



## 18-bit 670ksps single-channel analog-to-digital Converter (ADC)

### 1 Main features:

- ◆ Convert bits: 18 bits
- ◆ Clock frequency: 670 KSPS
- ◆ Power supply voltage:  $\pm 15$  V
- ◆ Power consumption: 225mW
- ◆ SFDR : 110dB@2kHz input
- ◆ SNR : 100dB@2kHz input
- ◆ 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
- ◆  $\Sigma$ - $\Delta$  Sigma Delta substitution

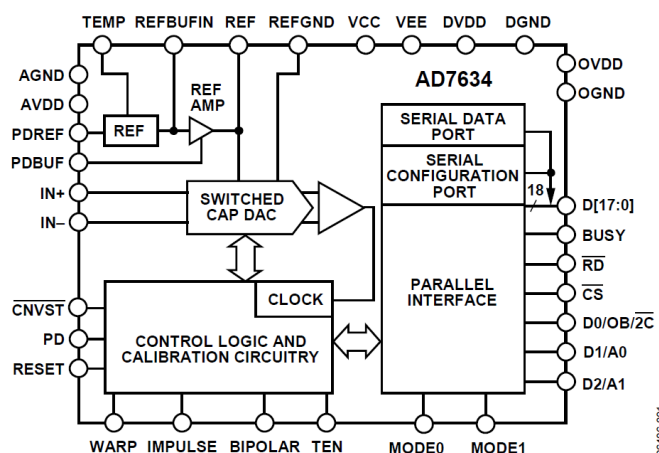
### 3 Product Description

This product is an 18-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 18-bit sampling ADC, an internal conversion clock, an internal voltage reference (as well as buffers), error correction circuits, and serial/parallel system interfaces.

### 5 Compared with similar foreign products

	precision	Clock frequency	Power dissipation	SNR	SFDR	Encapsulation form
AD7634 (ADI)	18Bit	670kHz	225mW	100dB@2kHz	110dB@2kHz	LQFP48
HL7634	18Bit	670kHz	225mW	100dB@2kHz	110dB@2kHz	LQFP48

When the falling edge of the  $\_CNVST$  signal ends, the circuit samples the  $IN+$  and  $IN-$  signal ends. 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  $85^{\circ}\text{C}$ . Compatible with foreign products AD7634 pin, can be replaced. Internal structure block diagram of the chip is as follows:



### 4 Product Highlights

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