



GPU Accelerator Capabilities *

Release 2021 R1

* Used in support of the CPU to process certain calculations and key solver computations for faster performance during a solution.

- Acceleration can be used for both shared-memory parallel processing (shared-memory Ansys) and distributed-memory parallel processing (Distributed Ansys).

- Acceleration is available for both Windows and Linux.

Support by Application

EMIT supports NVIDIA Tesla and Quadro RTX series, V series, P series, and M series.

Fluent supports NVIDIA's CUDA-enabled Tesla and Quadro series workstation and server cards.

HFSS supports NVIDIA Tesla V and P series, C20-series, Tesla K series, Quadro V, P and K series (K5000 and above).

ICEPAK supports NVIDIA's CUDA-enabled Tesla and Quadro series workstation and server cards.

Maxwell supports NVIDIA Tesla V and P series, C20-series, Tesla K series, Quadro V, P and K series (K5000 and above).

Mechanical APDL supports NVIDIA's CUDA-enabled Tesla and Quadro series workstation and server cards. When using the sparse solver or eigensolvers based on the sparse solver with NVIDIA cards additional considerations apply (please consult the ANSYS installation guide for details).

Polyflow supports NVIDIA's CUDA-enabled Tesla and Quadro series workstation and server cards.

Savant supports NVIDIA Tesla and Quadro RTX series, V series, P series, and M series.

Cards Tested **

The following Cards have been tested by Ansys, Inc.

Application	Manufacturer	Product Series	Card / GPU	Tested Platform	Tested Operating System Version
EMIT	NVIDIA	Quadro	GP100	Windows x64	Windows 10
			GV100	Windows x64	Windows 10
			M4000	Windows x64	Windows 10
				Linux x64	CentOS 7.7
			P4000	Windows x64	Windows 10
			RTX 6000	Windows x64	Windows 10
			RTX 8000	Linux x64	CentOS 7.7
Fluent	NVIDIA	Quadro	GP100	Linux x64	Red Hat 7.7
			GV100	Linux x64	CentOS 7.7
			P4000	Windows x64	Windows 10
			RTX 6000	Linux x64	SLES 12 SP5
		Tesla	K40	Windows x64	Windows 10
			K80	Linux x64	Red Hat 7.7
			P100	Linux x64	CentOS 7.7
			V100	Linux x64	SLES 12 SP3

Application	Manufacturer	Product Series	Card / GPU	Tested Platform	Tested Operating System Version
HFSS	NVIDIA	Quadro	GV100	Windows x64	Windows 10
			RTX 6000	Windows x64	Windows Server 2019
	Tesla	K40m	Windows x64	Windows Server 2016	
		K80	Windows x64	Windows Server 2019	
			Linux x64	Red Hat 7.7	
		P40	Windows x64	Windows Server 2019	
			Linux x64	CentOS 8.1	
		P100	Windows x64	Windows Server 2016	
			Linux x64	CentOS 7.8	
		V100	Windows x64	Windows Server 2019	
Linux x64	CentOS 7.7				
Icepak	NVIDIA	Quadro	K4000	Windows x64	Windows 10
			M4000	Windows x64	Windows 10
		Linux x64	CentOS 7.6		
	Tesla	K80	Linux x64	Red Hat 7.6	
		P100	Windows	Windows Server 2016	
Maxwell	NVIDIA	Quadro	GV100	Windows x64	Windows 10
			RTX 6000	Windows x64	Windows Server 2019
	Tesla	K40m	Windows x64	Windows Server 2016	
		K80	Windows x64	Windows Server 2019	
			Linux x64	Red Hat 7.7	
		P40	Windows x64	Windows Server 2019	
			Linux x64	CentOS 8.1	
		P100	Windows x64	Windows Server 2016	
			Linux x64	CentOS 7.8	
		V100	Windows x64	Windows Server 2019	
Linux x64	CentOS 7.7				

Application	Manufacturer	Product Series	Card / GPU	Tested Platform	Tested Operating System Version
Mechanical APDL	NVIDIA	Ampere	A100	Linux x64	Red Hat 7.8
					CentOS 7.6
	Tesla	K80	Windows x64	Red Hat 7.7	
			P100	Windows x64	Windows 10
		V100	Linux x64	CentOS 7.6	
				CentOS 7.7	
		V100	Windows x64	Windows Server 2016	
			Linux x64	CentOS 7.6	
Polyflow	NVIDIA	Quadro	GV100	Windows x64	Windows 10
				Linux x64	Red Hat 7.8
	M4000	Windows x64	Windows Server 2016		
		Linux x64	Red Hat 7.8		
	P4000	Linux x64	SLES 12 SP4		
			Red Hat 7.6		
			Red Hat 8.1		
	P6000 (Dual)	Linux x64	SLES 15 SP1		
			Windows x64	Windows 10	
	RTX 4000	Linux x64	Windows x64	Windows 10	
			SLES 12 SP5		
Savant	NVIDIA	Quadro	GP100	Windows x64	Windows 10
			GV100	Windows x64	Windows 10
			K4200	Windows x64	Windows 10
			M4000	Windows x64	Windows 10
				Linux x64	CentOS 7.7
			P4000	Windows x64	Windows 10
			RTX 6000	Windows x64	Windows 10
		Tesla	RTX 8000	Linux x64	CentOS 7.7
			P40	Windows x64	Windows Server 2019
				Linux x64	SLES 12 SP4
			P100	Windows x64	Windows Server 2016
				Linux x64	CentOS 7.8
			V100	Windows x64	Windows Server 2019
				Linux x64	CentOS 7.7

** The performance benefit of using a GPU Accelerator will depend on the card selected and the overall system configuration.