FS 8MM OSM-SF

Computer-On-Module with NXP i.MX8M Mini

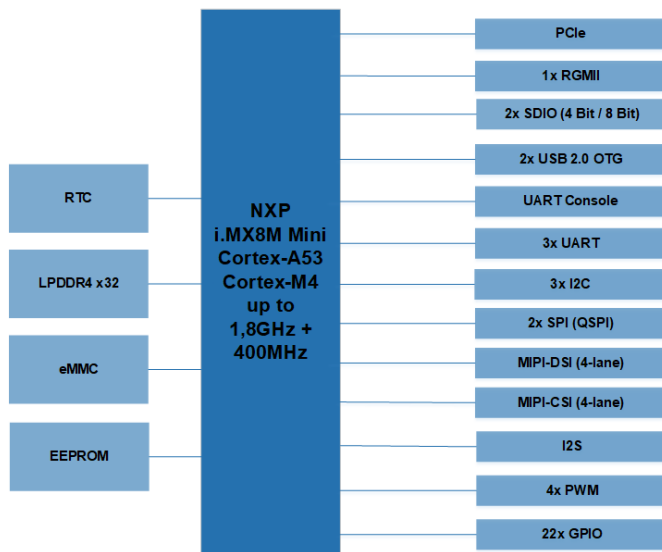**OPEN STANDARD MODULE™**

Characteristics

- NXP i.MX8M Mini Application Processor:
  4x Cortex®-A53 & Cortex®-M4
  Arm®TrustZone® architecture
- 2D GPU (GC320), 3D GPU (GCNanoUltra), VPU
- LPDDR4, eMMC, EEPROM
- Real-Time Clock (RTC)
- For applications with a sophisticated graphical user interface
- Minimum availability: 2035

Operating Systems

F&S offers comprehensive software support for the operating system as well as various workshops*.
- Linux Yocto
- Linux Debian
- FreeRTOS for Cortex-M
- Qt workshop
- Secure Boot workshop
- Asymetric Multiprocessing workshop

Block Diagramm

RTC — LPDDR4 x32 — eMMC — EEPROM — NXP i.MX8M Mini Cortex-A53 Cortex-M4 up to 1,8GHz + 400MHz — PCIe — 1x RGMII — 2x SDIO (4 Bit / 8 Bit) — 2x USB 2.0 OTG — UART Console — 3x UART — 3x I2C — 2x SPI (QSPI) — MIPI-DSI (4-lane) — MIPI-CSI (4-lane) — I2S — 4x PWM — 22x GPIO

Starterkit

To facilitate the implementation of the module in the target appli-cation, F&S offers a Starterkit*, including:
- 2x OSM8MM**
- Baseboard
- Cable Kit
- MIPI-DSI to LVDS adpater
- 7" LVDS Touch-Display (1024 x 600) px
- Cooling Solution

Order Notations

OSM8MM-V1I
standard, industrial:
i.MX8MM: Quad Cortex-A53 @ 1.6GHz, 1GB RAM, 8GB eMMC, LVDS, EEPROM, RTC, -25℃ +85℃, Linux

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

OSM8MM-SKIT-LIN
Starterkit for FS 8MM OSM-SF.

Description

The FS-8MM-OSM-SF, fully compatible with the SGET's OSM standard (Size S), is a solder on module that offers a variety of interfaces, (i.e. LAN, USB, SDIO, PCIe). It implements the NXP i.MX8M Mini application processor, providing huge processing power combined with integrated hardware graphic and video accelearation. Beside SDIO a PCIe interface is available for wireless connectivity or large memory with hiogh data throughput. Displays can be connected via MIPI-DSI interface. A MIPI-DSI to LVDS bridge or a MIPI-DSI to RGB bridge can be used on the carrier board. Reference schematic is available and part of SKIT.

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:	3 W (typ.)
Processor:	NXP i.MX8M Mini
Memory:	LPDDR4 x32 **up to 4GB**
	eMMC **up to 64GB**
	64Kb EEPROM
Interfaces:	1x RGMII (Gigabit Ethernet)
	2x SDIO (4 bit/ 8 bit)
	2x USB 2.0 OTG
	4x UART, 22x GPIO
	3x I2C, 2x SPI (QSPI), I2S,
	4x PWM, BL-PWM, PCIe
	JTAG
I/O voltage:	1,8 V
Display:	MIPI-DSI (4-lane)
Camera:	MIPI-CSI (4-lane)
RTC	PCF85263ATL
Temperature Range:	-40℃ … +85℃
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.