

Low Noise, High Throughput 24-Bit Sigma-Delta ADC

Manufacturers	<a href="#">Analog Devices, Inc</a>
Package/Case	SOIC24
Product Type	Data Conversion ICs
RoHS	Pb-free Halide free
Lifecycle	



Images are for reference only

Please submit RFQ for AD7731BRZ or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

## General Description

The AD7731 is a complete analog front-end for process control applications. The device has a proprietary programmable gain front end that allows it to accept a range of input signal ranges, including low level signals, directly from a transducer. The sigma-delta architecture of the part consists of an analog modulator and a low pass programmable digital filter, allowing adjustment of filter cutoff, output rate and settling time.

The part features three buffered differential programmable gain analog inputs (which can be configured as five pseudo-differential inputs), as well as a differential reference input. The part operates from a single +5 V supply and accepts seven unipolar analog input ranges: 0 to +20 mV, +40 mV, +80 mV, +160 mV, +320 mV, +640 mV and +1.28 V, and seven bipolar ranges:  $\pm 20$  mV,  $\pm 40$  mV,  $\pm 80$  mV,  $\pm 160$  mV,  $\pm 320$  mV,  $\pm 640$  mV and  $\pm 1.28$  V. The peak-to-peak resolution achievable directly from the part is 16 bits at an 800 Hz output rate. The part can switch between channels with 1 ms settling time and maintain a performance level of 13 bits of peak-to-peak resolution.

The serial interface on the part can be configured for three-wire operation and is compatible with microcontrollers and digital signal processors. The AD7731 contains self-calibration and system calibration options and features an offset drift of less than 5 nV/°C and a gain drift of less than 2 ppm/°C.

The part is available in a 24-lead plastic DIP, a 24-lead SOIC and 24-lead TSSOP package.

## Features

24-Bit Sigma-Delta ADC

16 Bits p-p Resolution at 800 Hz Output Rate

Programmable Output Rates up to 6.4 kHz

Programmable Gain Front End

Buffered Differential Inputs

Programmable Filter Cutoffs

FASTStep™\* Mode for Channel Sequencing

Single Supply Operation

## Application

Process Control

PLCs/DCS

Industrial Instrumentation

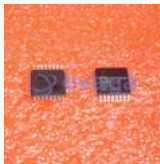


### Related Products



[ADAS3022BCPZ](#)

Analog Devices, Inc  
LFCSP-40



[AD7266BSUZ](#)

Analog Devices, Inc  
TQPF-32



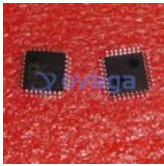
[AD574AJNZ](#)

Analog Devices, Inc  
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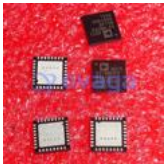
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[AD9680BCPZ-500](#)

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