



Features

- Full-featured Atmel AT91-based Microcontroller plus Flash, RAM and a Xilinx FPGA on a small plug-in module
- Complete GNU-ARM toolchain for MS-Windows, Linux/x86 and MacOS X available
- Powerfull debug features with JTAG-carrier board and GNU debugger
- 100 k gates high-density FPGA which can integrate custom IP, such as reconfigurable peripheral or system I/O extension.

Applications

- RTOS-based software development (eCOS prepared)
- FPGA-based System-on-chip development
- Prototyping, industrial control and measurement
- Mobile, battery-powered platforms
- Medical equipment

Introduction

The AML91S100E embedded module integrates both an Atmel AT91M42800A and a Xilinx Spartan-IIE 100k gates FPGA. The microcontroller is based on an ARM7TDMI core, a popular 32-Bit Risc CPU performing 30 MIPS.

Its rich on-chip peripherals are extended by an external Xilinx Spartan-IIE FPGA connected to the processor's external bus. This approach let customers benefit from numerous tools, libraries, RTOS and support for ARM-based designs. Besides, the incorporated Spartan-IIE-series FPGA offers large resources for I/O extension and customer logic.

The embedded system module in the size of a credit card is designed for a wide range of applications.

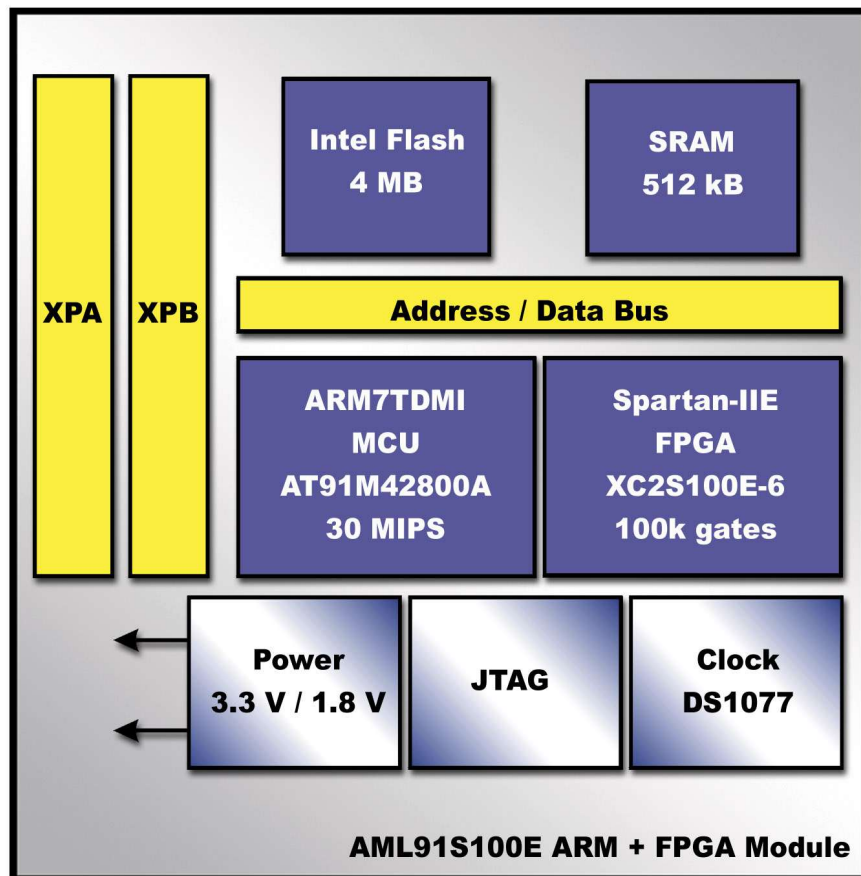
Specifications

	AML91S100E
Atmel ARM7TMDI 32-Bit Risc MCU	AT91M42800A (TQFP 144) ARM7TDMI, up to 33 MHz core clock 8 kB on-chip SRAM External Bus Interface w. 8 Chipselects, Vectored Interrupt Controller, 5 ext. Interrupts, 6 Channel Timer, 2 USART, 2 Master/ Slave SPI, 2 dedicated Peripheral Data Controller per SPI/USART, Real-time and Watchdog Timers, JTAG
Xilinx Spartan-IIE FPGA	XC100E FPGA w. 100K System Gates 2700 Logic Cells, 4 DLL, 40kBit BRAM 102 User I/O (~ 32 free)
Flash-ROM	Up to 8 MB (16-Bit bus, 4MB installed)
Static RAM	Up to 1 MB (16-Bit bus, 512 kB installed)
Expansion Header	Two 0.079 inch (2mm) pitch headers a 60 pins
Module Dimensions	3 x 2 inch (7,62 x 5,08 cm)



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Packing List

- AML91S100E Board equipped with Atmel AT91M42800A, 512kB SRAM, 4MB Flash, Xilinx XC2S100E FPGA
- AMLprog programmer adapter equipped w. RS232 transceivers
- JTAG/ICE programmer adapter for printer port (ARM JTAG debugging)
- RS232 (DB9) serial debugging cable
- Parallel cable for AMLprog
- Software CD-ROM with datasheets, GNU-ARM toolchain, webpack and examples.

Ordering Information

AML91S100E
(Order code: TE-0150-00)

shop.trenz-electronic.de

Bundled Software

- Multi-platform GNU software tools for MS-Windows, Linux/x86 and MacOS X
- Xilinx WebPACK ISE design software - a complete FPGA design entry, simulation, synthesis and implementation suite
- Quick Start Guide
- Data sheets of the major components

All documentation is provided in English.

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