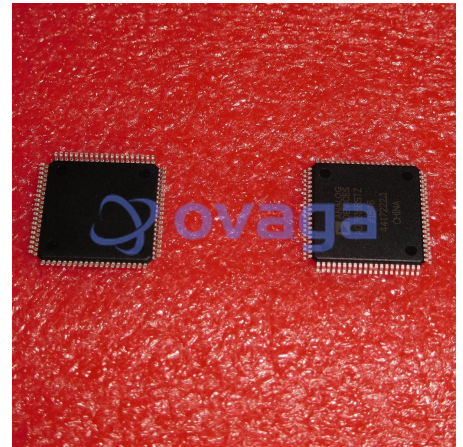


Data Acquisition ADCs/DACs - Specialised 100ksps 16 ch mixed Dual 16B SAR ADC

Manufacturers	Analog Devices, Inc
Package/Case	LQFP-80
Product Type	Data Conversion ICs
RoHS	Pb-free Halide free
Lifecycle	



Images are for reference only

Please submit RFQ for AD7616BSTZ 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 ± 10 V, ± 5 V, and ± 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 ± 21 V. The AD7616-P has 1 M Ω 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: ± 10 V, ± 5 V, ± 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 Ω analog input impedance

1st-order antialiasing analog filter

On-chip accurate reference and reference buffer

Dual 16-bit SAR ADC

Throughput rate: 2×1 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

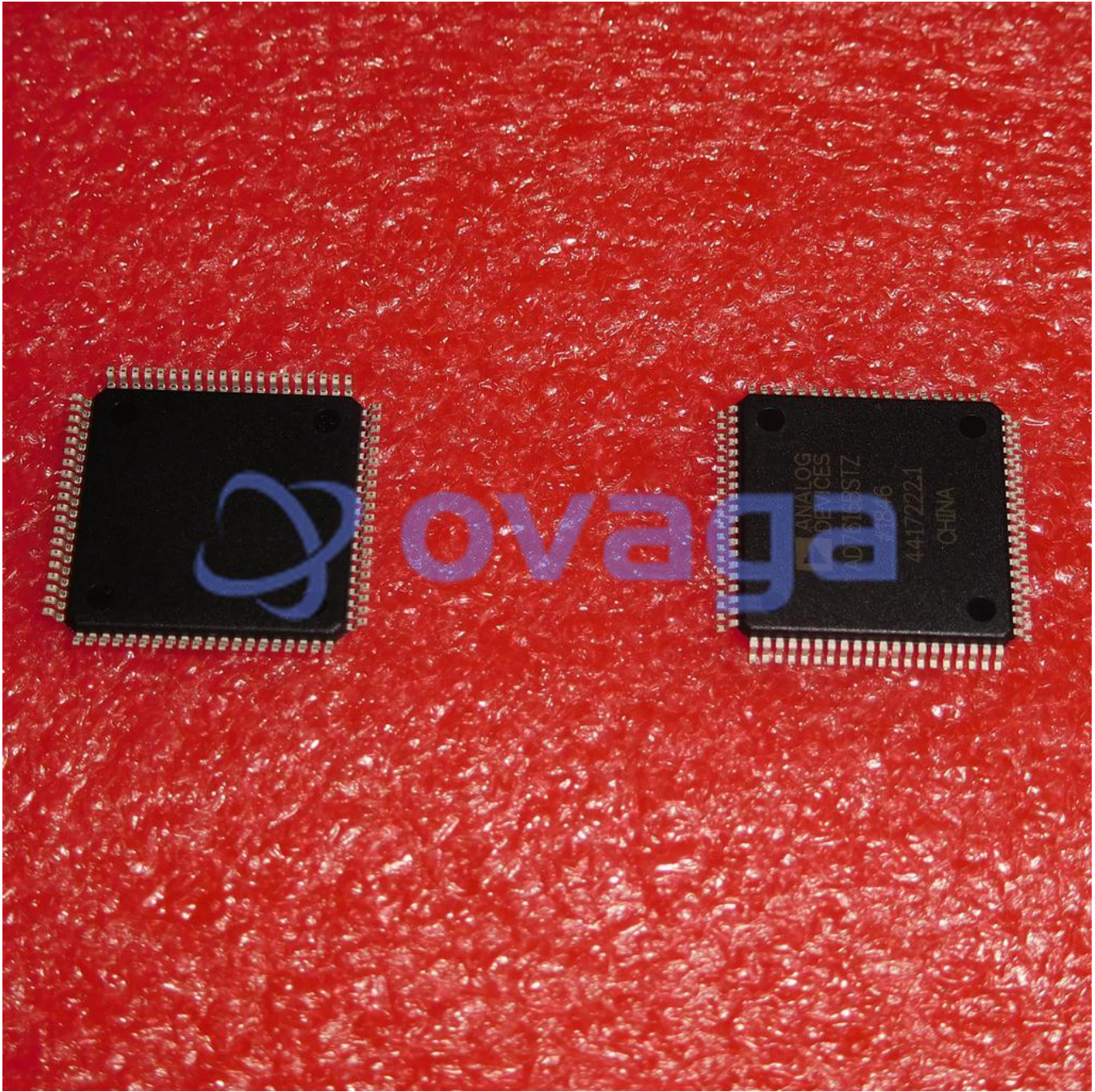
Power line monitoring

Protective relays

Multiphase motor control

Instrumentation and control systems

Data acquisition systems (DASs)



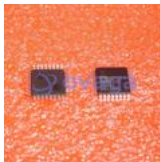


Related Products



[ADAS3022BCPZ](#)

Analog Devices, Inc
LFCSP-40



[AD7266BSUZ](#)

Analog Devices, Inc
TQPF-32



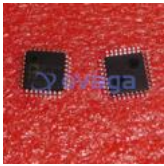
[AD574AJNZ](#)

Analog Devices, Inc
PDIP-28



[AD7401YRWZ](#)

Analog Devices, Inc
SOIC-16



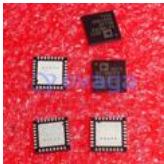
[AD7938BSUZ](#)

Analog Devices, Inc
TQFP-32



[AD7192BRUZ-REEL](#)

Analog Devices, Inc
TSSOP-24



[AD7124-8BCPZ-RL7](#)

Analog Devices, Inc
LFCSP-32



[AD9680BCPZ-500](#)

Analog Devices, Inc
LFCSP-64