

Lecture 8

Topics

The topics for this lecture with programmable electronics are:

- Finite state machines (FSM)
- Sensor communication (SPI)

Hardware

You can borrow the required hardware from us, one pr group.

- Zynq platform: DIPFORTy1 "Soft Propeller" TE0722¹ from Trenz electronics.
- Programmer: XMOD FTDI JTAG Adapter² from Trenz electronics.
- FTDI 3.3 V cable
- Ads7885 ADC
- More will come with the assignment

Preparation

Datasheet on ADC

(Mandatory) Get an overview of the document: ads7885.pdf

FSM

(Mandatory) Read theory and code understand processes in templates: Finite state machine in hardware.zip (all files)

SPI

Self study

Assignment

Will be uploaded to dropbox before the lecture.

¹ <https://shop.trenz-electronic.de/en/TE0722-02-DIPFORTy1-Soft-Propeller-with-Xilinx-Zynq-7010-and-16-MByte-Flash?c=348>

² <https://shop.trenz-electronic.de/en/TE0790-02-XMOD-FTDI-JTAG-Adapter-Xilinx-compatible?c=318>