Power-efficient 10b 64MS/s ΔΣ ADC

NSAD_ST130M_1V2_AD10B64M

Product description

The nSAD_ST130M_1V2_AD10b64M is a 64MS/s, 9.9 ENOB, power efficient ΔΣ ADC designed on the ST 130 M technology. Built around a fully-differential 3rd-order single-bit low-pass modulator, it consumes 1.9mW on silicon, reaching an energy efficiency of 31fJ/conversion-step.

Main characteristics

- ST 130 M
- 1.2V supply voltage
- 9.9 ENOB
- 64MS/s
- 1.9mW

Deliverables

- GDS II layouts
- LEF abstracts
- CDL netlists
- Liberty timings
- Verilog description
- A full datasheet
- An integration note

Status

- Silicon proven

Applications

- Very low power communications (Zigbee, Bluetooth LE)
- Very low power industrial control and instrumentation
- Battery powered systems
- Automotive and logistics equipment

Main features

- Includes reference generator and biasing circuits
- 1.9mW consumption in operation
- Single 1.2V supply
- 0.15mm² area
- 700mV_{pp_diff} input dynamic range
- 61.3dB SNDR
- 80dB SFDR
- 1MHz modulator signal bandwidth

Options

The decimator is designed according to your system requirements.

nSilition
Smaller, Smarter, Stronger

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Further information

For further information about this product and other nSilition IPs, development roadmap, availability and licensing terms, please e-mail to sales@nsilition.com.

Delivery and support

This AD converter cell is available as hard macro-cell for reuse in any design based on the ST 130 M CMOS process. No extra IP license from any third party will be needed for the cells or the cell library.

In addition, full support service is available on request. Support can include close integration follow-up by our design team or custom-made cells or features.

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Porting to another process

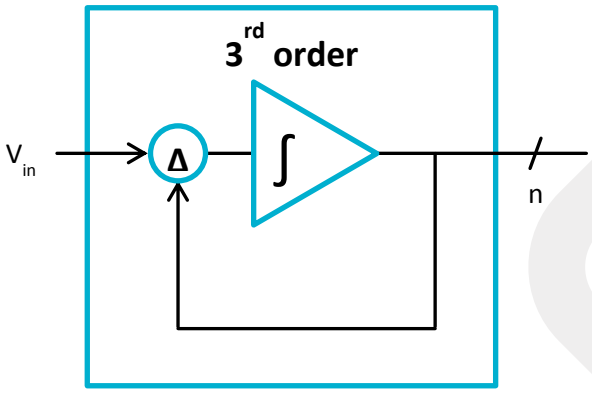
The nSAD_ST130M_1V2_AD10b64M AD converter cell is silicon proven in the ST 130 M CMOS process. It can be easily ported to another foundry and/or another similar CMOS process node upon request. Please contact us for details and availability.

About nSilition

nSilition is a leading analog and mixed-signal semiconductor IP provider.

nSilition specializes in the development of high quality analog and mixed-signal high performance semiconductor IPs. With reference designs available for 10b to 14b A/D and D/A converters, high-speed IO circuits, PFM and PWM high efficiency DC/DC integrated converters and high precision bandgap references; nSilition enables the highest value analog and mixed-signal functionalities at the lowest risk.

The “IP design” service of nSilition offers top-class quality, customization and support dedicated to your needs and your specifications.



ΔΣ-ADC block diagram

Disclaimer

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