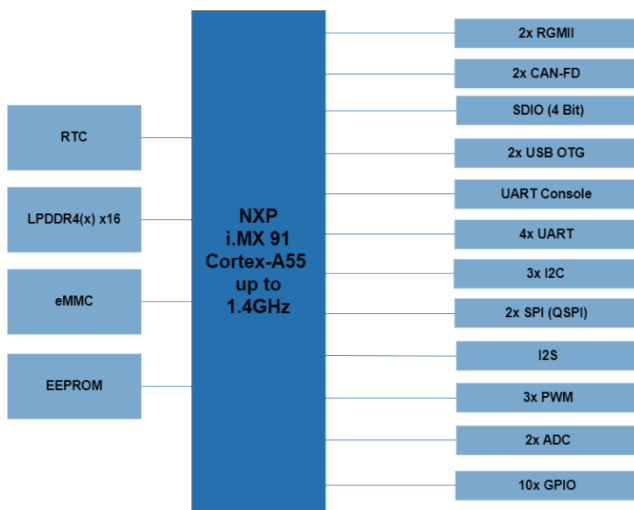


Characteristics

- NXP i.MX91 Application Processor:
Cortex®-A55
Arm®TrustZone® architecture, EdgeLock® secure enclave
- LPDDR4, eMMC, EEPROM
- Real-Time Clock (RTC)
- Extended Industrial Temperature Range
- Cost-effective Entry Level LGA module
- Minimum availability: 2039

Block Diagramm

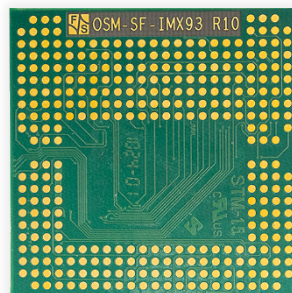


Description

The FS-91-OSM-SF is fully compatible with SGET's OSM standard (Size S). It is a solder on module that offers a variety of interfaces (i.e. LAN, USB, SDIO, CAN). NXP i.MX91 is NXP's Cost-effective entry level processor. It combines high performance and energy efficiency with state of the art security.

The SOM is an excellent choice for Industrial, IoT, Gateways, access control and EV charging stations.

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.



Operating Systems

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

- Linux Yocto
- Qt workshop
- LVGL workshop
- Secure Boot workshop

Starterkit

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

- 2x OSM-SF-IMX91**
- Baseboard
- Cable Kit
- Cooling Solution

Order Notations

FS-91-OSM-SF-V11

standard, industrial:

i.MX91: Cortex-A55 @ 1.4GHz, 1GB RAM, 8GB eMMC, EEPROM, 2x RGMII, 2x USB, UART, 3x I2C, SPI, QSPI, 2x CAN, I2S, LVDS, 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***.

FS-91-OSM-SKIT-LIN

Starterkit for OSM-SF-IMX91.

Technical Data (Quickfacts)

Power Supply:	5 VDC
Power Consumption:	2 W (typ.)
Processor:	NXP i.MX91
Memory:	LPDDR4 x16 up to 2GB eMMC up to 64GB 64Kb EEPROM
Interfaces:	2x RGMII (Gigabit Ethernet) SDIO (4 bit) 2x USB 2.0 OTG 2x CAN-FD, 5x UART, 10x GPIO 3x I2C, 2x SPI, QSPI, I2S, 3x PWM, 2x ADC JTAG
I/O voltage:	1.8 V
Display:	(RGB)
Camera:	---
RTC	PCF85263ATL
Temperature Range:	-40°C ... +85°C
Size (L x B 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.