Accelerate Enhance Improve

Lenovo | AMD

Using high-performance computing in your manufacturing can help:

- **Accelerate time-to-market**
- **Enhance product quality**
- **Improve energy efficiency**

Create better products faster

Whether you're making medical devices, automotive equipment, aerospace technology, or the chips that power our digital world, sophisticated software for computer aided engineering (CAE), electronic design automation (EDA) and other critical tasks, enables you to speed up development of high-quality products.

Data-intensive manufacturing workloads demand more-powerful computing

CAE and EDA rely on data-intensive applications to support use cases such as:

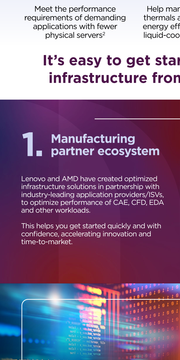
- Automotive crash test simulation
- Computational fluid dynamics (CFD)
- Digital twins
- Chip assembly

As these workloads become more sophisticated, many organizations find they reach the performance limits of traditional workstations and servers, and need to upgrade to more capable infrastructure.

This is why manufacturers are adopting powerful, optimized infrastructure from Lenovo and AMD to underpin their data-intensive workloads, unlocking new opportunities.

120+

World benchmarking records achieved by Lenovo and AMD[1]



Three benefits of optimized computing infrastructure in manufacturing

Meet the performance requirements of demanding applications with fewer physical servers[2]

Help manage server thermals and improve energy efficiency with liquid-cooled options[3]

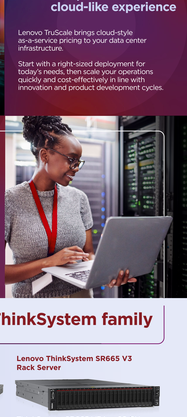
Solutions for a variety of deployment sizes, from single-node to large supercomputers

It's easy to get started with optimized infrastructure from Lenovo and AMD

1. Manufacturing partner ecosystem

Lenovo and AMD have created optimized infrastructure solutions in partnership with industry-leading application providers/ISVs, to optimize performance of CAE, CFD, EDA and other workloads.

This helps you get started quickly and with confidence, accelerating innovation and time-to-market.



Lenovo TruScale at-a-glance

- Reduced cost to entry
- Minimized risk with pay-as-you-go consumption model
- Designed for dynamic environments

2. Access the right solutions at the right time, with a flexible cloud-like experience

Lenovo TruScale brings cloud-style as-a-service pricing to your data center infrastructure.

Start with a right-sized deployment for today's needs, then scale your operations quickly and cost-effectively in line with innovation and product development cycles.

3. Servers to meet most needs

Not all data-intensive manufacturing workloads will require specialized high-performance computing (HPC) servers.

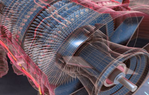
Thanks to powerful AMD EPYC™ processors, servers such as the Lenovo ThinkSystem SR645 V3 and SR665 V3 can run selected CAE, EDA and other manufacturing workloads. Have higher demands? Choose from SD665 V3, SD665-N V3 and SR675 V3.

Meet the Lenovo ThinkSystem family

Lenovo ThinkSystem SR645 V3 Rack Server

ThinkSystem SR645 V3 is a 2S/1U rack server powered by AMD EPYC™ CPUs. The SR645 V3 features outstanding 1U configuration flexibility to handle critical hybrid data center workloads.

Lenovo ThinkSystem SR665 V3 Rack Server



ThinkSystem SR665 V3 is a 2S/2U rack server powered by AMD EPYC™ CPUs. It features the performance and configuration capabilities to tackle key enterprise data center workloads, including HPC.

Lenovo ThinkSystem SD665 V3 High-Density Server

ThinkSystem SD665 V3 Neptune server combines the latest AMD processors and our Lenovo Neptune full system direct water-cooling solution for outstanding CPU performance and DDR5 memory bandwidth in an ultra-dense 6U, 12-node form factor chassis ideally suited for HPC clusters for research simulations.

Lenovo ThinkSystem SD665-N V3 High-Density Server

ThinkSystem SD665-N V3 Neptune server combines the latest AMD processors, plus GPUs, and our Lenovo Neptune full system direct water-cooling ultra-dense 6U, 6-node form factor chassis for best-in-class compute performance, as needed in complex workloads from molecular dynamics to astrophysics and nuclear research.

Lenovo ThinkSystem SR675 V3 Rack Server

ThinkSystem SR675 V3 is a 2-socket 3U GPU-rich powerhouse server optimized for performance. As well as the latest AMD processors, it provides up to eight full-size GPUs with up to 160 PCIe lanes to maximize operations, making it ideal for Artificial Intelligence and machine learning. It features a model with liquid-cooled GPUs in its air-cooled chassis to increase efficiency without compromising performance.

Together, Lenovo and AMD help designers, engineers and scientists create better products faster and more efficiently.

Find out more about Lenovo ThinkSystem servers, powered by AMD processors.

Learn more

Contact our team to discuss your needs

Lenovo | AMD

1. https://www.amd.com/en/processors/epyc-world-records
2. https://www.amd.com/en/processors/epyc-server-energy-efficiency
3. https://lenovopress.lenovo.com/lp1402-lenovo-thinksystem-sd650-v3-server