



NVIDIA Launches IGX Edge AI Computing Platform for Safe, Secure Autonomous Systems

Platform Advances Human-Machine Collaboration Across Manufacturing, Logistics and Healthcare

GTC -- NVIDIA today introduced the [NVIDIA IGX platform](#) for high-precision edge AI, bringing advanced security and proactive safety to sensitive industries such as manufacturing, logistics and healthcare. In the past, such industries required costly solutions custom built for specific use cases, but the IGX platform is easily programmable and configurable to suit different needs.

As the platform for safe, secure autonomous systems, IGX improves human-machine collaboration. For [manufacturing and logistics](#), IGX provides an additional layer of safety in highly regulated physical-world factories and warehouses. For [medical edge AI use cases](#), IGX delivers secure, low-latency AI inference to address the clinical demand for instantaneous insights from a range of instruments and sensors for medical procedures, such as robotic-assisted surgery and patient monitoring.

“As humans increasingly work with robots, industries are setting new functional safety standards for AI and computing,” said Jensen Huang, founder and CEO of NVIDIA. “NVIDIA IGX will help companies build the next generation of software-defined industrial and medical devices that can safely operate in the same environment as humans.”

NVIDIA IGX Platform — Ensuring Compliance in Edge AI

The NVIDIA IGX platform is a powerful combination of hardware and software that includes NVIDIA IGX Orin, the world’s most powerful, compact and energy-efficient AI supercomputer for autonomous industrial machines and medical devices.

IGX Orin developer kits will be available early next year for enterprises to rapidly prototype and test products. Each kit comes with an integrated GPU and CPU for high-performance AI compute and an NVIDIA ConnectX®-7 SmartNIC to deliver high-performance networking with ultra-low latency and advanced security.

ADLINK, [Advantech](#), [Dedicated Computing](#), Kontron, Leadtek, MBX, Onyx, [Portwell](#), [Prodrive Technologies](#) and [YUAN](#) will be among the first embedded-computing manufacturers to create products based on the IGX design built for the needs of the industrial and medical device industries.

Also included is a powerful software stack with critical security and safety capabilities that can be programmed and configured for different use cases. These features allow enterprises to add proactive safety into environments where humans and robots work side by side, such as warehouse floors and operating rooms.

The IGX platform can run [NVIDIA AI Enterprise software](#), which optimizes the development and deployment of AI workflows and ensures organizations have access to necessary AI frameworks and tools. NVIDIA is also working with operating system partners like [Canonical](#), [Red Hat](#) and [SUSE](#) to bring full-stack, long-term support to the platform.

For management of IGX in industrial and medical environments, [NVIDIA Fleet Command](#)™ allows organizations to deploy secure, over-the-air software and system updates from a central cloud console.

Building the Industrial Edge

NVIDIA is working with a broad ecosystem of companies to bring the IGX platform to market.

One of the first companies to use IGX at the edge is Siemens, a technology leader in industrial automation and digitalization, which is working with NVIDIA on a vision for autonomous factories.

Siemens is collaborating with NVIDIA to expand its work across industrial computing, including with digital twins and for the industrial metaverse.

The collaboration will allow enterprises to complement work carried out using the [NVIDIA Omniverse™ platform](#) for 3D design and collaboration and the [Siemens Xcelerator](#) open digital business platform with the powers of IGX. The platform enables data generated from digital twins in the virtual world to be used to train intelligent machines operating in real-life factories and warehouses using industrial-grade computing infrastructure from Siemens.

Siemens is already adding next-level perception into its edge-based applications through [NVIDIA Metropolis](#). With millions of sensors in factories, Metropolis connects entire fleets of robots and IoT devices to bring AI into industrial environments, making it one of the key application frameworks for edge AI running on top of the IGX platform.

“As part of our ongoing collaboration with NVIDIA to speed digital transformation, Siemens will bring IGX technologies to our industrial compute portfolio to help reduce repetitive tasks in the factory and better support workers,” said Rainer Brehm,

CEO of factory automation at Siemens. “By more closely connecting smart devices on the factory floor and using that data for intelligent machine operation in production, we can increase efficiency and flexibility for our customers.”

Made for Medical Environments

For healthcare, the IGX platform supports [NVIDIA Clara™ Holoscan](#) — a real-time, AI computing platform for medical devices — enabling the rapid development and production deployment of new devices that deliver AI applications directly into operating rooms, where over 300 million surgeries are delivered each year globally.

More than 70 medical-device companies, startups and medical centers have already been using Holoscan to advance their efforts in deploying AI applications to clinical settings and evolving medical devices to a software-as-a-service business model. Among them are Activ Surgical, Moon Surgical and Proximie, which are building next-generation surgical systems. With Clara Holoscan and IGX, Moon Surgical said it saved significant engineering time in its imaging pipelines, management system and hardware while developing its next-generation Maestro surgical robot assistant.

“By harnessing NVIDIA Clara Holoscan to power Maestro’s next-gen capabilities, Moon is creating an exceptional surgical experience,” said Anne Osdoit, CEO of Moon Surgical. “This collaboration has accelerated Moon’s time to market and allowed the team to focus on developing novel features and algorithms, confident that cutting-edge computing architecture is at the heart of the Maestro System.”

To learn more about NVIDIA IGX, watch Huang’s [GTC keynote](#). [Register for GTC](#) for free to attend sessions with NVIDIA and industry leaders.

About NVIDIA

Since its founding in 1993, NVIDIA (NASDAQ: NVDA) has been a pioneer in accelerated computing. The company’s invention of the GPU in 1999 sparked the growth of the PC gaming market, redefined computer graphics and ignited the era of modern AI. NVIDIA is now a full-stack computing company with data-center-scale offerings that are reshaping industry. More information at <https://nvidianews.nvidia.com/>.

Certain statements in this press release including, but not limited to, statements as to: the benefits, performance, impact, and availability of our products and technologies, including NVIDIA IGX, NVIDIA IGX Orin, NVIDIA AI Enterprise software, NVIDIA Fleet Command, NVIDIA Omniverse platform, NVIDIA Metropolis, NVIDIA Clara Holoscan; industries setting new functional safety standards for AI and computing; embedded-computing manufacturers including ADLINK, Advantech, Dedicated Computing, Kontron, Leadtek, Onyx, MBX, Portwell, Prodrive Technologies and YUAN building products based on the IGX design; the benefits, performance and impact of our collaborations including with Canonical, Red Hat, SUSE, and Siemens are forward-looking statements that 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 conditions; our reliance on third parties to manufacture, assemble, package and test our products; the impact of technological development and competition; development of new products and technologies or enhancements to our existing product and technologies; market acceptance of our products or our partners’ products; design, manufacturing or software defects; changes in consumer preferences or demands; changes in industry standards and interfaces; unexpected loss of performance of our products or technologies when integrated into systems; 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.

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