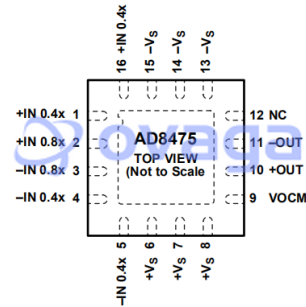


Differential Amplifiers Prec Selectable Gain Funnel

Manufacturers	Analog Devices, Inc
Package/Case	MSOP-10
Product Type	Amplifier ICs
RoHS	Rohs
Lifecycle	



Images are for reference only

Please submit RFQ for AD8475BRMZ or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The AD8475 is a fully differential, attenuating amplifier with integrated precision gain resistors. It provides precision attenuation (by 0.4 or 0.8), common-mode level shifting, and single-ended-to-differential conversion along with input overvoltage protection. Power dissipation on a single 5 V supply is only 16 mW.

The AD8475 is a simple to use, fully integrated precision gain block, designed to process signal levels of up to ± 10 V on a single supply. It provides a complete interface to make industrial level signals directly compatible with the differential input ranges of low voltage high performance 16-bit or 18-bit single-supply successive approximation (SAR) analog-to-digital converters (ADCs).

The AD8475 comes with two standard pin-selectable gain options: 0.4 and 0.8. The gain of the part is set by driving the input pin corresponding to the appropriate gain.

The AD8475 also provides overvoltage protection from large industrial input voltages up to ± 15 V while operating on a single 5 V supply. The VOVM pin adjusts the output voltage common mode for precision level shifting, to match the ADC's input range and maximize dynamic range.

The AD8475 works extremely well with SAR, Σ - Δ , and pipeline converters. The high current output stage of the part allows it to drive the switched capacitor front-end circuits of many ADCs with minimal error.

Unlike many differential drivers in the market, the AD8475 is a high precision amplifier. With 500 μ V maximum output offset, 10 nV/ $\sqrt{\text{Hz}}$ output noise, and -112 dB THD + N, the AD8475 pairs well with high accuracy converters. Considering its low power consumption and high precision, the slew-enhanced AD8475 has excellent speed, settling to 18-bit precision for 4 MSPS acquisition.

The AD8475 is available in a space-saving 16-lead 3 mm \times 3 mm LFCSP package and a 10-lead MSOP package. It is fully specified over the -40°C to $+85^\circ\text{C}$ temperature range.

Features

Precision attenuation: = 0.8

Fully differential or single-ended input/output

Differential output designed to drive precision ADCs

Drives switched capacitor and Σ - Δ ADCs

Rail-to-rail output

VOCM pin adjusts output common-mode voltage

Robust overvoltage protection up to ± 15 V

Single supply: 3 V to 10 V

Dual supplies: ± 1.5 V to ± 5 V

High performance

Suited for driving 18-bit converters up to 4 MSPS

10 nV/ $\sqrt{\text{Hz}}$ output noise

3 ppm/ $^{\circ}\text{C}$ gain drift

500 μV maximum output offset

50 V/ μs slew rate

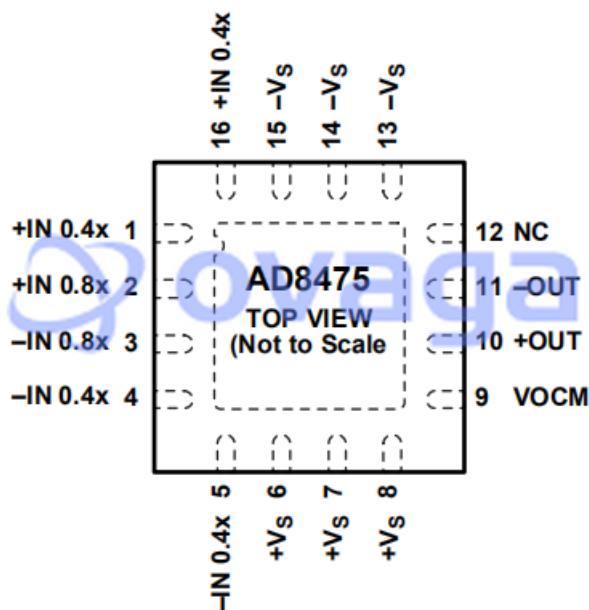
Low power: 3.2 mA supply current

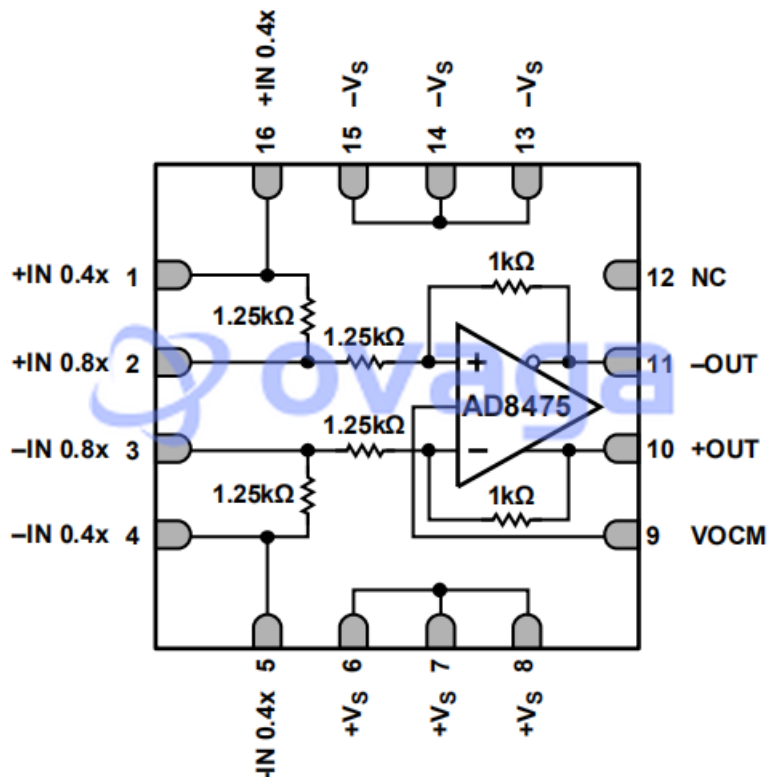
Application

ADC drivers

Differential instrumentation amplifier building blocks

Single-ended-to-differential converters





12-001

Related Products



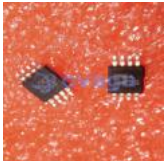
[AD8418BRMZ-RL](#)

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