



Studien-, Bachelor-, Master-, Diplomarbeit

Topic

Floating-Point to DAC-Input Signal Converter and ADC Output to Floating-Point Converter Circuit.

Description

Converter circuits will be designed and implemented by using VHDL or Verilog HDL. One converter is designed to transform the output signals of a floating-point digital signal processor into binary signals that can be read by a DAC circuit. The other other converter is designed to transform the output signals of an ADC circuit into floating-point binary signals that can be processed further by a floating-point digital signal processor. The format of the floating-point data is in accordance with IEEE Std 754-2008, i.e. 32-bit (single precision) with 1 sign bit + 8 exponent bits + 23 mantissa bits. A simple method such as two-point regression method can be used to realize an IP core of the converters. The converters are important parts of a floating-point-based application-specific processor for embedded applications. Student who has interest can select one of the converter circuits, which he/she prefers to design.

Skills

- Knowledge of Digital/Logic Circuit Design.
- Knowledge of VHDL or Verilog HDL.

Contact

If you have interest in the topic please feel free to contact us.

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