TU Graz

Open Thesis / Project:
MCSmartOS goes ZYNQ

Motivation & Summary

The ZYNQ® SoC family combines software programmability with hardware programmability. To achieve that, it features an ARM-based processor as well as an Artix-7 or Kintex-7 based FPGA.

To enhance functionality of MCSmartOS, this work aims to port the operating system to run on the ARM cores of a MicroZed development board.

As MCSmartOS' kernel is designed to be easily portable, all on-chip peripherals of the SoC must be supported as well.

Recommended Prior Knowledge

- C/C++
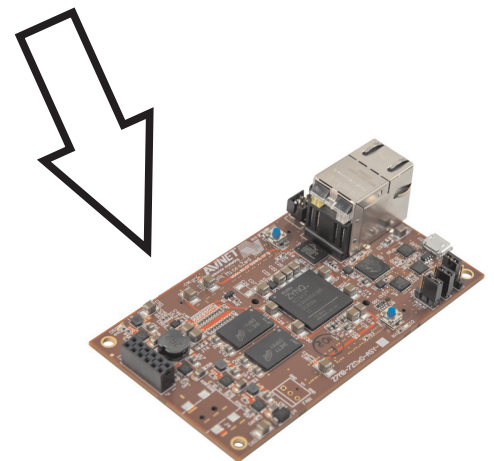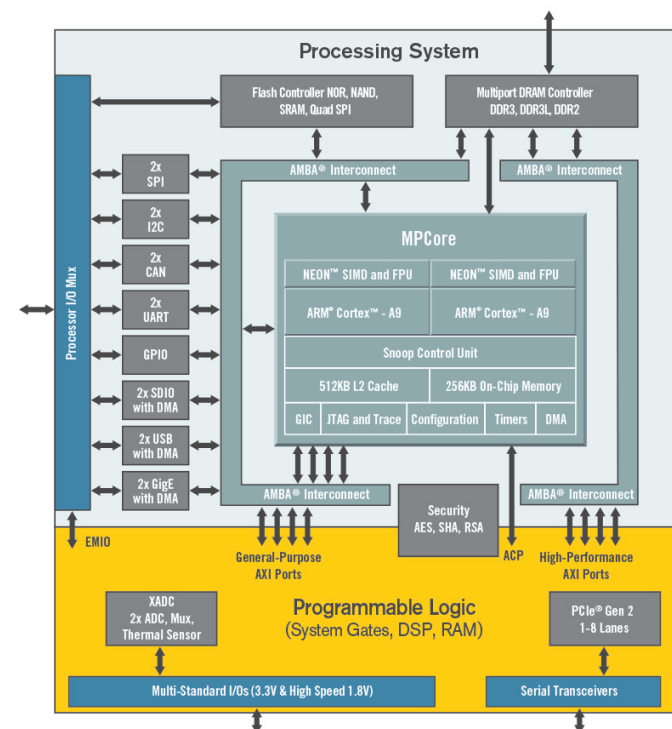- Real-time operating systems

Thesis Type

- Master's Project
- Master's Thesis

Student Target Groups

- Information and Computer Engineering (ICE)
- Computer Science (CS)

Goals and Tasks

- Setup of ZedBoard toolchain
- Porting of MCSmartOS to ZYNQ-7020
- Creation of test application

MCSmart OS
Multi-Core Sustainable modular adept real-time Operating System

Sources:
http://zedboard.org/product/microzed
https://www.xilinx.com/products/silicon-devices/soc/zynq-7000.html

Contact & Information

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http://www.tugraz.at/en/institutes/iti/teaching/open-theses/

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