



GPU Accelerator Capabilities *

Release 2023 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

AVxcelerate supports NVIDIA's CUDA-enabled series workstation and server cards.

Ansys EMIT and **EMIT Classic** support NVIDIA CUDA-enabled workstation, data center and server cards.

Fluent supports NVIDIA's CUDA-enabled workstation, data center and server cards.

HFSS Frequency-domain and Time-domain solvers support NVIDIA CUDA-enabled workstation, data center, and server cards.

HFSS SBR+ solver supports NVIDIA CUDA-enabled workstation, data center, and server cards.

ICEPAK supports NVIDIA's CUDA-enabled workstation, data center, and server cards.

Maxwell solvers support NVIDIA CUDA-enabled workstation, data center, and server cards.

Mechanical APDL supports the AMD Instinct MI Series Accelerators and NVIDIA's CUDA-enabled workstation, data center, and server cards. When using the sparse solver or eigen solvers 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 workstation, data center, and server cards.

Cards Tested **

The following cards have been tested by ANSYS, Inc.

Application	Manufacturer	Card / GPU	Tested Platform	Tested Operating System Version	Notes
AVxcelerate	Nvidia	GV100	Linux x64	Ubuntu 20.04	
		P5200	Windows x64	Windows 10	
		RTX 5000	Windows x64	Windows 10	
		RTX 6000	Windows x64	Windows 10	
				Windows 11	
		Linux x64	CentOS 7.9		
			Ubuntu 20.04		
		RTX 8000	Linux x64	CentOS 7.8	
		RTX A5000	Windows x64	Windows 10	
				Linux x64	Ubuntu 20.04
RTX A6000	Linux x64	Ubuntu 20.04			

Application	Manufacturer	Card / GPU	Tested Platform	Tested Operating System Version	Notes
EMIT and EMIT Classic	Nvidia	A100	Windows x64	Windows Server 2019	
		A6000	Windows x64	Windows Server 2019	
		GP100	Windows x64	Windows 10	
		M4000	Windows x64	Windows 10	
		P40	Windows x64	Windows Server 2019	
		P100	Windows x64	Windows Server 2019	
		P4000	Windows x64	Windows 10	
		RTX 6000	Windows x64	Windows Servers 2019	
Fluent	Nvidia	A5000	Windows x64	Windows 11	
		P4000	Linux x64	Red Hat 8.5	
				Red Hat 8.6	
		RTX 4000	Windows x64	Windows 10	
		RTX 6000	Linux x64	SLES 12 SP5	
		RTX A4000	Linux x64	Red Hat 7.8	
HFSS (Frequency-domain solver, Time-domain solver)	Nvidia	A100	Windows x64	Windows Server 2019	
				Windows Server 2022	
			Linux x64	SLES 15 SP2	
				Ubuntu 20.04	
		GV100	Linux x64	Ubuntu 20.04	
		P100	Linux x64	CentOS 7.9	
		RTX A6000	Windows x64	Windows Server 2019	
		RTX 6000	Windows x64	Windows Server 2019	
V100	Windows x64	Windows Server 2019			
		Linux x64	Ubuntu 20.04		

Application	Manufacturer	Card / GPU	Tested Platform	Tested Operating System version	Notes
HFSS SBR+ solver	Nvidia	A100	Windows x64	Windows Server 2019	
				Windows Server 2022	
			Linux x64	SLES 15 SP2	
				Ubuntu 20.04	
		GV100	Linux x64	Ubuntu 20.04	
		P100	Linux x64	CentOS 7.9	
		RTX 6000	Windows x64	Windows Server 2019	
		RTX A6000	Windows x64	Windows Server 2019	
V100	Windows x64	Windows Server 2019			
Linux x64		Ubuntu 20.04			
Icepak	Nvidia	K40m	Windows x64	Windows Server 2019	
		K80	Linux x64	Red Hat 8.1	
		K6000	Windows x64	Windows 10	
		M4000	Windows x64	Windows 10	
			Linux x64	CentOS 7.9	
		P40	Windows x64	Windows Server 2022	
			Linux x64	CentOS 7.9	
		RTX 6000	Linux x64	SLES 15 SP1	
		T2000	Windows x64	Windows 10	
		V100	Windows x64	Windows Server 2019	
Linux x64	Red Hat 8.3				
Maxwell	Nvidia	A100	Windows x64	Windows Server 2019	
				Windows Server 2022	
			Linux x64	SLES 15 SP2	
				Ubuntu 20.04	
		GV100	Linux x64	Ubuntu 20.04	
		P100	Linux x64	CentOS 7.9	
		RTX 6000	Windows x64	Windows Server 2019	
		RTX A6000	Windows x64	Windows Server 2019	
V100	Windows x64	Windows Server 2019			
Linux x64		Ubuntu 20.04			

Application	Manufacturer	Card / GPU	Tested Platform	Tested Operating System version	Notes
Mechanical APDL	AMD	Instinct MI100	Linux x64	Red Hat 7.9	
		Instinct MI210	Linux x64	Red Hat 8.5	
	Nvidia	A100	Windows x64	Windows Server 2019	
			Linux x64	CentOS 7.9	
				Red Hat 7.9	
	A6000	Windows x64	Windows Server 2019		
	P100	Windows x64	Windows 10		
		Linux x64	CentOS 7.9		
V100	Linux x64	CentOS 7.9			
Polyflow	Nvidia	A100	Windows x64	Windows Server 2019	
		GV100	Windows x64	Windows 11	
			Linux x64	SLES 15.3	
		P4000	Windows x64	Windows 11	
			Linux x64	Ubuntu Server 20.04	
		P6000	Windows x64	Windows 10	
		RTX 3090	Linux x64	Red Hat 8.6	
		RTX 4000	Windows x64	Windows 11	
			Linux x64	Red Hat 7.9	
	SLES 12.5				
		Ubuntu Server 20.04			
Speos	Nvidia	A5000	Windows x64	Windows 11	
		GV100	Windows x64	Windows 11	
		P4000	Windows x64	Windows 10	
		P6000	Windows x64	Windows 11	
		RTX 5000	Windows x64	Windows 10	
		RTX 6000	Windows x64	Windows 11	
Speos HPC	Nvidia	A5000	Linux x64	Red Hat 8.5	
		GV100	Linux x64	CentOS 7.9	
		P6000	Linux x64	CentOS 7.9	
		RTX 5000	Linux x64	Red Hat 8.5	
Speos for NX	Nvidia	P4000	Windows x64	Windows 10	
		RTX 5000	Windows x64	Windows 10	

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