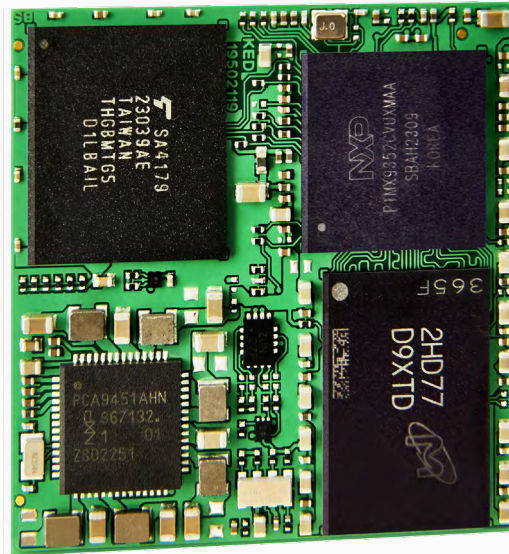


# OSM-S i.MX93

## SoM-Line



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

- NXP i.MX93, 2x Arm® Cortex®-A55 @1.7 GHz, 1x Arm® Cortex®-M33 @250 MHz
- 1x Arm® Ethos™ U-65 microNPU
- Security System EdgeLock® Secure Enclave
- 2x Gigabit Ethernet IEEE 1588 (1x with TSN)
- 2x CAN FD

| FUNCTION        |                                                                                                                                   | STANDARD                                                                                                                                                                                   |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MICROPROCESSOR  | CPU                                                                                                                               | NXP i.MX93, 2x Arm® Cortex®-A55 @1.7 GHz, 1x Arm® Cortex®-M33 @250 MHz, 1x Arm® Ethos™ U-65 microNPU                                                                                       |
| MEMORY          | LPDDR4-RAM<br>eMMC<br>EEPROM                                                                                                      | 1 GByte, optional 512 MByte up to 2 GByte<br>4 GByte, optional 8 GByte up to 64 GByte<br>8 kB (64 kb)                                                                                      |
| COMMUNICATION   | ETHERNET<br>USB<br>I/O<br>CAN                                                                                                     | 2x 1 Gbit/s IEEE 1588 (1x with TSN)<br>2x USB 2.0 (Host or Device)<br>4x UART, 2x I²C, 2x SPI, 10x GPIO, 3x PWM, 1x SAI, 2x SDIO (4-bit), 4x ADC<br>2x CAN FD                              |
| DISPLAY / TOUCH | LCD INTERFACE<br><br>CAMERA INTERFACE                                                                                             | 1x MIPI DSI (4-lane) up to 1920 x 1200 @60fps,<br>1x LVDS (4-lane) up to 1366 x 768 @60fps<br>1x MIPI CSI (2-lane)                                                                         |
| OTHER           | POWER SUPPLY<br>IO VOLTAGE<br>POWER CONSUMPTION<br>TEMPERATURE RANGE<br>RTC (I²C)<br>OPERATING SYSTEM<br>FORM FACTOR<br>FOOTPRINT | 5 V DC ±5 %<br>1.8 V<br>max. 3.5W, linux running <1.5W<br>-25 °C ... +85 °C<br>As an option<br>Embedded Linux (Yocto Distribution)<br>30 x 30 mm OSM 1.1 Size S<br>332 Pin / 1.25 mm pitch |
| SAFETY          |                                                                                                                                   | EdgeLock® Secure Enclave                                                                                                                                                                   |

## Product Highlights

The cost-effective OSM-S i.MX93 is a solderable SoM based on the Open Standard Module specification size S. The i.MX93 Dual-Core offers a wide range of functions and interfaces in a very small installation space of only 30 mm x 30 mm.

The integrated NPU (Neural Processing Unit) enables accelerated machine learning. Time-critical industrial applications can be easily realized via the Single Arm® Cortex®-M33 @250 MHz real-time co-processor.

Advanced security with integrated EdgeLock® Secure Enclave rounds off the wide range of possible applications

With NXP's innovative Energy Flex architecture, you get optimized performance and energy efficiency for industrial, IoT and automotive devices.

The Arm® Neon™ graphics unit can be used for accelerated processing of image data.

### Client Benefits

- OSM – Open Standard Module™ Size S
- OSM - Standard successfully established on the global market
- Fully automated soldering, assembly and testing possible
- Standard peripheral set with a variety of interfaces
- Requires only one voltage supply (5 V)

### Application

- IoT/Edge Devices
- Control and automation technology
- Industrial HMI
- Smart Home building automation
- Artificial intelligence in Edge device
- Minimum-footprint applications



## About Kontron

Kontron AG 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 6,500 employees in over 20 countries worldwide. Kontron is listed on the SDAX® and TecDAX® of the German Stock Exchange.

For more information, please visit: [www.kontron.com](http://www.kontron.com)

## About Kontron Electronics

Kontron Electronics GmbH is a full-service provider in the electronics industry, offering comprehensive services in development, rapid prototyping, and manufacturing. The company's portfolio includes proprietary and customer-specific products, development and engineering services for complex electronic components, modules, and systems, as well as production and assembly services for complete assemblies. The company is part of the Kontron AG technology group.

For more Information please visit: [www.kontron-electronics.com](http://www.kontron-electronics.com)

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