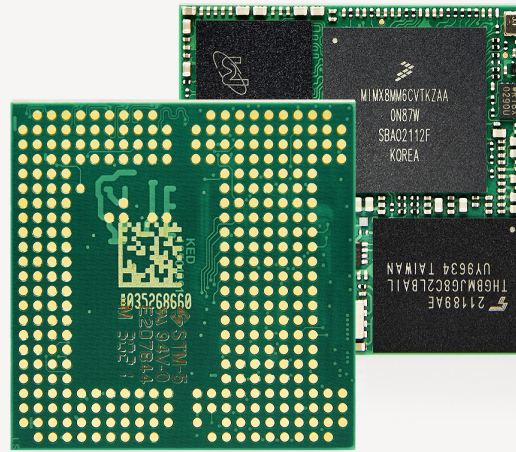
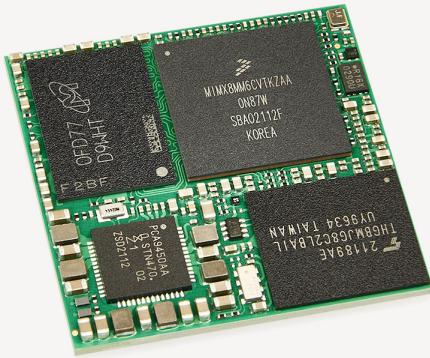


► OSM-S i.MX8M Mini



OSM Module QUAD CORE WITH 1.6 GHZ, EMMC AND LPDDR4 MEMORY ON JUST 30 mm x 30 mm (Size S)

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 communications 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.

► FEATURES

- 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

► 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

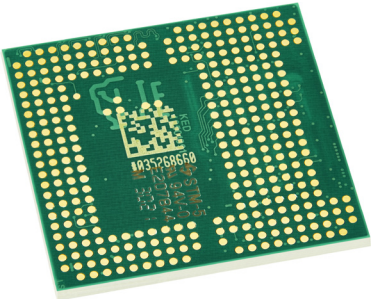
- IoT/Industrie 4.0
- Automation and control technology
- HMI, Touch Panel
- Consistent processor module for wide range of Baseboard families
- Minimum-footprint applications

► TECHNICAL DATA

FUNCTION	STANDARD	OPTIONS
MICROPROZESSOR		
CPU	4x Arm® Cortex®-A53 @1.6 GHz, 1x Arm® Cortex®-M4 @400 MHz, 2D GPU and 3D GPU	
MEMORY		
LPDDR4-RAM	4 GB	1 GB, 2 GB
NOR-Flash	2 MB	
eMMC	32 GB	4 GB up to 64 GB
EEPROM	1 kb	Up to 128 kb
COMMUNICATION		
Ethernet	1x 1 Gbit/s (RG MII)	
USB	2x 2.0 OTG	
I/O	4x UART, 2x I ² C, 2x SPI, 24x GPIO, 3x PWM, 1x PCIe, 1x SAI, 2x SDIO (1x 4-bit, 1x 8-bit)	
DISPLAY / TOUCH		
LCD Interface	1x MIPI DSI (4-lane), bis zu 1920 x 1080 @60 fps	
Camera interface	1x MIPI CSI2 (4-lane)	
OTHER		
Power supply	5 V DC ±5 %	
IO voltage	1.8 V	3.3 V
Power consumption	Linux running < 1 W, max. < 3.5 W	
Temperature range	-25 °C ... +85 °C	
RTC (I ² C)	45 nA / 1ppm @25 °C	
Operating system	Embedded Linux (Yocto Distribution)	
Form factor	30 x 30 mm OSM Size-5	
Footprint	332 Pin / RM 1.25 mm	
SAFETY		
	HAB Secure Boot, TrustZone, TRNG, RSA up to 4096, AES-128/192/256, 3DES, ARC4, MD-5, SHA up to 256, ECC, Secure JTAG	

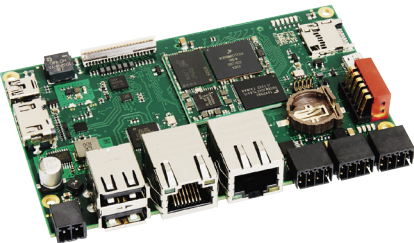
► PRODUCTS SOM-LINE

PRODUCT NAME	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

PRODUCT NAME	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

PRODUCT NAME	ARTICLE NO.	CONTENTS
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



POSSIBILITIES START HERE



► 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 Kontron and the technology corporation S&T.

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