SOLIDWORKS and SW PDM System Requirements

These requirements apply to all SOLIDWORKS products except where noted. Use this information to ensure you are always working with a SOLIDWORKS supported and optimized system for hardware, operating system and Microsoft products.

1. SOLIDWORKS Products for Windows

	SOLIDWORKS 2017 (EDU 2017-2018)	SOLIDWORKS 2018 (EDU 2018-2019)	SOLIDWORKS 2019 (EDU 2019-2020)
Operating Systems			
Windows 10, 64-bit	✔	✔	✔
Windows 8.1, 64-bit	✔	✔	✘
Windows 7 SP1, 64-bit	✔	✔	✔ (**End of life**: SW2020 SP5)
Virtual environments	Supported virtual environments (hypervisors)		
Hardware			
Processor	3.3 GHz or higher		
RAM	16 GB or more PDM Contributor or Viewer: 8 GB or more PDM Web Client or Web Server: 8 GB or more ECC RAM recommended		
Graphics Card	Certified cards and drivers		
Drives	SSD drives recommended for optimal performance		
Disk Space	PDM Contributor or Viewer: 10 GB or more PDM Web Client or Web Server: 5 GB or more PDM Archive Server or Database Server: 50 GB or more SOLIDWORKS Manage: 10 GB or more		
Software			
Microsoft Excel and Word	2010, 2013, 2016	2010, 2013, 2016	2013, 2016
Browsers (PDM Web2 Client)	Microsoft Internet Explorer, Microsoft Edge, Google Chrome, Mozilla Firefox, Apple Safari		
Antivirus	Antivirus products		

2. eDrawings for Mac

Operating Systems	eDrawings 2017	eDrawings 2018	eDrawings 2019
macOS Sierra (10.12)	✔	✔	✔
OS X El Capitan (10.11)	✔	✔	✔
OS X Yosemite (10.10)	✔	✔	✘

3. SOLIDWORKS Server Products

	SOLIDWORKS 2017	SOLIDWORKS 2018	SOLIDWORKS 2019
Operating Systems			
Windows Server 2016	✔ (2017 SP2)	✔	✔
Windows Server 2012 R2	✔	✔	✔
Windows Server 2012	✔	✔	✘
Windows Server 2008 R2, SP1	✔	✘	✘
SQL Server			
SQL 2017	✘	✔	✔
SQL 2016	✔	✔	✔
SQL 2014	✔	✔	✔
SQL 2012	✔	✔	✔

4. Microsoft Products (SOLIDWORKS 2017 - 2019)

Microsoft Products	Start of Life	End of Life [1]
Windows 10, 64-bit	2015 SP5	Active
Windows 8.1, 64-bit	2014 SP1	2018 SP5
Windows 7, 64-bit	2010 SP1	2020 SP5
Windows Server 2016	2017 SP2	Active
Windows Server 2012 R2	2014 SP3	2019 SP5
Windows Server 2012	2014 SP0	2018 SP5
Windows Server 2008 R2, SP1	2009	2017 SP5
SQL Server 2017	2018 SP0	Active
SQL Server 2016	2017 SP0	Active
SQL Server 2014	2015 SP0	2021 SP5
SQL Server 2012	2013 SP2	2019 SP5
SQL Server 2008 R2	2010 SP4	2017 SP5
IE 11	2014 SP3	Active
Excel, Word 2016 (64-bit recommended)	2016 SP3	Active
Excel, Word 2013	2013 SP4	2020 SP5
Excel, Word 2010	2010 SP5	2018 SP5

Notes:

1. End Of Life (EOL) corresponds to the last SOLIDWORKS release where a Microsoft product is supported (This is synchronized with the Microsoft Mainstream Support End Date). SOLIDWORKS releases after the EOL are not supported for the said Microsoft product and SOLIDWORKS installation is blocked in the case of an operating system.
2. SOLIDWORKS Product Support Lifecycle defines the End Of Support for SOLIDWORKS versions.
3. SolidWorks recommends using the latest Microsoft Service Pack of Windows, Office and Internet Explorer.
4. SolidWorks supports each Windows 10 release for applicable SOLIDWORKS releases as long as it is still covered by *both* the SOLIDWORKS Product Support Lifecycle and Microsoft Windows Lifecycle Fact Sheet.
5. SolidWorks recommends using a Windows Server operating system for all SOLIDWORKS server-based products.
6. Windows Server operating system support applies to Standard and Enterprise editions only.
7. Windows Home Editions and Windows To Go are not supported.
8. Microsoft Office 'Click-To-Run' feature is supported for SOLIDWORKS 2017 and later.
9. Apple Mac ® based machines running Windows using Boot Camp are not supported.
10. SOLIDWORKS 2018 on Windows 8.1 and Windows Server 2012 R2 requires the Microsoft April 2014 update
11. It is *not* recommended to install any instances of other applications on the SOLIDWORKS PDM Archive or Database Server. For PDM Professional, it is recommended the Archive and Database servers are two separate, dedicated machines.
12. To ensure optimum performance, it is *not* recommended to install anti-virus software on the SOLIDWORKS PDM vault computer.
13. Beginning with SOLIDWORKS 2020, DVD distribution media will only be provided on request. Please contact your Reseller.

5. Support for Virtual Environments (Hypervisors)

Use this information to ensure you are always working with a SOLIDWORKS supported and optimized system for hardware, operating system and Microsoft products.

Virtualization Environment	SOLIDWORKS 2017	SOLIDWORKS 2018	SOLIDWORKS 2019
VMware vSphere ESXi	6.0 (SW2017 SP02)	6.0	6.5
VMware Workstation	9	9	14
Microsoft Hyper-V	2012	2012	2012
Parallels Desktop, Mac [1]	10	10	10
Citrix XenServer	6.2	6.2	6.2

Notes:

1. Parallels Desktop for Mac is only supported for the non-server SOLIDWORKS products.
2. Support for virtual environments listed in the above table applies to SOLIDWORKS 2015 and later. Virtual environments are not supported in earlier releases.
3. SOLIDWORKS, eDrawings, and Composer require a GPU for good performance in a virtualized environment. SOLIDWORKS has tested and certified graphics cards for virtualized environments. For a complete listing, check Graphics Card Drivers.
4. SOLIDWORKS Electrical products are not supported for use in virtualized environments. Please consult your SOLIDWORKS Reseller/Partner for additional information regarding your installation.

6. SOLIDWORKS Hardware Certification

Certified cards and drivers：https://www.solidworks.com/sw/support/videocardtesting.html

The purpose of this page is to assist customers in finding a qualified workstation and graphics driver for use with SOLIDWORKS.
This page is not used to determine SOLIDWORKS support. For SOLIDWORKS support eligibility please review: https://www.solidworks.com/sw/support/solidworks-support.htm?tabshow=2
To find a certified/tested driver select values from each of the filters below:

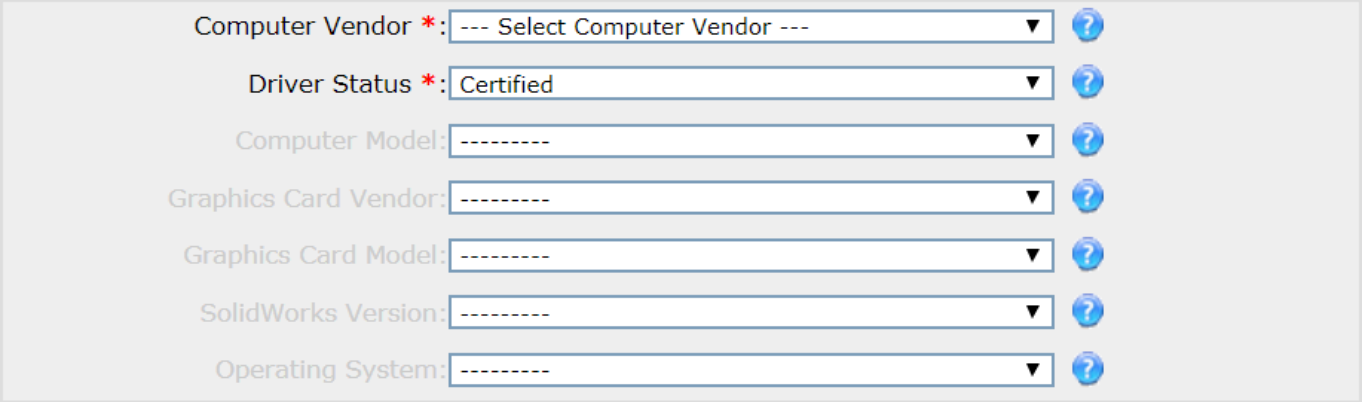
- Certified - Each workstation has passed the SOLIDWORKS Certification Test Suite in order to verify performance and that features work correctly.*
- Tested - Each workstation has been tested using the SOLIDWORKS Certification Test Suite.

To find a Graphics Card for a custom workstation or Virtual Desktop Infrastructure, choose "–Any System Vendor–" in the Computer Vendor drop down list. Then select your Graphics Card Vendor and Graphics Card Model.

If you do not see your configuration listed, please check your system or card manufacturer website for driver support.

The following guiding principles apply to this page:

- Any system or graphics card that is 3+ years passed its release date may be removed.
- Any SOLIDWORKS version that has passed its support period may be removed.



Notes:

*The results for similar models may have been derived without hands-on inspection.

7. SOLIDWORKS Visualize Benchmarks

To aid in your graphics card purchasing decisions, we've assembled the following table of render performance across commonly used NVIDIA GPUs with SOLIDWORKS Visualize. This table illustrates the expected performance results you can achieve on the tested GPUs. In these tests, the only variable was the GPU configuration – all project settings and other computer hardware remained constant. Use this table to compare render performance and invest in your ideal GPU configuration.

Click **here** to download (use Chrome or Firefox) the same Visualize benchmark project we used to conduct this same test your machine. The project is already set up to render – don't change the camera, lighting or any other setting in order to achieve consistent results.

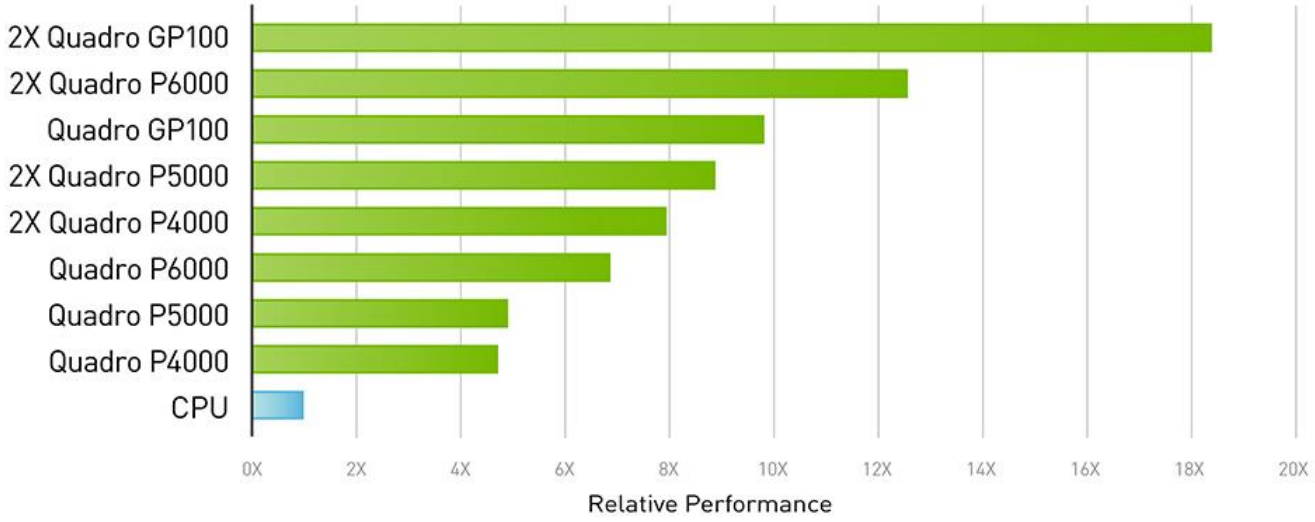
- The Viewport FPS tests are conducted by selecting the Viewport resolution noted at the top of the column and enabling Accurate mode. Look at the bottom of the screen in the HUD – when the Viewport reaches 500 passes, note the 'Passes per second.'
- The "Offline Render" tests are conducted by setting your render to the resolution below, choosing Accurate with 500 passes and JPG format. When the render completes, note the time to completion (minutes:seconds).

Please note: testing the same hardware with newer versions of Visualize and NVIDIA driver will result in faster performance, due to efficiency gains from latest Iray version.

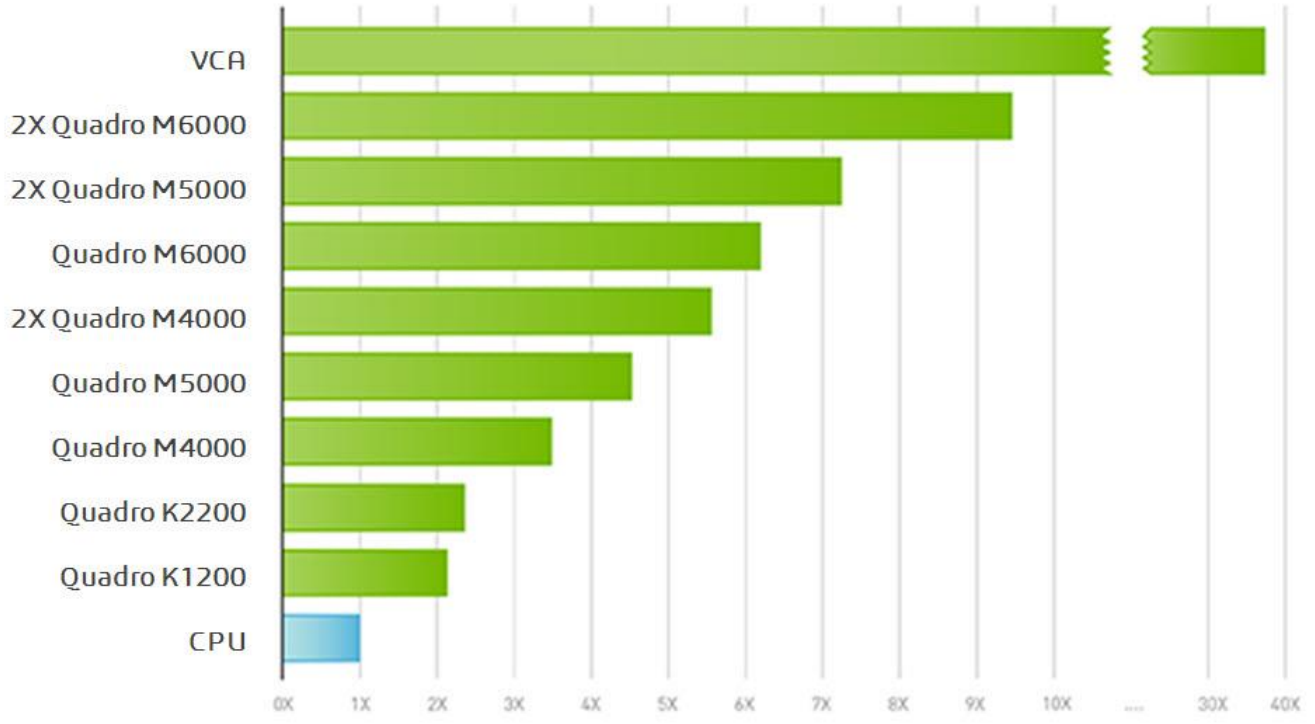
*These tests were conducted in GPU-only mode, so the CPU has no bearing on the performance results. Conduct your tests in GPU-only mode as well.

# GPUs	GPU	Viewport FPS 960x540 @500 passes (higher is better)	Viewport FPS 1920x1080 @500 passes (higher is better)	Offline Render 1920x1080 @500 passes (lower is better)	Offline Render 3840x2160 @500 passes (lower is better)	Visualize Version
1	GPU100	34.55	8.89	0:57	3:51	2018 SP0
1	TITAN V	55.20	14.18	0:41	2:37	2018 SP3
PASCAL						
1	P6000	25.85	6.71	1:16	4:58	2018 SP0
2	P6000	46.74	16.97	0:40	2:37	2018 SP0
1	P5000	17.31	4.48	1:53	7:20	2018 SP0
2	P5000	34.35	8.82	0:58	3:42	2018 SP0
4	P5000	64.75	18.04	0:32	1:54	2018 SP0
1	P4000	15.05	3.78	2:13	9:00	2018 SP0
2	P4000	30.13	7.62	1:10	4:32	2018 SP0
3	P4000	43.95	11.54	0:47	3:03	2018 SP0
4	P4000	56.89	15.18	0:37	2:20	2018 SP0
1	P2000	9.06	2.41	3:33	14.26	2017 SP2
MAXWELL						
1	M6000	20.08	5.43	1:21	6:04	2017 SP1
2	M6000	33.15	9.56	0:58	3:40	2017 SP1
1	M5000	13.45	3.44	2:24	10:58	2016
2	M5000	24.66	6.52	1:18	5:56	2016
1	M4000	9.2	2.38	3:40	16:46	2016
2	M4000	16.49	3.84	1:57	9:40	2016
KEPLER						
1	K6000	17.67	4.43	1:46	8:57	2016
1	K4200	7.26	1.89	4:28	20:06	2016
2	K4200	14.19	3.73	2:20	10:13	2016

NVIDIA QUADRO GPUs FOR DESKTOP WORKSTATIONS
DASSAULT SYSTEMES SOLIDWORKS VISUALIZE



Tests run on a workstation with Intel Xeon E5-2697 V3, 14 cores, 2.6 GHz, 32GB RAM, running Win 7 64-bit SP1, using NVIDIA Iray technology and driver version 375.86. Performance testing completed using internal NVIDIA Iray tests at HD resolution.



Tests run on single Intel Xeon ES-2697 v3 (3.6GHz Turbo, 14 cores/28 threads), 32GB RAM, running Win7 64-bit SP1, using NVIDIA Iray 2015 technology and driver version 353.06. NVIDIA performance even faster on Iray 2016.