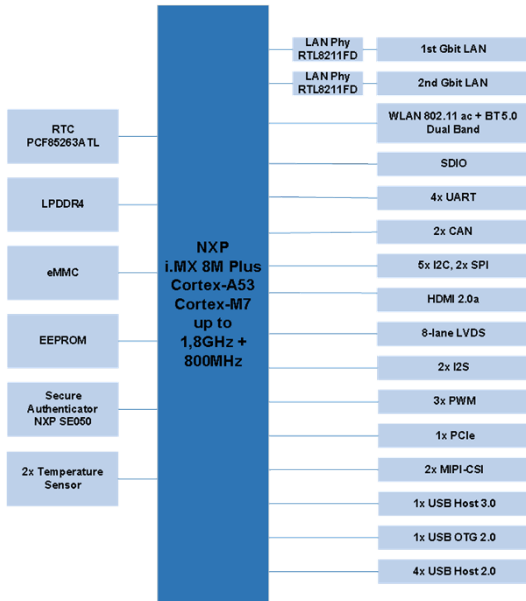# FSSM8MP

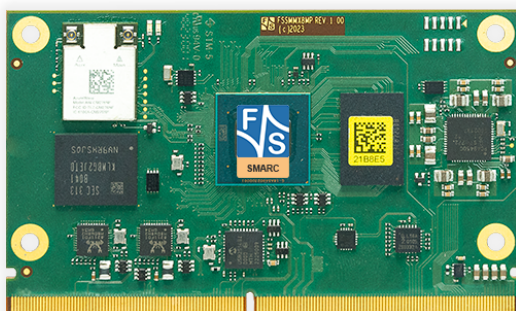*Computer-On-Module with NXP i.MX 8M Plus*

Characteristics

- NXP i.MX 8M Plus Application Processor:
  4x Cortex®-A53 & Cortex®-M7, 2D/3D GPU, VPU, ISP, NPU Arm®TrustZone® architecture
- LPDDR4, eMMC, EEPROM
- Real-Time Clock (RTC)
- USB 3.0, USB Hub, PCIe, 2x Gbit LAN
- Secure Element
- Extended Industrial Temperature Range
- Well balanced price/performance ratio
- Minimum availability: 2035

Operating Systems

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

- Linux Yocto
- Linux Debian
- Windows 10 IoT Enterprise
- FreeRTOS for Cortex-M
- Qt workshop
- Secure Boot workshop
- Asymmetric Multiprocessing workshop

Block Diagramm

Starterkit

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

- SMARC FSSM8MP
- Baseboard
- Cable Kit
- 10" LVDS Touch-Display (1024 x 600) px
- Cooling Solution

Order Notations

FSSM8MP-V4I-LIN
standard, industrial:
i.MX8MP: 4x Cortex-A53 @ 1.6GHz, 2GB RAM, 32GB eMMC, EEPROM, USB 3.0, 4x USB 2.0 Host, 2x Gbit LAN Phy, LVDS, WiFi 5 WLAN, BT 5, Secure Element SE5x, 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***.

FSSM8MP-SKIT-LIN or FSSM8MP-SKIT-W10
Starterkit for FSSM8MP.

Description

Powered by the NXP i.MX 8M Plus processor, the FSSM8MP delivers integrated AI and machine learning capabilities, optimized for demanding edge computing applications. With dual-camera support, 3D graphics acceleration and 1080p 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 5, Bluetooth 5.0, as well as USB 3.0, 4x USB 2.0 and PCIe interfaces the module seamlessly integrates into industrial and medical environments. Display support includes LVDS or MIPI-DSI, as well as HDMI. The FSSM8MP operates reliably in a wide temperature range from -40°C to +85°C, with robust security features such as TrustZone, Secure Boot and a Secure Element ensuring maximum data protection.

Technical Data (Quickfacts)

Power Supply:	5 VDC
Power Consumption:	4 W (typ.)
Processor:	NXP i.MX 8M Plus + Secure Element + 2x TempSensor
Memory:	LPDDR4 x32 **up to 8GB** eMMC **up to 64GB** 64Kb EEPROM
Interfaces:	2x Gbit Lan Phy SDIO (4 bit), PCIe 1x USB3.2 Host, 3x USB 2.0 Host, 1x USB2.0 OTG, 2x CAN-FD, 4x UART, 5x I2C, 2x SPI, QSPI, 2x I2S, 3x PWM, JTAG
I/O voltage:	1.8 V
Display:	LVDS (8-lane) or MIPI-DSI/LVDS, DVI
Camera:	2x MIPI-CSI (2/4-lane)
RTC	PCF85263ATL
Temperature Range:	-40°C … +85°C
Size (L x B x H):	(82 x 50 x 5.5) mm
Weight:	≈ 10 g

* You can find detailed information on our website.

*** Please contact us for further information.