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AMD Brings World-Class Performance of 4th Gen AMD EPYC™ Processors to Embedded Networking, Security, Storage and Industrial Systems

- *New energy-efficient EPYC Embedded 9004 Series combines embedded system-optimized features, enhanced security and scalability up to 96 cores —*
- *Siemens and Advantech are initial customers deploying solutions based on EPYC Embedded 9004 Series —*

NÜRNBERG, Germany, March 14, 2023 (GLOBE NEWSWIRE) -- **Embedded World 2023 (Hall 2, Stand 2-411)** — [AMD](#) (NASDAQ: AMD) today announced it is bringing world-class performance and energy efficiency to embedded systems with [AMD EPYC™ Embedded 9004 Series](#) processors. The new 4th generation EPYC Embedded processors powered by “Zen 4” architecture provide technology and features for embedded networking, security/firewall and storage systems in cloud and enterprise computing as well as industrial edge servers for the factory floor.

Built on the “Zen 4” 5nm core, the processors combine speed and performance while helping reduce both overall system energy costs and TCO. The series is comprised of 10 processor models with performance options ranging from 16 to 96 cores, and a thermal design power (TDP) profile ranging from 200W to 400W. The performance and power scalability afforded with AMD EPYC Embedded 9004 Series processors make them an ideal fit for embedded system OEMs expanding their product portfolios across a range of performance and pricing options. The AMD EPYC Embedded 9004 Series processors also include enhanced security features to help minimize threats and maintain a secure compute environment from power-on to run time, making them well suited for applications with enterprise-class performance and security needs.

“Supporting enterprise-grade reliability, AMD EPYC Embedded 9004 Series processors are targeted for heavy workload, ‘always-on’ embedded systems requiring exceptional compute performance and I/O agility in a power-optimized profile,” said Rajneesh Gaur, corporate vice president and general manager, Embedded Solutions Group, AMD. “With the launch of the EPYC Embedded 9004 Series processors, we’re bringing the power of data center-level computing to embedded networking, security, storage and industrial applications.”

With AMD EPYC Embedded 9004 Series processors, customers can create a variety of embedded networking, security, storage and industrial systems that operate in the most demanding conditions. AMD EPYC Embedded 9004 offers the world-class performance and efficiency, enhanced data security features and unmatched core scalability of the [EPYC 9004 Series server processor](#), while providing unique, embedded-specific benefits to help improve reliability and system longevity including:

- **Non-Transparent Bridging (NTB):** Helps enhance system reliability by enabling data exchange between two redundant CPUs.
- **Non-Volatile Dual In-Line Memory Module (NVDIMM¹):** NVDIMM is a hybrid memory consisting of volatile DRAMs and non-volatile Flash memory that helps retain data after a system power failure or reset by saving DRAM contents to Flash.
- **Dual Serial Peripheral Interface (SPI):** Enables two off-chip ROMs to be supported for secure boot.
- **Availability:** Up to 7-year planned availability to address embedded requirements for long life and support.

Customer Traction

Siemens and Advantech are among the lead OEM and ODM customers deploying the AMD EPYC Embedded 9004 Series. The processors will also be deployed by customers in networking for next-gen firewalls and software-defined routers, as well as enterprise and cloud storage systems.

Siemens' new SIMATIC IPC RS-828A server is powered by the EPYC Embedded 9004 Series processors. The system is designed for hyper-convergent infrastructures serving a wide range of applications, including automotive manufacturing, 5G base stations and IoT public clouds. The server can also be useful for applications involving AI or heavy computation, such as visual tracking in a retail environment.

“Siemens selected the AMD EPYC Embedded 9004 Series devices for our new high-performance, data center-class server because the processors reliably deliver performance and power efficiency while being able to operate seamlessly in extreme temperatures, as well as in settings with vibration or electromagnetic interference,” said Thibault de Assi, head of business line industrial computing, Siemens. “With AMD leadership in the data center, we have been able to leverage its exceptional expertise for our industrial-grade products, where performance and efficiency are paramount. The new processors will open new opportunities for the industrial market.”

Advantech's new ASMB-831 server board, with HPC-7420 4U Rackmount, features five PCIe[®] Gen5 x16 and two PCIe Gen5 x8 slots for four double-deck cards with DDR5 4800 MHz RDIMM and up to 384GB (6 DIMMS). The ASMB-831 server board is designed to enable image analysis in various use cases, including industrial machine vision, AOI and facial recognition for smart city applications, and security surveillance.

AMD EPYC Embedded 9004 Series Processor Overview

OPN	Model	Cores	Nominal TDP (W)	cTDP (W)	Base Freq (GHz)	Max Freq (GHz)
100-000000921	9654	96	360	320-400	2.4	3.7
100-000000912	9554	64	360	320-400	3.1	3.75
100-000000913	9454	48	290	240-300	2.75	3.8
100-000000914	9354	32	280	240-300	3.25	3.8
100-000000915	9254	24	200	200-240	2.9	4.15
100-000000916	9124	16	200	200-240	3.0	3.7
100-000000917	9654P	96	360	320-400	2.4	3.7
100-000000918	9554P	64	360	320-400	3.1	3.75
100-000000919	9454P	48	290	240-300	2.75	3.8
100-000000920	9354P	32	280	240-300	3.25	3.8

AMD at Embedded World 2023

At Embedded World 2023, AMD will be showcasing its latest hardware and software innovations for embedded applications and markets in Hall 2, Stand 2-411. Product and solution demonstrations will feature the new AMD EPYC Embedded 9004 Series processors, Ryzen™ Embedded devices, Kria™ SOMs and Zynq™ and Versal™ adaptive SoCs powering industrial, vision, automotive and healthcare-based applications. [Learn More](#)

EPYC Embedded 9004 Availability

The AMD EPYC Embedded 9004 Series processors are sampling now with production shipments expected in April 2023. To accelerate development, evaluation kits featuring a reference board, comprehensive documentation and development tool kits are available now to qualified customers.

Supporting Resources

- Learn more about [EPYC Embedded 9004 Series processors](#)
- Follow AMD on [Twitter](#)
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About AMD

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1. NVDIMM feature availability dependent on ecosystem support

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