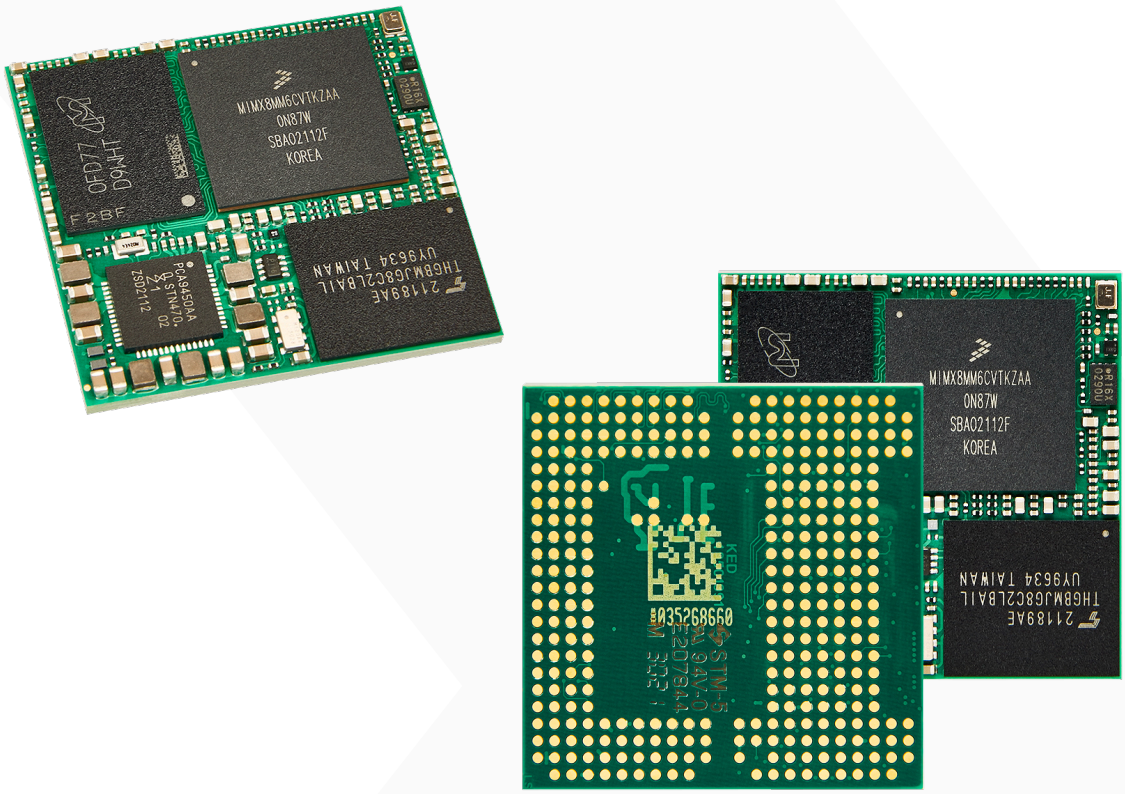
OSM-S i.MX8M Mini

SoM-Line



OSM-Modul Quad Core with 1.6 GHz, eMMC and LPDDR4 Memory on just 30 x 30 mm (Size-S)

- NXP i.MX8M Mini, 4x Arm® Cortex®-A53 @1.6 GHz and 1x Arm® Cortex-M4 @400 MHz
- 2D GPU, 3D GPU
- Memory expansion
- Preconfigured U-boot boot loader; programming with client-specific Embedded Linux possible

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Technical Information

FUNCTION		STANDARD	OPTIONS
MICROPROCESSOR	CPU	NXP i.MX8M Mini, 4x Arm® Cortex®-A53 @1.6 GHz, 1x Arm® Cortex®-M4 @400 MHz, 2D GPU and 3D GPU	
MEMORY	LPDDR4-RAM NOR-FLASH eMMC EEPROM	4 GByte 2 MByte 32 GByte 8 kB (64 kb)	1 GByte, 2 GByte 4 GByte up to 64 GByte On request
COMMUNICATION	ETHERNET USB I/O	1x 1 Gbit/s (RG MII) 2x 2.0 OTG 4x UART, 2x I²C, 2x SPI, 24x GPIO, 3x PWM, 1x PCIe, 1x SAI, 2x SDIO (1x 4-bit, 1x 8-bit)	
DISPLAY / TOUCH	LCD INTERFACE CAMERA INTERFACE	1x MIPI DSI (4-lane), up to 1920 x 1080 @60 fps 1x MIPI CSI (4-lane)	
OTHER	POWER SUPPLY IO VOLTAGE POWER CONSUMPTION TEMPERATURE RANGE RTC (I²C) OPERATING SYSTEM FORM FACTOR FOOTPRINT	5 V DC ±5 % 1.8 V Linux running < 1 W, max. < 3.5 W -25 °C … +85 °C 45 nA / 1ppm @25 °C Embedded Linux (Yocto Distribution) 30 x 30 mm OSM Size-S 332 Pin / RM 1.25 mm	3.3 V
SECURITY		HAB Secure Boot, TrustZone, TRNG, RSA bis zu 4096, AES-128/192/256, 3DES, ARC4, MD-5, SHA bis zu 256, ECC, Secure JTAG	

Product Highlights

The OSM - Open Standard Module™ specifications create a standard for manufacturer-specific modules. As such, they help to combine the advantages of modular embedded computing with growing expectations in terms of cost, installation space and interfaces. Our new system-on-module SoM OSM-S i.MX8M Mini offers maximum performance with the smallest possible footprint for high-level 3D graphics, diverse communication options and CPU-intensive applications. The state-of-the-art processor (4x Cortex®-A53, 1x Cortex®-M4) and memory technology (LPDDR4) can be readily and rapidly adapted for custom board and application designs.

Equipped with security features including the latest encryption technologies and secure boot, the SoM satisfies maximum security requirements. In combination with modern wireless technologies and software architectures, it is the ideal component for secure devices in large-scale IoT networks.

High performance, compact design and low cost makes the SoM OSM-S i.MX8M Mini an excellent basis for developing your own baseboards. Ready2Use: Thanks to the supplied Linux Board Support Package and end2end development environment, the system can be deployed immediately.

Client Benefits

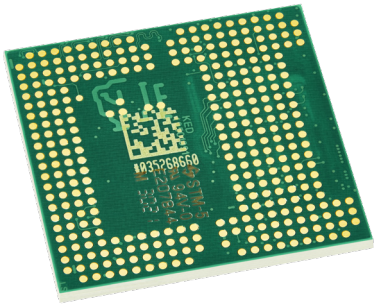
- OSM - Open Standard Modul™ Size S
- Fully automated soldering, assembly and testing possible
- Quick and easy realization of complex processor solutions
- Complex pin multiplexing and sophisticated DDR4-RAM layout already implemented
- Requires only one voltage supply (5 V)

Applications

- IoT/Industrie 4.0
- Automation and control technology
- HMI, Touch Panel
- Consistent processor module for wide range of Baseboard families
- Minimum-footprint applications

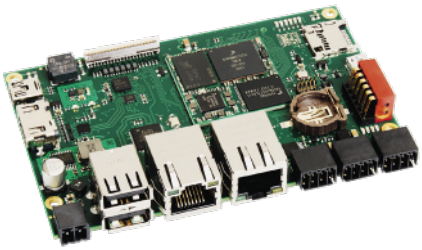
Products SoM-Line

PRODUCTNAME	ARTICLE NO.	OPTIONS
OSM-S i.MX8M Mini Quad 1 GB/8 GB	40099 227	-
OSM-S i.MX8M Mini Quad 2 GB/8 GB	40099 229	-
OSM-S i.MX8M Mini Quad 4 GB/32 GB	40099 231	-



Products Board-Line

PRODUCTNAME	ARTICLE NO.	OPTIONS
BL i.MX8M Mini Quad OSM-S 1 GB/8 GB	tbd	-
BL i.MX8M Mini Quad OSM-S 4 GB/32 GB	tbd	-
AC Connector Set BL/AL/DL	30099 003	Order in addition to BL i.MX8M Mini OSM-S
USB-UART Adapter	40099 101	-



Development kit

PRODUCTNAME	ARTICLE NO.	OPTIONS
DK 7" i.MX8M Mini Quad 4 GB/32 GB	tbd	BL i.MX8M Mini Quad OSM-S, 4 GB/32 GB, Touch Display, Power Supply, Cables, Debug Adapter

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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