



Description

The SDT.05 standardisation group was founded at SGET with the aim of defining a standard for a direct solder module. The founding members were IESY GmbH, F&S Elektronik Systeme GmbH and Kontron AG, with many other members joining in the course of time.

The advantages of such a module are machine assembly, a lot of performance and functions in a small space, and the costs as well as the risk of using connectors are eliminated.

Both software and hardware interfaces are defined in the OSM standard. This makes it relatively easy to exchange OSM modules (different manufacturers, different CPUs, etc.).

Currently, there are 4 sizes of 15 x 30mm, "S" 30 x 30mm, 45 x 30mm and 45 x 45mm.

Depending on the size, more or fewer interfaces are available. Thus, the board manufacturers can select the optimal size (space requirement of the CPU, number of interfaces) for a CPU. The first OSM modules are already available to customers, and F&S Elektronik will also be launching them on the market in the course of 2022.

F&S Elektronik Systeme has been developing and producing embedded boards in Stuttgart for more than 25 years and offers a wide range of modules with NXP CPUs (i.MX 6, i.MX 8 and soon i.MX9) on different form factors (plug-on modules with connectors or with finger contacts and also SBC solutions in PicoITX).

The first OSM module from F&S Elektronik will be equipped with the very successful NXP CPU, the i.MX 8 M Mini with 4x Cortex-A53 @1.8GHz. A powerful CPU with a lot of computing power and 2D/ 3D graphics unit as well as video decoder. The pin-compatible i.MX 8 M Nano CPU can be equipped alternatively. RAM, flash on board and interfaces such as LAN, USB, SDIO, UART, I2C, SPI, audio, GPIO, MIPI-CSI and MIPI-DSI are available.

In addition to the OSM module, F&S Elektronik also offers the development and production of a suitable baseboard and then delivers the complete unit soldered, tested and, if desired, with the customer's software installed, so all you have to do is unpack, install and switch on.



Technical Data

Power Supply:	5VDC
Power Consumption:	3W typ.
Processor:	Dual/ Quad ARM® Cortex®-A53-1800MHz & ARM® Cortex®-M7-800MHz
Memory:	LPDDR4 up to 4GB eMMC up to 32GB
Interfaces:	1x RGM II (Ethernet) 1x SDIO, 1x USB Host, 1x USB OTG 1x CAN, 4x UART, 4x I2C, 2x SPI, I2S (Audio), MIPI-DSI (4 lanes)
Display:	MIPI-DSI (4 lanes)
Camera:	MIPI-CSI
Temperature range:	0°C - +70°C (opt. 20°C+85°C, -20°C+85°C)
Size:	30mm x 30mm x 8mm (Size S)
Weight:	About 7g

Standard Versions/ Order Notations

FS-OSM-SF-MX8MM-V1I-LIN

i.MX 8M Mini Quad-1.6GHz Industrial, 1GB RAM, 4GB eMMC, RGMII, 2x USB, UART, I2C, SPI, CAN, Audio I2S, MIPI-DSI, RTC, -20°C +85°C, Linux

Minimum Order Quantity is **1000pcs**

Minimum Order Quantity for Special Versions
Assembly Variant: **3000 pcs**

Starter KIT

FS-OSM-SF-MX8MM-SKIT-LIN

F&S uses an intermediate adapter (OSM adapter - PicoCore baseboard) for the OSM starter kit which is pin-compatible with the PicoCore modules. This means that both a PicoCore or the OSM module with adapter board can be plugged in.

The Starter kit include 3pcs FS-OSM-SF-MX8MM-V1I-LIN with adapter board, base board, 3.5" MIPI display, cable kit, access data to BSP and documentation



