



NVIDIA and Hyundai Motor Group Team on AI Factory to Power AI-Driven Mobility Solutions

Leading Global Automaker to Deploy NVIDIA Blackwell AI Infrastructure Across Manufacturing, Robotics and Autonomous Driving

News Summary:

- Hyundai Motor Group and NVIDIA will collaborate with the Korean government to develop Korea's physical AI industry, including the establishment of an AI Application Center and AI Technology Center, while nurturing local AI talent to build a vibrant innovation ecosystem.
- Hyundai Motor Group is building an NVIDIA AI supercomputer to accelerate model training, validation and deployment for in-vehicle AI, autonomous driving, smart factories and robotics.
- Hyundai Motor Group is exploring using the NVIDIA Omniverse and Cosmos platforms on NVIDIA RTX PRO Servers to develop car factory digital twins and robots.
- With NVIDIA Nemotron open models and the NVIDIA NeMo software, Hyundai Motor Group is speeding proprietary LLM and AI development.
- Using NVIDIA DRIVE AGX Thor, running [on the safety-certified NVIDIA DriveOS operating system](#), Hyundai Motor Group is developing advanced driver-assistance systems, next-generation safety features and in-vehicle intelligence for mobility solutions.

APEC Summit—NVIDIA today announced it is deepening its collaboration with [Hyundai Motor Group](#) to accelerate innovation in autonomous vehicles (AVs), smart factories and robotics with a new NVIDIA Blackwell-powered AI factory.

Building on their strategic collaboration, Hyundai Motor Group and NVIDIA are now entering a new phase of collaboration, shifting from strategic adoption of advanced software platforms and infrastructure to joint innovation of core physical AI technologies. Together, they will codevelop AI capabilities for mobility solutions, a next-generation smart factory and on-device semiconductor advancements to strengthen Hyundai Motor Group's future capabilities.

As part of this endeavor, Hyundai Motor Group and NVIDIA aim to enable integrated AI model training, validation and deployment using 50,000 NVIDIA Blackwell GPUs.

In addition, in support of the [Korean government's initiative](#) to build a national physical AI cluster, Hyundai Motor Group and NVIDIA will work closely with government stakeholders to accelerate ecosystem development. This will result in an approximately \$3 billion investment to advance the physical AI landscape in Korea.

Key efforts include the establishment of an NVIDIA AI Technology Center, Hyundai Motor Group's Physical AI Application Center and regional data centers. This will also foster dynamic exchanges with NVIDIA's engineers and technicians, helping cultivate Korea's next generation of physical AI talent.

"AI is revolutionizing every facet of every industry, and in transportation alone — from vehicle design and manufacturing to robotics and autonomous driving — NVIDIA's AI and computing platforms are transforming how the world moves," said Jensen Huang, founder and CEO of NVIDIA. "Together with Hyundai Motor Group — Korea's industrial powerhouse and one of the world's top mobility solutions providers — we're building intelligent cars and factories that will shape the future of the multitrillion-dollar mobility industry."

"As we enter a new era of AI-powered mobility and smart factories, deepening our collaboration with NVIDIA marks a pivotal step forward," said Euisun Chung, executive chair of Hyundai Motor Group. "Together, we are not only building advanced technologies but also laying the foundation for a robust AI ecosystem in Korea — one that fosters innovation, nurtures talent and positions us at the forefront of global AI leadership."

"For Korea to leap forward as a leading nation in AI, the advancement of physical AI is essential — a key initiative championed by the Ministry of Science and ICT. This inaugural step in public-private collaboration to foster physical AI is therefore incredibly significant," said Bae Kyung-hoon, Deputy Prime Minister, and Minister of Science and ICT of the Republic of Korea. "Korea has a strong foundation in manufacturing. By combining Korea's rich manufacturing data with NVIDIA's cutting-edge AI infrastructure, we expect to build a win-win model through collaboration with domestic companies, thereby accelerating innovative AI transformation in manufacturing across industries."

Hyundai Motor Group Advances Automotive With NVIDIA AI Factory

With its NVIDIA Blackwell-based AI factory, Hyundai Motor Group will deploy essential infrastructure for powering every

phase of innovation — bringing together in-vehicle AI, autonomous driving, factory automation and robotics into one intelligent, interconnected ecosystem.

NVIDIA offers the three AI compute platforms that serve as the infrastructure for physical AI and robotics:

- [NVIDIA DGX™](#) and other NVIDIA AI infrastructure enables large-scale AI model training and software development.
- [NVIDIA Omniverse™](#) and [NVIDIA Cosmos™](#) running on [NVIDIA RTX PRO™ Servers](#) enables [digital twins](#) and simulation to optimize manufacturing, as well as test and validate AV software across an infinite number of driving scenarios.
- [NVIDIA DRIVE AGX Thor™](#) serves as the “AI brain” for real-time intelligence in vehicles and robots.

Together, these computing platforms form the backbone of AI and car factories, enabling the transportation industry to develop, validate and deploy advanced physical AI at scale.

Building Smart Factories and Safe Cars of the Future

As part of the expanded collaboration, [unveiled earlier this year](#), Hyundai Motor Group will use the [NVIDIA Omniverse Enterprise](#) platform to create robust factory digital twins — virtual replicas of manufacturing environments that unify and manage factory data — as well as enable precision control, software- and hardware-in-the-loop validation, discrete event simulation and virtual commissioning.

These physically accurate digital environments accelerate robot integration, optimize production, enable predictive maintenance and pave the way for fully autonomous, software-defined factories — reshaping how vehicles are designed and manufactured.

NVIDIA Omniverse Enterprise also extends to humanoid and robotic systems using [NVIDIA Issac Sim™](#), an open robotics reference framework built on NVIDIA Omniverse. This enables virtual validation of task assignments, motion planning and ergonomic safety before robot deployment on physical production lines, significantly accelerating robot integration and maximizing productivity.

Hyundai Motor Group is also testing the use of the NVIDIA Omniverse and Cosmos platforms on NVIDIA RTX PRO Servers, with [NVIDIA RTX PRO 6000 Blackwell Server Edition GPUs](#), to build digital twins of regional driving environments and conditions, incorporating extensive simulations to advance its development pipeline. These sophisticated capabilities place Hyundai Motor Group at the forefront of scalable, next-generation autonomous driving.

Hyundai Motor Group is developing advanced AI models — built with the [NVIDIA Nemotron™](#) open AI reasoning models and [NVIDIA NeMo™](#) software — to enable over-the-air updates of capabilities and features across vehicles.

In addition to autonomy capabilities, Hyundai Motor Group will use these advanced models to develop a range of innovative in-vehicle AI features, from personalized digital assistants to intelligent infotainment and adaptive comfort systems. This transforms vehicles into continuously learning, evolving intelligent agents.

Inside Hyundai Motor Group vehicles, NVIDIA DRIVE AGX Thor, accelerated compute running on safety-certified [NVIDIA DriveOS™](#) operating system, is set to provide the AI compute power for advanced driver-assistance and next-generation safety features, as well as immersive in-vehicle AI experiences.

With NVIDIA, Hyundai Motor Group is evolving its vehicles and factories from independent systems into a single, interconnected and intelligent ecosystem, setting a new standard for the future of the global automotive industry.

About NVIDIA

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

Certain statements in this press release including, but not limited to, statements as to: “AI revolutionizing every facet of every industry. In transportation alone — from vehicle design and manufacturing to robotics and autonomous driving — NVIDIA’s AI and computing platforms are transforming how the world moves; together with Hyundai Motor Group — Korea’s industrial powerhouse and one of the world’s top mobility solutions providers — NVIDIA building intelligent cars and factories that will shape the future of the multitrillion-dollar mobility industry; the benefits, impact, performance, and availability of NVIDIA’s products, services, and technologies; expectations with respect to NVIDIA’s third party arrangements, including with its collaborators and partners; expectations with respect to technology developments; and other statements that are not historical facts are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, which are subject to the “safe harbor” created by those sections based on management’s beliefs and assumptions and on information currently available to management and 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 and political conditions; NVIDIA’s reliance on third parties to manufacture, assemble, package and test NVIDIA’s products; the impact of technological development and competition; development of new products and technologies or enhancements to NVIDIA’s existing product and technologies; market acceptance of NVIDIA’s products or NVIDIA’s partners’ products; design, manufacturing or software defects; changes in consumer preferences or demands; changes in industry standards and interfaces; unexpected loss of

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