AD7193BRUZ

Data Sheet

4-Channel, 4.8 kHz, Ultralow Noise, 24-Bit Sigma-Delta ADC with PGA; Package: 28-TSSOP (4.4mm); Temperature Range: -40°C to +125°C

Images are for reference only

Manufacturers	Analog Devices, Inc
Package/Case	TSSOP-28
Product Type	Data Conversion ICs
RoHS	Rohs
Lifecycle	

Please submit RFQ for AD7193BRUZ or Email to us: sales@ovaga.com We will contact you in 12 hours. RFQ

General Description

The AD7193 is a low noise, complete analog front end for high precision measurement applications. It contains a low noise, 24-bit sigma-delta (Σ-Δ) analog-to-digital converter (ADC). The on-chip low noise gain stage means that signals of small amplitude can interface directly to the ADC.

The device can be configured to have four differential inputs or eight pseudo differential inputs. The on-chip channel sequencer allows several channels to be enabled simultaneously, and the AD7193 sequentially converts on each enabled channel, simplifying communication with the part. The on-chip 4.92 MHz clock can be used as the clock source to the ADC or, alternatively, an external clock or crystal can be used. The output data rate from the part can be varied from 4.7 Hz to 4.8 kHz.

The device has a very flexible digital filter, including a fast settling option. Variables such as output data rate and settling time are dependent on the option selected. The AD7193 also includes a zero latency option.

The part operates with a power supply from 3 V to 5.25 V. It consumes a current of 4.65 mA, and it is available in a 28-lead TSSOP package and a 32-lead LFCSP package.

Features

Fast settling filter option

4 differential/8 pseudo differential input channels

RMS noise: 11 nV @ 4.7 Hz>

15.5 noise-free bits @ 2.4 kHz>

Up to 22 noise-free bits>

Offset drift: ±5 nV/°C

Gain drift: ±1 ppm/°C

Specified drift over time

Automatic channel sequencer

Programmable gain (1 to 128)

Output data rate: 4.7 Hz to 4.8 kHz

Internal or external clock

Simultaneous 50 Hz/60 Hz rejection

4 general-purpose digital outputs

Power supply

AVDD: 3 V to 5.25 V

DVDD: 2.7 V to 5.25 V

Current: 4.65 mA

Temperature range: −40°C to +105°C

28-lead TSSOP and 32-lead LFCSP packages

Interface

3-wire serial

SPI, QSPI™, MICROWIRE™, and DSP compatible

Schmitt trigger on SCLK

Application

PLC/DCS analog input modules

Data acquisition

Strain gage transducers

Pressure measurement

Temperature measurement

Flow measurement

Weigh scales

Chromatography

Medical and scientific instrumentation


AD7193
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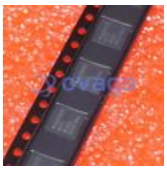
PIN 1

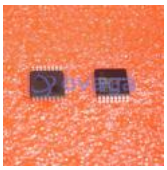
Related Products



[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](#)

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TQFP-32

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TSSOP-24

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LFCSP-64