Custom MSP430 for RFID

Motivation

There exist an open-source clone of the 16-bit MSP430 microcontroller. Goal of this project is to optimize the implementation to fit on an RFID tag. As peripherals, existing cryptographic modules should be included to allow cryptographic computations on the tag.

Project description

- Goals
  - Design of a tiny MSP430 processor for RFID
- Tasks
  - Literature research
  - Try openMSP430 processor
  - Optimize it (area, power,…)
  - Include AES/ECC as peripherals
  - Communicate with the modules over memory mapped I/O

Literature

- The openMSP430 core available at opencores.org

Deliverables

- Project files (.zip, cleaned)
- Documentation (inline)
- Readme (getting started)
- Presentation (10 .ppt slides)

Project schedule

- Start Immediately
- Month 1 Reading, planning, preparing
- Month 2 Programming
- Month 3 Final deliverables

Master Project

Studies: ☐ INF ☐ SEW ☑ TEL

Prerequisites

- HDL

Advisor / contact

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