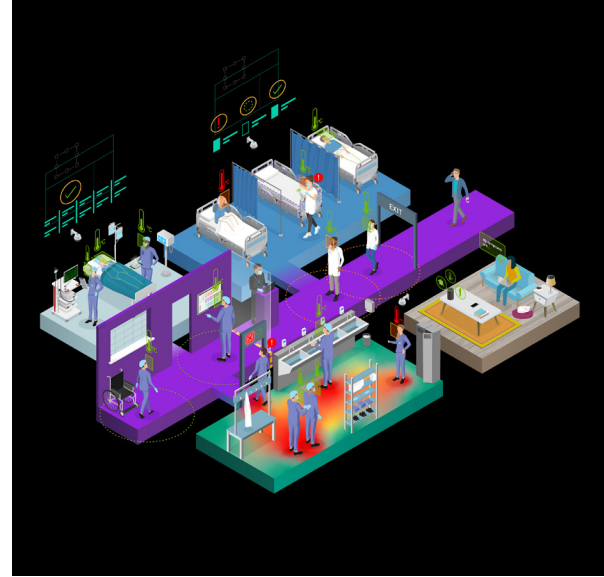**NVIDIA**

NVIDIA DGX BasePOD for Healthcare and Life Sciences
Streamline AI development and deployment.

Democratizing and Accelerating AI in Healthcare From End to End

The healthcare and life sciences (HCLS) industry will account for 30% of the world's data (36% CAGR) by 2025. As this industry further transforms its investments, operations, customer experiences, and clinical outcomes with the power of AI, having the right infrastructure foundation that can simplify and speed the development of AI applications has become table stakes for CIOs and line-of-business leaders.

NVIDIA has made it easier, faster, and more cost-effective for businesses to deploy mission-critical AI use cases. This is made possible by combining the proven performance, scale, and manageability of the **NVIDIA DGX BasePOD™** architecture with industry-tailored software and tools from the NVIDIA AI Enterprise software suite, along with an ecosystem of proven partners. Enterprises now have a trusted platform on which to build and deploy their AI applications.

To speed the time to value of AI-powered use cases in health and life sciences, NVIDIA offers the DGX BasePOD Infrastructure solution for healthcare and life sciences (HCLS). It's optimized to streamline AI development and deployment, from genomics and drug discovery to medical imaging. Plus, it includes domain-specific, proven, open-sourced containers and frameworks that have been certified to run the most demanding HCLS workloads on the most highly optimized environment— on premises or in the cloud.

The Value of NVIDIA AI Enterprise

Combined with DGX BasePOD, the **NVIDIA AI Enterprise software suite** includes the key building blocks required to develop and deploy domain-specific, end-to-end AI workflows—from data prep to training to inference and deployment. The NVIDIA DGX BasePOD for HLCS includes proven, open-source applications, SDKs, and libraries specific to healthcare and life sciences, such as **MONAI Label and Core** for medical imaging and NVIDIA Parabricks® for genomics. AI practitioners can even choose to train on complex neural network models, as well as tree-based models. This combination democratizes access to a fully integrated solution of AI-accelerated software and hardware infrastructure, enabling any organization to deploy the foundation on which their AI workloads can be streamlined and accelerated. Finally, because enterprise-class support is included, organizations get the transparency of open-source backed by the assurance that the global NVIDIA Enterprise Support team will help AI projects stay on track.

Benefits

> Prescriptive architecture that eliminates design complexity

> Faster deployment

> Predictable performance at scale

> Proven software stack optimized for health and life science application development
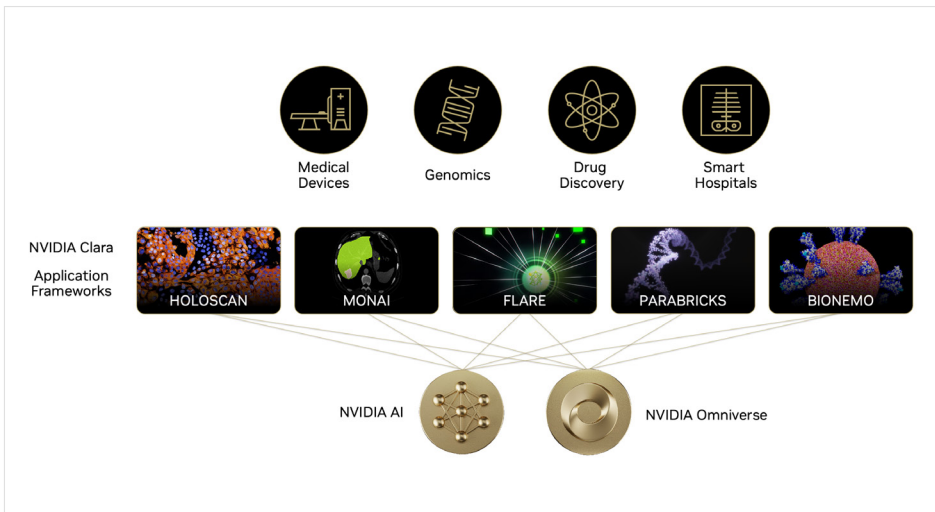
> Full-stack expertise from NVIDIA Enterprise Support

Figure 1. NVIDIA Clara for healthcare and life sciences application frameworks.

Powered by NVIDIA Base Command

Also bundled with the DGX BasePOD is **NVIDIA Base Command™**, the software engine of the DGX platform, which includes enterprise-grade orchestration and cluster management, libraries that accelerate compute, storage and network infrastructure, and an operating system optimized for AI workloads. This ensures that enterprise-class, accelerated AI infrastructure is accessible to organizations of any size by providing the AI software, compute power, tools, and support needed for organizations to focus on creating business value from AI, not on the underlying AI infrastructure.
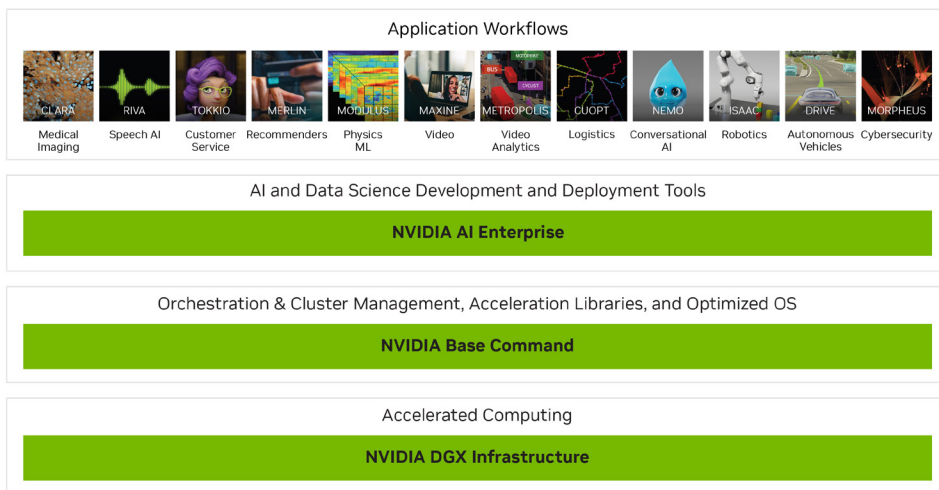

Figure 2. NVIDIA DGX Platform's AI Software Stack

A Strong Ecosystem of Proven Partners

These "better together" solutions are certified by NVIDIA and include a qualified and proven ecosystem of DGX BasePOD storage partners. They use the **Magnum IO™** portfolio for intelligent data center input/output (IO) and include technologies like GPU Direct Storage, which provides the highest-performance IO directly to the GPUs powering the AI infrastructure, accelerating jobs like image processing and annotation. The DGX BasePOD for HLCS, fully integrated and tested with the partner ecosystem, also simplifies the deployment of on-premises accelerated AI infrastructure for enterprise IT organizations.

Supported by NVIDIA

With NVIDIA DGX BasePOD, both AI practitioners and IT administrative teams have access to NVIDIA experts globally. This enables coordinated support across the full solution, including partner products, as well as control of upgrade and maintenance schedules with long-term support (LTS) options and access to instructor-led customer training and knowledge base resources.

University of Wisconsin-Madison Accelerates the Entire Radiological Workflow with DGX BasePOD

Researchers at University of Wisconsin-Madison wanted to determine if AI could be used to improve healthcare workflows by speeding up tedious tasks in the radiologic interpretation process or providing new information at the time of interpretation. Using MONAI from the NVIDIA Clara™ application framework integrated into the Flywheel data management platform, with training done on NVIDIA DGX BasePOD, they can scale the dataset to do what was previously not possible. This includes applying state-of-the-art research tools to every single abdominal CT ever performed by the university since 2004. 10,000 cases alone that used to take six to eight months just to get through can now be easily processed in a day.

Read Success Story

Ready to Get Started?

To learn more about NVIDIA DGX BasePOD,
visit: **nvidia.com/dgx-basepod**

To learn more about NVIDIA Clara,
visit: **nvidia.com/clara**

Partner
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