



Japan's Robotics and Manufacturing Leaders Build on NVIDIA Cosmos to Advance Physical AI Frontier

News Summary:

- NVIDIA introduces Cosmos 3 Edge for on-device vision reasoning and robot policy deployment on NVIDIA Jetson Thor platforms, and NVIDIA Metropolis libraries built on NVIDIA Cosmos for agentic vision AI development.
- Japan's physical AI ecosystem leaders AIrOA, FANUC, Fujitsu, Hitachi, Kawasaki Heavy Industries, Kubota, NEC, SoftBank Corp., Sony Group Corporation and Yaskawa Electric intend to join the NVIDIA Cosmos Coalition to help build open frontier physical AI models.
- Fujitsu is exploring the development of a collaborative control platform for physical AI, with FANUC, Yaskawa Electric and Kawasaki Heavy Industries integrating NVIDIA technologies, while Japanese manufacturers and physical AI leaders including Enactic, Honda R&D, GROOVE X, Mitsui & Co, OMRON, Shimizu Corporation and Telexistence are building on NVIDIA's physical AI stack.

NVIDIA today announced that Japan's physical AI leaders are building on the [NVIDIA Cosmos™](#), [NVIDIA Isaac™](#), [NVIDIA Metropolis](#) and [NVIDIA Jetson™](#) platforms to accelerate the deployment of intelligent machines across manufacturing, mobility, infrastructure and robotics.

NVIDIA also announced Cosmos 3 Edge, a new addition to the NVIDIA Cosmos 3 open [world model](#) family, that brings frontier capabilities to NVIDIA Jetson, helping embodied systems see, reason in real time and predict robot actions locally.

[Physical AI](#) is bringing intelligence into machines, facilities and infrastructure, helping industries automate complex work and extend human expertise. Japan's strengths in robotics, manufacturing, automotive, telecommunications and industrial technology give it a powerful foundation for scaling this next wave of AI.

"The next frontier of AI is in the physical world, and this is a once-in-a-generation opportunity for Japan," said Jensen Huang, founder and CEO of NVIDIA. "Japan invented modern manufacturing. Now, it has the opportunity to reinvent it for the age of intelligent industries. By combining its world-leading heritage in manufacturing, precision engineering and robotics with NVIDIA Cosmos, Isaac, Metropolis and Jetson, Japan's innovators are building the next generation of intelligent machines. We are honored to partner with them on this journey."

NVIDIA Cosmos 3 Edge Powers On-Device Vision Reasoning and Robot Policy

[NVIDIA Cosmos 3 Edge](#) is a 4-billion-parameter model built on [NVIDIA Nemotron™](#) that helps robots and vision AI agents understand their surroundings, reason in real time and generate robot actions on NVIDIA edge computers.

Using the open [NVIDIA Cosmos framework](#), developers can adapt the model for specific robots, vehicles, sensors and environments in about a day. Lightweight enough to run on edge GPUs and quickly post-train specialized world action models, Cosmos 3 Edge can be deployed across [NVIDIA RTX™](#) GPUs, [NVIDIA DGX™](#) systems and NVIDIA Jetson, including the newly announced T2000 and T3000 modules.

To further accelerate the development of vision AI agents, NVIDIA is also announcing [new NVIDIA Metropolis libraries](#) and skills that help developers use coding agents to build, train and operate video intelligence systems with Cosmos at least 6x faster.

Japan's Physical AI Leaders Intend to Join NVIDIA Cosmos Coalition to Advance Open World Models

NVIDIA is expanding the NVIDIA Cosmos Coalition to Japan, bringing together world model builders, AI developers and physical AI leaders to advance open world models with Cosmos technologies.

Japan's physical AI ecosystem leaders including AIrOA, [classmethod](#), Enactic, FANUC, Fujitsu, GROOVE X, Hitachi, Honda R&D, Kawasaki Heavy Industries, Kubota, Mitsui & Co., Mitsubishi Corp., Mujin, NEC, Preferred Networks, SoftBank Corp., Sony Group Corporation, Telexistence, TIER IV, TRON K.K., Turing and Yaskawa Electric intend to join the coalition.

Coalition members can contribute to and build on the NVIDIA Cosmos platform, which includes [open models](#), data curation libraries, datasets and frameworks. The resulting world models will help Japanese companies test and optimize physical AI systems before deployment, shortening development cycles across factories, logistics networks, farms, construction sites, hospitals, roads and homes.

NVIDIA Physical AI Powers Momentum Across Japan's Robotics, Manufacturing and Smart Spaces Ecosystem

Fujitsu is exploring business opportunities in physical AI with FANUC, Yaskawa Electric and Kawasaki Heavy Industries. Led by Fujitsu, the initiative aims to build a collaborative control platform integrating NVIDIA's physical AI stack to bridge digital and physical operations across all industrial sectors.

Built with Cosmos world foundation models, the open Isaac robotics development platform, [NVIDIA Omniverse™ NuRec](#) libraries and the [Newton](#) physics engine, the platform will support AI model development, digital twins, robot learning, simulation-to-real workflows and pre-deployment validation.

NEC, Hitachi, OMRON and Preferred Networks are using NVIDIA Cosmos and NVIDIA physical AI technologies to advance world models, industrial AI and physical AI R&D. SoftBank Corp. is developing a physical AI development platform built on NVIDIA Cosmos, [NVIDIA Omniverse](#) and NVIDIA Isaac Sim™. The company is also advancing AI-RAN initiatives using [NVIDIA AI Aerial](#) with the aim of delivering intelligent connectivity for billions of physical AI devices.

Mujin is exploring NVIDIA Cosmos for autonomous robotics and intelligent industrial automation powered by MujinOS, while TRON K.K. is developing manufacturing data workflows for task-specific physical AI models in assembly, picking, inspection and material handling, as well as factory 3D digitization workflows.

Kawasaki Heavy Industries is applying NVIDIA physical AI technologies across healthcare, shipbuilding, transportation, aerospace and energy; Kubota is exploring Cosmos-based physical AI for autonomous agriculture and smart farming.

Enactic is fine-tuning the NVIDIA Isaac GR00T open model for elder-care semi-humanoid robots; GROOVE X is building Jetson-powered companion robots, [LOVOT](#); and Telexistence is applying Isaac and exploring Cosmos for retail automation.

Japan's industry leaders are also using NVIDIA Metropolis to bring Cosmos-powered vision AI agents into physical operations: Hitachi for smart-building operations, OMRON for automated inspection and Shimizu Corporation for construction safety.

About NVIDIA

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

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