



## GPU Accelerator Capabilities \*

### Release 2024 R2

- \* 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.

**Rocky** supports NVIDIA's CUDA-enabled workstation (computing or gaming) CUDA version 11.7 toolkit or higher, at least 4 GB memory, and fast double-precision for DEM simulations and single-precision for SPH simulations.

### 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 22.04	
		P6000	Windows x64	Windows 10	
		RTX 5000 Ada Laptop	Windows x64	Windows 11	
		RTX 6000	Windows x64	Windows 10	
			Linux x64	Ubuntu 20.04	
	RTX A5000	Windows x64	Windows 11		
			Linux x64	Ubuntu 20.04	
	RTX A5500	Windows x64	Windows 11		
	RTX A6000	Windows x64	Windows 10		
			Linux x64	Ubuntu 20.04	

Application	Manufacturer	Card / GPU	Tested Platform	Tested Operating System Version	Notes
<b>EMIT and EMIT Classic</b>	Nvidia	A100	Windows x64	Windows Server 2019	
		A6000	Windows x64	Windows Server 2019	
		GP100	Windows x64	Windows 10	
		GV100	Windows x64	Windows 10	
		P40	Windows x64	Windows Server 2019	
		P100	Windows x64	Windows Server 2016	
		RTX 6000	Windows x64	Windows Servers 2019	
		RTX 8000	Windows x64	Windows 10	
		V100	Windows x64	Windows Server 2019	
<b>HFSS</b>  Frequency-domain solver  Time-domain solver  SBR+ solver	Nvidia	A100	Windows x64	Windows Server 2019	
			Windows x64	Windows Server 2022	
			Linux x64	Red Hat 8.9	
			Linux x64	Rocky 8.8	
		Linux x64	Ubuntu 20.04		
		GV100	Linux x64	Ubuntu 20.04	
		P40	Windows x64	Windows Server 2022	
		P100	Windows x64	Windows Server 2022	
		Linux x64	Rocky 8.9		
		RTX 6000	Windows x64	Windows Server 2019	
			Linux x64	CentOS 7.9	
		Linux x64	Red Hat 8.7		
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
<b>Icepak</b>	Nvidia	A100	Windows x64	Windows Server 2019	
				Windows Server 2022	
			Linux x64	Red Hat 8.9	
				Rocky 8.8	
		Ubuntu 20.04			
		GV100	Linux x64	Ubuntu 20.04	
		P40	Windows x64	Windows Server 2022	
		P100	Windows x64	Windows Server 2022	
				Linux x64	Rocky 8.9
		RTX 6000	Windows x64	Windows Server 2019	
				Linux x64	Red Hat 8.7
		RTX A6000	Windows x64	Windows Server 2019	
		V100	Windows x64	Windows Server 2019	
				Linux x64	Ubuntu 20.04
<b>Maxwell</b>	Nvidia	A100	Windows x64	Windows Server 2019	
				Windows Server 2022	
			Linux x64	Red Hat 8.9	
				Rocky 8.8	
		Ubuntu 20.04			
		GV100	Linux x64	Ubuntu 20.04	
		P40	Windows x64	Windows Server 2022	
		P100	Windows x64	Windows Server 2022	
				Linux x64	Rocky 8.9
		RTX 6000	Windows x64	Windows Server 2019	
				Linux x64	CentOS 7.9
		Red Hat 8.7			
		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
<b>Mechanical APDL</b>	AMD	MI100	Linux x64	Red Hat 8.7	
				Red Hat 8.9	
	Nvidia	MI210	Linux x64	Red Hat 8.7	
				SLES 15.5	
		A100	Linux x64	Windows x64	Windows Server 2019
				Linux x64	Red Hat 7.9
		H100	Linux x64	Windows x64	Windows Server 2022
				Linux x64	Red Hat 8.7
		V100	Linux x64	Windows x64	Windows 10
				Linux x64	Rocky 9.3
RTX A6000	Windows x64	Windows 10			
RTX A6000 Lovelace	Ada	Linux x64	Red Hat 8.7		
<b>Polyflow</b>	Nvidia	RTX A6000	Windows x64	Windows Server 2022	
			Linux x64	SLES 15.4	
			Windows x64	Windows Server 2022	
			Linux x64	Red Hat 8.9	
<b>Rocky</b>	Nvidia	A30	Linux x64	CentOS 7	
		A100	Linux x64	CentOS 7	
		L40	Linux x64	CentOS 7	
		RTX A4000	Windows x64	Windows 10	
		T4	Windows x64	Windows Server 2019	
		V100	Linux x64	Windows Server 2019	

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