16-bit 750ksps single-channel Analog-to-Digital Converter (ADC)

1 Main features:

- Conversion bits: 16 bits
- Clock frequency: 750 KSPS
- Power supply voltage: ±15 V
- Power consumption: 230 mW
- SFDR：107dB@2kHzinput
- SNR：94dB@2kHzinput
- Optional in-film jitter
- ADC internal reference voltage source 5V
- Digital communication voltage 3.3V
- Encapsulation：LQFP-48

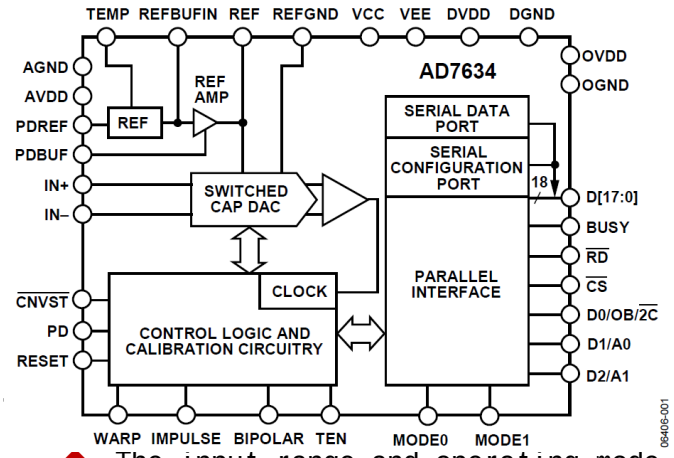
2. Typical applications

- CT scan
- Spectrum analysis
- Servo control system
- Data acquisition
- Instrument and meter
- Σ-Δ Sigma Delta substitution

3 Product Description

This product is a 16-bit charge redistributed successive approximation analog-to-digital converter. The chip can be configured with the input range and operating mode through hardware or a dedicated write only serial port. This product includes a high-speed 16-bit sampling ADC, an internal conversion clock, an internal voltage reference (and buffer), and a string/parallel system interface. When the falling edge of the _CNVST signal end comes, the circuit samples the IN+ signal end, and the IN- ground is used as the reference level.

The main feature of this product is that it can be configured with four different analog input ranges and three different operating modes: bending mode, which enables the fastest conversion rate; Normal mode, can achieve the fastest asynchronous conversion rate; In pulse mode, the power consumption is approximately linear with the conversion rate. The chip operating temperature range is -40 to 85°C. Compatible with foreign products AD7612 pin, can be replaced. The internal structure block diagram of the chip is as follows:



- The input range and operating mode can be selected programmatically.
- Fast throughput.
- Serial or parallel interface.
- Excellent linearity.

5 Compared with similar foreign products

	precision	Clock frequency	Power dissipation	SNR	SFDR	Encapsulation form
AD7612 （ADI）	16Bit	750kHz	230mW	94dB@2kHz	107dB@2kHz	LQFP48
HL7612	16Bit	750kHz	230mW	94dB@2kHz	107dB@2kHz	LQFP48

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