

Kontron's New System-on-Module OSM-S i.MX93 for Secure Edge Computing and Machine Learning

The SoM combines cost effectiveness and energy efficiency as well as extensive connectivity for multimedia functions in the smallest possible installation space.

Ismaning, Germany, March 19, 2024 – [Kontron](#), a leading supplier of IoT/Embedded Computer Technology (ECT), has expanded its portfolio to include the OSM-S i.MX93 with Dual Core Arm® Cortex®-A55 @1.7 GHz with a 250 MHz Cortex® M33 real-time co-processor, up to 2 GB LPDDR4-RAM and 512 GB eMMC. The module can be directly soldered, allowing it to be assembled, tested and programmed by machine automation.

The System-on-Module with two CAN and two Ethernet interfaces is designed especially for gateways and all areas of industrial automation. The Neural Processing Unit (NPU) Arm® Ethos™ U-65 micro makes the acceleration of neural networks in high-performance embedded devices possible. It is ideal for use in machine vision applications and intelligent energy management systems. The microNPU offers increased performance for more demanding applications, providing computing power into the 0.5 TOPs range.

Security, flexibility and user-friendliness are guaranteed with the support of the EdgeLock® Secure Enclave, a pre-configured and autonomous security subsystem that is designed to implement the latest security functions on the hardware side. This security system is used in IoT applications such as smart city, smart building and edge computing.

Developed for the entry-level price segment, the SoM impresses with its variety of functions and interfaces in its compact size of just 30 mm x 30 mm. In addition to the MIPI DSI serial display interface with four lanes, the module also comes with a MIPI CSI camera interface with two lanes. The camera systems can be connected via LAN or USB. The Arm® Neon™ graphics unit can be used for accelerated processing of image data. The use of inline ECC in LPDDR4 RAM means that incorrect data in the main memory is detected and corrected at a low cost, ensuring data accuracy as well as data security.

Time-critical industrial applications are easy to implement with the Arm® Cortex® M33 @250 MHz real-time co-processor. The two CAN FD interfaces and two GbE LAN interfaces allow for fast and secure communication. One LAN port supports the Time Sensitive Networking (TSN) standard for real-time data transmission.

The first prototype for customers will be available starting in Q3/2024.

Further information:

A photograph in high resolution is provided here:

<https://profil-marketing.cloud/index.php/s/7Jn5mykSRZ6e7aT>

For more information, please visit:

<https://www.kontron-electronics.com/products/som/#produkt-2703-daten>

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About Kontron Electronics GmbH

Kontron Electronics is a full-service provider in the fields of electronics, development and manufacturing services. The portfolio includes proprietary and customized products, development and design services for complex electronic components, modules and systems, and production and assembly services for complete assemblies. Kontron Electronics is a leading global service provider for electronics with 450 employees at our German locations in Frickenhausen near Nürtingen, Halle (Saale) and Schorndorf and in Hungary at the Kontron Electronics Kft. production facilities in Pécs and Tab. For more information please visit: www.kontron-electronics.com

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About Kontron

Kontron AG (www.kontron.com, ISIN AT0000A0E9W5, WKN A0X9EJ, KTN) is a leading IoT technology company. For more than 20 years, Kontron has been supporting companies from a wide range of industries to achieve their business goals with intelligent solutions. From automated industrial operations, smarter and safer transport to advanced communications, connectivity, medical, and energy solutions, the company delivers technologies that add value for its customers. With the acquisition of Katek SE in early 2024, Kontron significantly strengthens its portfolio with the new GreenTec division, focusing on solar energy and eMobility, and grows to around 8,000 employees in over 20 countries worldwide. Kontron is listed on the SDAX® and TecDAX® of the German Stock Exchange.

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