



ACCELERATE DEEP INSIGHTS WITH NEW SUPERMICRO HIGH-PERFORMANCE WORKSTATIONS

Bringing the Power of Data Science and AI to every business



Supermicro Workstation Family

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Executive Summary

The digital universe is exploding in size and complexity, giving today’s companies unprecedented opportunities to disrupt and lead their industries. At the same time, the demand for data science and artificial intelligence (AI) is escalating and urging companies to rethink how they utilize data to create smarter applications and functionality.

SUPERMICRO

As a global leader in high performance, high efficiency server technology and innovation, we develop and provide end-to-end green computing solutions to the data center, cloud computing, enterprise IT, big data, HPC, and embedded markets. Our Building Block Solutions® approach allows us to provide a broad range of SKUs, and enables us to build and deliver application-optimized solutions based upon your requirements.

Data scientists must analyze, visualize, and share insights in real-time to keep pace with data trends and remain one step ahead of the competition. These capabilities are critical to improving the productivity of high-level decision-makers, researchers, and developers by allowing them to make smarter decisions and take immediate action. However, traditional technologies often lack the computing power and scalability to seamlessly share data across disparate locations.



[High-performance workstations](#) can optimize a wide range of computationally intensive scientific and engineering applications, from advanced visualization work to AI. The latest workstation solutions are designed to execute workflows faster than ever before. As a result, companies that invest in these technologies will have an extraordinary opportunity to speed up decision-making, realize better outcomes, and reimagine how enterprises think, work, and collaborate.

Next generation workstations are the ideal foundation to achieve critical insights when and where they are needed most:

- Purpose-built for the most demanding data and AI workloads
- Accelerated workflows deliver real-time and predictive insights
- Application-optimized performance for increased visibility and control across operations

For data scientists, implementing a purpose-built workstation is crucial to operating quickly and effectively. Data science applications utilize capabilities such as scientific computing, predictive analytics, and prescriptive analytics to power a number of AI, machine learning, and deep learning uses. With the right technologies in place, companies can transform massive amounts of data into insights quickly:

- Simplifying workloads for rapid data preparation, model training, and data visualization
- Boosting productivity of data scientists by enabling quicker and more accurate predictions
- Reducing model development and training time for faster deployment and business insights

These technologies deliver incredible performance for a number of sophisticated applications. The result is an ideal work environment for data scientists, engineers, analysts, and other power users with high CPU and GPU computation core counts right at their desks.

Partnering for Success

Supermicro and NVIDIA are delivering the next generation of AI computing to accelerate insights on demand. Together, both companies provide the right computing solutions to maximize the speed and precision of any project.

Supermicro is a global leader in high-performance, high-efficiency technology, offering the broadest product portfolio for next generation workstations. With operations in [more than 100 countries](#), Supermicro is a leader in enterprise, cloud, AI, edge, and IoT, developing state-of-the-art products that help companies capture and operationalize deep insights everywhere. The goal is to enable the success of every company. Supermicro achieves this through extensive engineering expertise and the industry's broadest product portfolio, which offers green computing technologies that reduce energy costs, effectively allocate resources to tackle complex data workloads, and improve the overall total cost of ownership. In partnership with NVIDIA, Supermicro offers a range of AI-capable solutions to help companies work better, smarter, and faster.

Leveraging [first-to-market innovations](#) from Supermicro and the massively parallel processing capacity of [NVIDIA GPUs](#), together create IT environments that are purpose-built for data science and AI. As a result, every workstation delivers breakthrough performance at scale, so companies can execute critical workflows in record time using high-end compute and analytics capabilities. These joint solutions radically improve how remote users work, collaborate, and innovate.

Building an Unparalleled Computing Environment

Supermicro workstations powered by NVIDIA technology gain an extraordinary competitive advantage:

- Performance at scale to ramp up diverse data-centric workloads
- Enterprise reliability and enhanced manageability
- Rich, expansive visual workspaces that support disparate power users
- Unmatched acceleration to boost productivity and innovation

[Supermicro workstations](#) are fast, reliable, and cost-effective to meet the demands of data science and AI. These workstations utilize enterprise-grade technologies tested and validated to meet enterprise specific application requirements, delivering unmatched performance wherever users need to work.

Solutions from Supermicro offer a high degree of flexibility and upgradability with support for a wide range of industry standard components, so anyone can create the ideal work environment to run any application. Workstations are assembled and tested at a production facility in the USA. Supermicro builds workstations at production facilities in the Netherlands and Taiwan for EMEA and APAC companies. All support issues are managed by local engineers, product managers, and global support services, including next-day onsite options. Supermicro experts can also provide enterprises with recommended configurations based on their unique workflows.



540A-TR



5014A-TT



740GP-TNRT

Single-processor workstations with support for multi-GPU to provide exceptional power to handle the most demanding workflow.

Entry-level configurations are engineered to have excellent price-performance to facilitate AI, machine learning, and deep learning applications.

- Intel® Xeon® W-3300 processor, up to 38 cores
- 256GB DDR4-3200 Memory
- NVIDIA A30/40
- 2TB M.2 NVMe + 2x 4TB SSD
- Linux

This high-performance workstation is fully configurable and provides extreme acceleration and enterprise-class reliability and manageability.

Mainstream configurations offer everything data scientists need to capture insights from immense datasets.

- AMD Ryzen™ Threadripper™ PRO 3900WX processor, up to 64 cores
- 1TB GB DDR4-3200 Memory
- 2x NVIDIA RTX™ A6000
- 2TB M.2 NVMe + 2x 3.8TB U.2 PCIe Gen 4 SSD
- Linux

Dual processor workstations are designed for critical speed and compute capacity to execute the most critical data-intensive work at scale.

Expert configurations provide unprecedented CPU and GPU acceleration for deep learning workloads.

- Dual 3rd Gen Intel® Xeon® Scalable Processor, up to 80 cores total
- 4TB DDR4-3200 Memory
- 4x NVIDIA (A100/A40/RTX A6000)
- 2x M.2 NVMe (for OS) and up to 8x NVMe U.2
- Linux

Summary

Supermicro and NVIDIA empower companies in various industries to work better, smarter, and faster. These cutting-edge workstations are creating tomorrow today, allowing data scientists to unlock the full value of their data. Organizations can benefit from solutions and capabilities that are the best in the industry:

- **Best performance:** Highest memory and storage capacities available in a single tower system, featuring up to four passively cooled GPUs in tower form factor. Supermicro is the only manufacturer to offer up to four NVIDIA A100 Tensor Core GPUs in multiple models, with up to 80 cores, 4TB of memory, 61.44TB of NVMe, and optional DCPMM support.
- **Best expandability** Up to six PCIe Gen4 x16 expansion slots, or up to four PCIe Gen4 M.2 with optional hardware RAID 0/1/5/10 support.
- **Best component selection:** Supermicro validates a wide variety of memory, storage, and networking components with different specifications to help IT managers configure an optimized system for any enterprise needs without locking into one brand.
- **Best assembly and local support:** All workstation systems shipped in the Americas are built and tested at Supermicro headquarters in San Jose, California, and include technical support services by in-house Supermicro engineers and product managers.

Whether using data analytics to enable faster decision-making or collecting deep insights to fuel the subsequent great discovery, workstation solutions from Supermicro and NVIDIA have the best product selections and configurations to empower an organization's success.

Together, Supermicro and NVIDIA can help prepare for the cutting-edge of AI. Visit us online to begin the digital transformation.

Learn more at

[supermicro.com/en/products/superworkstation](https://www.supermicro.com/en/products/superworkstation)

[nvidia.com/en-us/design-visualization/rtx/](https://www.nvidia.com/en-us/design-visualization/rtx/)

RESOURCES

[supermicro.com/en/products/system/Workstation/Tower/SYS-540A-TR](https://www.supermicro.com/en/products/system/Workstation/Tower/SYS-540A-TR)

[nvidia.com/en-us/data-center/products/a100-gpu/](https://www.nvidia.com/en-us/data-center/products/a100-gpu/)

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[nvidia.com/en-us/data-center/products/a30-gpu/](https://www.nvidia.com/en-us/data-center/products/a30-gpu/)

[supermicro.com/en/products/system/GPU/4U/SYS-740GP-TNRT](https://www.supermicro.com/en/products/system/GPU/4U/SYS-740GP-TNRT)

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