UNLOCK ACCELERATED CREATIVITY
GPU RENDERING WITH REDSHIFT

Image courtesy of Piotr Tatar

The first fully GPU-accelerated, biased renderer.

Redshift is a powerful and flexible GPU-accelerated renderer, built to meet the specific demands of contemporary high-end production rendering. Tailored to support creative individuals and studios of every size, Redshift offers a suite of powerful features and integrates with industry standard CG applications. Redshift features out-of-core technology for both textures and geometry, allowing it to render large scenes.

With multi GPU platforms, a truly interactive look development workflow is easily achieved at every step during scene creation. Redshift allows look developers and technical directors a quicker preview of a project's progress resulting in more accurate final frame quality based on the given art direction.

Redshift Spotlight: Tendril, American Gods

Image courtesy of Tendril Studio

While speed is a common reason that many artists use GPU rendering, Redshift was chosen for *Coming to America* as it could combine speed with reliable handling of the large datasets that the creative team would generate. The GPU renderer managed the resource-rich project with no problems: "If we can create an animation like that [in Redshift], it speaks to how robust [Redshift] is" says Christian Hecht, lighting and texture artist at Tendril, reflecting on how Redshift performed with the heavy datasets.

"Because Redshift has a very clean and stable implementation in Maya, it was much more reliable than any of the other render engines that we had used."

—Tendril lighting and texture artist Alex Veaux

KEY REDSHIFT FEATURES

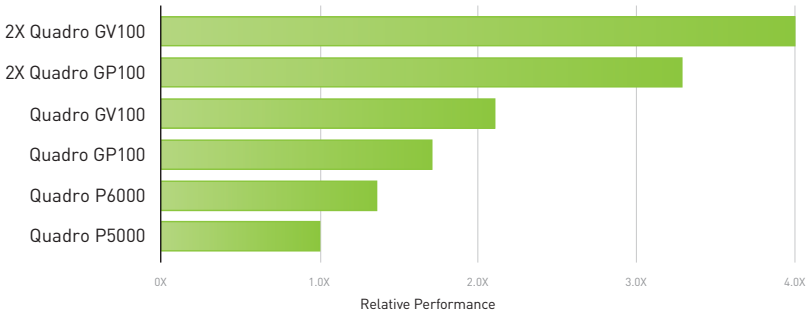
- Fully biased GPU renderer, meaning it offers unparalleled flexibility for shading, lighting, scripting, and scene setup.
- Preferred GPU renderer for larger VFX facilities and any studio demanding the best stability and flexibility.
- Out-of-core data access for both textures and geometry, meaning it can render very large scenes that exceed the GPU memory's limits.
- Photo-realistic global illumination for indirect lighting using biased point-based GI techniques as well as brute-force GI.
- Proxies, motion and deformation blur, hair, tessellation and displacement, physically based materials, AOVs, and much more.
- Free of charge plug-ins: Softimage, Maya, 3dsMax, Cinema4D, Houdini, and Katana.
- Fluid interactivity during look development with NVIDIA® OptiX™ AI-accelerated denoiser.

REDSHIFT

The GPU Rendering Solution

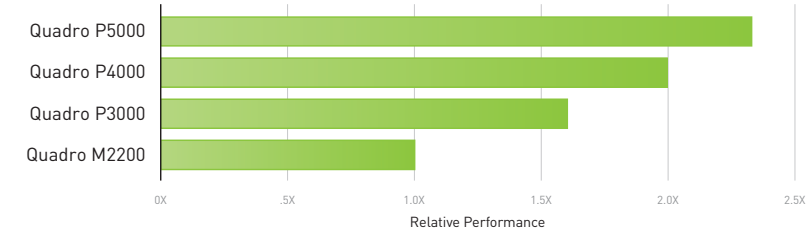
NVIDIA® Quadro® GV100 is the most powerful professional GPU rendering solution available, delivering the fastest rendering speeds possible. With 32GB of memory, it allows the largest images to be rendered with a single GPU. For even larger scenes, connect two GV100s with NVIDIA NVLink™* to access up to 64GB of GPU memory.

NVIDIA QUADRO GPUs FOR DESKTOP WORKSTATIONS
REDSHIFT



Tests run on a workstation with Intel Xeon E5-2697 v3, 14 cores 2.6GHz, 32GB RAM, running Win 10 64-bit, Fall Creators Update using Redshift 2.6.01 and driver version 390.77, HD render resolution.

NVIDIA QUADRO GPUs FOR MOBILE WORKSTATIONS
REDSHIFT



Tests run on a workstation with Intel Core i7 4790S 3.2GHz 8GB RAM, running Windows 10 64-bit Anniversary Update and driver 384.76. Performance testing completed with Redshift bench version 2.5.20, image resolution 1920x1080.

GV100 SPECIFICATIONS

GPU ARCHITECTURE	**NVIDIA Volta™**
NVIDIA CUDA CORES	**5,120**
NVIDIA TENSOR CORES	**640**
MEMORY CAPACITY	**32GB HBM2**
SINGLE-PRECISION PERFORMANCE	**14.8 TFLOPS**
DOUBLE-PRECISION PERFORMANCE	**7.4 TFLOPS**
TENSOR PERFORMANCE	**118.5 TFLOPS**
NVIDIA NVLink™	**2 Quadro GV100 Supported**
DISPLAY CONNECTORS	**4x DP 1.4**
DISPLAY SUPPORT	**4x 4096x2160 @ 120Hz 4x 5120x2880 @ 60Hz**
VR READY	**YES**

Image courtesy of Aixsponza

Image courtesy of Gimpville Studio

Image courtesy of Chocolate Tribe Studio

REDSHIFT

NVIDIA professional graphics solutions are certified and recommended by Redshift. For the latest updates on software certifications and support, please visit the Redshift platform support website. The close collaboration during product development guarantees stability and reliability of the platform just the way you expect from day one.

To learn more, visit **www.nvidia.com/gpurendering**

For more information on Redshift, visit **www.redshift3d.com**

*Application support for NVLink is required to access 64GB of memory

NVIDIA