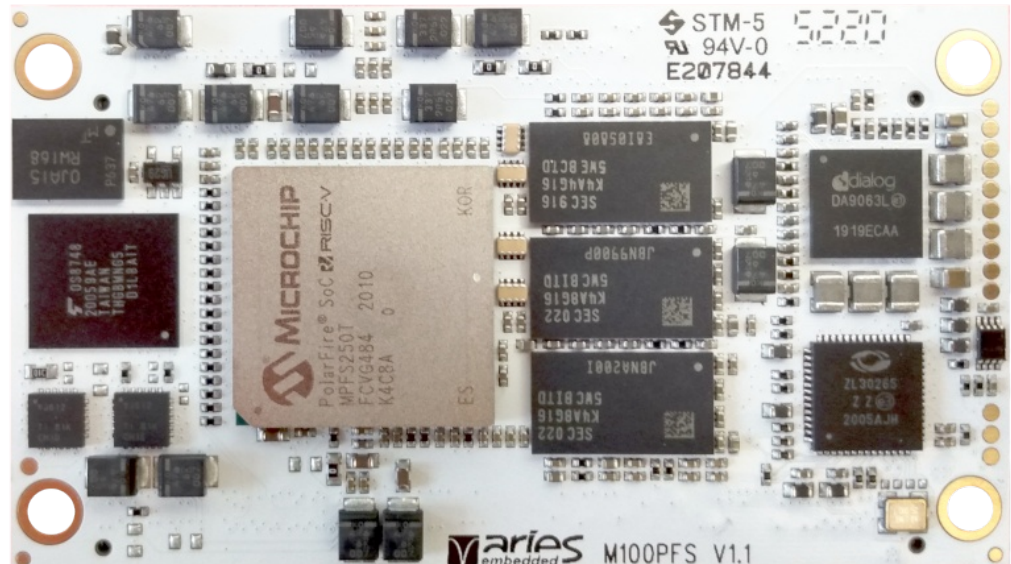


# M100PFS System on Module

The M100PFS is based on the PolarFire SoC FPGA architecture by Microchip and combines high-performance 64-bit RISC-V cores with outstanding FPGA technology.

The platform integrates a hardened real-time, Linux capable, RISC-V-based MPU subsystem on the mid-range PolarFire FPGA family, bringing low power consumption, thermal efficiency and defence grade security to embedded systems.



Intelligence for Industry

ARIES Embedded GmbH  
Schöngesinger Str. 84  
D-82256 Fürstentfeldbruck  
Germany

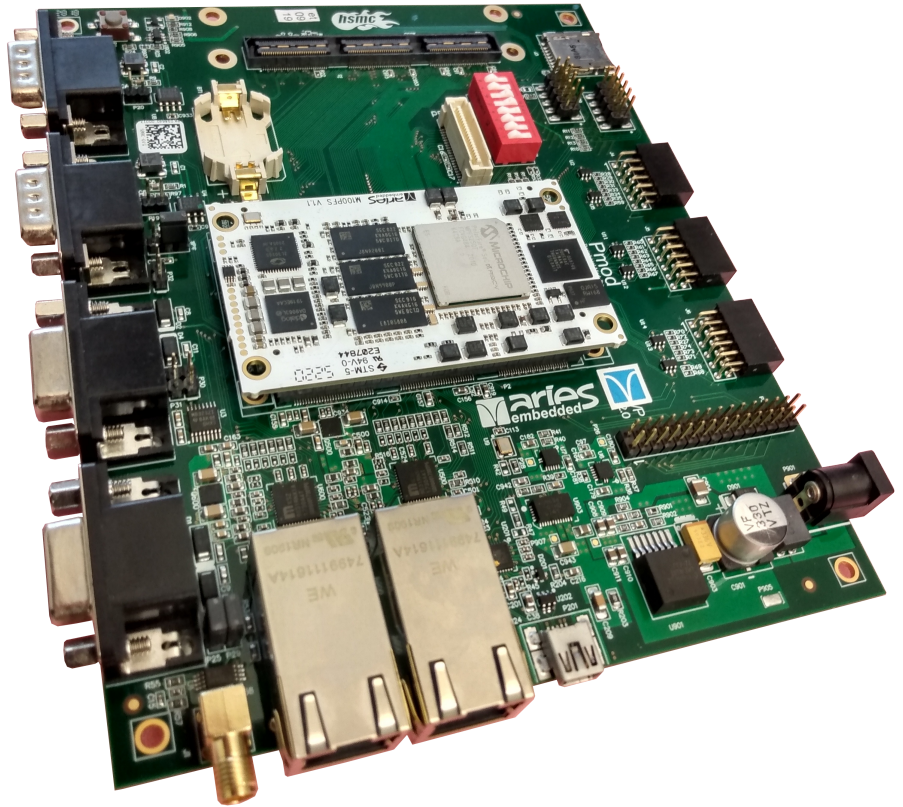
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Fax: +49(0)8141.36 367-67

www.aries-embedded.com  
info@aries-embedded.de

- Microsemi PolarFire SoC FPGA
  - MPFS025T, 23KLE, 68 math blocks, 4x SERDES, 2x PCIe
  - MPFS095T, 93KLE, 292 math blocks, 4x SERDES, 2x PCIe
  - MPFS160T, 161KLE, 498 math blocks, 8x SERDES, 2x PCIe
  - MPFS250T, 254KLE, 784 math blocks, 16x SERDES, 2x PCIe
- Quad 64-bit RV64GC cores, 667 MHz
- 64-bit RV64IMAC monitor core, 667 MHz
- Processor I/O
  - 2x Gigabit Ethernet
  - 1x USB 2.0 OTG
  - 1x MMC 5.1 SD/SDIO
  - 2x CAN 2.0 A and B
  - Execute in place Quad SPI flash controller
  - 5x UARTs, 2x SPI, 2x I2C
  - RTC, GPIO
  - 5x watchdog timers, timers
- Processor to FPGA Interconnect
  - 2x 64-bit AXI4 processor-to-fabric interfaces
  - 3x 64-bit AXI4 fabric-to-processor interfaces
  - 1x 32-bit APB processor-to-fabric interface
- 1/2/4/8 GByte DDR4 RAM dedicated to the HMS
- 0,5/1/2/4 GByte DDR4 RAM dedicated to the FPGA
- 128-1Gbit Mbit NOR Flash
- 8 - 64 GByte eMMC memory
- Clock distribution

# M100PFSEVP Evaluation Platform

The M100PFSEVP offers a good functionality for evaluation the M100PFS SoM. The M100PFS is based on the PolarFire SoC FPGA architecture by Microchip and combines high-performance 64-bit RISC-V cores with outstanding FPGA technology.



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- 2x Gigabit Ethernet
- 2x RS232 on DSub9
- 2x CAN on DSub9
- P-mod extension connectors
- HSMC extension connector
- microSD-card slot

## M100PFSEVP kit contents:

- M100PFS-250BAAB featuring MPFS250T, 2GB DDR4 RAM HMS, 512M DDR4 RAM FPGA, 8GB eMMC NAND Flash
- M100PFSEVP baseboard
- 17,7cm (7") LCD with touchscreen (optional)
- power supply