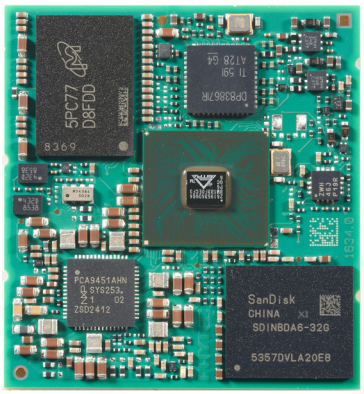
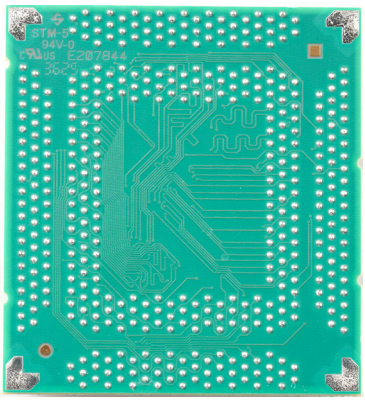
phyFLEX®-SL261x FPSC

phyFLEX®-SL261x FPSC: High Security for Industrial Application

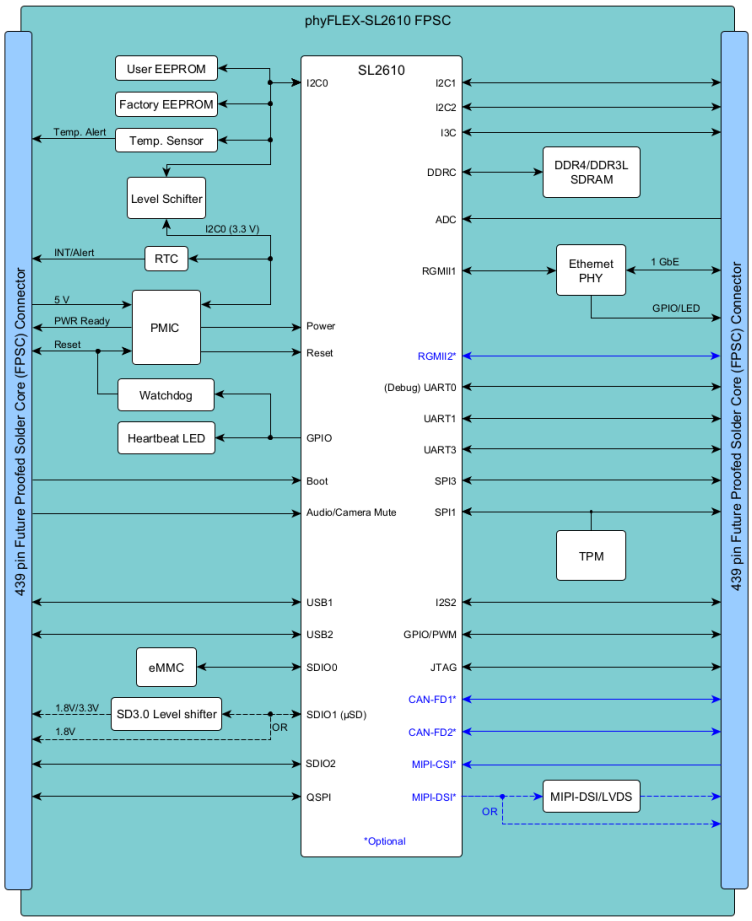
The phyFLEX®-SL261x SoM brings this innovation directly to your systems: Featuring a dual-core Arm® Cortex™-A55 processor (up to 2 GHz) and an Arm® Cortex™-M52 (200 MHz), the module combines computing power with real-time capability. The Torq NPU delivers up to 1 TOPS of AI acceleration and integrates a Coral RISC-V transformer – ideal for smart edge applications, computer vision, and predictive maintenance. It also boasts comprehensive interfaces – including MIPI-DSI, MIPI-CSI, 2× USB 2.0, 4× I²C + I3C, and 8× UART – as well as security features such as Secure Boot. With PSA-certified protection, the SoM is perfectly equipped for demanding industrial environments.





FPSC

Synaptics'® SL2610 processor family was specifically designed for Industrial IoT applications, combining high computing power with an energy-efficient design. Synaptics stands for advanced technology that enables high-performance yet cost-effective solutions for industrial use. After decades of experience in high-performance ARM-based consumer solutions, Synaptics is now bringing its proven technology to the industrial embedded market to address the specific requirements of modern IIoT systems.



SL261x Processor

- Dual-core Arm® Cortex™-A55 with up to 2GHz
- Arm® Cortex™-M52 (200 MHz)
- DDR3 and DDR4 Design
- Torq NPU (1 TOPS) incl. Coral RISC-V transformer
- Vision Interfaces: MIPI-DSI, MIPI-CSI (2 lane)
- Thanks to FPSC, pin-compatible with all phyFLEX-Gamma devices.

Module Features

- Easy soldering using FTGA soldering technology
- Sophisticated energy management
- Fully TSN-capable Ethernet
- All processor interfaces are available on the SOM connection

Your Advantages

- Ready adapted Linux operating system
- Only one device design for different performance configurations
- Product Lifecycle Management program
- Global Technical Support

https://www.phytec.de/produkte/system-on-modules/phyflex-sl261x-fpsc/

Technical Data

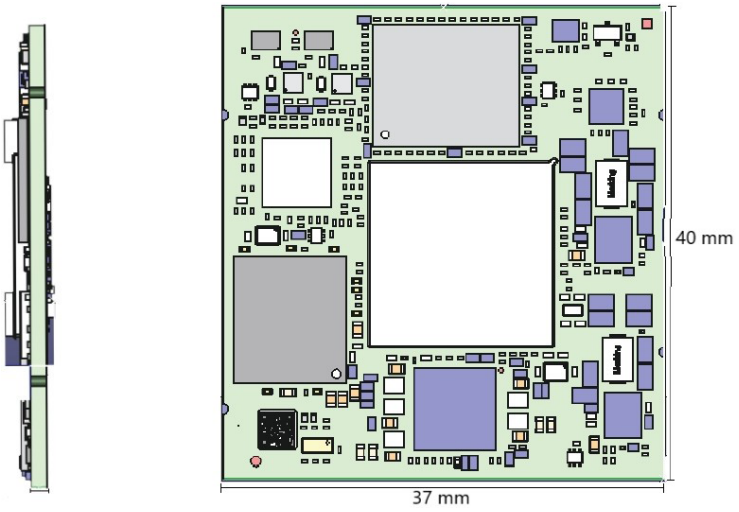
Module Configuration

Processor	Synaptics SL2611, SL2613, SL2615, SL2617, SL2619
Core(s)	Single- or dual-core Arm® Cortex™-A55
Additional Core(s)	Single-core Arm® Cortex™-M52
Bit Width	64-bit
Clock frequency	2.0 GHz (A55), 200 MHz (M52)
GPU	Arm Mali-G31 3D GPU
AI/ML	Synaptics Torq NPU Subsystem (1 TPOS)
Crypto	RSA, SHA
HW Security	Secure boot, TRNG, ECC
EXT. MEMORY	
eMMC	4 GB (DDR3 Variant) 128 GB (DDR4 Variant)
LPDDR3 Variant	512 MB
LPDDR4 Variant	2 GB
EEPROM	2 x 4 kB up to (1x Factory EEPROM, 1x User EEPROM)
PHYSICAL PROPERTIES	
Dimensions	45 mm x 48 mm x 13 mm
Weight	tbd.
Operating temperature	-40 °C to +85 °C
Humidity	95 % RH non condensing
Operating voltage	5.0 V
Power consumption typ.	tbd.
PCB connection	Fused Tin Grid Array (FTGA) with FPSC-Gamma 1.1 footprint (1.27 mm pitch)
SOFTWARE	
Operating system	Linux (Yocto based)

Module Interfaces

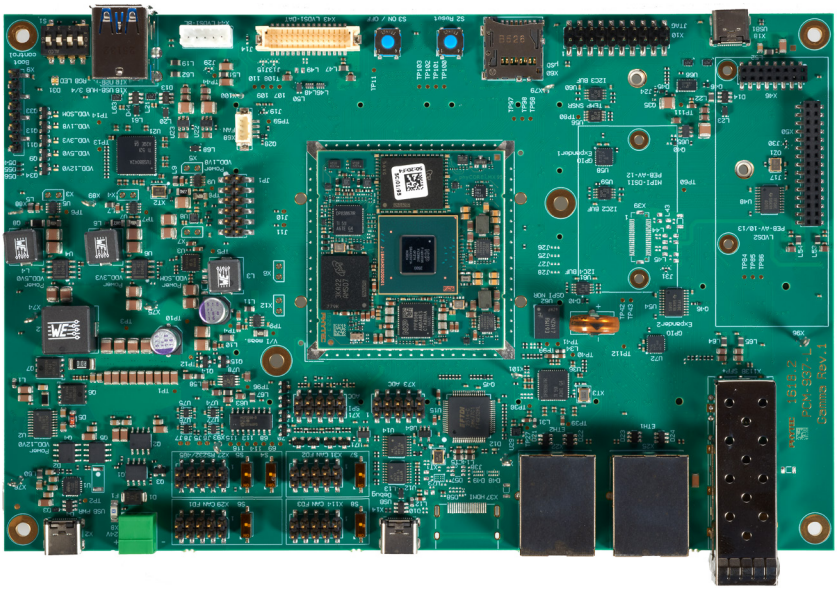
Ethernet	2x GbE (1x on-board PHY / 1x RGMII)
USB	2x USB 2.0
UART	3x (up to 8x)
CAN	2x (CAN FD)
I²C	4x
SPI	2x (up to 5x)
MMC/SD/SDIO	1x
ePWM	2x (up to 12x)
Display	1x MIPI DSI (4-lane) or LVDS
Camera	1x MIPI-CSI-2 (2-lane)
Audio	1x I2S (up to 3x)
ADC	up to 8x (12-bit)
GPIO	4x (up to 99x)
Debugging	UART
RTC	1x on-chip 1 on-board

Blue font indicates the maximum number or additional interfaces when pin compatibility according to the FPSC standard is NOT required



Libra Development Board FPSC

Versatile Development Platform for FPSC Modules



INTERFACES	
Ethernet	2x 1 GbE (all RJ45) (TSN support)
USB	1x USB 2.0 (Type-A), 1x USB 2.0 (Type-C)
Serial	1x RS-232 or RS-485, 2x CAN FD (3x pin header 2x5)
Display	1x LVDS
Debugging	JTAG (Expansion sockets) 1x USB 2.0 Debug (Type-C)
Various	I²C, SPI, GPIO, ADC (Expansion connectors)
MISCELLANEOUS	
MMC/SD/SDIO	microSD Card Slot
User Control	3x LED, 1x RGB LED, 2x button
Dimensions	230 mm x 140 mm
Supply Voltage	24 V or USB-C