



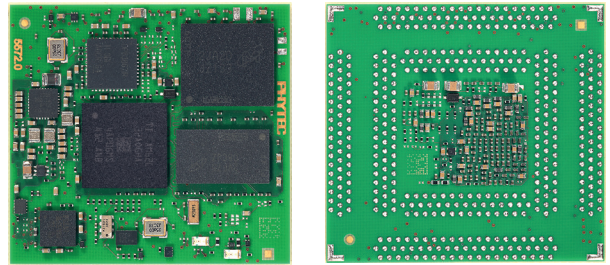
phyCORE[®]-AM62Lx FPSC

Arm[®] Cortex[®]-A53

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

The new phyCORE-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

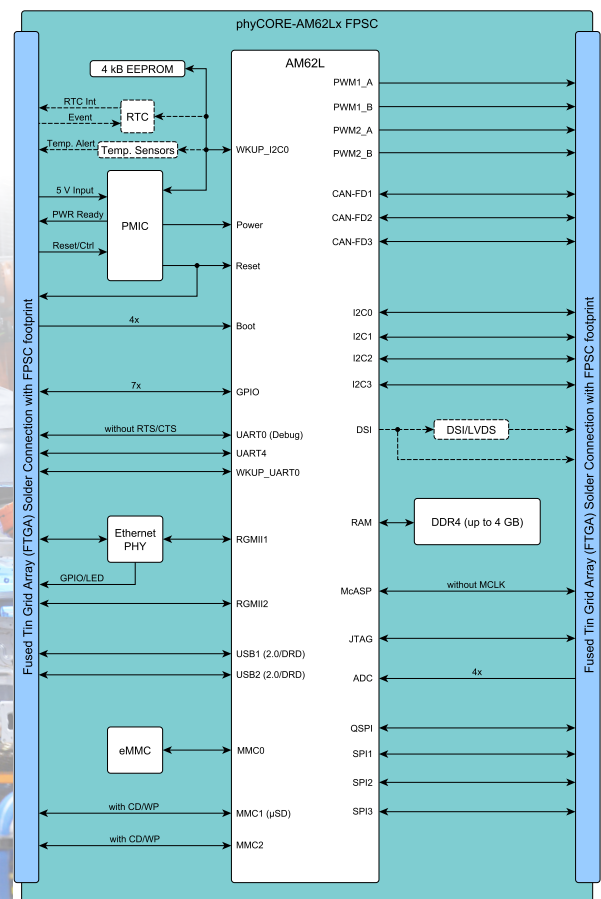
- Cutting Edge Performance with 2x Arm Cortex-A53 (1.25 GHz)
- Wide range of industrial interfaces (e.g. 2x Ethernet, 2x USB2.0, 3x CAN FD)
- Advanced hardware security with Secure boot, Trusted Execution Environment (TEE) and Arm TrustZone[®]
- Designed to be used under harsh temperature conditions

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



www.phytec.eu/en/phycore-am62lx-fpsc

Technical Data

Module Configuration

| SOC | |
|------------------------|---|
| Processor | T1 AM62L |
| Core | up to 2x Arm® Cortex®-A53 |
| Clock frequency | up to 1.25 GHz (A53) |
| L1 Cache | 32 kB D-cache, 32 kB I-cache per core |
| L2 Cache | shared 256 kB with ECC |
| Internal RAM | shared 160 kB SRAM with ECC |
| Crypto | AES 128/192/256, SHA2 224/256/384/512, DRBG, SM3, SM4 |
| HW Security | Secure boot, Arm TrustZone® |
| EXT. MEMORY | |
| eMMC | up to 256 GB TLC |
| DDR4 | up to 4 GB |
| EEPROM | 4 kB up to 32 kB |
| PHYSICAL PROPERTIES | |
| Dimensions | 37 mm x 38 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 | FPSC-Gamma 1.1 (FTGA, 1.27 mm pitch) |
| SOFTWARE | |
| Operating system | Linux (Yocto based) |

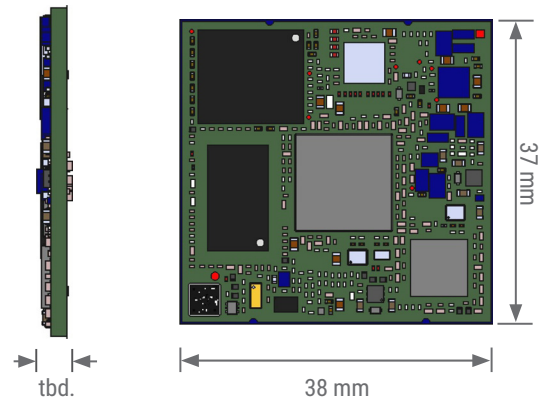
Module Interfaces

| NUMBER OF INTERFACES*, ** | |
|---------------------------|---|
| Ethernet | 1x GbE, 1x GbE RGMII (all with TSN and AVB) |
| 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 |
| GPWC | 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 (10-bit) |
| Debugging | JTAG |
| RTC | 1x AM62L internal and 1x external RTC |

* Due to multiplexing, not all interfaces may be fully available.

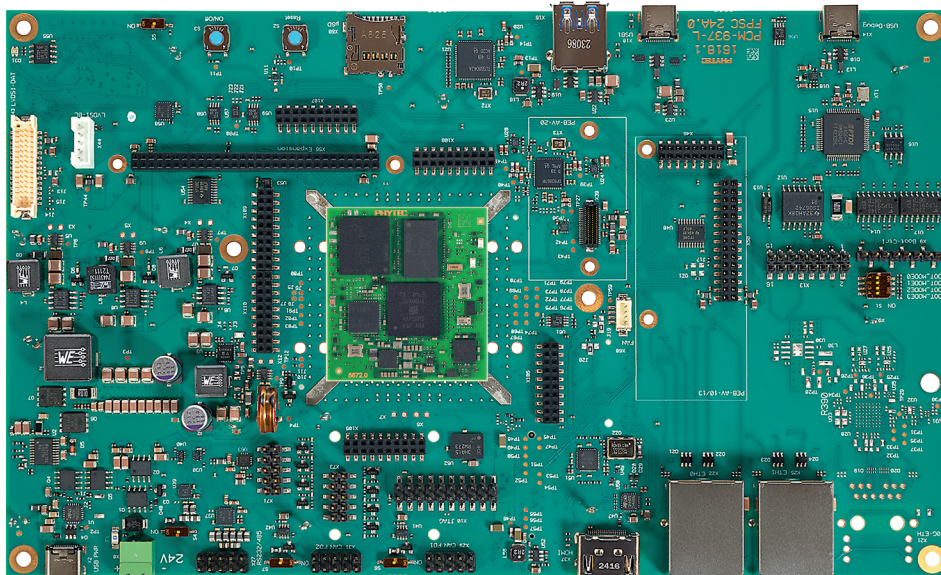
** Due to the exclusive use of individual interfaces on the module, the maximum number may differ from the processor specification.

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



Libra Development Board FPSC-Gamma 1.1

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 |