

5 Reasons Why NVIDIA Omniverse™ Enterprise for Architecture and Engineering

At a Glance

Leaders in architecture, engineering, construction, and operations (AECO) are utilizing tools developed on NVIDIA Omniverse™ Enterprise and Dell Precision™ workstations to reimagine creative collaboration and improve building projects.



Unify

AECO pipelines
and applications across
the globe

- Enable architects, engineers, and builders to collaborate in real time by sharing previously incompatible 3D data in a single workspace with Open Universal Scene Description (OpenUSD).
- Connect CAD tools and data easily, streamline reviews, and simplify handoffs to accelerate the design process.



Accelerate

iterations with
next-gen visualization
and simulation

- Build and refine physically accurate virtual structures as a team from anywhere.
- Reproduce and evaluate environmental factors such as radiation and wind to help reduce design flaws.



Leverage

digital twins and
AI-generated insights to
optimize operations

- Visualize massive construction and civil datasets from multiple sources before construction begins.
- Utilize real-time, AI-enabled monitoring to improve ongoing building maintenance after construction.



Maximize

NVIDIA Omniverse Enterprise
benefits with Dell Precision
workstations

- Get the performance, scalability, and reliability you need to take full advantage of NVIDIA Omniverse Enterprise with Dell Precision AI-ready workstations.
- Certified by NVIDIA, Dell Precision workstations support real-time ray tracing for live collaboration and presentation.



Proven

to increase efficiency on
AECO-related projects

- Mark III Systems built Omniverse Smart Hospital digital twins on Dell Precision 7960 workstations.
- The team iterated concepts more effectively while creating labor and delivery room renderings.

Technical Deep Dive

Dell Precision AI-ready workstations powered by NVIDIA RTX™ Ada generation GPUs

Get the most out of NVIDIA Omniverse Enterprise with Dell Precision workstations. Configure your systems with up to two NVIDIA RTX™ 6000 Ada Generation GPUs (each touting 48GB VRAM), NVIDIA high-performance networking, and up to two CPUs. Combine Dell Precision workstations with high-performance Dell PowerEdge servers for an end-to-end solution.

Aggregate files automatically using OpenUSD

With nondestructive interoperable workflows, you spend less time importing/exporting 3D and CAD files and transferring data between tools. NVIDIA Omniverse Enterprise and OpenUSD support a wide range of software and file formats, including Autodesk Revit, Autodesk 3ds Max, Autodesk Maya, McNeel Rhino/Grasshopper, Trimble SketchUp, and Graphisoft Archicad, to name a few.

[See Full List](#)

Develop and deploy custom apps and workflows without programming expertise

Thanks to convenient developer tools, Python apps and extensions can be built in NVIDIA Omniverse Enterprise without extensive programming experience. Get started fast with fully customizable foundation apps (best-practice implementations of native OpenUSD apps for 3D data aggregation).

Incorporate your preferred 3D tools easily with applications and connectors

NVIDIA Omniverse Enterprises provides a valuable catalog of third-party extensions that developers can modify for their workflows. Omniverse Connectors offer the highest fidelity connection with live-link workflows between third-party applications.

Focus on higher-level projects by automating repetitive tasks

Embed AI into your workflows to automate recurring tasks with predictive capabilities and natural language processing. Develop intelligent applications to analyze data, recognize patterns, and make predictions.

Next Steps

Email us at omniverse@dell.com to learn more about NVIDIA Omniverse Enterprise and Dell Precision workstations.

Contact Us

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