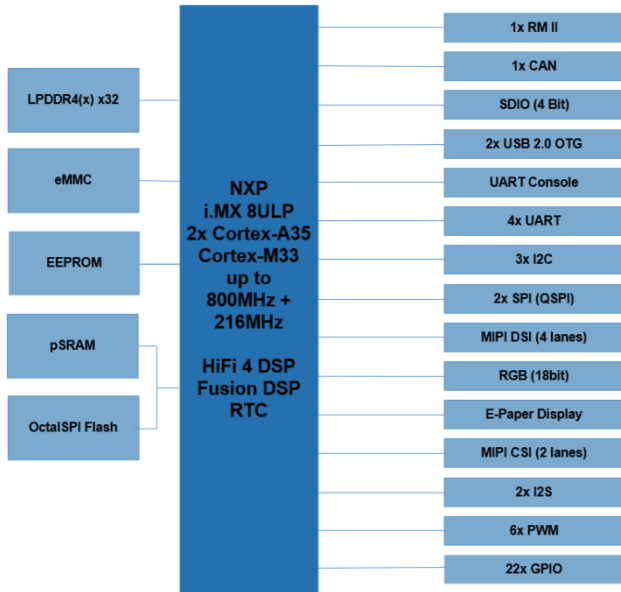


Characteristics

- NXP i.MX 8ULP Application Processor:
 - 2x Cortex®-A35 & Cortex®-M33
 - Arm®TrustZone® architecture, EdgeLock® secure enclave
 - Efficient in sleep and when running at full speed
- 2D GPU, 3D GPU (GCNanoUltra 3.1)
- Tensilica HIFI4 DSP + Fusion DSP
- LPDDR4(x), eMMC, EEPROM
- Real-Time Clock (RTC)
- Minimum availability: 2038

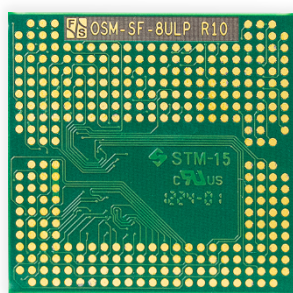
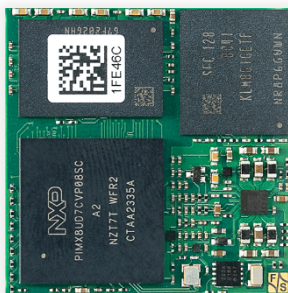
Block Diagramm



Description

The FS 8ULP OSM-SF, fully compatible with SGET's OSM standard v1.2 (size-S), is a solder on module that offers a variety of interfaces, (i.e. LAN, USB, SDIO, CAN). The i.MX 8ULP processor is designed to deliver both, low power and rich multimedia capabilities. It's not only possible to slow down or switch off the chip, it is also designed to be efficient when running at full speed. EdgeLock Secure Enclave is perfect to meet the upcoming Cyber Resilience Act or U.S. Cyber Trust Mark. Displays can be connected via parallel RGB, MIPI DSI or E-Paper Display interface. Reference schematic is available and part of SKIT.

Due to the small size, 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
- FreeRTOS for Cortex-M
- µPower Support
- MIPI DSI display adaption
- Qt workshop
- Secure Boot workshop
- Asymmetric Multiprocessing workshop

Starterkit

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

- 2x OSM8ULP-V21**
- Baseboard with MIPI-DSI to LVDS adapter
- 7" LVDS Touch-Display (1024 x 600) px
- Cable Kit
- Cooling Solution

Order Notations

OSM8ULP-V21

FS 8ULP OSM-SF module, standard, industrial:
i.MX8ULP: 2x Cortex®-A35 @ 800MHz, RTC, noEPDC, 2GB LPDDR4, 8GB eMMC, 18bit RGB, MIPI DSI, EEPROM, -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***.

OSM8ULP-SKIT-LIN

Starterkit for FS 8ULP OSM-SF.

Technical Data (Quickfacts)

Power Supply:	5 VDC
Power Consumption:	1 W (typ.)
Processor:	NXP i.MX 8ULP
Memory:	LPDDR4(x) x32 up to 2GB eMMC up to 64GB 64Kb EEPROM
Interfaces:	1x RMII (Ethernet) 1x SDIO (4 bit) 2x USB 2.0 OTG 1x CAN, 5x UART, 22x GPIO, 3x I2C, 2x SPI (QSPI), 2x I2S, 6x PWM, JTAG
I/O voltage:	1,8 V / 3,3 V (optional, partly)
Display:	18(24)bit RGB + MIPI DSI (4 lane), E-Paper Display
Camera:	MIPI CSI (2 lane)
RTC	i.MX 8ULP internal
Temperature Range:	-40°C ... +85°C
Size (L x W x H):	(30 x 30 x 2.6) 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.