phyFLEX®-AM62Lx FPSC

Latest processor technology at an outstanding price/performance ratio for Linux based applications

The new phyFLEX-AM62Lx FPSC module is the most price optimized Cortex-A Linux capable SoM on the market. Developing applications that make use of the advantages of a full Linux based operating system is now possible at the price of an MCU RTOS based system, without compromise in processor feature availability.

Despite its small size (37 mm x 38 mm), the SoM is fully equipped with memory, Ethernet PHY and MIPI to LVDS converter. The solderable module has the new FPSC footprint, which not only provides all the features of the processor, but also allows the module to be interchanged with existing and future FPSC SoMs. This allows scalable applications and increases the longevity of the application.
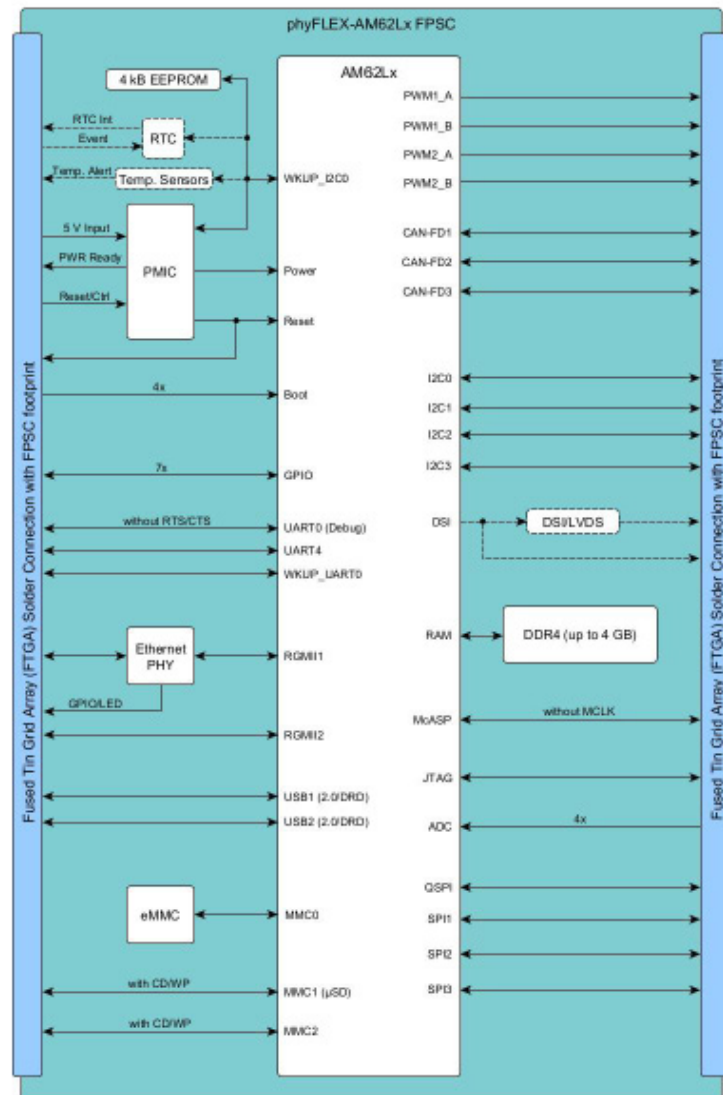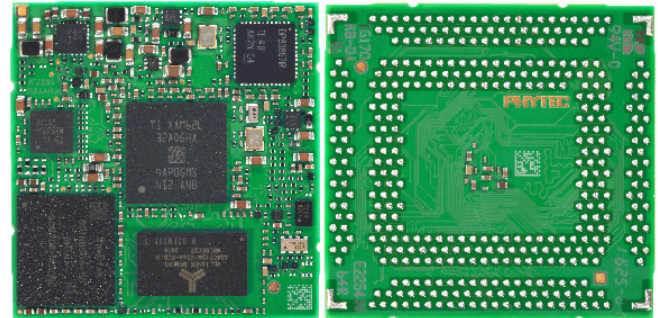
AM62Lx Processor
- Cutting Edge Performance with 2x Arm Cortex-A53(1.25 GHz)
- Wide range of industrial interfaces (e.g. 2x Ethernet, 2x USB2.0, 3x CAN FD)
- Advanced hardware security with Secure boot, Trusted Execution Environment (TEE) and Arm Trust Zone®
- Designed to be used under harsh temperature conditions

Module Features
- Up to 256 GB TLC eMMC and up to 4 GB DDR4 RAM
- On-board Ethernet PHY and voltage conversion
- MIPI to LVDS converter to connect industrial grade quality displays
- Low power consumption to meet the requirements of battery powered systems and to eliminate the need for active cooling
- FPSC-Gamma 1.1 footprint (FTGA, 1.27 mm pitch)
- Dimensions 37 mm x 38 mm , low profile

Your Advantages
- Ready adapted Linux® operating system
- Only one device design for different performance configurations
- Product Life-Cycle Management program
- Global Technical Support

https://www.phytec.eu/en/p/som/phyflex-am62lx-fpsc/

Technical Data

Module Configuration

Processor	TI AM62L
Core	up to 2x Arm® Cortex®-A53
Clock frequency	up to 1.25 GHz (A53)
L1 Cache	32 kB D-chache, 32 kB I-cache per core
L2 Cache	256 kB
Internal RAM	160 kB SRAM
Crypto	AES 128/192/256, SHA2 224/256/384/512, DRBG
HW Security	Secure boot, Arm TrustZone®
EXT. MEMORY	
eMMC	up to 256 GB TLC
DDR4	up to 4 GB
EEPROM	4 kB
PHYSICAL PROPERTIES	
Dimensions	37 mm x 38 mm x 3mm
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	FPSC-Gamma 1.1 (FTGA, 1.27 mm pitch)
SOFTWARE	
Operating system	Linux (Yocto based)

Module Interfaces

Ethernet	1x GbE, 1x GbE RGMII
USB	2x USB2.0 (all dual-role)
UART	3x, up to 8
CAN	up to 3x CAN FD
I²C	4x, up to 5
SPI	3x (+1x QSPI), up to 4 (+1x OSPI)
MMC/SD/SDIO	up to 2
GPMC	1x (16-bit)
ePWM	up to 3
eCAP, eQEP	up to 3 each
Display	1x MIPI DSI (4-lane) or LVDS or DPI (24-bit)
Audio	1x, up to 3x McASP
ADC	up to 4 (2 Bit (10 Bit ENOB))

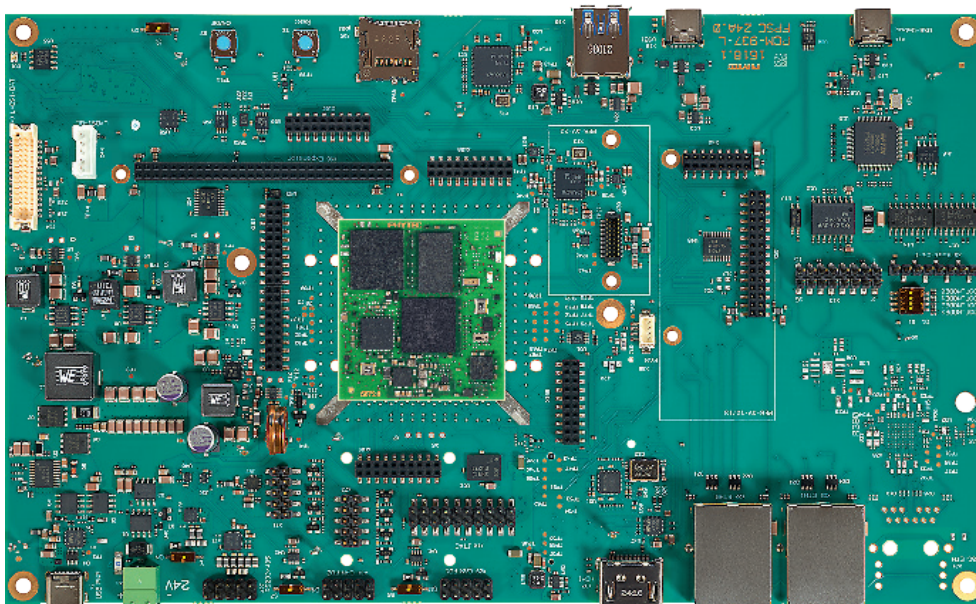* Due to multiplexing, not all interfaces may be fully available.
** Due to the exclusive use of individual interfaces on the module, the maximum number may differ from the processor specification.
Blue font indicates the maximum number or additional interfaces when

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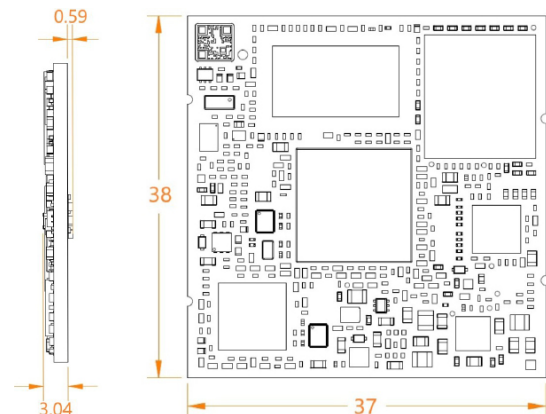
Libra Development Board FPSC

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