5 REASONS WHY AMD EPYC™ 9005 SERIES PROCESSORS ARE THE RIGHT CHOICE FOR CLOUD, ENTERPRISE AND AI

AT A GLANCE

Servers based on AMD EPYC 9005 Series processors offer leadership performance, density and efficiency to support the most demanding data center initiatives today: everything from corporate AI enablement and large-scale hybrid cloud buildouts to business-critical enterprise applications.

1

PROPEL YOUR AI

AMD EPYC 9005 Series processors accelerate the AI journey with their potential to consolidate data centers, perform fast AI Inference and host GPU-accelerated systems efficiently. They excel for small to medium AI inference models, and help maximize GPU accelerator performance by handling data preparation and post-processing tasks efficiently as host processors in GPU-accelerated systems.

2

OPTIMIZE ENTERPRISE APPLICATION PERFORMANCE

AMD EPYC 9005 CPUs are the newest generation of the powerful and efficient AMD EPYC processor family. Designed around the high-performance, high-efficiency "Zen 5" microarchitecture, AMD EPYC 9005-based systems provide more cores and support for higher frequencies and faster DRAM than the previous generation.

3

LEVERAGE A STRONG ECOSYSTEM OF COMPATIBLE SOLUTIONS

The proven performance, efficiency and easy x86 software compatibility of AMD EPYC processors have prompted companies, governments and organizations around the world to switch to EPYC processor-based servers for their most demanding computing tasks. Consider servers based on EPYC 9005 processors as a straightforward evolutionary path for leadership AI and business solutions.

4

BUILD MORE EFFICIENCY INTO YOUR COMPUTE

The outstanding performance and efficiency of 5th Gen AMD EPYC processors lets you consolidate and modernize your IT infrastructure, helping free up space and energy to accommodate AI and other business innovation initiatives within your existing data center strategies.

5

ADVANCE CONFIDENTIAL COMPUTING

5th Gen AMD EPYC processors introduce Trusted IO to the Infinity Guard feature set,[1] extending data security integrity across external trusted devices, and are currently in the process of FIPS 140-3 certification, which will provide the latest benchmark for cryptographic hardware validation.

TECHNICAL DEEP DIVE

#1 Propel your AI

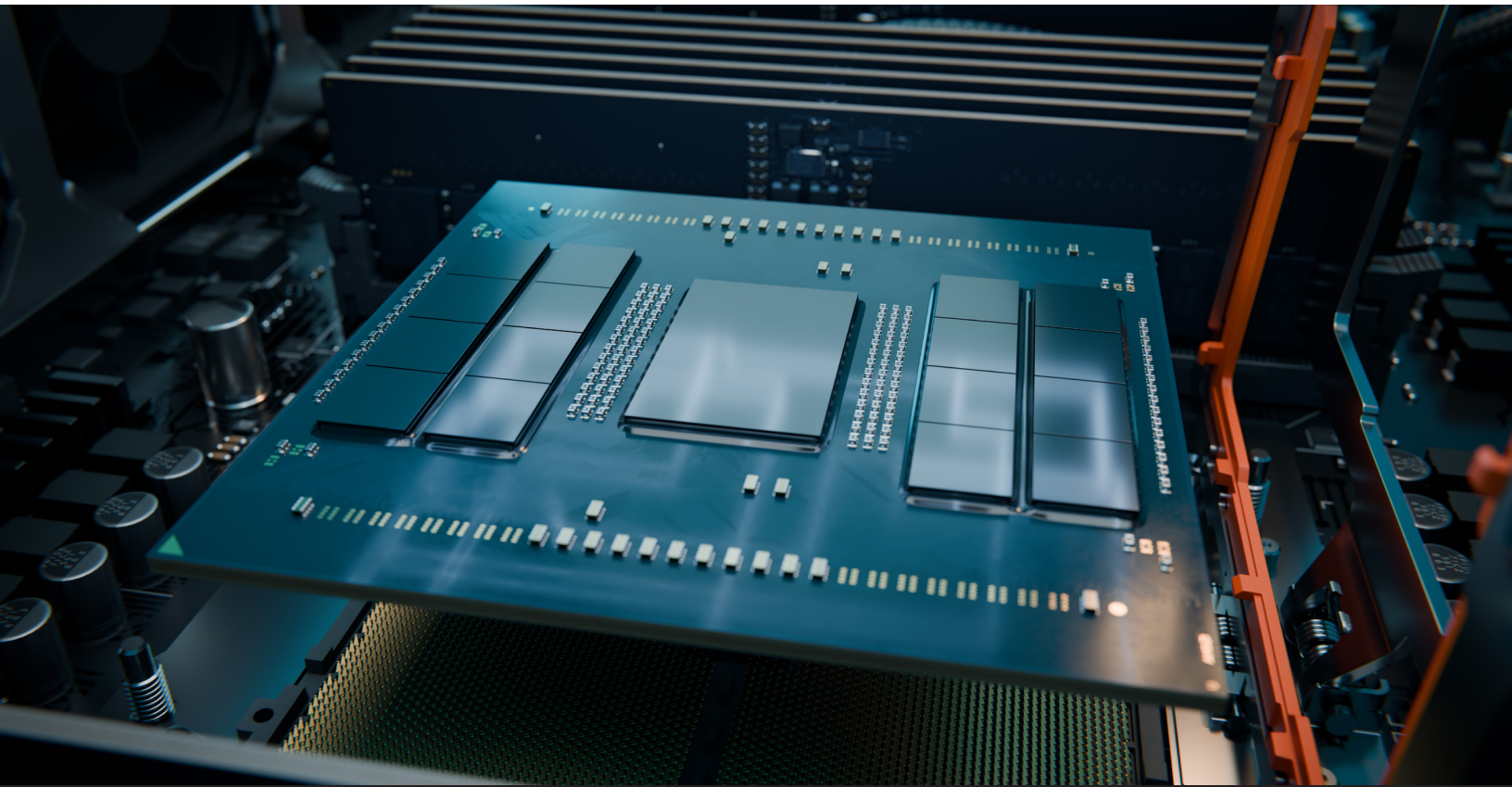
- AMD EPYC processors are optimized for enterprise AI CPU inference and can enhance AI efficiency of GPU accelerators. They offer high CPU frequencies, core counts, large cache and high memory bandwidth for fast, efficient results.
- Achieve up to **2.7x the inference throughput** when running extreme gradient boosting with the Higgs boson data set (XG Boost) on servers with two 192-core AMD EPYC 9965 processors compared to those with two 64-core Intel® Xeon® 8592+ CPUs.[9xx5-010]
- Achieve up to **20% more inference requests** and **15% faster training time** running Llama 3.1-70B and 3.1-8B, respectively (8 GPUs hosted by 2 AMD EPYC 9575F CPUs vs. 2 Intel® Xeon® 8592+ CPUs).[9xx5-014, 9xx5-015]

#2 Optimize enterprise application performance

- AMD EPYC 9005 Series processors are the high-performance CPU for data-intensive enterprise applications that demand connectivity and bandwidth for large-scale deployments.
- Achieve leadership integer performance with an estimated **2.65x higher throughput** when comparing two-socket servers using 192-core AMD EPYC 9965 to 64-core Intel® Xeon® 8592+ running SPECrate®2017_int_base.[9xx5-002D]
- Discover leadership integer performance per core with an estimated **~1.4x the throughput/core** when comparing two-socket servers using 32-core AMD EPYC 9355 to 32-core Intel Xeon 6548Y+ running SPECrate®2017_int_base.[9xx5-003B]
- MySQL® workloads based on TPC-C Benchmark® scale up to **3.9x the transactions/seconds** when using two-socket servers based on 192-core AMD EPYC 9965 vs. 64-core Intel® Xeon® 8592+.[9xx5-005A]

#3 Leverage a strong ecosystem of compatible solutions

- AMD EPYC 9005 Series processors maintain familiar x86 software compatibility, providing easy integration into your existing x86 infrastructure with minimal software reworking.
- Upgrade to AMD with confidence using a strong set of AMD tools that facilitate your solution evaluation, migration and optimization. Start your journey by perusing AMD EPYC processor Tuning Guides at https://www.amd.com/en/search/documentation/hub.html.
- Tailored for various environments including cloud, hyperscale, on-premises and SAAS, AMD EPYC 9005 Series processors enable broad applicability across industries.



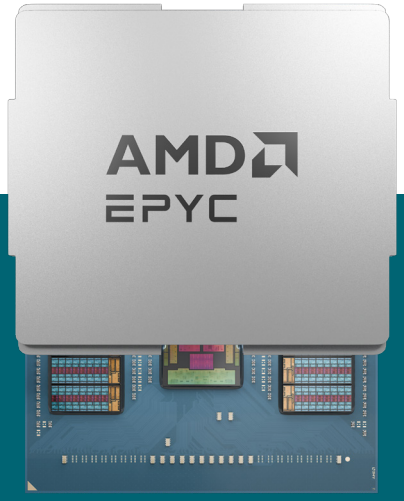
#4 Build more efficiency into your compute

- AMD EPYC 9005 Series offers energy-efficient server solutions with exceptional performance, making them ideal for businesses seeking to consolidate and modernize IT infrastructure while accommodating AI. For example, 2P servers using AMD EPYC 9965 CPUs deliver **1.7x the performance per system W** than Intel® Xeon® 8592+ CPUs running SPECpower.[9xx5-061]
- Replacing 100 old 2P Xeon® 8280 CPU-based servers with ~14 new AMD EPYC 9655 CPU-based servers can provide an estimated 39,100 units of integer performance while using **up to 86% fewer servers and 69% less power.** Achieving the same performance level would require 35 2P Intel® Xeon® 8592+ CPU-based servers.[9xx5TCO-001B]

#5 Advance confidential computing

- AMD EPYC processors defend sensitive data from sophisticated attacks and avoid downtime with AMD Infinity Guard, a multilayered, hardware-based approach to security, including SEV Secure Nested Pages, SEV Encrypted State and Secure Memory Encryption.
- 5th Gen AMD EPYC processors add Trusted IO to the Infinity Guard feature set extending the trust boundary to external devices such as storage, SmartNICs and accelerators,[1] an increasingly critical capability with a lot of data being moved back and forth between the CPU and accelerators, as well as across the network in an AI supercomputer.
- All AMD EPYC 9005 Series CPUs are currently in the process of FIPS 140-3 certification to provide cryptographic hardware effectiveness. This certification is crucial for government agencies and businesses requiring validated and tested security measures for sensitive information.

AMD EPYC 9005 SERIES PROCESSORS



AMD
together we advance_data centers

Learn more at www.amd.com/epyc

1 GD-183A: AMD Infinity Guard features vary by EPYC™ processor generations and /or series. Infinity Guard security features must be enabled by server OEMs and/or Cloud Service Providers to operate. Check with your OEM or provider to confirm support of these features. Learn more about Infinity Guard at https://www.amd.com/en/technologies/infinity-guard.