
ETISB

Embedded Signal Processing



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Introduction, number formats and Blackfin

1.1 Lektion 30-01-2018

1. Course introduction
2. Number formats (fixed- and floating-point)
3. Conversion between different number formats
4. (Blackfin) DSP Architecture
5. Software development flow

- ESP Chapter 1.1 + 1.2
- ESP 5.1 + 5.2.1
- ESP Chapter 6.1.1 (only p.217-p.222) and 6.1.3 - 6.1.5

- 1.1.1 Number formats (fixed- and floating-point)
- 1.1.2 Conversion between different number formats
- 1.1.3 (Blackfin) DSP Architecture
- 1.1.4 Software development flow

Quantization and fixed-point effects

2.1 Lektion 06-02-2018

1. ADC Quantization
2. Coefficient- and product-quantization
3. Overflow / underflow and coefficient scaling
4. Notch and peak filters as example

- ESP 6.1.1 (only p. 222 - 229)
- ESP 6.2.2, 6.2.3 (p. 240 - 243)
- ESP 3.4.2 + 3.4,3

2.1.1 ADC Quantization

2.1.2 Coefficient- and product-quantization

2.1.3 Overflow / underflow and coefficient scaling

2.1.4 Notch and peak filters as example