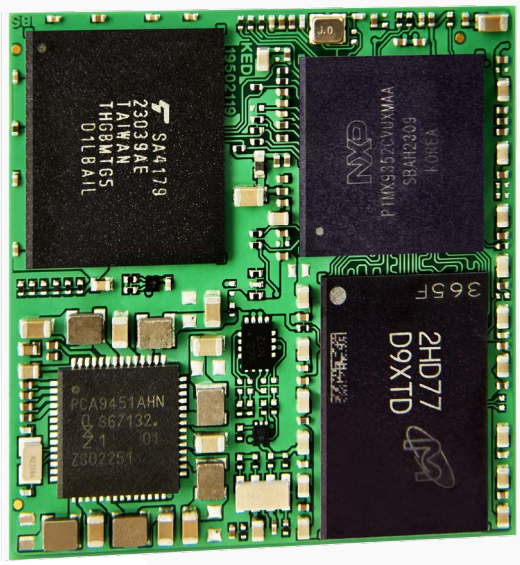
OSM-S i.MX93

SoM-Line



OPEN STANDARD MODULE™

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

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The Power of IoT

Technical Information

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 eMMC EEPROM	1 GByte, optional 512 MByte up to 2 GByte 4 GByte, optional 8 GByte up to 64 GByte 8 kB (64 kb), optional
COMMUNICATION	ETHERNET USB I/O CAN	2x 1 Gbit/s IEEE 1588 (1x with TSN) 2x USB 2.0 OTG 4x UART, 2x I²C, 2x SPI, 10x GPIO, 3x PWM, 1x SAI, 2x SDIO (4-bit), 2x ADC 2x CAN FD
DISPLAY / TOUCH	LCD INTERFACE CAMERA INTERFACE	1x MIPI DSI (4-lane) up to 1920 x 1200 @60fps, 1x LVDS (4-lane) up to 1366 x 768 @60fps 1x MIPI CSI (2-lane)
OTHER	POWER SUPPLY IO VOLTAGE POWER CONSUMPTION TEMPERATURE RANGE RTC (I²C) OPERATING SYSTEM FORM FACTOR FOOTPRINT	5 V DC ±5 % 1,8 V TBD -25 °C ... +85 °C As an option Embedded Linux (Yocto Distribution) 30 x 30 mm OSM Size S 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 is a global leader in IoT/Embedded Computing Technology (ECT) and offers individual solutions in the areas of Internet of Things (IoT) and Industry 4.0 through a combined portfolio of hardware, software and services. With its standard and customized products based on highly reliable state-of-the-art technologies, Kontronprovides secure and innovative applications for a wide variety of industries. As a result, customers benefit from aceerated time-to-market, lower total cost of ownership, extended product lifecycles and the best fully integrated applications.

For more information, please visit: **www.kontron.com**

About Kontron Electronics

Kontron Electronics GmbH is a full-service provider in the field of electronics, development and manufacturing services. Our business portfolio includes proprietary and client-specific products, development and design services for complex electronics components, modules and systems, as well as production and assembly services for entire devices. The company is part of the technology corporation Kontron AG.

For more Information please visit: **www.kontron-electronics.com**

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