

16-bit 250KSPS six-channel Analog-to-Digital Converter (ADC)

1 Main features:

- ◆ Conversion bits: 16 bits
- ◆ Throughput rate: 250 KSPS
- ◆ Low power consumption: 140mW
- ◆ INL: $\pm 3\text{LSB}$ (Typical value)
- ◆ SNDR: 86dB@50kHz input
- ◆ THD: -90dB@50kHz input
- ◆ Signal input range: $\pm 5\text{V}$ 、 $\pm 10\text{V}$ ($V_{\text{REF}} = 2.5\text{V}$)
- ◆ Pipeline-free delay
- ◆ Serial interface: SPI compatible
- ◆ Encapsulation: QFP64

2. Typical applications

- ◆ Power supply equipment
- ◆ Servo control system
- ◆ Automatic test equipment
- ◆ Data acquisition
- ◆ Medical instrument

3 Product Description

HL7656 is a six-channel synchronous sampling, 16-bit precision, 250KSPS conversion rate successive approximation analog-to-digital converter chip.

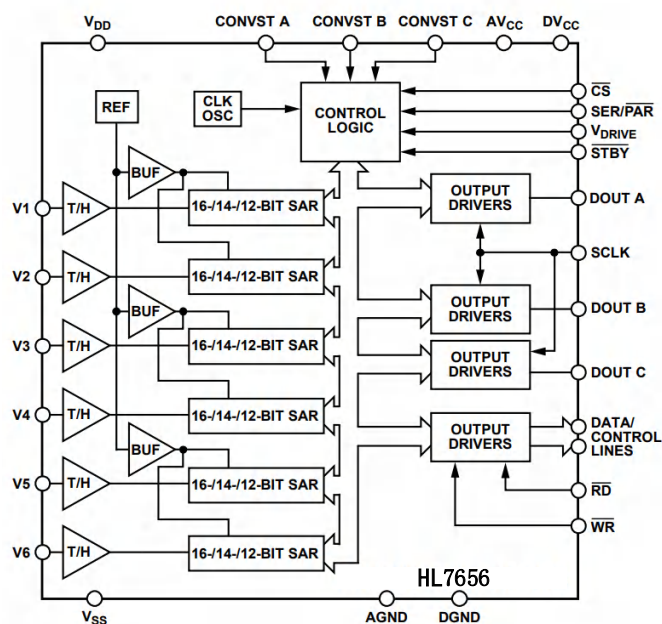
The HL7656 can be configured to quantify input signals in the $\pm 5\text{V}$, $\pm 10\text{V}$ range, and can be selected for parallel or serial interface communication.

5 Compared with similar foreign products

	precision	Conversion rate	Data port	Power dissipation	SNDR	THD	Encapsulation form
AD7656 (ADI)	16-bit	250KSPS	Serial/parallel port	140mW	86dB@50kHz	-90dB@50kHz	QFP-64
HL7656	16-bit	250KSPS	Serial/parallel port	140mW	86dB@50kHz	-90dB@50kHz	QFP-64

The HL7656 can optionally use an on-chip or off-chip reference voltage.

HL7656 is compatible with foreign products AD7656 pins and can be replaced. The functional structure block diagram of the chip is shown as follows:



4 Product Highlights

- ◆ Supports multiple ADCs Daisy chain connection
- ◆ Power consumption and throughput change linearly
- ◆ Simultaneous sampling
- ◆ Compatible with serial/parallel interfaces