

FSSM95S (preliminary)

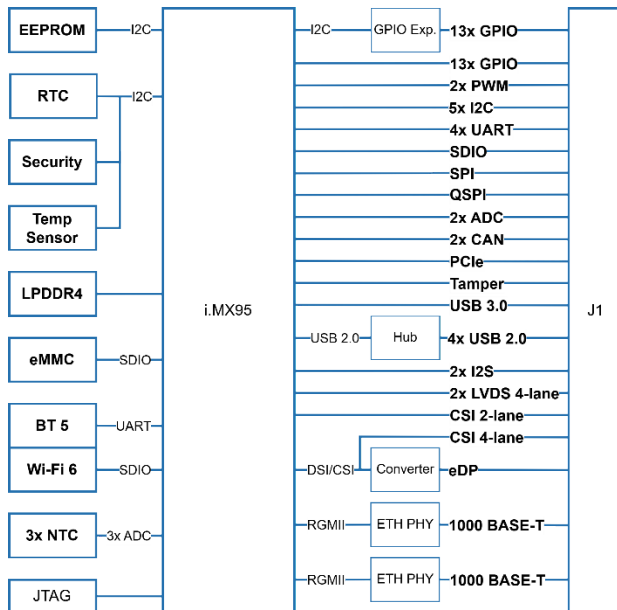
Computer-On-Module with NXP i.MX 95



Characteristics

- **NXP i.MX 95** Application Processor:
6x Cortex®-A55 & Cortex®-M7 & Cortex®-M33, 2D/3D Arm Mali GPU, VPU, ISP, **NPU (2 TOPS)**
Arm®TrustZone® architecture, EdgeLock® secure enclave
Energy Flex architecture
- LPDDR4x, eMMC, EEPROM
- Security Element (TPM 2.0 or SE050)
- High-performance HMI applications, machine vision and secure networked edge computing.

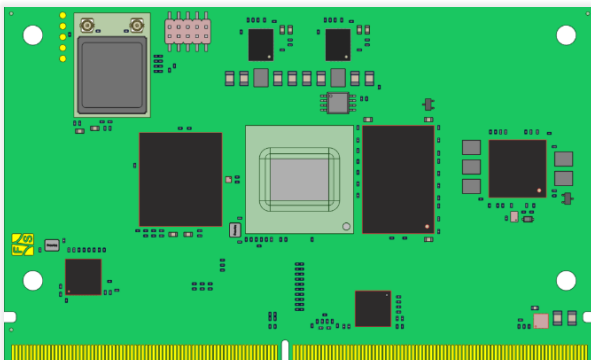
Block Diagram



Description

Powered by the NXP i.MX 95 processor, the FSSM95S delivers **integrated AI** and **machine learning** capabilities (2 TOPS), optimized for demanding edge computing applications. With dual-camera support, 3D graphics acceleration, and 4k video encoding/decoding, it's ideal for advanced image processing and multimedia solutions.

Thanks to its extensive connectivity options featuring dual Gigabit Ethernet, Wi-Fi 6, Bluetooth 5, as well as USB 3.0 and PCIe interfaces the module seamlessly integrates into industrial and medical environments. Display support includes LVDS and eDP. The FSSM95S operates reliably in a wide temperature range from -40°C to +85°C. Robust security features such as **TrustZone**, **Secure Boot**, and a **Secure Element** ensure maximum data protection.



Operating Systems

F&S offers comprehensive software support for the operating system as well as various workshops*.

- Linux Yocto and Debian
- QNX (under development)
- Windows 11 IoT Enterprise (under development)
- FreeRTOS / Zephyr for Cortex-M / Cortex-A
- Qt workshop
- **Secure Boot workshop**
- Asymmetric Multiprocessing workshop

Starterkit

To facilitate the implementation of the module in the target application, F&S offers a Starterkit*, including:

- SMARC FSSM95S
- Baseboard
- Cable Kit
- 10" LVDS Touch-Display (1024 x 600) px
- Cooling Solution

Order Notations

FSSM95S-V4I-LIN

standard, industrial:

i.MX95: 6x Cortex-A55 @ 1.8GHz, 2GB RAM, 32GB eMMC, EEPROM, USB 3.0, 4x USB Host, 2x Gbit LAN PHY, LVDS, Wi-Fi 6e WLAN, BT 5, SE050, RTC, -25°C +85°C, Linux

In addition to the standard version(s) listed on our homepage, F&S also offers and supports customer-specific configurations***.

FSSM95-SKIT-LIN

Starterkit for FSSM95S.

Technical Data (Quickfacts)

Power Supply	5 V
Power Consumption	4 W (typ.)
Processor	NXP i.MX 95
Memory	LPDDR4x x32 up to 16GB eMMC up to 128GB 64Kb EEPROM
SMARC Interfaces**	2x Gbit Lan Phy, Wi-Fi 6 & BT 5.4, SDIO (4 bit), PCIe , USB 3.0 Host, 4x USB 2.0 (1x OTG), 2x CAN-FD, 4x UART, 5x I2C, 2x SPI, 1x QSPI, 2x I2S, 3x PWM, 26x GPIO, 2x ADC, Tamper, JTAG
I/O voltage	1.8 V
Display	LVDS (2x 4-lane or 8-lane) and eDP and MIPI-DSI
Camera	2x MIPI-CSI (2 & 4-lane)
RTC	PCF85263ATL
Security Element	TPM 2.0 or EdgeLock® SE050
Temperature Range	-40°C ... +85°C
Size (L x B x H)	(82 x 50 x 5) mm

* You can find detailed information on our website.

** Other configurations possible

*** Please contact us for further information.

The information within this document is subject to change without notice.
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