The MAS OSM SMARC ADAPTER i.MX93 is based on the new OSM 1.1 standard (Size-S) and SMARC 2.11 for completely machine processible low-cost embedded computer on modules.

APPLICATION AREAS

INDUSTRIAL AUTOMOTIVE MEDICAL ARTIFICIAL INTELLIGENCE

OSM SMARC ADAPTER i.MX93

The MAS OSM SMARC ADAPTER i.MX93 was designed to evaluate the NEITH i.MX93 the new OSM from MAS Elettronica.

MAS OSM SMARC ADAPTER i.MX93 provides fast and low power LPDDR4x memory technology with inline ECC support, combined with up to 256GB eMMC Flash memory. Hardware Watch dog, Chip ID are integrated in the board. Various interfaces for embedded applications such as Dual Gigabit Ethernet(RGMII), USB 2.0, 2x CAN-FD, MIPI-DSI and MIPI CSI-2 (2-lane) for connecting a camera are available. The typical design power ranges from 2 W to 4 W. Logevity is 15 years.
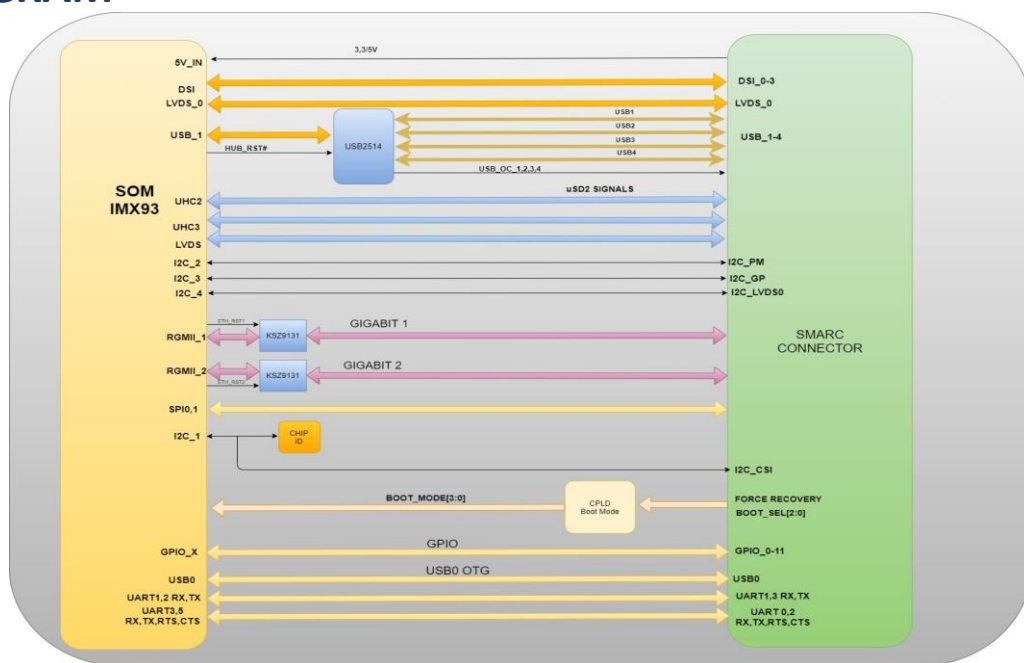
The module is compliant with the SMARC 2.11 standard. For evaluation and design-in of the new MAS OSM i.MX93 module, MAS provides a development platform and a starter kit. A Yocto based Linux Board Support Package is available.

MADE in ITALY

Design & Production

MAIN FEATURES

Arm® Core	MAS OSM SMARC ADAPTER i.MX93
Arm® Core	1-2 X Cortex-A55, 1 X Cortex-M33@250Mhz
NPU	ARM Ethos-U65 micro NPU with 256 MACs/Cycle
DRAM	Up to 2GB 3700MT/s LPDDR4 SDRAM, soldered, inline ECC support
eMMC	8GB, ver 5.0 (HS400) expandable up to 256GB
CSI	1x MIPI CSIx2
VIDEO	1x LVDS up to 720p 60fps 1x DSI up to 1080p 60fps
Ethernet	2 x Gigabit KSZ9131

Arm® Core	MAS OSM SMARC ADAPTER i.MX93
GPIO	20x GPIO, configurable as input or output, interrupt capable 2x PWM 2x ADC inputs (12-bit)
Serial interfaces	4x UART
Other interfaces	2x I2C up to 400 Kbit/s 2x SPI (with two chip selects) 2x CAN-FD /CAN 2.0B
USB	4 x USB 2.0
Operating System	Linux 5.15.xx, Kirksotone
Dimentions	82x50mm OSM SMALL Format
Temperature	Commercial: 0° … 70°C (operating) -20° - 85°C (storage) Extended: -25° … 85°C (operating) -40° -85°C (storage) Industrial: -40° … 85°C (operating) -40° -85°C (storage)

i.MX93 SOM BLOCK DIAGRAM

ORDERING

ORDERING CODE	DESCRIPTION	Comments
OSMA_000_0_0	Full feature board	Standard product

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