FS 93 OSM-SF

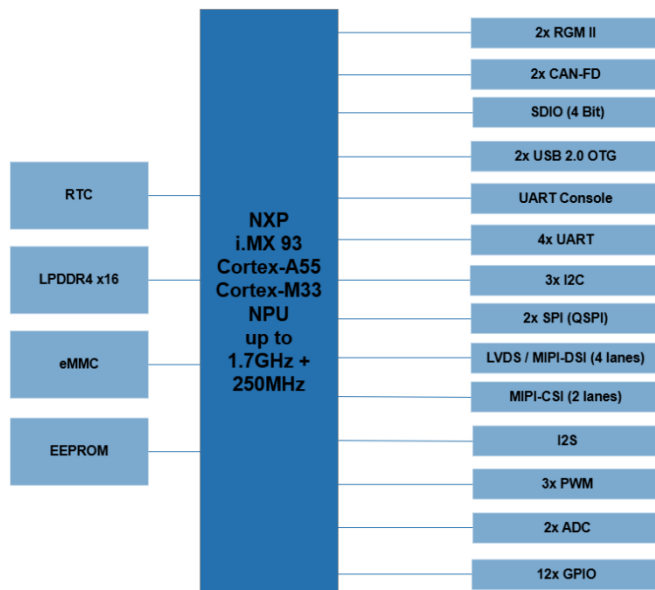*Computer-On-Module with NXP i.MX 93*

Characteristics

- NXP i.MX93 Application Processor:
  2x Cortex®-A55 & Cortex®-M33, NPU
  Arm®TrustZone® architecture, EdgeLock® secure enclave
  Energy Flex architecture
- LPDDR4, eMMC, EEPROM
- Real-Time Clock (RTC)
- Extended Industrial Temperature Range
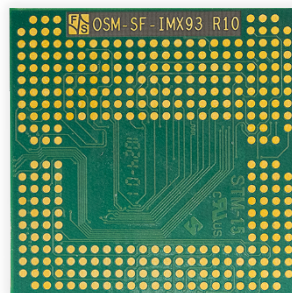- Well balanced price/performance ratio
- Minimum availability: 2035

Operating Systems

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

- Linux Yocto
- Linux Debian
- Windows 11 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:

- 2x OSM93-V1I**,
- Baseboard,
- Cable Kit,
- 7" LVDS Touch-Display (1024 x 600) px,
- Cooling Solution.

Order Notations

OSM93-V1I
FS 93 OSM-SF module, standard, industrial:
i.MX93: 2x Cortex®-A55 @ 1.7GHz with NPU, 1GB RAM, 8GB eMMC, LVDS, EEPROM, RTC, -25°C +85°C, Linux

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

OSM93-SKIT-LIN
Starterkit for FS 93 OSM-SF

Description

The FS 93 OSM-SF, fully compatible with the SGET's OSM standard v1.2 (size-S), is a solder on module that offers a variety of interfaces, such as LAN, USB, SDIO, SPI, UART, I2C, CAN, MIPI-DSI, LVDS, MIPI-CSI, GPIOs, … It implements the NXP i.MX93 application processor, providing optimized performance, efficient machine learning and integrated advanced security to support energy efficient edge computing for Industrial, IoT and automotive devices.

Due to the small size of (30 x 30) mm, the modules are ideal for applications, where space is limited. The single-sided assembly simplifies the implementation and is very robust against shock and vibration.

Technical Data (Quickfacts)

Power Supply:	5 VDC
Power Consumption:	2 W (typ.)
Processor:	NXP i.MX93
Memory:	LPDDR4 x16 **up to 2GB**
	eMMC **up to 64GB**
	64Kb EEPROM
Interfaces:	2x RGMII (Gigabit Ethernet)
	1x SDIO (4 bit)
	2x USB 2.0 OTG
	2x CAN-FD, 5x UART, 12x GPIO
	3x I2C, 2x SPI (QSPI), 1x I2S,
	3x PWM, 2x ADC
	JTAG
I/O voltage:	1,8 V
Display:	LVDS or MIPI DSI (4 lane)
Camera:	MIPI CSI (2 lane)
RTC	PCF85263ATL
Temperature Range:	-40°C … +85°C
Size (L x W x H):	(30 x 30 x 2) mm
Weight:	≈ 5 g

 * You can find detailed information on our website.
 ** 1x soldered onto an adapter which can be plugged onto the baseboard.
   1x additional mechanical sample.
*** Please contact us for further information.