackwell architecture.

"A billion vehicles driving trillions of miles each year move the world. With autonomous vehicles — one of the largest robotics markets — now here, the NVIDIA Blackwell-powered platform will shift this revolution into high gear," said Jensen Huang, founder and CEO of NVIDIA. "The next wave of autonomous machines will rely on physical AI world foundation models to understand and interact with the real world, and NVIDIA DRIVE is purpose-built for this new era, delivering unmatched functional safety and AI."

Driving Safety Forward: Certified Assurance for Next-Gen Vehicles

Next-generation vehicles will be increasingly software-defined, capable of receiving new features and functionality over their lifetime. Tapping into NVIDIA's 15,000 engineering years invested in vehicle safety, DRIVE Hyperion will help ensure advanced automotive systems with rich, AI-based functionalities are compliant with the automotive industry's stringent functional safety and cybersecurity standards.

NVIDIA recently received safety certifications and assessments from accredited third parties, including:

- TÜV SÜD, which granted the ISO 21434 Cybersecurity Process certification to NVIDIA for automotive SoC, platform and software engineering processes. Additionally, NVIDIA DriveOS 6.0 conforms to ISO 26262 Automotive Safety Integrity Level (ASIL) D standards, pending certification release.
- TÜV Rheinland, which performed an independent United Nations Economic Commission for Europe (UNECE) safety assessment of NVIDIA DRIVE AV related to safety requirements for complex electronic systems.

In addition, NVIDIA is now accredited by the ANSI National Accreditation Board (ANAB) to provide safety and cybersecurity inspections for NVIDIA DRIVE™ ecosystem partners. The new [NVIDIA DRIVE AI Systems Inspection Lab](#) will help the NVIDIA DRIVE automotive ecosystem build autonomous driving software that meets the industry's evolving safety and AI standards.

NVIDIA is the first platform company to receive a comprehensive set of third-party assessments for its automotive technologies — including the NVIDIA DRIVE end-to-end self-driving platform, spanning SoC, OS, sensor architecture and level 2+ application software — as well as independent accreditation as an AI systems safety and cybersecurity inspection lab for the automotive market.

Intelligence Powered by Industry-Leading Compute

NVIDIA DRIVE Thor, the core computer for DRIVE Hyperion, is the successor to the production-proven NVIDIA DRIVE Orin™. Its architecture compatibility and scalability means developers can use existing software from earlier DRIVE product generations, as well as integrate future updates, to achieve seamless development pipelines.

DRIVE Thor is based on the NVIDIA Blackwell architecture and is optimized for the most demanding processing workloads, including those involving generative AI, vision language models and large language models. Its simplified architecture enhances generalization, reduces latency and boosts safety by harnessing powerful NVIDIA accelerated computing to run the end-to-end AV stack and a proven safety stack in parallel.

DRIVE Thor paves the way for the next era of AV technology, known as AV 2.0, which involves delivering humanlike autonomous driving capabilities for navigating the most complex roadway scenarios.

In addition to the DRIVE AGX in-vehicle computer, two other NVIDIA computers serve as the foundation for automotive-grade AV development: [NVIDIA DGX™](#) systems for training advanced AI models and building a robust AV software stack in the cloud, and the [NVIDIA Omniverse™](#) platform running on [NVIDIA OVX™](#) systems for simulation and validation. These three computers, now enhanced with the new [NVIDIA Cosmos™](#) world foundation model platform, are set to accelerate end-to-end AV development and mass deployment.

To learn more about NVIDIA's three-computer approach to automotive development and the Cosmos world foundation model platform along with other automotive news, tune in to [Huang's CES opening keynote](#).

About NVIDIA

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

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