

NVIDIA and US Manufacturing and Robotics Leaders Drive America's Reindustrialization With Physical AI

News Summary:

- “Mega” NVIDIA Omniverse Blueprint expands to include libraries for building factory-scale digital twins, with Siemens’ Digital Twin software first to support the blueprint and FANUC and Foxconn Fii first to connect their robot models.
- Belden, Caterpillar, Foxconn, Lucid Motors, Toyota, TSMC and Wistron build Omniverse factory digital twins to accelerate AI-driven manufacturing.
- Agility Robotics, Amazon Robotics, Figure and Skild AI build America’s collaborative robot workforce using NVIDIA’s three-computer architecture.

GTC Washington, D.C.—NVIDIA today announced that the nation’s leading manufacturers, industrial software developers and robotics companies are using [NVIDIA Omniverse™](#) technologies to build state-of-the-art robotic factories and new autonomous collaborative robots to help overcome labor shortages and drive American reindustrialization.

“AI is transforming the world’s factories into intelligent thinking machines — the engines of a new industrial revolution,” said Jensen Huang, founder and CEO of NVIDIA. “Together with American’s manufacturing leaders, we’re building physical AI, Omniverse digital twins and collaborative robots that will drive productivity, resilience and competitiveness across the U.S. industrial base.”

The Operating System for the Industrial AI Era

NVIDIA announced that it is expanding its [“Mega” NVIDIA Omniverse Blueprint](#) for simulating robot fleets to include technologies for designing and simulating [factory digital twins](#).

[Siemens](#) is the first company to develop digital twin software that supports the Mega Omniverse Blueprint. Currently in beta testing, the new industrial technology stack will be part of the Siemens Xcelerator platform. It will help engineers design and operate large-scale [digital twins](#) of factories that bring together realistic 3D models with live operational data. Built for the AI era, this technology stack enables comprehensive simulation, optimization and real-time performance monitoring that can help design smarter and more efficient factories, products and data centers.

FANUC and Foxconn Fii are among the first robot manufacturers to support 3D, [OpenUSD](#)-based digital twins of their robots to make it easy for manufacturers to drag and drop equipment into their digital twins.

In his NVIDIA GTC Washington, D.C., keynote address, Huang showcased how Foxconn is using the new Omniverse technologies to design, simulate and optimize its new 242,287-square-foot facility in Houston, Texas, for manufacturing NVIDIA AI infrastructure systems.

America’s Leaders Build AI-Driven Factories to Accelerate Manufacturing

In 2025, \$1.2 trillion in investments toward building out U.S. production capacity was announced — led by electronics providers, pharmaceutical companies and semiconductor manufacturers. The nation’s leading companies are relying on applications from independent software vendors and [Omniverse libraries](#) to build robotic factories that can power this wave of industrialization, using [physical AI](#) and simulation to accelerate manufacturing.

Belden has implemented [Accenture’s Physical AI Orchestrator](#), which combines NVIDIA Omniverse libraries, the [NVIDIA Metropolis](#) platform and agentic AI from Accenture, to create virtual safety fences for instant hazardous zone monitoring and real-time quality-inspection systems in factories and warehouses.

Caterpillar is applying Omniverse to build digital twins of its factories and supply chains, for use in advanced manufacturing capabilities such as predictive maintenance and dynamic scheduling, NVIDIA NIM™ microservices to drive workflow automation and predict and optimize factory maintenance, and NVIDIA cuOpt™ software to optimize supply chain performance.

Lucid Motors is using Omniverse to build digital twins of its factories for real-time factory planning and optimization, as well as to train AI-driven robotics systems. Toyota is using [idealworks’ iw.sim](#) technology, which integrates capabilities from the Mega Omniverse Blueprint, to create digital twins of its Georgetown, Kentucky, facility and explore complex automation scenarios.

TSMC is using Omniverse to accelerate fab design and construction, as well as the [NVIDIA Isaac™](#) platform for the development of robotics for specific operations at its Phoenix, Arizona, facility to significantly enhance manufacturing productivity. [Wistron](#) is using a suite of NVIDIA AI and Omniverse technologies to implement a rigorous digital testing and validation process for the systems it assembles in its Fort Worth, Texas, facility.

Leading Robot Developers Assemble America's New Robotic Workforce

Robotics companies are using [NVIDIA's three-computer architecture](#) to build and deploy advanced fleets of robots that will play a critical role in bridging skills gaps, enhancing worker productivity and improving safety across industries.

Figure and NVIDIA announced a collaboration to accelerate next-generation [humanoid robotics](#). Using NVIDIA accelerated computing to build its Helix vision language action model and the Isaac platform for simulation and training, Figure is rapidly building the world's most advanced, large-scale humanoid fleet capable of everything from household chores to industrial support.

[Agility Robotics'](#) general-purpose humanoid, Digit, uses the [NVIDIA Isaac Lab](#) framework to refine [whole-body control](#) through millions of [reinforcement learning](#) scenarios, which accelerate enhancements to its skillsets such as step recovery from environmental disturbances, often needed in highly dynamic areas like manufacturing and logistics facilities. Digit is powered by the [NVIDIA Jetson AGX Thor™](#) module, enabling real-time perception, navigation and autonomous decision-making.

Amazon Robotics is using Omniverse libraries and frameworks to shorten the development of Amazon's various manipulation systems and mobile robots, which run on the [NVIDIA Jetson™](#) platform, from years to months. Thanks to simulation training, Amazon's recently announced BlueJay multi-arm manipulator for picking, stowing and consolidating moved from concept to production in just over a year.

Skild AI is building a [general-purpose robotics foundation model](#) that spans legged, wheeled and humanoid robots, using Isaac Lab for locomotion and dexterous manipulation tasks training and [NVIDIA Cosmos™](#) world foundation models for generating training datasets. FieldAI is training cross-embodied robot brains for monitoring and inspection in construction and oil and gas environments, using Isaac Lab for reinforcement learning and [NVIDIA Isaac Sim™](#) for synthetic data generation and software-in-the-loop validation.

AI Infrastructure Accelerates Industrial Digitalization

NVIDIA provides edge solutions and works with leading cloud service providers to offer broad access to the powerful AI and simulation infrastructure needed to accelerate manufacturing in America.

[NVIDIA IGX Thor™](#), an NVIDIA Blackwell-powered, enterprise-ready platform designed to power the next generation of industrial and medical edge AI applications, is being adopted by industry leaders including Diligent Robotics, EndoQuest Robotics, Hitachi Rail, Joby Aviation, Maven and [SETI Institute](#).

[Google Cloud](#) announced that its new G4 instances powered by NVIDIA RTX PRO™ 6000 Blackwell Server Edition GPUs are now available, while Microsoft will soon offer these GPUs both in Microsoft Azure public cloud and at the edge with Azure Local distributed infrastructure.

Learn more about how NVIDIA and partners are advancing AI innovation in the U.S. by watching the [NVIDIA GTC Washington, D.C.. keynote by Huang](#).

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 transforming the world's factories into intelligent thinking machines — the engines of a new industrial revolution; together with American's manufacturing leaders, NVIDIA building physical AI, Omniverse digital twins and collaborative robots that will drive productivity, resilience and competitiveness across the U.S. industrial base; 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 performance of NVIDIA's products or technologies when integrated into systems; and changes in applicable laws and regulations, as well as other factors detailed from time to time in the most recent reports NVIDIA files with the Securities and Exchange Commission, or SEC, including, but not limited to, its annual report on Form 10-K and quarterly reports on Form 10-Q. Copies of reports filed with the SEC are posted on the company's website and are available from NVIDIA without charge. These forward-looking statements are not guarantees of future performance and speak only as of the date hereof, and, except as required by law, NVIDIA disclaims any obligation to update these forward-looking statements to reflect future events or circumstances.

Many of the products and features described herein remain in various stages and will be offered on a when-and-if-available

basis. The statements above are not intended to be, and should not be interpreted as a commitment, promise, or legal obligation, and the development, release, and timing of any features or functionalities described for our products is subject to change and remains at the sole discretion of NVIDIA. NVIDIA will have no liability for failure to deliver or delay in the delivery of any of the products, features or functions set forth herein.

© 2025 NVIDIA Corporation. All rights reserved. NVIDIA, the NVIDIA logo, Jetson, Jetson AGX Thor, NVIDIA Cosmos, NVIDIA cuOpt, NVIDIA IGX Thor, NVIDIA Isaac, NVIDIA Isaac Sim, NVIDIA NIM, NVIDIA Omniverse and NVIDIA RTX PRO are trademarks and/or registered trademarks of NVIDIA Corporation in the U.S. and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

A photo accompanying this announcement is available at <https://www.globenewswire.com/NewsRoom/AttachmentNg/901e5bdf-5b78-4c1d-8515-a4a74f54eba0>

Quentin Nolibois
+1 415-741-8356
qnolibois@nvidia.com