

# Speed & Scalability for Ansys Simulations

## Accelerate Ansys with Exxact Systems

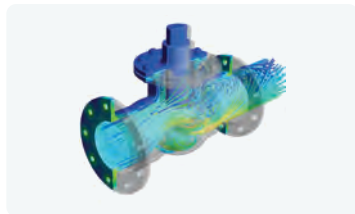
Choose Exxact for your Ansys simulation workloads. GPU-accelerated systems deliver up to 11X faster processing in Ansys® Fluent®, Mechanical™, Rocky™, & Lumerical™ with just a single NVIDIA H100. Exxact offers a comprehensive range of systems powered by Intel and AMD CPUs paired with NVIDIA GPUs.

Scale your team's hardware with Exxact individual GPU workstations, multi-user 8-GPU servers, or a full multi-node GPU cluster capable of near-linear performance scaling. Execute Ansys simulation results in minutes for even the most complex multi-physics problems.

- ✓ Accelerate time-to-market with dramatically faster design iterations
- ✓ Tackle previously impossible simulation challenges with more realistic simulation times
- ✓ Deliver groundbreaking innovations while reducing energy consumption & IT complexity

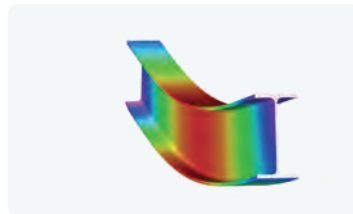


	Speedup	Comparison	Benchmark
Ansys Fluent	10x	1x NVIDIA H100 vs 20 CPU Cores	207M Transient CHT
Ansys Mechanical	6x	With 1x NVIDIA H100 vs 4 CPU Cores Only	50M DOF MAPDL Sparse
Ansys Rocky	11x	1x NVIDIA H100 vs 20 CPU Cores	100M Dice Rotation Mill
Ansys Lumerical	11x	1x NVIDIA H100 vs 20 CPU Cores	100μm FDTD Half Ring



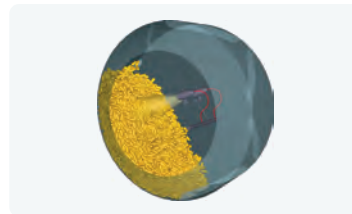
### Ansys Fluent (CFD)

- Fluid flow & aerodynamics simulation
- Heat transfer & conjugate thermal analysis
- Advanced turbulence modeling



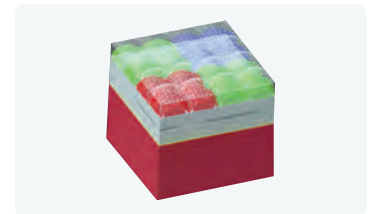
### Ansys Mechanical (FEA)

- Structural, thermal, & nonlinear material analysis
- Fatigue, fracture, and contact mechanics
- Dynamic and vibration analysis



### Ansys Rocky (DEM)

- Particle flow simulation and optimization
- Mining and mineral processing analysis
- Coupled DEM-CFD simulations



### Ansys Lumerical (Photonics)

- Finite-difference time-domain (FDTD) electromagnetic analysis
- Photonic integrated circuit (PIC) design
- Advanced nanophotonic device simulation

# Why Choose Exxact for Your Ansys Workloads?

Exxact offers a comprehensive selection of GPUs to power your Ansys workloads, from the cost-effective NVIDIA RTX 5000 Ada and versatile NVIDIA RTX 6000 Ada to the premium NVIDIA H100NVL and NVIDIA H200NVL. Each system is fully configurable to match your specific performance needs and budget requirements.

Exxact delivers these key advantages to maximize your Ansys investment:

- ✔ **Comprehensive GPU Solutions** - Access an extensive range of NVIDIA GPU-accelerated platforms, from NVIDIA L40S and RTX GPUs for everyday workloads to H100NVL for mission-critical simulations
- ✔ **Future-Proof Architecture** - Our component configurable approach ensures continuous access to cutting-edge technologies without complete system replacement
- ✔ **Sustainable Performance** - Advanced cooling options and efficient designs optimize computational throughput while reducing operational costs

Partner with Exxact to transform your simulation capabilities with a scalable acceleration ecosystem that evolves with your needs.

## Basic Simulation Workstation Recommendation



### MPN: VWS-172109266-ANS

- AMD Ryzen 9 9950X (16C/32T)
- 128GB DDR5 4800 MT/s Memory
- NVIDIA RTX 5000 Ada 32GB GPU
- 2TB M.2 NVMe SSD

## High Performance Workstation Recommendation



### MPN: VWS-107355433-ANS

- Intel Xeon W9-3495X (56C/112T)
- 256GB DDR5 6400 MT/s ECC Memory
- 2x NVIDIA RTX 6000 Ada 48GB GPUs (up to 4x)
- 4TB M.2 NVMe SSD + 2TB M.2 NVMe SSD

## Rackmount 2U Server Recommendation



### MPN: TS2-100183160-ANS

- Dual Intel Xeon Gold 6447 (32C/64T per CPU)
- 512GB DDR5 6400 MT/s ECC Memory
- 4x NVIDIA L40S 48GB GPUs (or 4x H100 NVL)
- 8TB U.2 NVMe SSD + 2TB U.2 NVMe SSD

## Multi-User 4U Server Recommendation



### MPN: TS4-186830206-ANS

- Dual Intel Xeon Platinum 8558 (48C/96T per CPU)
- 768GB DDR5 6400 MT/s ECC Memory
- 8x NVIDIA H100NVL 94GB HBM2e GPUs
- 8TB U.2 NVMe SSD + 2TB U.2 NVMe SSD

# More than Just for Graphics

GPUs aren't just for graphics and gaming. They are turning into general processing units used to accelerate immense scientific discovery and overcome engineering challenges. GPU acceleration can dramatically reduce simulation time-to-completion in parallelizable workloads like Ansys Fluent, Rocky, and Lumerical. Ansys also continues to innovate and enable GPU-accelerated computing in Mechanical FEA Simulations.



## Ansys Recommended GPUs

	SM Count	Server/Workstation	Precision	Performance	Use Case
NVIDIA H200 NVL 141GB	132	Server Only	FP64	Best	Compute Only
NVIDIA H100 NVL 94GB	132	Server Only	FP64	Better	Compute Only
NVIDIA L40S 48GB	142	Server Only	FP32	Better	Compute & Visualization
NVIDIA RTX 6000 Ada 48GB	142	Both	FP32	Better	Compute & Visualization
NVIDIA RTX 5000 Ada 32GB	100	Both	FP32	Good	Compute & Visualization

Connect with our sales engineers to configure a high performance computing solutions tailored for your research and business needs. Our Exxact experts will assess your requirements and deliver an ideal solution for accelerating your simulation workflows.



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