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AMD Accelerates Innovation at the Edge with Kria K24 SOM and Starter Kit for Industrial and Commercial Applications

— K24 SOM and KD240 Kit enable the design of power-efficient, production-ready solutions for motor control and digital signal processing applications with a fast time to market —

SANTA CLARA, Calif., Sept. 19, 2023 (GLOBE NEWSWIRE) -- AMD (NASDAQ: AMD) today announced AMD Kria™ K24 System-on-Module (SOM) and KD240 Drives Starter Kit, the latest additions to the Kria portfolio of adaptive SOMs and developer kits. AMD Kria K24 SOM offers power-efficient compute in a small form factor and targets cost-sensitive industrial and commercial edge applications. Advanced InFO (Integrated Fan-Out) packaging makes the K24 half the size of a credit card while using half the power[1] of the larger, connector-compatible Kria K26 SOM.

The K24 SOM provides high determinism and low latency for powering electric drives and motor controllers used in compute-intensive digital signal processing (DSP) applications at the edge. Key applications include electric motor systems, robotics for factory automation, power generation, public transportation such as elevators and trains, surgical robotics and medical equipment like MRI beds, and EV charging stations.

Coupled with the KD240 Drives Starter Kit, an out-of-the-box-ready motor control-based development platform, the products offer a seamless path to production deployment with the K24 SOM. Users can quickly be up and running, speeding time to market for motor control and DSP applications without requiring FPGA programming expertise.

“The AMD Kria K24 SOM and KD240 development platform build on the breakthrough design experience introduced by the Kria SOM portfolio, offering solutions for robotics, control, vision AI and DSP applications,” said Hanneke Krekels, corporate vice president, Core Vertical Markets, AMD. “System architects must meet growing demands for performance and power efficiency while keeping expenses down. The K24 SOM delivers high performance-per-watt in a small form factor and houses the core components of an embedded processing system on a single production-ready board for a fast time to market.”

Many factories have hundreds of motors powering robotics that drive assembly lines and other equipment. It is estimated that around 70% of the total global electrical use by the industrial sector is tied to electric motors and motor-driven systems[2]. As such, even a 1% improvement in the efficiency of a drive system can have a significant positive impact on operational expenses and the environment.

“The AMD Kria SOM portfolio has helped make robust hardware for robotics and industrial edge applications available to the masses and we’re excited to see the portfolio extended with the new K24 SOM and KD240 Starter Kit,” said Greg Needel, CEO of Rev Robotics. “With Kria SOMs we’re able to simplify development of even advanced control loop

algorithms, adapt to changing software and hardware requirements, and build really cool things for both commercial and STEM educational customers."

Simplified DSP Development and Accelerated Design Cycles

The K24 SOM features a custom-built Zynq™ UltraScale+™ MPSoC device and the supporting KD240 starter kit is a sub-$400 FPGA-based motor control kit. Enabling developers to begin at a more evolved point in the design cycle, the KD240 provides easy access for entry-level developers compared to other processor-based control kits.

The K24 SOM comes qualified for use in industrial environments with support for more design flows than any generation before it. That includes familiar design tools like Matlab Simulink and languages like Python with its extensive ecosystem support for the PYNQ framework. Ubuntu and Docker are also supported. Software developers can also use the AMD Vitis™ motor control libraries while maintaining support for traditional development flows.

With the launch of Kria™ K26 SOM, AMD introduced the first App Store for edge applications. By introducing the KD240 Starter Kit, AMD is now the first to offer pre-built motor control apps, allowing users to create power-efficient industrial solutions that are reliable, available, and with advanced security features.

The KD240 is supported by an optional Motor Accessory Pack (MACCP), with additional motor kits available in the future that can be purchased separately for an enhanced ramp-up experience for developers.

Access to a Family of Scalable SOMs

Kria SOMs allow developers to skip the substantial design efforts around the selected silicon device and instead focus on providing differentiated, value-added features.

Connector compatibility enables easy migration between the K24 and K26 SOM without changing boards, allowing system architects to balance power, performance, size and cost for energy-efficient systems.

K24 SOMs are offered in both commercial and industrial versions and are built for 10-year industrial lifecycles. In addition to support for expanded temperature ranges, the industrial-grade SOM includes ECC-protected LPDDR4 memory for high-reliability systems.

The K24 SOM (commercial and industrial versions) and KD240 Drives Starter Kit are available to order now via direct order and worldwide channel distributors. The K24 commercial version is shipping today, and the industrial version is expected to ship in Q4.

Supporting Resources

- Learn more about the Kria K24 System-on-Module and the KD240 Drives Starter Kit
- Register and attend the Kria K24 webinar
- Become a fan of AMD on Facebook
- Follow AMD on Twitter

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[1] Based on AMD internal analysis in August 2023, comparing the dimensions of the Kria K24 SOM versus the Kria K26 SOM. Power consumption measured By AMD Labs in August 2023, using the xmutil platform utility tool running on a FOC sensor-based bistream on the K24 SOM and a Smart Camera bitstream on the K26 SOM. Results may vary. (SOM-002).
[2] Source: Energy Efficiency 2022, International Energy Agency, December 2022

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A photo accompanying this announcement is available at https://www.globenewswire.com/NewsRoom/AttachmentNg/14876110-a428-4f38-9c7a-d67c5282fe5a

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AMD Kria K24 SOM



AMD Kria K24 Adaptive SOM