



## 16-bit 1MSPS 16-channel Analog-to-Digital Converter (ADC)

### 1 Main features:

- ◆ Conversion bits: 16Bit
- ◆ Throughput rate: 1 MSPS
- ◆ Low power consumption: 300mW
- ◆ INL:  $\pm 3.5\text{LSB}$  (Typical value)
- ◆ SNDR: 90dB@1kHz input
- ◆ THD: -100dB@10kHz input
- ◆ Signal input range:  $\pm 2.5, \pm 5\text{V}, \pm 10\text{V}$
- ◆ Pipeline-free delay
- ◆ Serial interface: SPI compatible
- ◆ Encapsulation: QFP80

### 2. Typical applications

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

### 3 Product Description

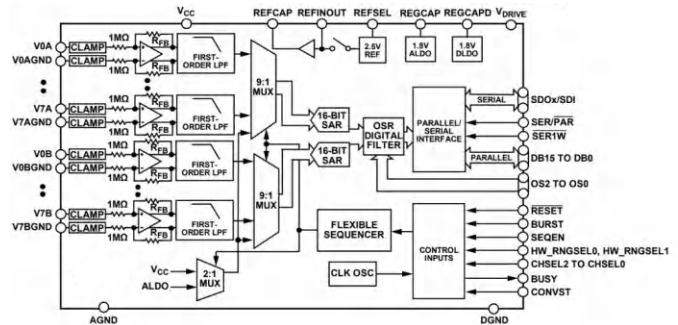
HL7616 is a 16-channel synchronous sampling, 16-bit precision, 1MSPS conversion rate successive approximation type ADC chip.

### 5 Compared with similar foreign products

	precision	Conversion rate	Data port	Power dissipation	SNDR	THD	Encapsulation form
AD7616 (ADI)	16-bit	1MSPS	Serial/parallel port	300mW	90dB@1k Hz	-100dB@1kHz	QFP-80
HL7616	16-bit	1MSPS	Serial/parallel port	300mW	90dB@1k Hz	-100dB@1kHz	QFP-80

The HL7616 can be configured to quantify input signals in the  $\pm 2.5, \pm 5\text{V}, \pm 10\text{V}$  range, and can be selected for parallel or serial interface communication.

HL7616 and foreign products AD7616 pin compatible, can be replaced, the functional structure of the chip block diagram as shown below:



### 4 Product Highlights

- ◆ Supports dual synchronous sampling
- ◆ The low-voltage power supply quantifies the high-voltage signal
- ◆ Compatible with serial/parallel interfaces
- ◆ Input resistance up to 1M ohms
- ◆ On-chip digital filter improves accuracy