

4TH GEN AMD EPYC™ 9004 SERIES PROCESSORS: THE NEXT GENERATION OF SERVER ARCHITECTURE AND ENERGY EFFICIENCY, TODAY

New capabilities in AI, high-performance computing and analytics—and even virtualization and cloud—are enabling amazing advances for enterprises worldwide. But what's the best data center strategy for improving performance and becoming more efficient while simultaneously improving business agility, security and, above all, time to value? With AMD EPYC™ processors, experience continued performance leaps, open a new world of possibilities and modernize efficiently while addressing data center sustainability goals, all while helping target and manage today's new set of business vulnerabilities. AMD EPYC processors are raising the bar yet again.

THE CONVERSATION ROADMAP

Engage your buyers in a clear, consistent and memorable way. Accelerate your buyer's decision confidence by sharing new perspectives, establishing yourself as a trusted partner and clarifying the case for taking action. Why AMD EPYC processors?



ICE BREAKER

Today's enterprise requires rapid advances in computing power and efficiency. Organizations are pivoting to new data-centric strategies to grow, nurture and analyze diverse information sets. Treating data as a living, breathing asset is a key competitive and policy strategy today, and it demands peak performance.



THE BREAKDOWN

What are the best ways to increase your data center flexibility and efficiency, simplify migrations, reduce costs and manage risk, all at the same time? Amid a storm of innovation and disruption, you must manage a variety of factors to identify the most promising avenues for change.



THE TURN

What if your next upgrade could improve the performance and agility of your existing landscape without requiring you to make changes first? What if you could deliver impressive leaps in value for the same job time, wattage and square footage?



THE BREAKTHROUGH

Open up a new world of possibilities by taking advantage of an emerging era of data agility and accelerated productivity. 4th Gen AMD EPYC processors provide the performance and efficiency to thrill us, move us and help us work smarter. This is the moment to redefine your potential and set new, ambitious goals.

KEY MESSAGES

To tackle the myriad challenges of today's business landscape, AMD EPYC processors can help improve transformation and performance efficiently and confidently.

Experience continued performance leaps

AMD EPYC 9004 Series processors deliver on AMD's multi-generation roadmap, featuring innovative design that enables powerful performance for demanding computing workloads. Imagine gaining up to 2.1x the integer [SP5-001C](#) and 2.2x the floating-point [SP5-002C](#) top-of-stack performance over the prior generation.

Open up a new world

Designed for solutions, not just specs, AMD EPYC processor-based servers are everywhere, from public and private clouds to virtual machines and containers and out to the edge. They help generate new value from remarkable workload performance and can be found across industry verticals, enabling exceptional performance for industry specific workloads, advanced virtualization and database performance.

Modernize efficiently while addressing data center sustainability goals

High performance, energy-efficient servers built on AMD EPYC 9004 Series processors can help you scale your data center in remarkable new ways while also optimizing it to support your efficiency and TCO goals. AMD helps you address your data center sustainability goals, even as we push the limits of high-performance computing.

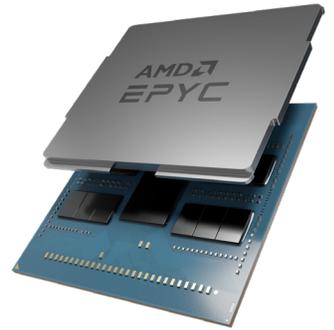
Help target target and manage a new set of business vulnerabilities

How can you best manage the onslaught of unpredictable new risks confronting your business, everything from hackers and compliance vulnerabilities to global supply chain disruptions and business continuity? The AMD "Security by Design" approach includes a set of state-of-the-art security features and a silicon embedded security subsystem. In addition, you can help protect your business's reputation by knowing that AMD works with its suppliers to advance human rights and maintain supply chain resilience.

DELIVERING INSIGHTS

You can help your prospect be the catalyst that improves outcomes and drives breakthroughs with an IT infrastructure that offers outstanding performance, power management, security features and TCO benefits. Some questions to consider asking your prospect include:

- How will you handle the challenge of improving data center agility and efficiency while simultaneously controlling complexity and costs?
- Are you experiencing frustrating data bottlenecks that impede application performance? Is improving throughput speed and volume important to your future business goals?
- Do you want to upgrade your HPC capabilities and explore new applications in the exciting realms of Big Data analytics and AI/ML without taking a hit on TCO?
- Would you like to be able to add protective shielding to applications and databases running on-prem or in virtual or cloud environments without having to add costs or code?



VALUE PROPOSITION AND BENEFITS

ARCHITECTURE LEADERSHIP

4th Gen AMD EPYC 9004 Series processors are the only x86-compatible 5nm CPU, with up to 96 x86 “Zen4” cores: offers 12 DDR5 memory channels – more memory channels than any other x86 processor [EPYC-033](#) – for the highest X86 memory throughput; [EPYC-032](#) and has 128 PCIe® Gen5 lanes that maximize I/O. [EPYC-035](#)

WORKLOAD PERFORMANCE LEADERSHIP

Compatible out of the box with your existing x86 applications, AMD EPYC 9004 Series processors offer a system-on-chip that’s designed for solutions not just specs and point the way to easier migrations and digital transformations. AMD EPYC processors have achieved leadership performance across a wide range of workloads for organizations of any size (over 300 world records and counting). For a complete set of world records achieved by the AMD EPYC family of processors, see amd.com/en/processors/epyc-world-records.

EFFICIENCY LEADERSHIP

The 5nm processor node technology of the AMD EPYC 9004 Series lets you deploy fewer servers to accomplish the same jobs, helping lower power usage and the associated lower CO₂ generation. A 2P 96-core AMD EPYC™ 9654 powered server has the highest overall ssj_ops/W score running SPECpower_ssj@2008. [SPS-011B](#)

STATE-OF-THE-ART SECURITY FEATURES

Building on the state-of-the-art AMD Infinity Guard security feature set, 4th Gen AMD EPYC processors add improved features such as 256-bit AES-XTS encryption and secure multi-key encryption (SMKE) that enables hypervisors to selectively encrypt address space ranges on CXL™-attached memory. This makes the existing software encryption features work seamlessly with CXL-attached memory. Leverage a growing ecosystem for confidential computing, encrypting data in-use in cloud and virtualized environments.

OPPORTUNITY AREAS

- **HCI**, where exceptional support for VMmark® vSAN™ enhances both performance and VM density while helping reduce data risk and TCO. More materials [here](#).
- **Relational databases**, where advanced throughput accelerates SQL and in-memory query times, helping you achieve actionable results faster. More materials [here](#).
- **HPC**, where you can vastly increase the number of computations per core, accelerating simulation timelines and shortening design cycles. More materials [here](#).
- **Big Data analytics**, with impressive query response times and exceptional queries per node. More materials [here](#).
- **ML (machine-learning) inference**, with impressive instructions per cycle for fast learning and quick responsiveness. More materials [here](#).
- **Financial services**, with high per-core performance for near-real-time calculation and communication. More materials [here](#).
- **Media and entertainment**, where incredibly fast rendering means shorter creative cycles and richer collaboration. More materials [here](#).
- **AMD Infinity Guard features**, with state-of-the-art security features on the die, helps defend against threats and keep your data safe. More materials [here](#).

KEY TAKEAWAYS

Leave every prospect with these four facts:

1

AMD EPYC 9004 Series processors bring thrilling leadership performance and a robust feature set to a wide range of x86 compatible CPU models, delivering fast, outstanding business value.

2

AMD EPYC 9004 Series processors can power today's most exciting breakthrough applications and help enable a broader spectrum of compelling use cases than ever, whether in your data center or in the cloud.

3

The remarkable energy efficiency of AMD EPYC 9004 Series processors helps lower TCO and is part of AMD's commitment to the development of environmentally sustainable technologies.

4

AMD EPYC 9004 Series processors are 'hardened at the core' and leverage a growing ecosystem for confidential computing, encrypting data in-use in cloud and virtualized environments.

TOGETHER WE ADVANCE DATA CENTER COMPUTING

[CONTACT AN AMD SERVER EXPERT](#)

RESOURCES

A wide variety of resources are available to guide your conversation with customers.

- 4th Gen AMD Processor Launch Hub at amd.com/epyc4
- AMD Partner Hub at amd.com/partner
- AMD EPYC Processor Selector Tools at amd.com/en/processors/epyc-tools
- AMD EPYC Technical Briefs at amd.com/en/processors/server-tech-docs/search
- [Sales Enablement Assets on the SRC](#)

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