

CI3166xa – 6-Bit, 100MHz, 3.3V/1.8V IQ ADC

FEATURES

- 6-bit 100 MS/s IQ Analog-to-Digital Converter
- 0.18 µm CMOS technology (1P6M with MiM option)
- 3.3 V ± 10 % Analog Power Supply
- 1.8 V ± 10 % Digital Power Supply
- Optional Single-Ended / Differential Input
- Selectable Input Range (0.25V, 0.5V, 0.75 V)
- Internal References
- 120 mW Power Dissipation
- Core Cell Area: 0.7 mm²

APPLICATIONS

These ADC is suitable for applications requiring low and medium resolutions and high-speed conversion rates, such as data acquisition, high-speed data transmission and communications.

OVERVIEW

The CI3166xa is a dual high-speed low-power 6-bit 100 MS/s ADC core cell designed for 0.18um 1P6M +MiM CMOS technology.

The ADC architecture employs an interpolating flash ADC to achieve high sampling rate with low power dissipation and input capacitance.

Programmable Gain Amplifiers are used to accommodate full-scale input ranges of 0.25 V, 0.5 V and 0.75 V.

The reference voltages are internally generated and are provided outside for decoupling purposes.

A power down capability is included for extremely low power dissipation in stand-by mode.

TECHNOLOGY: Instantiated in 0.18µm CMOS single-poly, using thick oxide devices and 6 metal layers; retargetable towards any sub-micron CMOS technology with 3.3V/1.8V supply .

FUNCTIONAL DIAGRAM

