MSC Apex® Jaguar

Installation Guide
December 16, 2019

1 Required Hardware and Software Configurations

Hardware and Software Requirements

MSC Apex supports the following Microsoft Windows hardware and software.

Computer Requirements	
Hardware Platforms	Intel Core 2 Duo, I7 and Intel Xeon, Intel Core 2 Quad
Memory	8 GB Minimum 16 GB (or higher) Recommended
Swap Space/Page File	Swap = 1.5 times the memory size.
Disk Space	12-20GB*
Operating Systems	Windows 7 Enterprise, Professional, and Ultimate Editions (Service Pack 1, 64 bit). Windows 10 Professional 64-bit (10.0, Build 16299, Build 15063 or Build 14393)
Other	3 Button Mouse
Graphics Devices	1280x1024 or higher resolution

The application may actually run with fewer resources than shown, but we recommend these minimums for practical use. These guidelines are based on typical use.

Note: *Benchmark testing suggests that up to a 30% increase in performance of simulation can be realized if the operating system, MSC Apex installation and the Solver Scratch directory is on a Solid State Disk compared to the same installation on a SATA hard disk drive.

MSC Apex may not be installed on shared or mapped network drives.

Virtual Machine Requirements

Virtual Machine Host Requirements	
Hardware Platform	Intel Xeon E Series Processors (2 CPUs)
Memory	256 GB Minimum
Disk Space	800 GB SSD
Graphics Card	NVidia Grid K1 or K2 or M6
Network	10 Gigabit
Network Connection Speed to VDI device	Minimum 5 Mbps upload/5 Mbps download or higher is recommended.

Virtual Machine Host Requirements	
VM Client	VMware Horizon View 6.0
VMware Hypervisor	vSphere 5.5
Display Protocol	vDGA using PCoIP

Virtual Machine Requirements	
VM Operating Systems	Windows 7 Enterprise, Professional, and Ultimate Editions (Service Pack 1, 64 bit) Windows 10 Pro 64-bit
VM Virtual Processors	4
VM Memory	8 GB Minimum 16 GB (or higher) Recommended
VM Swap Space/Page File	Swap = 1.5 times the memory size.
VM Disk Space	12-20GB
VM Disk IOPs	1000
OpenGL	OpenGL 3.3 or higher
Screen Resolution	1280x1024 or higher resolution
Other	3 Button Mouse

MSC Apex also supports VMware Workstation 12 Player to create a virtual machine on a laptop or desktop.

In order to run Apex using Remote Desktop, the remote machine should have an Nvida Quadro card that is already included in the list of MSC Apex Supported Hardware (see MSC Apex Certified Hardware table below) and a driver version of 9.18.13.4105 or higher. For other cards; third party remote access tools (such as RealVNC) have to be used.

For the latest information on supported platforms for upcoming releases of MSC products, please visit the following web site: http://www.mscsoftware.com/Support/Platform-Support/Default.aspx

Peripheral Devices

3DCONNEXION's SpacePilot PRO, SpaceMouse PRO and SpaceNavigator products, have been tested with Apex. "3DxWare 10 for Windows (64-bit)" version "10.4.3" is the required driver.

Note: In order for your device to operate properly, you may have to copy

..\MSC Apex\2018-621976\clef\Framework\AppFrame\res\MSC_Apex_3dMouse.xml to C:\Program Files\3Dconnexion\3DxWare\3DxWinCore64\Cfg

The 3dConnexion Driver will automatically create an <appName>.xml 3dMouse configuration file for applications that have not already provided an xml file for the application. If you have problems, you should delete any found MSC_Apex*.xml files from the UserData…3dConnexion… folders.

Other Software Requirements

- Adobe Flash Player Version 11 or higher is required to view the tutorials that are included with MSC Apex.

Supported Graphics Cards and OpenGL Acceleration

Apex uses OpenGL acceleration. Any graphics board and driver combination that supports OpenGL version 3.3 or higher and 1280x1024 resolution or greater should work with the application. MSC Software has, however, tested the following specific graphics adapters to verify compatibility with the application on Windows. We cannot guarantee the functionality of other graphics devices.

Dual Graphics Cards

If running MSC Apex on a system with dual graphics cards, it is recommended that you choose to activate the high performance graphics processor instead of the integrated graphics for MSC Apex.For more information, please review the following SimCompanion article regarding usage and configuration of dual graphics cards:

https://simcompanion.mscsoftware.com/infocenter/index?page=content&id=KB8022950

MSC Apex Certified Hardware
Windows 7:

Brand-Model	RAM (GB)	CPU	Graphics Card	Graphics Card Memory	Graphics Card Driver
HP-EliteBook 8770W	8	Intel core i7 3820QM @ 2.74 GHz	AMD FirePro M4000	4 GB	12.104.2.0
HP-EliteBook 8760W	8	Intel Core i7-2820QM 2.3 GHz	AMD FirePro M5950	4 GB	Fx570 13.152.4.0
HP-Z820	16	Intel E5-2680 2.7GHz (2 processors)	NVIDIA Quadro K5000	4 GB	9.18.13.3221
Dell-M6600	6	Intel Core i7-2820QM CPU @ 2.30GHz	NVIDIA Quadro 4000M	4 GB	9.18.13.2000
Dell-Precision T7500	6	Intel(R) Xeon(R) CPU X550 @ 2.67GHz	AMD FirePro V4800	3.8 GB	8.850.70.2000
HP-EliteBook 8770W	8	Intel Core i7-3820QM @ 2.70GHz (8 CPUs)	NVIDIA Quadro K5000M	4 GB	8.17.12.9703
Dell-Precision M4400	8	Intel Core 2 Duo, T-9800 @ 2.93 GHz	NVIDIA Quadro FX 770M	2 GB	8.17.12.8562
Dell-Precision M4600 *	8	Intel Core i7-2860QM	NVIDIA Quadro 1000M	2 GB	9.18.13.2092

Brand-Model	RAM (GB)	CPU	Graphics Card	Graphics Card Memory	Graphics Card Driver
Dell-Precision M4700	8	Intel Core i7-3520QM @ 2.90GHz (4 CPUs)	NVIDIA Quadro 1000M	2 GB	9.18.13.2092
Dell-Precision M4700	16	Intel Core i7-3720QM @ 2.60GHz	NVIDIA Quadro K2000M	2 GB	9.18.13.1090
HP-Workstation XW8200-3	8	Intel Xeon 3.60 GHz (2 Processors)	NVIDIA Quadro FX380	256 MB	9.18.13.2049
HP-Workstation XW8200-2	8	Intel Xeon 3.60 GHz (2 Processors)	NVIDIA Quadro K5000	4 GB	9.18.13.3250
HP-Workstation XW8200-1	8	Intel Xeon 3.60 GHz (2 Processors)	AMD FirePro V4900	1 GB	9.3.3.3000
HP-EliteBook 8560w	8	Intel core i7 2820 QM @ 2.30 GHz	NVIDIA Quadro 2000M	4 GB	9.18.13.4725
Dell Precision T3400	8	Intel Q9300 2.50 GHz (4 CPUs)	NVIDIA Quadro FX 1700	512 MB	9.18.0013.0745
Dell Precision T3400	8	Intel Q9300 2.50 GHz (4 CPUs)	NVIDIA Quadro FX 570	3.8 MB	9.18.13.4105
Dell Precision M6500	4	Intel Core i7-Q720 CPU @ 1.6GHz (8 CPUs)	AMD FirePro M7820	2 GB	8.911.3.400
HP-EliteBook 8740w	8	Intel Core i7-Q820 CPU @ 1.73GHz (8 CPUs)	NVIDIA Quadro 5000M	4 GB	9.18.13.3182
Dell Precision M4600 *	8	Intel Core i7-2620M CPU @ 2.7 GHz (4 CPUs)	NVIDIA Quadro 1000M	4 GB	9.18.13.2092
Dell Precision M4700	8	Intel Core i7-3740 QM CPU @ 2.70 GHz	NVIDIA Quadro K2000M	4 GB	9.18.13.2049
Dell Precision M4700	8	Intel Core i7-3720 QM CPU @ 2.60 GHz (8 CPUs)	NVIDIA Quadro K2000M	1 GB	9.18.13.2092
Dell Precision M4600 *	8	Intel Core i7-2620M CPU @ 2.7 GHz	NVIDIA Quadro 1000M	1 GB	9.18.13.2092

Brand-Model	RAM (GB)	CPU	Graphics Card	Graphics Card Memory	Graphics Card Driver
Dell Precision M4600	16	Intel Core i7-2760QM CPU @ 2.7 GHz (8 CPUs)	NVIDIA Quadro 2000M	4 GB	9.18.13.2092
HP-EliteBook 8570w	32	Intel Core i7-3820 QM CPU @ 2.70 GHz (8 CPUs)	NVIDIA Quadro K2000M	4 GB	9.18.13.3250
Dell Precision M4600 *	8	Intel Core i7-2620 QM CPU @ 2.70 GHz (8 CPUs)	NVIDIA Quadro 1000M	2 GB	9.18.13.2092
HP-Z820	16	Intel E5-2680 2.7GHz (2 processors)	NVIDIA Quadro K600	1 GB	9.18.13.1090
HP-Z400 Workstation	8	Intel® Xeon(R) CPU W3520 @2.67GHz	NVIDIA Quadro 4000	2 GB	9.18.13.3221
HP-Z820	16	Genuine Intel (R) @ 2.7GHz (2 Processors)	NVIDIA Quadro K6000	12 GB	9.18.13.2092
Dell Precision M4500	8	Intel Core i7M620 @ 2.67GHz	NVIDIA Quadro FX 1800M	512 MB	9.18.13.3165
Dell Precision T3500	8	Intel® Xeon(R) CPU W3520 @2.67GHz	NVIDIA Quadro FX 580	4 GB	8.17.12.9688
Dell Precision T3500	12	Intel® Xeon(R) CPU W3520 @2.67GHz	AMD FirePro V5900 (FireGL V)	4 GB	13.152.4.0
Dell Precision T3500	8	Intel® Xeon(R) CPU W3520 @2.67GHz	NVIDIA Quadro 2000	4 GB	9.18.13.2092
HP Z600 Workstation	8	Intel® Xeon(R) CPU E5645 @2.40GHz	NVIDIA Quadro 2000	1 GB	8.17.12.7090
Dell Precision T1650	16	Intel (R) Xeon(R) CPU-E3-1220 V2 @ 3.10 GHz	NVIDIA Quadro 2000	1 GB	8.17.12.7090
Dell Precision T1700	16	Intel (R) Xeon(R) CPU-E3-1240 V3 @ 3.40 GHz	NVIDIA Quadro K600	4 GB	9.18.13.2009
Dell Precision T7600	128	Intel (R) Xeon(R) CPU-E5-2630 0 @ 2.30 GHz	NVIDIA Quadro 6000	6 GB	8.17.12.7619

Brand-Model	RAM (GB)	CPU	Graphics Card	Graphics Card Memory	Graphics Card Driver
Dell Precision M4300	4	Intel Core 2 Duo 2 @ GHz (2 CPUs)	NVIDIA Quadro FX 360M	512 MB	9.18.13.2049
HP ZBook 15	16	Intel i-7 4900MQ @ 2.80GHz	NVIDIA Quadro K2100M	4 GB	9.18.13.1233
HP ZBook 17	16	Intel i-7 4900MQ @ 2.80GHz (8CPUs)	NVIDIA Quadro K5100M	4 GB	9.18.13.4084
Dell Precision M6800	16	Intel i-7 4900MQ @ 2.80GHz (8CPUs)	NVIDIA Quadro K5100M	4 GB	9.18.13.1166
Dell Precision M4800	16	Intel i-7 4900MQ @ 2.80GHz	NVIDIA Quadro K2100M	4 GB	9.18.13.1166
HP ZBook 14	16	Intel Core i-7 4600 U CPU @ 2.10 GHz	AMD FirePro M4100 FireGl V	4 GB	13.101.1.0
HP ElliteBook 8540w	8	Intel i-7 Q 820Q 1.73 GHz	NVIDIA Quadro FX 1800M	466 MB	8.17.12.9688
Dell Precision M6800	8	Intel i-7 4720MQ @ 2.2GHz (8 CPU's)	AMD FirePro M6100 FireGL V	4 GB	13.152.4.0
Dell Precision M4500	4	Intel i-5 M520 @ 2.4GHz (4 CPU's)	NVIDIA Quadro FX 880M	3 GB	9.18.13.3165
Dell Precision T3610	32	Intel(R) Xeon(R) CPU E5-1650 v2 @ 3.50GHz (12 CPUs)	NVIDIA Quadro K2000	2 GB	9.18.13.3276
Dell Precision T3610	32	Intel(R) Xeon(R) CPU E5-1650 v2 @ 3.50GHz (12 CPUs),	AMD FirePro V3900	4 GB	13.350.1012.0
Dell Precision T7610	16	Intel(R) Xeon(R) CPU E5-2687W v2 @ 3.40GHz (32 CPUs), ~3.4GHz	AMD FirePro W8100	8 GB	13.352.1009.0 **
HP Z820	16	Intel E5-2680 2.7GHz (2 processors)	AMD FirePro W8100	8 GB	13.352.1009.0 **
HP-Workstation XW8200-3	8	Intel Xeon 3.60 GHz (2 Processors)	NVIDIA Quadro FX 3800	1 GB	9.18.13.3311

Brand-Model	RAM (GB)	CPU	Graphics Card	Graphics Card Memory	Graphics Card Driver
Dell Precision M3800	16	Intel(R) Core(TM) i7-4702HQ CPU @ 2.20GHz (8 CPUs)	NVIDIA Quadro K1100M	2 GB	9.18.13.4066
HP Z840	64	Intel(R) Xeon(R) E5-2643 v3@ 3.4GHz (2 processors)	NVIDIA Quadro K420	1 GB	9.18.13.4066
HP Z840	64	Intel(R) Xeon(R) E5-2643 v3@ 3.4GHz (2 processors)	NVIDIA Quadro K620	2 GB	9.18.13.4066
HP Z840	64	Intel(R) Xeon(R) E5-2643 v3@ 3.4GHz (2 processors)	NVIDIA Quadro K2200	4 GB	9.18.13.4066
HP Z840	64	Intel(R) Xeon(R) E5-2643 v3@ 3.4GHz (2 processors)	NVIDIA Quadro K4200	4 GB	9.18.13.4066
HP Z840	64	Intel(R) Xeon(R) E5-2643 v3@ 3.4GHz (2 processors)	NVIDIA Quadro K5200	8 GB	9.18.13.4066
HP Z840	64	Intel(R) Xeon(R) E5-2643 v3@ 3.4GHz (2 processors)	NVIDIA Quadro K6000	12 GB	9.18.13.4066
HP Z840	64	Intel(R) Xeon(R) E5-2643 v3@ 3.4GHz (2 processors)	AMD FirePro W2100	2 GB	13.352.1009
HP Z840	64	Intel(R) Xeon(R) E5-2643 v3@ 3.4GHz (2 processors)	AMD FirePro W5100	4 GB	13.352.1009
Dell Precision T7610	16	Intel(R) Xeon(R) CPU E5-2683 v3 @ 2.00GHz (32 CPUs)	NVIDIA Quadro K620	2 GB	9.18.13.4066
Dell Precision T7610	16	Intel(R) Xeon(R) CPU E5-2683 v3 @ 2.00GHz (32 CPUs)	NVIDIA Quadro K2200	4 GB	9.18.13.4066
Dell Precision T7610	16	Intel(R) Xeon(R) CPU E5-2683 v3 @ 2.00GHz (32 CPUs)	NVIDIA Quadro K4200	4 GB	9.18.13.4066
Dell Precision T7610	16	Intel(R) Xeon(R) CPU E5-2683 v3 @ 2.00GHz (32 CPUs)	NVIDIA Quadro K5200	8 GB	9.18.13.4066

Brand-Model	RAM (GB)	CPU	Graphics Card	Graphics Card Memory	Graphics Card Driver
Dell Precision T7610	16	Intel(R) Xeon(R) CPU E5-2683 v3 @ 2.00GHz (32 CPUs)	NVIDIA Quadro K6000	12 GB	9.18.13.4066
Dell Precision T7610	16	Intel(R) Xeon(R) CPU E5-2683 v3 @ 2.00GHz (32 CPUs)	AMD FirePro W2100	2 GB	13.352.1009
Dell Precision T7610	16	Intel(R) Xeon(R) CPU E5-2683 v3 @ 2.00GHz (32 CPUs)	AMD FirePro W4100	2 GB	13.352.1009
Dell Precision T7610	16	Intel(R) Xeon(R) CPU E5-2683 v3 @ 2.00GHz (32 CPUs)	AMD FirePro W5100	4 GB	13.352.1009
HP Z440 *	16	Intel(R) Xeon(R) CPU E5-1630 v3 @ 3.70GHz (8 CPUs)	NVIDIA Quadro K420	1 GB	9.18.13.4066
HP Z440 *	16	Intel(R) Xeon(R) CPU E5-1630 v3 @ 3.70GHz (8 CPUs)	NVIDIA Quadro K620	2 GB	9.18.13.4066
HP Z440 *	16	Intel(R) Xeon(R) CPU E5-1630 v3 @ 3.70GHz (8 CPUs)	NVIDIA Quadro K2200	4 GB	9.18.13.4066
HP Z440 *	16	Intel(R) Xeon(R) CPU E5-1630 v3 @ 3.70GHz (8 CPUs)	NVIDIA Quadro K4200	4 GB	9.18.13.4066
HP Z440 *	16	Intel(R) Xeon(R) CPU E5-1630 v3 @ 3.70GHz (8 CPUs)	NVIDIA Quadro K5200	8 GB	9.18.13.4066
HP Z440 *	16	Intel(R) Xeon(R) CPU E5-1630 v3 @ 3.70GHz (8 CPUs)	NVIDIA Quadro K6000	12 GB	9.18.13.4066
HP Z440 *	16	Intel(R) Xeon(R) CPU E5-1630 v3 @ 3.70GHz (8 CPUs)	AMD FirePro W2100	2 GB	13.352.1009
HP Z440 *	16	Intel(R) Xeon(R) CPU E5-1630 v3 @ 3.70GHz (8 CPUs)	AMD FirePro W5100	4 GB	13.352.1009
HP Zbook 17 G2	16	Intel(R) Core(TM) i7-4910MQ CPU @ 2.90GHz (8CPUs)	AMD FirePro M6100	2 GB	14.301.1003
HP Zbook 15 G2	16	Intel(R) Core(TM) i7-4910MQ CPU @ 2.90GHz (8CPUs)	NVIDIA Quadro K1100M	2 GB	9.18.13.3356

Brand-Model	RAM (GB)	CPU	Graphics Card	Graphics Card Memory	Graphics Card Driver
HP Zbook 17 G2	16	Intel(R) Core(TM) i7-4910MQ CPU @ 2.90GHz (8CPUs)	NVIDIA Quadro K2200M	2 GB	9.18.13.4122
HP Z440 *	16	Intel(R) Xeon(R) CPU E5-1630 v3 @ 3.70GHz (8 CPUs)	AMD FirePro W7100	8 GB	13.352.1009
HP Z840	64	Intel(R) Xeon(R) E5-2643 v3@ 3.4GHz (2 processors)	AMD FirePro W7100	8 GB	13.352.1009
Dell Precision T3610	32	Intel(R) Xeon(R) CPU E5-1650 v2 @ 3.50GHz (12 CPUs),	AMD FirePro W7100	8 GB	13.350.1012.0
HPZBOOK14	16	Intel Core i-7 5600 U CPU @ 2.60 GHz	AMD FirePro M4150	4GB	14.301.1002.1006
HPZBOOK15u	16	Intel Core i-7 5600 U CPU @ 2.60 GHz	AMD FirePro M4170	4GBx	14.301.1002.1006
HP Z440	16	Intel(R) Xeon(R) CPU E5-1630 v3 @ 3.70GHz (8 CPUs)	NVIDIA Quadro M6000	8 GB	9.18.13.4752
HP Z840	64	Intel(R) Xeon(R) E5-2643 v3@ 3.4GHz (2 processors)	NVIDIA Quadro M6000	8 GB	9.18.13.4752
Dell Precision T3610	32	Intel(R) Xeon(R) CPU E5-1650 v2 @ 3.50GHz (12 CPUs),	AMD FirePro V4800(FireGL V)	4GB	13.350.1012.0
DELL Precision T7910	16	Intel(R) Xeon(R) CPU E5-2683 v3 @ 2.00GHz (32 CPUs), 16 GB	NVIDIA Quadro FX 3700	16GB	9.18.13.4066
DELL Precision T7910	16	Intel(R) Xeon(R) CPU E5-2683 v3 @ 2.00GHz (32 CPUs), 16 GB	NVIDIA Quadro M4000	2GB	10.18.13.5435
DELL Precision T7910	16	Intel(R) Xeon(R) CPU E5-2683 v3 @ 2.00GHz (32 CPUs), 16 GB	NVIDIA Quadro M5000	4GB	10.18.13.5435
DELL Precision T7910	16	Intel(R) Xeon(R) CPU E5-2683 v3 @ 2.00GHz (32 CPUs), 16 GB	NVIDIA Quadro M6000	8GB	10.18.13.5435

Brand-Model	RAM (GB)	CPU	Graphics Card	Graphics Card Memory	Graphics Card Driver
DELL Precision T7910	16	Intel(R) Xeon(R) CPU E5-2683 v3 @ 2.00GHz (32 CPUs), 16 GB	AMD FirePro W8100	8GB	15.201.2401
HP Elitebook 8760w	8	Intel Core i-7 2820MQ CPU @ 2.30 GHz	AMD FirePro M5950(FireGL V)	4 GB	13.352.1006.0
HP Elitebook zb	8	Intel Core i-7 Q820 CPU @ 1.73GHz	NVIDIA Quadro FX 1800M	466MB	9.18.13.4052
HP Zbook15	16	Intel i-7 4900MQ @ 2.80GHz	NVIDIA Quadro K2100M	4GB	9.18.13.4084
HP Z440	16	Intel(R) Xeon(R) CPU E5-1630 v3 @ 3.70GHz (8 CPUs)	NVIDIA Quadro M4000	2 GB	9.18.13.4817
HP Z840	64	Intel(R) Xeon(R) E5-2643 v3@ 3.4GHz (2 processors)	NVIDIA Quadro M4000	2 GB	10.18.13.5413
HP Z440	16	Intel(R) Xeon(R) CPU E5-1630 v3 @ 3.70GHz (8 CPUs)	NVIDIA Quadro M5000	4 GB	9.18.13.4817
HP Z840	64	Intel(R) Xeon(R) E5-2643 v3@ 3.4GHz (2 processors)	NVIDIA Quadro M5000	4 GB	10.18.13.5413
Dell-Precision T7500	22	Intel(R) Xeon(R) CPU X550 @ 2.67GHz	NVIDIA Quadro K5000	4 GB	9.18.13.5362
Dell Latitude L01532-3	8	Intel(R) Core(TM) i7-2720QM CPU @ 2.20GHz	NVIDIA NVS 4200M	4 GB	9.18.13.4105
Dell Precision 7510	16	Intel(R) Core(TM) i7-6920HQ CPU @ 2.90GHz ~2.90GHz	NVIDIA Quadro M2000M	4GB	10.18.13.5413
Dell Precision 7510	16	Intel(R) Core(TM) i7-6920HQ CPU @ 2.90GHz ~2.90GHz	AMD FirePro W5170M	2GB	15.201.2401.0

Brand-Model	RAM (GB)	CPU	Graphics Card	Graphics Card Memory	Graphics Card Driver
Dell Precision 7710	16	Intel(R) Core(TM) i7-6920HQ CPU @ 2.90GHz ~2.90GHz	NVIDIA Quadro M5000M	8GB	10.18.13.5413
Dell Precision 7710	16	Intel(R) Core(TM) i7-6920HQ CPU @ 2.90GHz ~2.90GHz	AMD FirePro W7170M	4GB	15.201.2401.0
Precision WorkStation T3400	8	Intel(R) Core(TM)2 Quad CPU Q9300 @ 2.50GHz (4 CPUs), ~2.5GHz	ATI FirePro V7800 (FireGL V)	4GB	13.152.4.0
HP ZBook Studio G3	16	Intel(R) Core(TM) i7-6820HQ CPU @ 2.70GHz ~2.70GHz (8 CPUs)	NVIDIA Quadro M1000M	1GB	10.18.13.5461
HP Zbook 15 G3	16	Intel(R) Core(TM) i7-6820HQ CPU @ 2.70GHz ~2.70GHz (8 CPUs)	NVIDIA Quadro M2000M	8GB	10.18.13.5461
HP Zbook 15u G3	16	Intel(R) Core(TM) i7-6600U CPU @ 2.60GHz ~2.81GHz (8 CPUs)	AMD FirePro W4190M	2GB	15.201.1701.1005
HP Zbook 17 G3	16	Intel(R) Core(TM) i7-6820HQ CPU @ 2.70GHz ~2.70GHz (8 CPUs)	NVIDIA Quadro M2000M	8GB	10.18.13.5461
HP Zbook 17 G3	16	Intel(R) Core(TM) i7-6820HQ CPU @ 2.70GHz ~2.70GHz (8 CPUs)	NVIDIA Quadro M5000M	8GB	10.18.13.5461
HP Z840	64	Intel(R) Xeon(R) E5-2643 v3@ 3.4GHz (2 processors)	NVIDIA Quadro M2000	4 GB	10.18.13.6191
HP Z840	64	Intel(R) Xeon(R) E5-2643 v3@ 3.4GHz (2 processors)	NVIDIA Quadro M6000 24G	24 GB	10.18.13.6191
HP Z840	64	Intel(R) Xeon(R) E5-2643 v3@ 3.4GHz (2 processors)	NVIDIA Quadro K1200	4 GB	10.18.13.6191
HP Zbook 15 G3	16	Intel(R) Xeon(R) CPU E5-1545M v5 @ 2.9GHz ~2.8GHz(8 CPUs), 16GB	Intel® Iris™ Pro Graphics P580	1GB	20.19.15.4444

Brand-Model	RAM (GB)	CPU	Graphics Card	Graphics Card Memory	Graphics Card Driver
Dell Precision 5510	16	Intel(R) Xeon(R) CPU E5-1505M v5 @ 2.8GHz ~2.8GHz(8 CPUs), 16GB	NVIDIA Quadro M1000M	2GB	10.18.13.5894
Dell Precision 5510	16	Intel(R) Xeon(R) CPU E5-1505M v5 @ 2.8GHz ~2.8GHz(8 CPUs), 16GB	NVIDIA Quadro M1000M	2GB	10.18.13.6886
***Precision T3620	8	Intel(R) Core(TM) i7-6700 CPU @ (8 CPUs)	NVIDIA Quadro K2200	1GB	10.18.13.4757
***Precision T3620	8	Intel(R) Xeon(R) E3-1270 v5	NVIDIA Quadro K620	1GB	10.18.13.5413
***Precision T3620	8	Intel(R) Xeon(R) E3-1270 v5	NVIDIA Quadro K2200	1GB	10.18.13.4757
***Precision T3620	8	Intel(R) Xeon(R) E3-1270 v5	NVIDIA Quadro K2200	1GB	10.18.13.6886
***Precision T3620	32	Intel(R) Xeon(R) E3-1270 v5	NVIDIA Quadro K620	1GB	10.18.13.5413
***Precision T3620	32	Intel(R) Xeon(R) E3-1270 v5	NVIDIA Quadro K620	1GB	10.18.13.6886
HP Z840	64	Intel(R) Xeon(R) E5-2643 v3@ 3.4GHz (2 processors)	AMD Radeon Pro WX4100	4GB	21.19.141.0
HP Z840	64	Intel(R) Xeon(R) E5-2643 v3@ 3.4GHz (2 processors)	AMD Radeon Pro WX5100	8GB	21.19.141.0
HP Z840	64	Intel(R) Xeon(R) E5-2643 v3@ 3.4GHz (2 processors)	AMD Radeon Pro WX7100	8GB	21.19.141.0
HP Z440	16	Intel(R) Xeon(R) CPU E5-1630 v3 @ 3.70GHz (8 CPUs)	AMD Radeon Pro WX4100	4GB	21.19.141.0
HP Z440	16	Intel(R) Xeon(R) CPU E5-1630 v3 @ 3.70GHz (8 CPUs)	AMD Radeon Pro WX5100	8GB	21.19.141.0
HP Z440	16	Intel(R) Xeon(R) CPU E5-1630 v3 @ 3.70GHz (8 CPUs)	AMD Radeon Pro WX7100	8GB	21.19.141.0

Brand-Model	RAM (GB)	CPU	Graphics Card	Graphics Card Memory	Graphics Card Driver
HP Z840	64	Intel(R) Xeon(R) E5-2643 v3@ 3.4GHz (2 processors)	NVIDIA QUADRO P6000	24GB	375.86
HP Z840	64	Intel(R) Xeon(R) E5-2643 v3@ 3.4GHz (2 processors)	NVIDIA QUADRO P5000	16 GB	375.86
HP Z840	64	Intel(R) Xeon(R) E5-2643 v3@ 3.4GHz (2 processors)	NVIDIA QUADRO P4000	8 GB	375.86
HP Z840	64	Intel(R) Xeon(R) E5-2643 v3@ 3.4GHz (2 processors)	NVIDIA QUADRO P2000	5 GB	375.86
HP Z440	16	Intel(R) Xeon(R) CPU E5-1630 v3 @ 3.70GHz (8 CPUs)	NVIDIA QUADRO P6000	24GB	375.86
HP Z440	16	Intel(R) Xeon(R) CPU E5-1630 v3 @ 3.70GHz (8 CPUs)	NVIDIA QUADRO P5000	16 GB	375.86
HP Z440	16	Intel(R) Xeon(R) CPU E5-1630 v3 @ 3.70GHz (8 CPUs)	NVIDIA QUADRO P4000	8 GB	375.86
HP Z440	16	Intel(R) Xeon(R) CPU E5-1630 v3 @ 3.70GHz (8 CPUs)	NVIDIA QUADRO P2000	5 GB	375.86
HP Z840	64	Intel(R) Xeon(R) E5-2643 v3@ 3.4GHz (2 processors)	NVIDIA QUADRO P400	2GB	377.11
HP Z840	64	Intel(R) Xeon(R) E5-2643 v3@ 3.4GHz (2 processors)	NVIDIA QUADRO P600	2 GB	377.11
HP Z840	64	Intel(R) Xeon(R) E5-2643 v3@ 3.4GHz (2 processors)	NVIDIA QUADRO P1000	4 GB	377.11
HP Z840	64	Intel(R) Xeon(R) E5-2643 v3@ 3.4GHz (2 processors)	NVIDIA QUADRO GP100	16 GB	377.11
HP Z440	16	Intel(R) Xeon(R) CPU E5-1630 v3 @ 3.70GHz (8 CPUs)	NVIDIA QUADRO P400	2GB	375.86

Brand-Model	RAM (GB)	CPU	Graphics Card	Graphics Card Memory	Graphics Card Driver
HP Z440	16	Intel(R) Xeon(R) CPU E5-1630 v3 @ 3.70GHz (8 CPUs)	NVIDIA QUADRO P600	2 GB	375.86
HP Z440	16	Intel(R) Xeon(R) CPU E5-1630 v3 @ 3.70GHz (8 CPUs)	NVIDIA QUADRO P1000	4 GB	375.86
HP Z440	16	Intel(R) Xeon(R) CPU E5-1630 v3 @ 3.70GHz (8 CPUs)	NVIDIA QUADRO GP100	16 GB	377.11
Dell Precision 7520	16	Intel(R) Core(TM) i7-6920HQ CPU @ 2.90GHz (8 CPUs), ~2.90GHz	AMD Radeon Pro WX 4130	2 GB	16.50.2701
Dell Precision 7720	16	Intel(R) Core(TM) i7-6920HQ CPU @ 2.90GHz (8 CPUs), ~2.90GHz	AMD Radeon Pro WX 7100	8 GB	16.50.2701
Dell Precision 7720	16	Intel(R) Core(TM) i7-6920HQ CPU @ 2.90GHz (8 CPUs), ~2.90GHz	NVIDIA Quadro M1200	4 GB	377.11
Dell Precision 7720	16	Intel(R) Core(TM) i7-6920HQ CPU @ 2.90GHz (8 CPUs), ~2.90GHz	NVIDIA Quadro P3000	6 GB	377.11
HP Z840	64	Intel(R) Xeon(R) E5-2643 v3@ 3.4GHz (2 processors)	AMD Radeon Pro WX2100	2GB	17.10.1730.1705
HP Z840	64	Intel(R) Xeon(R) E5-2643 v3@ 3.4GHz (2 processors)	AMD Radeon Pro WX3100	4GB	17.10.1730.1705
HP Z840	64	Intel(R) Xeon(R) E5-2643 v3@ 3.4GHz (2 processors)	AMD Radeon Pro WX4100	4GB	16.50.2701
HP Z840	64	Intel(R) Xeon(R) E5-2643 v3@ 3.4GHz (2 processors)	AMD Radeon Pro WX7100	8GB	16.50.2701
HP Z440	16	Intel(R) Xeon(R) CPU E5-1630 v3 @ 3.70GHz (8 CPUs)	AMD Radeon Pro WX2100	2GB	17.10.1730.1705
HP Z440	16	Intel(R) Xeon(R) CPU E5-1630 v3 @ 3.70GHz (8 CPUs)	AMD Radeon Pro WX3100	4GB	17.10.1730.1705

Brand-Model	RAM (GB)	CPU	Graphics Card	Graphics Card Memory	Graphics Card Driver
HP Z440	16	Intel(R) Xeon(R) CPU E5-1630 v3 @ 3.70GHz (8 CPUs)	AMD Radeon Pro WX4100	4GB	16.50.2701
HP Z440	16	Intel(R) Xeon(R) CPU E5-1630 v3 @ 3.70GHz (8 CPUs)	AMD Radeon Pro WX7100	8GB	16.50.2701
Dell All-In-One Precision 5720	32	Intel(R) Core(TM) i7-6700HQ CPU @ 3.40GHz ~3.4GHz	AMD Radeon Pro WX4150	4GB	16.40.3801.1001

Windows 10:

Brand-Model	RAM (GB)		CPU		Graphics Card
HP Zbook 15 G3	16	Intel(R) Core(TM) i7-6820HQ CPU @ 2.70GHz ~2.71GHz (8 CPUs)	NVIDIA Quadro M1000M	8GB	10.18.13.5461
HP Zbook 15u G3	16	Intel(R) Core(TM) i7-6600U CPU @ 2.60GHz ~2.81GHz (8 CPUs)	AMD FirePro W4190M	2GB	15.201.1701.1005
HP Zbook 15 G3	16	Intel(R) Xeon(R) CPU E5-1545M v5 @ 2.9GHz ~2.8GHz(8 CPUs), 16GB	Intel® Iris™ Pro Graphics P580	1GB	20.19.15.4444
HP Zbook 15 G3	16	Intel(R) Core(TM) i7-6820HQ CPU @ 2.70GHz ~2.70GHz (8 CPUs)	AMD FirePro W5170M	2GB	15.201.2601.1003
HP Zbook 17 G3	16	Intel(R) Core(TM) i7-6820HQ CPU @ 2.70GHz ~2.70GHz (8 CPUs)	NVIDIA Quadro M2000M	8GB	10.18.13.5461
HP Zbook 17 G3	16	Intel(R) Core(TM) i7-6820HQ CPU @ 2.70GHz ~2.70GHz (8 CPUs)	NVIDIA Quadro M5000M	8GB	10.18.13.5461

Brand-Model	RAM (GB)		CPU		Graphics Card
Dell Precision 7530	32	Intel(R) Xeon(R) E-2176M CPU @ 2.70GHz (12 CPUs), ~2.7GHz	NVIDIA Quadro P1000	4 GB	23.21.13.9827
HP Z4 G4 Workstation	32	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	NVIDIA Quadro RTX 6000	16 GB	24.21.14.1216
*HP Z4 G4 Workstation	32	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	NVIDIA Quadro RTX 5000	16GB	24.21.14.1195
*HP Z4 G4 Workstation	32	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	NVIDIA Quadro RTX 4000	16GB	24.21.14.1195
*HP Z4 G4 Workstation	32	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	NVIDIA Quadro RTX 8000	16GB	25.21.14.1917
HP ProBook 650 G2	32	Intel(R) Core(TM) i7-6600U CPU @ 2.60GHz (4 CPUs), ~2.8GHz	AMD Radeon (TM) R7 M350	32GB	25.20.15031.5004
*HP Z4 G4 Workstation	32	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	NVIDIA Quadro RTX 5000	16GB	25.21.14.1917
*HP Z4 G4 Workstation	32	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	NVIDIA Quadro RTX 6000	24GB	25.21.14.1917
*HP Z4 G4 Workstation	32	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	NVIDIA Quadro RTX 4000	8GB	25.21.14.1917
*HP Z4 G4 Workstation	32	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	NVIDIA Quadro P2200	4GB	26.21.14.3064
*HP Z4 G4 Workstation	32	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	AMD Radeon Pro WX 3200 Series	4GB	26.20.11002.1001
HP ZBook 14u G6	**16**	**Intel(R) Core (TM) i7-8665U CPU @ 1.90GHz 2.11 GHz**	**AMD Radeon Pro WX3200 Graphics**	**8GB**	**25.20.15026.2**
HP Z4 G4 Workstation	**32**	**Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz**	**AMD Radeon Pro WX3200**	**4GB**	**26.20.11024.1**

Brand-Model	RAM (GB)		CPU		Graphics Card
HP Z4 G4 Workstation	**32**	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	**AMD Radeon Pro WX2100**	**2GB**	**26.20.11024.1**
HP Z4 G4 Workstation	**32**	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	**AMD Radeon Pro WX3100**	**4GB**	**26.20.11024.1**
HP Z4 G4 Workstation	**32**	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	**AMD Radeon Pro WX4100**	**4GB**	**26.20.11024.1**
HP Z4 G4 Workstation	**32**	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	**AMD Radeon Pro WX5100**	**8GB**	**26.20.11024.1**
HP Z4 G4 Workstation	**32**	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	**AMD Radeon Pro WX7100**	**8GB**	**26.20.11024.1**
HP Z4 G4 Workstation	**32**	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	**AMD Radeon Pro WX8200**	**8GB**	**26.20.11024.1**
HP Z4 G4 Workstation	**32**	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	**AMD Radeon Pro WX9100**	**16GB**	**26.20.11024.1**
HP Zbook15u G4	16	Intel(R) Core(TM) i7-7600U CPU @ 2.80GHz (4 CPUs), ~2.9GHz	AMD FirePro W4190M	2 GB	21.19.142.32768
Dell Precision 7520	16	Intel(R) Core(TM) i7-7920HQ CPU @ 3.10GHz (8 CPUs), ~3.1GHz	AMD Radeon Pro WX 4130	2 GB	21.19.384.3
Dell Precision 7520	16	Intel(R) Xeon(R) CPU E3-1535M v6 @ 3.10GHz (8 CPUs), ~3.1GHz	AMD Radeon Pro WX 4150	4 GB	21.19.384.3
Dell Precision 7520	16	Intel(R) Core(TM) i7-7920HQ CPU @ 3.10GHz (8 CPUs), ~3.1GHz	NVIDIA Quadro M1200	4 GB	21.21.13.7586
Dell Precision 7520	16	Intel(R) Core(TM) i7-7920HQ CPU @ 3.10GHz (8 CPUs), ~3.1GHz	NVIDIA Quadro M2200	4 GB	21.21.13.7586

Brand-Model	RAM (GB)		CPU		Graphics Card
Dell Precision 7720	16	Intel(R) Core(TM) i7-7920HQ CPU @ 3.10GHz (8 CPUs), ~3.1GHz	AMD Radeon Pro WX 4130	2 GB	21.19.384.3
Dell Precision 7720	16	Intel(R) Core(TM) i7-7920HQ CPU @ 3.10GHz (8 CPUs), ~3.1GHz	AMD Radeon Pro WX 7100	8 GB	21.19.384.3
Dell Precision 7720	16	Intel(R) Core(TM) i7-7920HQ CPU @ 3.10GHz (8 CPUs), ~3.1GHz	NVIDIA Quadro P3000	6 GB	21.21.13.7586
Dell Precision 7720	16	Intel(R) Core(TM) i7-7920HQ CPU @ 3.10GHz (8 CPUs), ~3.1GHz	NVIDIA Quadro P4000	8 GB	21.21.13.7586
Dell Precision 7720	16	Intel(R) Xeon(R) CPU E3-1535M v6 @ 3.10GHz (8 CPUs), ~3.1GHz	NVIDIA Quadro P5000	16 GB	21.21.13.7586
Dell Precision T1500	16	Intel(R) Core(TM) i7 CPU 860 @ 2.80GHz, ~2.80GHz	AMD FirePro V4800(FireGL V)	4GB	15.201.2401.0
HP Zbook 15 G4	16	Intel(R) Core(TM) i7-7820HQ CPU @ 2.90GHz ~2.90GHz (8 CPUs)	NVIDIA Quadro M1200	4GB	377.43
HP Zbook 15 G4	16	Intel(R) Core(TM) i7-7820HQ CPU @ 2.90GHz ~2.90GHz (8 CPUs)	AMD Radeon Pro WX4150	4GB	16.40.3801.1002
HP Zbook 17 G4	16	Intel(R) Core(TM) i7-7820HQ CPU @ 2.90GHz ~2.90GHz (8 CPUs)	NVIDIA Quadro M2200	4GB	377.43
HP Zbook 17 G4	16	Intel(R) Core(TM) i7-7820HQ CPU @ 2.90GHz ~2.90GHz (8 CPUs)	NVIDIA Quadro P5000	16GB	377.43
HP Zbook Studio G4	16	Intel(R) Core(TM) i7-7820HQ CPU @ 2.90GHz ~2.90GHz (8 CPUs)	NVIDIA Quadro M1200	4GB	377.43

Brand-Model	RAM (GB)		CPU		Graphics Card
Dell Precision 7920 Tower	32	Intel(R) Xeon(R) Gold 6130 CPU @ 2.10GHz (64 CPUs), ~2.1GHz	NVIDIA Quadro P600	2GB	377.11
Dell Precision 7920 Tower	32	Intel(R) Xeon(R) Gold 6130 CPU @ 2.10GHz (64 CPUs), ~2.1GHz	NVIDIA Quadro P1000	4GB	377.11
Dell Precision 7920 Tower	32	Intel(R) Xeon(R) Gold 6130 CPU @ 2.10GHz (64 CPUs), ~2.1GHz	NVIDIA Quadro P2000	5GB	377.11
Dell Precision 7920 Tower	32	Intel(R) Xeon(R) Gold 6130 CPU @ 2.10GHz (64 CPUs), ~2.1GHz	NVIDIA Quadro P4000	8GB	377.11
Dell Precision 7920 Tower	32	Intel(R) Xeon(R) Gold 6130 CPU @ 2.10GHz (64 CPUs), ~2.1GHz	NVIDIA Quadro P5000	16GB	377.11
Dell Precision 7920 Tower	32	Intel(R) Xeon(R) Gold 6130 CPU @ 2.10GHz (64 CPUs), ~2.1GHz	NVIDIA Quadro P6000	24GB	377.11
Dell Precision 7920 Tower	32	Intel(R) Xeon(R) Gold 6130 CPU @ 2.10GHz (64 CPUs), ~2.1GHz	AMD Radeon WX4100	4GB	17.10.1730.1004
Dell Precision 7920 Tower	32	Intel(R) Xeon(R) Gold 6130 CPU @ 2.10GHz (64 CPUs), ~2.1GHz	AMD Radeon WX5100	8GB	17.10.1730.1004
Dell Precision 7920 Tower	32	Intel(R) Xeon(R) Gold 6130 CPU @ 2.10GHz (64 CPUs), ~2.1GHz	AMD Radeon WX7100	8GB	17.10.1730.1004
HP Z8 G4 Workstation	96	Intel(R) Xeon(R) Gold 6128 CPU @ 3.40GHz (24 CPUs), ~3.4GHz	AMD Radeon WX2100	2GB	22.19.640.2
HP Z8 G4 Workstation	96	Intel(R) Xeon(R) Gold 6128 CPU @ 3.40GHz (24 CPUs), ~3.4GHz	AMD Radeon WX3100	4GB	22.19.640.2
HP Z8 G4 Workstation	96	Intel(R) Xeon(R) Gold 6128 CPU @ 3.40GHz (24 CPUs), ~3.4GHz	AMD Radeon WX4100	4GB	22.19.640.2
HP Z8 G4 Workstation	96	Intel(R) Xeon(R) Gold 6128 CPU @ 3.40GHz (24 CPUs), ~3.4GHz	AMD Radeon WX9100	16GB	22.19.640.2
HP Z4 G4 Workstation	32	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8 CPUs), ~4.0GHz	AMD Radeon WX2100	2GB	22.19.640.2

Brand-Model	RAM (GB)		CPU		Graphics Card
HP Z4 G4 Workstation	32	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8 CPUs), ~4.0GHz	AMD Radeon WX3100	4GB	22.19.640.2
HP Z4 G4 Workstation	32	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8 CPUs), ~4.0GHz	AMD Radeon WX4100	4GB	22.19.640.2
*****HP Z8 G4 Workstation	96	Intel(R) Xeon(R) Gold 6128 CPU @ 3.40GHz (24 CPUs), ~3.4GHz	NVIDIA Quadro P4000	8GB	385.69
*HP Z4 G4 Workstation	32	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8 CPUs), ~4.0GHz	NVIDIA Quadro P620	2GB	23.21.13.9077
*HP Z4 G4 Workstation	32	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8 CPUs), ~4.0GHz	AMD Radeon WX9100	16GB	22.19.693.256
HP ZBook 14u G5	16	Intel(R) Core(TM) i7-8650U CPU @1.90GHz 2.11GHz	AMD Radeon Pro WX 3100	2GB	23.20.787.768
Dell Precision 7530	16	Intel(R) Core(TM) i7-8850H CPU @2.60GHz 2.59GHz	NVIDIA Quadro P2000	4GB	23.21.13.8908
Dell Precision 3530	16	Intel(R) Xeon(R) E-2176M CPU @2.70GHz 2.71GHz	NVIDIA Quadro P600	4GB	23.21.13.8908
Dell Precision 7730	16	Intel(R) Core(TM) i9-8950HK CPU @2.90GHz 2.90GHz	NVIDIA Quadro P3200	6GB	23.21.13.8908
HP ZBook 17 G5	16	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz (12 CPUs), ~2.6GHz	NVIDIA Quadro P5200	8GB	23.21.13.9148
******HP ZBook 17 G5	16	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz (12 CPUs), ~2.6GHz	NVIDIA Quadro P2000	8GB	23.21.13.9148
******HP ZBook Studio x360 G5	16	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz (12 CPUs), ~2.6GHz	NVIDIA Quadro P1000	8GB	23.21.13.9148
******HP ZBook 15 G5	16	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz (12 CPUs), ~2.6GHz	AMD Radeon (TM) Pro WX Series	8GB	24.20.12024.10

Brand-Model	RAM (GB)		CPU		Graphics Card
******Dell Precision 7730	16	Intel(R) Core(TM) i7-8850H CPU @ 2.60GHz (12 CPUs), ~2.6GHz	AMD Radeon (TM) Pro WX 7100 Graphics	8GB	24.20.12024.10
HP Z840	64	Intel (R) Xeon CPU E5-2620 v4 @2.10 GHz	AMD Radeon (TM) Pro WX 8200	8 GB	18.Q3
*******HP Z840	64	Intel (R) Xeon CPU E5-2620 v4 @2.10 GHz	AMD Radeon (TM) Pro WX 8200	8 GB	18.Q4
Dell Precision 7530	32	Intel(R) Xeon(R) E-2176M CPU @ 2.70GHz (12 CPUs), ~2.7GHz	NVIDIA Quadro P1000	4 GB	23.21.13.9827
HP Z4 G4 Workstation	32	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	NVIDIA Quadro RTX 6000	16 GB	24.21.14.1216
*HP Z4 G4 Workstation	32	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	NVIDIA Quadro RTX 5000	16GB	24.21.14.1195
*HP Z4 G4 Workstation	32	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	NVIDIA Quadro RTX 4000	16GB	24.21.14.1195
*HP Z4 G4 Workstation	32	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	NVIDIA Quadro RTX 8000	16GB	25.21.14.1917
HP ProBook 650 G2	32	Intel(R) Core(TM) i7-6600U CPU @ 2.60GHz (4 CPUs), ~2.8GHz	AMD Radeon (TM) R7 M350	32GB	25.20.15031.5004
*HP Z4 G4 Workstation	32	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	NVIDIA Quadro RTX 5000	16GB	25.21.14.1917
*HP Z4 G4 Workstation	32	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	NVIDIA Quadro RTX 6000	24GB	25.21.14.1917
*HP Z4 G4 Workstation	32	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	NVIDIA Quadro RTX 4000	8GB	25.21.14.1917
*HP Z4 G4 Workstation	32	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	NVIDIA Quadro P2200	4GB	26.21.14.3064

Brand-Model	RAM (GB)		CPU		Graphics Card
*HP Z4 G4 Workstation	32	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	AMD Radeon Pro WX 3200 Series	4GB	26.20.11002.1001
HP ZBook 14u G6	**16**	**Intel(R) Core (TM) i7-8665U CPU @ 1.90GHz 2.11 GHz**	**AMD Radeon Pro WX3200 Graphics**	**8GB**	**25.20.15026.2**
HP Z4 G4 Workstation	**32**	**Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz**	**AMD Radeon Pro WX3200**	**4GB**	**26.20.11024.1**
HP Z4 G4 Workstation	**32**	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	**AMD Radeon Pro WX2100**	**2GB**	**26.20.11024.1**
HP Z4 G4 Workstation	**32**	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	**AMD Radeon Pro WX3100**	**4GB**	**26.20.11024.1**
HP Z4 G4 Workstation	**32**	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	**AMD Radeon Pro WX4100**	**4GB**	**26.20.11024.1**
HP Z4 G4 Workstation	**32**	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	**AMD Radeon Pro WX5100**	**8GB**	**26.20.11024.1**
HP Z4 G4 Workstation	**32**	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	**AMD Radeon Pro WX7100**	**8GB**	**26.20.11024.1**
HP Z4 G4 Workstation	**32**	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	**AMD Radeon Pro WX8200**	**8GB**	**26.20.11024.1**
HP Z4 G4 Workstation	**32**	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	**AMD Radeon Pro WX9100**	**16GB**	**26.20.11024.1**
HP Z4 G4 Workstation	**32**	Intel(R) Xeon(R) W-2125 CPU @ 4.00GHz (8CPUs), ~4.0GHz	**AMD Radeon Pro W5700**	**8GB**	**19. Q4**

Brand-Model	RAM (GB)		CPU		Graphics Card
HP ZBook 15 G6	16	Intel(R) Core(TM) i7-9850H CPU @2.60GHz(12 CPUs)~2.6GHz	**NVIDIA Quadro T1000**	4GB	**25.21.14.2591**
HP ZBook 15 G6	16	Intel(R) Core(TM) i7-9850H CPU @2.60GHz(12 CPUs)~2.6GHz	**NVIDIA Quadro RTX3000**	6GB	**25.21.14.2591**
HP ZBook 17 G6	16	Intel(R) Core(TM) i7-9850H CPU @2.60GHz(12 CPUs)~2.6GHz	**NVIDIA Quadro RTX5000**	16GB	**25.21.14.2591**

Note:

- If graphical issues still remain with driver update to the latest version, please make sure to update BIOS
- For cards with no driver information, please use the latest version certified by the vendor.
- If the application is unable to launch and prompts an error regarding your graphics card, using NVidia/ AMD Control Center and adding MSC_Apex.exe to its 3D settings might resolve the issue

* HP Z640 is the HP Z440 with expandability of second processor. The Z440, Z640 and Z840 are all the same Intel Chipset.

**While the application does run on this configuration, there are currently known issues which are being investigated.

Important: We can not guarantee the functionality of other graphics devices.

Privileges Requirements

You need administrator privileges to install the application. This allows for C++ runtime libraries and .NET components to be installed.

Installing MSC Apex

If you are downloading from the Solutions Download Center, download the self-extracting archive (.exe) and follow these steps:

- Copy the self-extracting archive (.exe) file to a temporary subdirectory with enough disk space.
- Double-click on the installer and follow the prompts.
- If you are installing localized documentation files, install them after you have installed the MSC Apex executable.

Allowing Installation With Security Software

In order to install MSC Apex, the application and its lockserver must be allowed to execute by any security software on the system. MSC Apex is whitelisted with Symantec, but users with other security software must add exceptions that allow the MSC Apex lockserver to run. If these exceptions are not made, the security software will prevent MSC Apex from installing.

If a security error occurs during Apex installation, users should manually add Apex installation folder to their security software's exception list and then start the lock server using lsconfig.bat. lsconfig.bat is located at :

"<INSTALLATION_FOLDER>\leaf\Services\EOM\WIN8664\bin\lsconfig.bat".

Silent Installation Option

The MSC Apex installer provides a silent installation option where the responses to prompts during one installation may be recorded and repeated to create subsequent identical installations.

Recording an installation

You can record a silent install response file by running an installer with the -r option, which will store the responses in a .iss file that may be used for subsequent installations. For example, to install MSX Apex and record the installation responses to D:\my_response.iss, run the following command, replacing #### with the appropriate CL number for the version that you are installing:

```
MSC_Apex_CL####_windows64.exe -r -f1"D:\my_response.iss"
```

Playing back a recorded installation

To perform additional installations using the responses that were stored in the my_response.iss file run the following command:

```
MSC_Apex_CL####_windows64.exe -s -f1"D:\my_response.iss"
```

Notation for Localized Language Silent Installation

To have the silent installation install in a language other than the default of English, you may add the following flags to your command:

- German: -L1031
- Japanese: -L1041
- French: -L1036
- Chinese (Simplified): -L2052

For example, to use the above language flags and install MSC Apex and its associated documentation in German you should run the following command:

```
MSC_Apex_CL#####_windows64.exe -s -L1031 -f1"D:\mygerman1.iss"
```

Licensing

Once the Setup program has installed all of the files, it will prompt for the licensing information.

Note that global setting of license servers (by explicitly defining the MSC_LICENSE_FILE environment variable for your computer) supersedes the license setting done by MSC Apex during installation.

For more information regarding licensing, please see the MSC Licensing 11.13 User's Guide.