ENTERPRISE VISUAL COMPUTING FOR TODAY'S PROFESSIONAL WORKFLOWS

Productivity of Today's Visual Computing Workflows Drives a Real Competitive Edge.

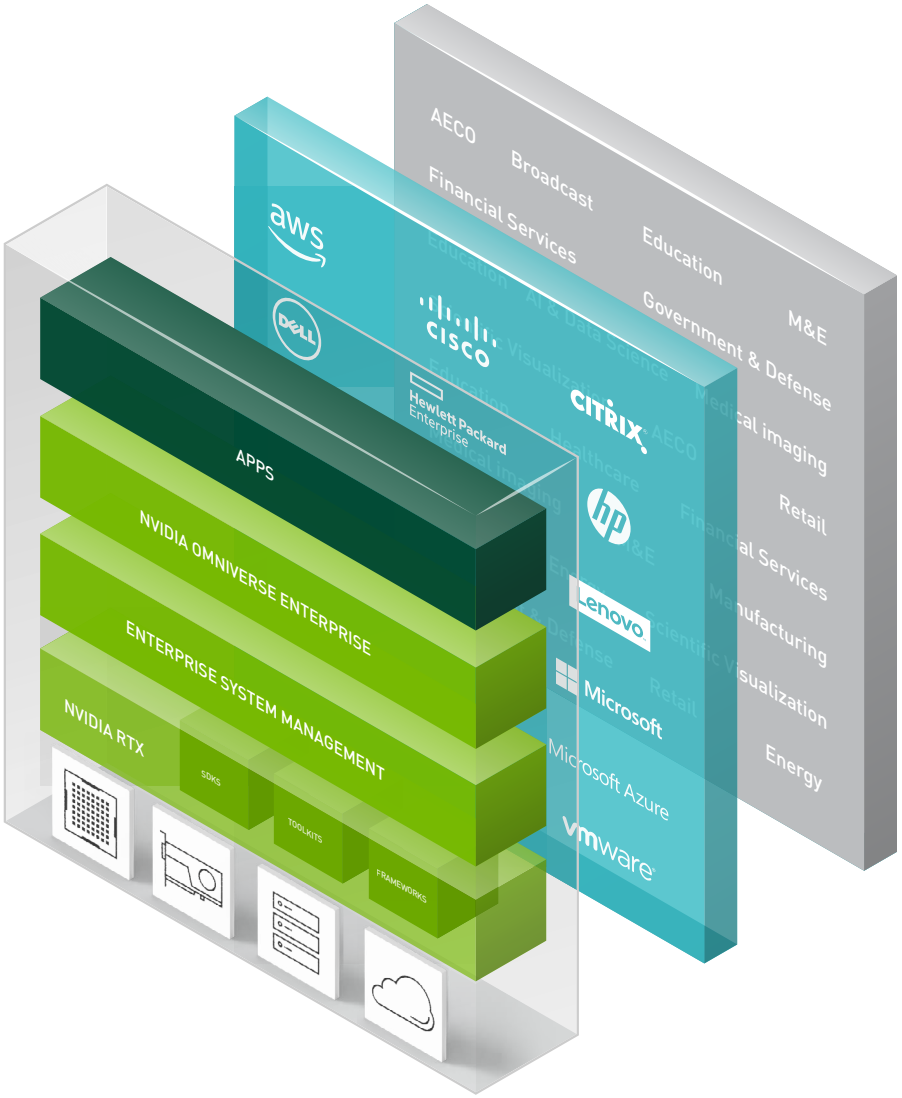
NVIDIA

RE-INVENTING PROFESSIONAL WORKFLOWS WITH NVIDIA RTX

It's a new era of work for artists, designers, and engineers. Visual computing workflows are growing in complexity working with higher fidelity and higher resolution images and models. Photorealistic rendering is required to evaluate concepts and designs, create realistic prototypes for study and refinement, and gain a greater understanding of data by seeing it as it appears in the real world. Multi-application workflows are common with users moving data between applications in order to complete their work. The need for efficient and effective remote collaboration has never been greater, driving the business requirement for employees to do any work from anywhere.

Implementing these new work paradigms doesn't come without challenges. Complex software workflows can be difficult to manage and require more powerful computing hardware to drive increased computing loads. Recent world events have increased the need for remote work to levels that could not have been anticipated, posing challenges for IT and workers. Advanced technologies such as ray tracing, AI, data analytics, and extended reality continue to be adopted at an incredible pace, challenging existing IT infrastructure and hardware.

An enterprise-level visual computing platform is key to meeting the needs of today's business environment. Workers must be equipped to do any work anywhere, taking advantage of the latest technologies that provide the competitive edge demanded in today's complex and rapidly changing world.



NVIDIA RTX: THE WORLD'S PREEMINENT VISUAL COMPUTING PLATFORM

NVIDIA solutions have been the leading enterprise visual computing choice for over twenty years. Millions of professionals choose NVIDIA to power their visualization workloads every day.

NVIDIA continues to be a driving force across industries with the NVIDIA RTX™ platform, a full stack professional visualization solution. The latest generation of NVIDIA RTX GPUs and NVIDIA software technologies combine to deliver real time ray tracing, AI, compute, simulation, and advanced graphics. Enterprises rely on the RTX platform to solve today's biggest challenges, create the next cutting-edge products, design smart, efficient and sustainable buildings, develop new life-saving medical procedures, and help us better understand the world and the universe around us.

Working with leading hardware, software, and OEM system partners, NVIDIA extends the reach of the RTX platform to tackle the most demanding visual computing workflows in the form factors users need. From embedded devices - such as drones, robots, and gaming machines, to powerful thin and light mobile workstations, and supercomputer performance from desktop workstations. The NVIDIA RTX platform is also available from the data center in NVIDIA-Certified Systems™ and from cloud service providers. And with NVIDIA Virtual Workstation Software (vWS), professionals can access the power of the NVIDIA RTX platform from anywhere.

For geographically dispersed teams, seamless collaboration is key to success. With NVIDIA Omniverse™ Enterprise, the RTX platform provides an end-to-end collaboration and simulation platform that transforms complex design workflows, creating a more efficient environment for professional teams by connecting them through the applications and tools they use every day.

With the NVIDIA RTX platform, users can choose from a vast array of GPU-accelerated applications provided by a global ecosystem of NVIDIA software partners. These professional applications take advantage of NVIDIA AI, ray tracing, compute, simulation, and graphics technologies to provide the performance and capabilities required for demanding professional workflows across industries. This close partnership between NVIDIA and our hardware and software partners extends beyond technology integration to include testing, support, and certification[1].

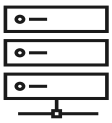
PROFESSIONAL LAPTOPS

CLOUD

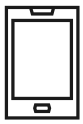
VIRTUAL WORKSPACES

DESKTOP WORKSTATIONS

EMBEDDED SOLUTIONS



NVIDIA CERTIFIED SOLUTIONS



SPECIALTY SOLUTIONS

DATA CENTER

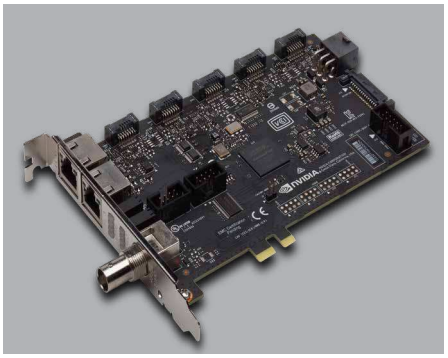
1. Certain ISVs conduct formal certifications for professional application software. Please consult with your software vendor for specifics on software and hardware certification.

BUILT FOR PROFESSIONALS

The NVIDIA RTX platform is built for professionals, providing the features, performance, stability, and reliability required for these demanding workflows. The RTX platform provides exclusive technologies and tools designed specifically for enterprise deployments. These include:

MULTI-DISPLAY TECHNOLOGY

Professional displays have moved beyond a single desktop monitor. Multiple 4K and even 8K displays are becoming common. Video walls, CAVE environments, and LED volumes for virtual production are being deployed by businesses around the globe. The NVIDIA RTX platform provides NVIDIA Mosaic™ for massive multi-display deployments along with NVIDIA Warp and Blend software tools for projection and curved displays.



VIDEO SYNCHRONIZATION

Advanced enterprise visualization solutions, such as flight or vehicle simulation or live video broadcast deployments require precise video timing across multiple GPUs or systems. The NVIDIA RTX platform with NVIDIA® Quadro® Sync hardware enables multiple GPUs within a single workstation, server, or multiple network-connected workstations and servers, to synchronize GPU display output to each other or external timing signals for artifact-free displays.

VIDEO PROCESSING

Enterprise workflows, such as video editing, video content distribution or video surveillance, put extreme demands on computing resources. NVIDIA RTX solutions provide workflow specific capabilities such as hardware encode and decode engines that can process multiple simultaneous video streams and NVIDIA GPUDirect® technology that enables data transfer directly to and from RTX GPUs, reducing latency.

EXTENDED REALITY (XR)

As professional use cases for virtual reality (VR) and augmented reality (AR) continue to grow, the NVIDIA RTX platform drives these expanding workflows, enabling multiple GPUs to drive a single head mounted display (HMD) with NVIDIA VR SLI technology, or to stream VR and AR content across 5G and Wi-Fi networks with NVIDIA CloudXR™.

ENHANCE PRODUCTIVITY

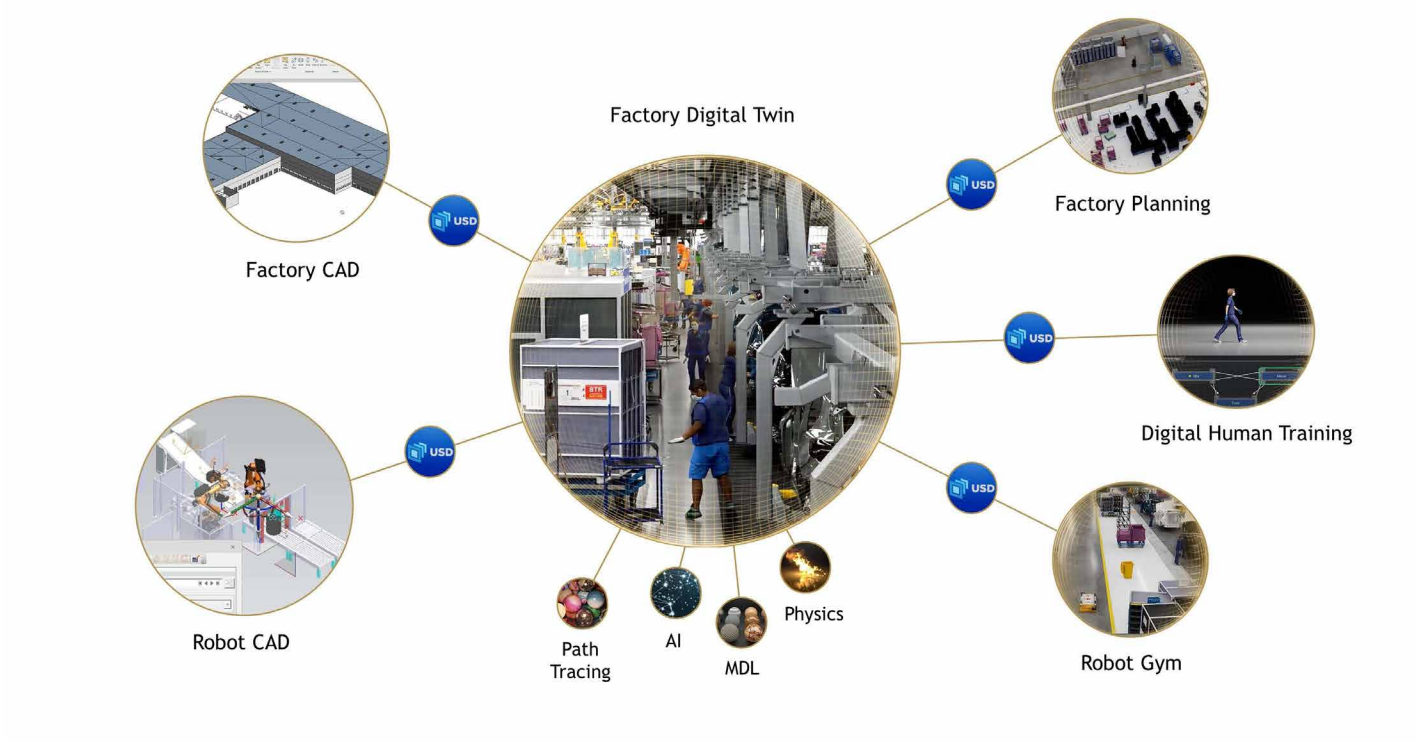
The need to maximize productivity has never been greater. The NVIDIA RTX platform provides tools to help workers boost their output. NVIDIA RTX Experience™ is a full suite of productivity tools, including 4K recording, automatic alerts for driver updates, and gaming features. NVIDIA RTX Desktop Manager software provides a full suite of display management tools, including flexible window snapping, user profiles, window management, and hotkey support.

ENTERPRISE DEPLOYMENT

Managing large-scale computing hardware deployments can be a challenge. The NVIDIA RTX platform provides a comprehensive set of enterprise management tools and enterprise level drivers. NVIDIA RTX Enterprise Drivers are tuned, tested, and certified for professional applications.

NVIDIA OMNIVERSE ENTERPRISE: FROM CREATION TO OPERATION OF VIRTUAL WORLDS

NVIDIA Omniverse enables 3D collaboration across the enterprise for a wide variety of use cases from training AI's, to designing new products, to creating Digital Twins.



NVIDIA RTX PARTNERS

Explore how NVIDIA RTX solutions are powering the future of visual computing for professionals.

Learn More