

AD7738BRUZ

Data Sheet

8-Channel, 8.5 kHz, 24-Bit Sigma-Delta A/D Converter; Package: TSSOP; No of Pins: 28; Temperature Range: Industrial
Manufacturers <u>Analog Devices, Inc</u>
Package/Case TSSOP-28
Product Type Data Conversion ICs
RoHS Rohs
Lifecycle Images are for reference only

General Description

The AD7738 is based on a sigma-delta architecture and features up to 24 bits of no missing codes performance. The part can be configured via a simple digital interface, which allows users to balance the noise performance against data throughput up to a 15.4 kHz conversion rate. The analog front end features 8 single-ended or 4 fully differential input channels with unipolar or bipolar 625 mV, 1.25 V and 2.5V input ranges and accepts a common mode input voltage from 200 mV above AGND to AVDD-300 mV. The multiplexer output is pinned out externally allowing the user to implement programmable gain or signal conditioning before applying the input signal to the ADC. The differential reference input features "No Reference" detect capability. The ADC also supports per channel system calibration options.

The digital serial interface can be configured for three-wire operation and is compatible with microcontrollers and digital signal processors. All interface inputs are Schmitt triggered.

The part is specified for operation over the extended industrial temperature range of -40°C to +105°C and is available in 28-lead TSSOP package.

Features

- High Resolution ADC
- 24 Bits No Missing Codes
- 0.0015% Nonlinearity
- Optimized for Fast Channel Switching
- 18-Bits p-p Resolution (21 Bits Effective) at 500 Hz
- 16-Bits p-p Resolution (19 Bits Effective) at 8.5 kHz
- 15-Bits p-p Resolution (18 Bits Effective) at 15 kHz
- On-Chip Per Channel System Calibration
- Configurable Inputs
- 8 Single-Ended or 4 Fully Differential

Input Ranges

- 3-Wire Serial Interface
- SPITM, QSPITM, MICROWIRETM and DSP Compatible
- Schmitt Trigger on Logic Inputs
- Single-Supply Operation

Package: 28-Lead TSSOP

Related Products







AD574AJNZ Analog Devices, Inc PDIP-28



AD7938BSUZ Analog Devices, Inc TQFP-32







AD7266BSUZ

Analog Devices, Inc TQPF-32

AD7401YRWZ

Analog Devices, Inc SOIC-16

AD7192BRUZ-REEL

Analog Devices, Inc TSSOP-24



AD7124-8BCPZ-RL7

Analog Devices, Inc LFCSP-32



AD9680BCPZ-500

Analog Devices, Inc LFCSP-64