

IC ADC 16B 1MSPS 16CH ST80

Manufacturers	<a href="#">Analog Devices, Inc</a>
Package/Case	80-LQFP
Product Type	Data Conversion ICs
RoHS	Pb-free Halide free
Lifecycle	



Images are for reference only

Please submit RFQ for AD7616BSTZ-RL or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

## General Description

The AD7616-P is a 16-bit, DAS that supports dual simultaneous sampling of 16 channels. The AD7616-P operates from a single 5 V supply and can accommodate  $\pm 10$  V,  $\pm 5$  V, and  $\pm 2.5$  V true bipolar input signals while sampling at throughput rates up to 1 MSPS per channel pair with 90.5 dB SNR. Higher signal-to-noise ratio (SNR) performance can be achieved with the on-chip oversampling mode (92 dB for an oversampling ratio (OSR) of 2).

The input clamp protection circuitry tolerates voltages up to  $\pm 21$  V. The AD7616-P has 1 M $\Omega$  analog input impedance, regardless of sampling frequency. The single-supply operation, on-chip filtering, and high input impedance eliminate the need for driver op amps and external bipolar supplies.

The device contains analog input clamp protection, a dual, 16-bit charge redistribution successive approximation register (SAR) analog-to-digital converter (ADC), a flexible digital filter, a 2.5 V reference and reference buffer, and a high speed parallel interface.

## Features

16-channel, dual, simultaneously sampled inputs

Independently selectable channel input ranges

True bipolar:  $\pm 10$  V,  $\pm 5$  V,  $\pm 2.5$  V

Single 5 V analog supply and 2.3 V to 3.6 V VDRIVE supply

Fully integrated data acquisition solution

Analog input clamp protection

Input buffer with 1 M $\Omega$  analog input impedance

1st-order antialiasing analog filter

On-chip accurate reference and reference buffer

Dual 16-bit SAR ADC

Throughput rate:  $2 \times 1$  MSPS

Oversampling capability with digital filter

Flexible sequencer with burst mode

Parallel digital interface

Optional CRC error checking

Hardware/software configuration

Performance

92 dB SNR at 500 kSPS ( $2 \times$  OSR)

90.5 dB SNR at 1 MSPS

8 kV ESD rating on analog input pins

On-chip self detect function

80-lead LQFP package

## Application

Power line monitoring

Protective relays

Multiphase motor control

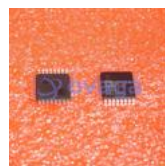
Instrumentation and control systems

Data acquisition systems (DASs)

## Related Products



[ADAS3022BCPZ](#)  
Analog Devices, Inc  
LFCSP-40



[AD7266BSUZ](#)  
Analog Devices, Inc  
TQPF-32



[AD574AJNZ](#)

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