SCIENCE ▪ PASSION ▪ TECHNOLOGY

TU Graz

Open Thesis / Project:

Analog-to-digital preprocessing in an FPGA

Motivation & Summary

To fulfil today's requirements in the embedded world, System-On-Chips (SoCs) accommodate more and more components while their size remains constant or even shrinks. Due this grow in the integration density and the number of different internal components it is a challenge to test, evaluate and validate such a system.

To do that, we perform local measurements on the hardware and extract measurement data that should be further processed. The goal of this thesis is to implement an interface that preprocesses this data on an FPGA and makes it available for further evaluation (e.g., on a PC).

Recommended Prior Knowledge

- Digital Design
- FPGAs
- Electronics

Thesis Type

- Bachelor's Thesis
- Master's Project
- Master's Thesis

Student Target Groups

- Information and Computer Engineering (ICE)
- Electrical Engineering (EE)

Goals and Tasks

- Getting familiar with an open-source FPGA toolchain
- Preprocessing data for digital transmission

Optional (depending on thesis type):

- Investigating A/D conversion methods
- Implementing a low-noise, high-speed A/D conversion

Contact & Information

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