



## NVIDIA TESLA V100 FOR VIRTUALIZATION



### Redefining Virtual Workstation Performance

NVIDIA® Tesla® V100 with NVIDIA Quadro® Virtual Data Center Workstation (Quadro vDWS) software brings the power of the world's most advanced data center GPU to a virtualized environment—creating the world's most powerful virtual workstation. Quadro vDWS on Tesla V100 delivers faster ray tracing, advanced simulations, and AI-powered rendering from anywhere, on any device.

NVIDIA redefined visual computing by giving designers, engineers, scientists, and graphic artists the power to take on the biggest visualization challenges with immersive, interactive, photorealistic environments. With NVIDIA Quadro vDWS, architects, engineers, and designers are now untethered from their desks and can access applications and data securely from the data center.

Powered by the NVIDIA Volta GPU architecture, Tesla V100—the highest-performing GPU to date—enables engineers and designers to remotely access workflows that previously weren't accessible. The powerful Tesla V100 GPUs used for AI and inferencing workloads can also be used for VDI, providing greater flexibility to use the same hardware to run different workloads around the clock. Run VDI by day and compute by night using the Tesla V100.

### SPECIFICATIONS



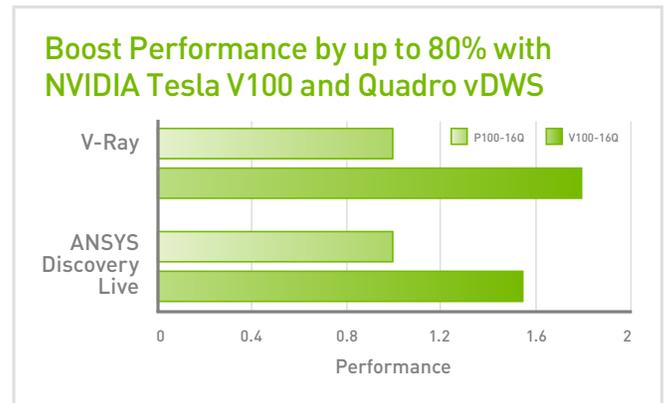
	Tesla V100 PCIe	Tesla V100 SXM2
GPU Architecture	NVIDIA Volta	
NVIDIA CUDA® Cores	5,120	
Tensor Cores	640	
GPU Memory	32/16 GB HBM2	
H.264 1080p30 Streams	36	
vGPU Profiles	1 GB, 2 GB, 4 GB, 8 GB, 16 GB, 32 GB	
Form Factors	PCIe 3.0 Dual Slot and SXM2	
Power	250 W / 300 W (SXM2)	
Thermal Solution	Passive	

## Graphics-Accelerated Design

Set up scenes and materials and achieve high-quality results while enjoying fluid visual interactivity. Achieve photorealistic rendering with up to 80 percent faster ray tracing to deliver better results and faster decision making.<sup>1</sup>

Compress design cycles and accelerate time to market with up to 55 percent performance improvement of ANSYS Discovery Live design workflows with real-time interactive simulation.<sup>2</sup> ANSYS Discovery Live leverages NVIDIA CUDA to boost performance, harnessing the power of NVIDIA Tesla GPUs.

AI-accelerated denoising makes setting up scenes and materials a lot faster. Reach high-quality results up to 15 times faster, and enjoy fluid visual interactivity throughout the design process.<sup>3</sup>



## Virtualize Without Compromise



### PHYSICAL WORKSTATION EXPERIENCE

Achieve the ultimate user experience for any workload or virtual GPU (vGPU) profile. With support for CUDA and OpenCL, professional and design engineering workflows are enabled at peak performance, providing a workstation-like experience that can be accessed anytime, on any device.



### OPTIMAL MANAGEABILITY

Intelligently design, manage, and support the vGPU environment with end-to-end management and monitoring and real-time insight into performance. Broad partner integrations enable access to a wide variety of tools from all major hypervisor vendors.



### QUADRO-POWERED VISUALIZATION

Accelerate workflows with the world's leading visual computing platform, trusted by millions of creative and technical professionals. It's accessible from the data center, and users benefit from the Quadro ecosystem of independent-software-vendor (ISV) certifications and tools.



### INVESTMENT PROTECTION

Access ongoing feature enhancements and new releases on a regular cadence, as well as support and maintenance, with a Quadro vDWS software license. This software license model provides access to new features without a dependency on new hardware.

<sup>1</sup> Comparing a single virtual machine (VM) on NVIDIA Tesla V100-16Q with a single VM on NVIDIA Tesla P100-16Q using V-Ray 2015

<sup>2</sup> Comparing a single VM on NVIDIA Tesla V100-16Q with a single VM on NVIDIA Tesla P100-16Q using test resolution 1080p

<sup>3</sup> Comparing CPU-only to a single VM on NVIDIA Tesla V100-16Q using Dassault Systèmes SOLIDWORKS Visualize

To learn more about NVIDIA virtual GPU technology, visit [www.nvidia.com/virtualgpu](http://www.nvidia.com/virtualgpu)