SOLIDWORKS Visualize: 2021 System Requirements

TITLE:	SOLIDWORKS Visualize: 2021 System Requirements
DATE:	August 2020
SUBJECT:	SOLIDWORKS Visualize 2021 System Requirements
ABSTRACT:	Latest hardware and software requirements for Visualize 2021

This guide is intended to assist in the selection of a system for use of SOLIDWORKS Visualize 2021. The requirements in this guide are for SOLIDWORKS Visualize and Visualize Boost. These requirements are intended as advice for a general audience.

This is not a troubleshooting guide. If you have any technical issues with SOLIDWORKS Visualize, please contact a support technician through our website or call us at 1.877.266.4469 (USA) or 1.866.587.6803 (Canada).

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System Requirements

The information below displays the minimum system requirements for the general audience who are casual SOLIDWORKS Visualize users.

Operating System	Windows 7 or 10 or newer (64-bit)
Processor	Dual Core CPU
Memory (RAM)	8 GB
Storage	2 GB free disk space
Graphics Card	NVIDIA graphics card: NVIDIA Quadro/GeForce/Tesla with at least an NVIDIA Kepler chip
GPU Memory	2 GB or more
Other	• For NVIDIA iRay GPU support, NVIDIA driver support for CUDA® 10.2 or newer is required. • For RTX-enabled Turing cards (Turing™ TU10x), a minimum driver version of 442.19 is required • NVIDIA driver versions 441.22 (or newer)

System Recommendation

The information below are recommended system specifications for advanced users who work with large assemblies, heavy animations, complex lighting and reflections, or need to increase their general rendering speed.

Operating System	Window 10 (64-bit)
Processor	Quad Core CPU
Memory (RAM)	32 GB
Storage	5 GB free disk space
Graphics Card	NVIDIA Pascal, Turing or Volta based GPU; Quadro P2000 – P6000, Quadro RTX 4000 -6000, Quadro GV100/GP100, Titan V
GPU Memory	4GB or more
Other	• HDR Light Studio connection: HDR Light Studio v5.3.3 or newer, except v5.4 • 4GB of video memory or more required for the Denoiser feature

Support for Non-NVIDIA Based GPUs

In the past, SOLIDWORKS Visualize defaulted to only the **CPU** for previewing and rendering when non-NVIDIA based GPUs were used. However, starting with the 2020 release, users can utilize AMD GPUs with AMD ProRender, a raytracing engine that can be enabled in SOLIDWORKS Visualize at **Tools > Options > 3D Viewport > Render Engine**. The GPUs will require OpenCL™ 1.2 and we recommend installing the latest available graphics card drivers found on the AMD website. AMD ProRender is supported on Windows 7 (64-bit) and 10 (64-bit). We recommend either the Radeon or FirePro series workstation cards.

Currently, AMD ProRender does not support Fast Render Mode and Visualize Boost.

Support for Non-Quadro or Non-Tesla GPUs

Cards from NVIDIAs gamer or prosumer products such as GeForce or Titan are technically non-certified for SOLIDWORKS products. However, SOLIDWORKS is still working closely with NVIDIA to provide benchmark data on these GPUs since they **will** work with Visualize. Benchmark data shows that GeForce and Titan cards perform the same if not better than Quadro cards. However, for users who use SOLIDWORKS CAD and Visualize on the same computer, the Quadro cards are recommended because they are fully supported for both products.

Support for Multiple GPUs

Visualize fully supports multiple GPUs and is recommended for improving performance. Combining different NVIDIA products has shown to be successful (Quadro + GeForce/Titan).

Benchmark References

- https://www.solidworks.com/sw/support/visualize-hardware-benchmarks.htm
- https://www.pugetsystems.com/labs/articles/SOLIDWORKS-Visualize-2017-Quadro-GPU-Performance-Comparison-895/
- https://www.pugetsystems.com/labs/articles/SOLIDWORKS-Visualize-2017-GeForce-GPU-Performance-Comparison-896/
- https://www.pugetsystems.com/labs/articles/SOLIDWORKS-Visualize-2017-GPU-Scaling-Analysis-897/