



# **Description**

The SDT.05 standardization 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.

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.

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 i.MX9) on different form factors (plug-on modules with connectors or with finger contacts and also SBC solutions in PicoITX).

i.MX 93 applications processors deliver efficient machine learning (ML) acceleration and advanced security with integrated EdgeLock® secure enclave to support energy-efficient edge computing. The i.MX 93 applications processors are the first in the i.MX portfolio to integrate the scalable Arm Cortex-A55 core, bringing performance and energy efficiency to Linux®-based edge applications and the Arm Ethos™-U65 NPU, enabling developers to create more capable, cost-effective and energyefficient ML applications. Optimizing performance and power efficiency for Industrial, IoT and automotive devices, i.MX 93 processors are built with NXP's innovative Energy Flex architecture. The SoCs offer a rich set of peripherals targeting automotive, industrial and consumer IoT market segments. The new OSM module from F&S will be equipped with the i.MX 93 with 2x Cortex-A55 @1.7GHz. A powerful CPU with up to 125° iunction temperature.

RAM, flash on board and interfaces such as LAN, CAN, USB, SDIO, UART, I2C, SPI, audio, GPIO, MIPI-CSI and MIPI-DSI are available

In addition to the OSM module, F&S 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.

# Standard Versions/ Order Notations

## FS 93 OSM-SF-V1XI-LIN

i.MX 93 Dual-1.5GHz Industrial, 1GB RAM, 8GB eMMC, 64k EEPROM, 2x RGMII (Ethernet), 2x USB, UART, I2C, SPI, 2x CAN, I2S (Audio), LVDS, RTC, -40°C +85°C. Linux

Minimum Order Quantity is

1000pcs

Minimum Order Quantity for Special Versions Assembly Variant:

3000 pcs



# **Technical Data**

Power Supply: 5VDC Power Consumption: 3W typ.

Processor: Dual ARM®

Cortex®-A55-1700MHz & Cortex®-M33-250MHz

Memory: LPDDR4 up to 1GB

eMMC up to 32GB 64k EEPROM

Interfaces: 2x RGMII (Gigabit Ethernet)

1x SDIO, RTC 2x USB 2.0 OTG

2x CAN, 4x UART or GPIO 3x I2C, 2x SPI, I2S (Audio),

Display: 2x PWM, 2x ADC

Camera: MIPI-DSI (4 lanes) or LVDS

MIPI-CSI

Temperature range: -20°C - +85°C

(opt. -40°C+85°C)

Size: 30mm x 30mm x 8mm (Size S)

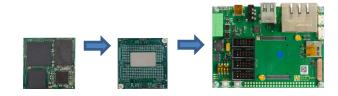
Weight: About 7g

### Starter KIT

### FS 93 OSM-SF-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 93-SF-V1XI-LIN with adapter board, base board, 7" LVDS display, cable kit, access data to BSP and documentation





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