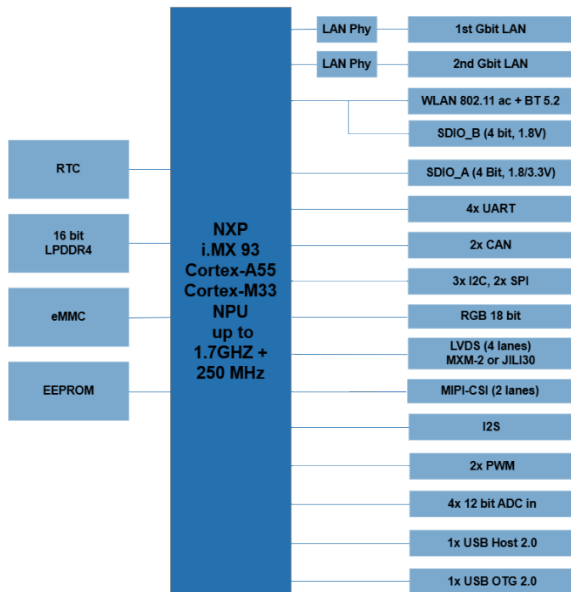# efus™MX93

System-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
- Highly integrated SoM for easy carrier board design
- Minimum availability: 2038
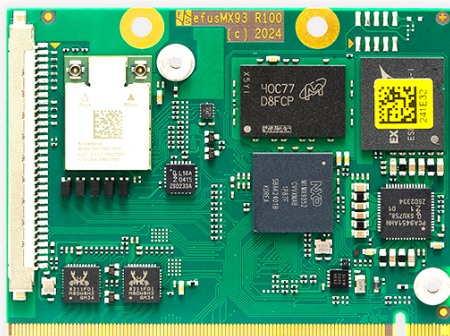
Block Diagramm

Description

efusMX93 – Efficient. Functional. Universal. Scalable

The **efusMX93** module combines the energy-efficient **NXP i.MX93 CPU** with the proven advantages of the **efus standard**:

efficient in power consumption, **f**unction-rich with numerous interfaces, **u**niversal in application, and **s**calable for a wide range of use cases.

Thanks to its compact form factor, standardized MXM-2 connector and layout-friendly pin assignment, the efusMX93 is easy to integrate into custom carrier boards – making it ideal for industrial, medical, HMI, and other embedded applications.

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/Zephyr*** for Cortex-M
- Qt workshop
- Secure Boot workshop
- Asymetric Multiprocessing workshop

Starterkit

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

- efusMX93
- Baseboard
- Cable Kit
- 7" LVDS Touch-Display (1024 x 600) px
- Cooling Solution

Order Notations

efusMX93-V4I-LIN
standard, industrial:
i.MX93: 2x Cortex-A55 @ 1.7GHz, 2GB RAM, 64GB eMMC, EEPROM, 2x Gbit LAN Phy, 2x USB, WiFi 6/BT5, 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***.

EFUSMX93-SKIT-LIN
Starterkit for efusMX93.

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**
	EEPROM
Interfaces:	2x Gbit LAN Phy
	SDIO (4 bit)
	2x USB 2.0 OTG
	2x CAN-FD, 7x UART, 6x I2C, 2x SPI, I2S, 2x PWM, 4x ADC
	JTAG
I/O voltage:	3.3 V
Display:	MIPI-DSI (4-lane) or LVDS (4-lane)
Camera:	MIPI-CSI (2-lane)
RTC	PCF85263ATL
Temperature Range:	-40°C … +85°C
Size (L x B x H):	(47 x 62.1 x 11) mm
Weight:	≈ 15 g

* You can find detailed information on our website.

*** Please contact us for further information.