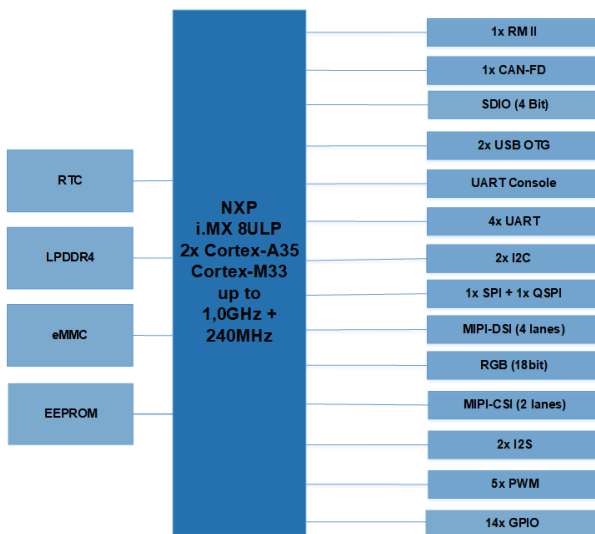


## Characteristics

- 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, eMMC, EEPROM
- Real-Time Clock (RTC)
- Minimum availability: 2035

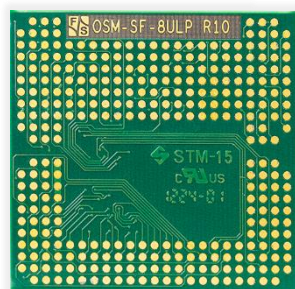
## Block Diagramm



## Description

The FS-8ULP-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). 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 or MIPI-DSI interface. A MIPI-DSI to LVDS bridge can be used on the carrier board. 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\*\*
- Baseboard with MIPI-DSI to LVDS adapter
- 7" LVDS Touch-Display (1024 x 600) px
- Cable Kit
- Cooling Solution

## Order Notations

### OSM8ULP-V2I

standard, industrial:

*i.MX8ULP: Dual Cortex-A35 @ 800MHz, 2GB RAM, 8GB eMMC, 18bit RGB, MIPI-DSI, EEPROM, RTC, -20°C +85°C, Linux*

In addition to the standard version(s) 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:	2 W (typ.)
Processor:	NXP i.MX 8ULP
Memory:	LPDDR4 x32 <b>up to 2GB</b> eMMC <b>up to 64GB</b> 64Kb EEPROM
Interfaces:	1x RMII (Ethernet) 1x SDIO (4 bit) 2x USB 2.0 OTG 5x UART, 1x CAN, 18x GPIO 3x I2C, 2x SPI, QSPI, 2x I2S, 5x PWM, BL-PWM, PCIe JTAG
I/O voltage:	1,8 V
Display:	18(24)bit RGB + MIPI-DSI (4-lane)
Camera:	MIPI-CSI (2-lane)
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.