SOLUTION BRIEF

SUPERMICRO SERVERS USING AMD CPUS DELIVER APPLICATION OPTIMIZED SERVERS FOR CONTENT CREATION STUDIOS

Speed Up Content Creation and Increase Collaboration with Supermicro Servers Using 4th Gen AMD EPYC™ Processors



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Executive Summary

Studios and content creation creators always look for innovative ways to create new and exciting videos and other forms of entertainment. The process of delivering a fantastic end user experience relies heavily on the latest technologies, including computer servers, storage, and software. Collaboration among creative specialists is critical, resulting in a more engaging creative process and end result.

Content Creation Components

Supermicro servers with 4th Gen AMD EPYC™ processors offer an optimized solution for creative organizations that need VDI, Rendering, and fast storage to create immersive experiences and engaging content.

Virtual Desktop Infrastructure (VDI):

VDI is a desktop virtualization technology that separates the desktop environment and associated application software from the physical client device used to access it. This IT architecture means the desktop environment and applications are hosted on a central server and delivered to users' devices over a network. A VDI environment can increase employee access security,

reduce IT costs, and increase collaboration. In addition, employees can access their desktops with the needed applications from different devices without being physically tied to a single device. However, these benefits require the right servers to process requests, securely store data, and maintain SLAs.

Rendering:

The rendering process, whether for computer generated imagery or to enhance or modify live action video, requires high performance servers that can modify the digital image at high resolutions. With videos being viewed at 60 frames/second, tremendous processing power is necessary to create or modify each frame for a seamless experience. The servers used for rendering must contain more than just a fast CPU but require large amounts of memory, GPUs, fast storage access, and networking to keep the CPUs and GPUs busy, which reduces the Total Cost of Ownership.

Storage:

Integrating high speed storage into the content creation environment is critical to a smooth running data center. The ability to retrieve information from a storage hierarchy for processing needs to be integrated into the rendering or VDI environment. Delays in the CPU or GPU accessing or storing the required data can significantly reduce productivity in an innovative environment.

Supermicro Solutions for VDI, Rendering, and Storage

VDI: The 4U GPU Server with up to 8 PCIe GPUs

The AS -4125GS-TNRT server features a dual-root PCIe architecture that directly connects each of 8 GPUs to CPUs with 16 lanes of connectivity so that nothing stands in the way of data flow to the accelerators. This server is ideal for VDI and other workloads that are very I/O intensive and need a balance of CPU and GPU performance. Direct connectivity is also provided to two 16-lane PCIe 5.0 slots, and the server includes support for up to 4 NVMe and 2 SATA drives.

Supermicro AMD GPU Server AS -4125GS-TNRT

- Dual AMD EPYC™ 9004 Series Processor up to 360W TDP
- NVIDIA RTX™ 6000 GPUs
- Up to 8 direct attached double width, full length GPUs
- Up to 24 DIMM Slots, 6TB DDR5 memory
- Up to 4x 2.5" Hot-swap NVMe drive bays

Rendering: 2U Hyper for render; highest core density per U.

The H13 Hyper systems are the new flagship data center systems, certified to run major enterprise applications while affording you a flexible range of computing, networking, storage, and I/O expansion capabilities. Choose NVMe, SATA, or SAS storage to achieve the number of I/O operations per second(IOPS) your applications need to perform at their best. And use Open Compute Project (OCP) 3.0 add-in modules (AIOMs) for consistent and standard networking capabilities across all data center server deployments.

Supermicro Hyper AS -2125HS-TNR

- Dual 4th Gen AMD EPYC 9004 processors
- 24 DIMMs, up to 6TB of memory
- Flexible PCIe 5.0 configurations
- Up to 24x Hot-swap 2.5” NVMe/SAS/SATA drives
- Redundant Titanium 1600W Power Supplies

Learn More about the Supermicro H13 Hyper Series

Storage: AMD based Petascale system - https://www.supermicro.com/en/products/system/storage/1u/asg-1115s-ne316r

Supermicro has launched a new line of petascale class storage platforms based on the extreme performance of 4th Gen AMD EPYC™ processors for customers who recognize the need for more data closer to computing. These storage systems are designed to store, process, and move vast amounts of data that today’s enterprises need. So whether you need a distributed scale-out storage server or a highly parallel virtualized environment, the Supermicro Petascale storage systems are a valuable asset in the data center.

Supermicro AMD Petascale Systems

- Single Socket 4th Gen AMD EPYC 9004 processors, up to 300W TDP
- Up to 6TB memory – 24 DIMMS with 2DPC
- 16 x hot-swap E3.S (7.5mm) NVMe drive bays
- Redundant Titanium 1600W Power Supplies

4th Gen AMD EPYC™ Processors are Ideal for M&E Workloads

The 4th Gen AMD EPYC™ processors can help IT professionals everywhere excel. Performance + Efficiency are the new metrics for success in IT. Servers powered by EPYC 9004 CPUs can deliver faster time to results, helping provide more and better insights for decisions and driving better business outcomes. AMD EPYC CPUs – performant, efficient, and on time.

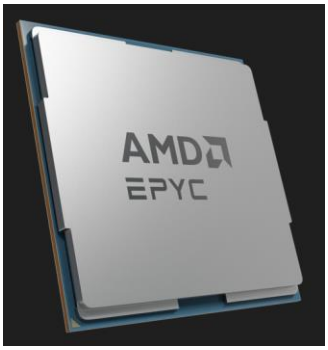
- Efficient: With EPYC 9004 CPUs, IT professionals can use fewer servers compared to previous generations of CPUs to get the job done, helping data centers be more energy efficient. The proverbial "do more with less" comes true.

- Latest Technology: The 9004 Series AMD EPYC CPUs amplify the AMD history of x86 architecture innovations, high performance, and the latest technology, with support for high performant DDR5 DIMMs and fast PCIe® Gen 5 I/O. EPYC 9004 CPUs support 12 memory channels with 2 DIMMs/channel capability, delivering the resources needed for memory hungry AI, ML, HPC, and large in-memory computations. These EPYC CPUs also provide 128 PCIe5 lanes in a 1-socket server and up to an astounding 160 PCIe5 lanes in 2-socket servers. This number of PCIe lanes enables the high performant demands of today's AI and ML applications and the increasing use of accelerators, GPUs, FPGAs, and high capacity LAN cards natively with 4th Gen EPYC CPUs' high PCIe5 lane counts.

- 4th Gen EPYC processors are available in eleven two-socket and two one-socket EPYC 9004 series packages

- Results Oriented: From print/file to databases and analytics, to HCI, HPC (now including AVX512 support), AI, and machine learning, AMD EPYC 9004 powered servers deliver faster time to results than previous generations with exceptional energy efficiency.

- AMD EPYC 4th Gen processors deliver out-of-the-box performance –up to an estimated 30% more performance per watt for 64 core processors gen over gen.



Summary

New technologies, including Supermicro servers with 4th Gen AMD EPYC processors, are enhancing the creativity of content creators. The low latency responses for interactive work with the increasing rendering performance allow new ideas to be brought to production. High speed storage enables access to terabytes of data needed for collaboration and interactive work to integrate into existing workflows seamlessly.

For More Information:

To learn more about the Supermicro product line with AMD CPUs, please visit www.supermicro.com/H13
To learn more about specific Supermicro servers for these solutions, please visit:
- Storage: AMD based Petascale system – https://www.supermicro.com/en/products/system/storage/1u/asg-1115s-ne316r
- Rendering: Supermicro Hyper Server – https://www.supermicro.com/en/products/system/hyper/2u/as-2125hs-tnr
- VDI: Supermicro GPU Server – https://www.supermicro.com/en/products/system/gpu/4u/as-4125gs-tnrt

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.

AMD

For more than 50 years AMD has driven innovation in high-performance computing, graphics and visualization technologies. Billions of people, leading Fortune 500 businesses and cutting-edge scientific research institutions around the world rely on AMD technology daily to improve how they live, work and play. AMD employees are focused on building leadership high-performance and adaptive products that push the boundaries of what is possible. For more information about how AMD is enabling today and inspiring tomorrow, visit the AMD (NASDAQ: AMD) website, blog, LinkedIn and Twitter pages.

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