

Analogue to Digital Converter, Sigma Delta, 16 bit, 500 SPS, Differential, Serial, Single, 4.75 V

Manufacturers	<a href="#">Analog Devices, Inc</a>
Package/Case	SOP-16
Product Type	Data Conversion ICs
RoHS	Pb-free Halide free
Lifecycle	



Images are for reference only

Please submit RFQ for AD7715ARZ-5 or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

## General Description

The AD7715 features a differential analog input as well as a differential reference input. It operates from a single supply (3 V or 5 V). It can handle unipolar input signal ranges of 0 mV to 20 mV, 0 mV to 80 mV, 0 V to 1.25 V and 0 V to 2.5 V. It can also handle bipolar input signal ranges of  $\pm 20$  mV,  $\pm 80$  mV,  $\pm 1.25$  V and  $\pm 2.5$  V. These bipolar ranges are referenced to the negative input of the differential analog input. The AD7715 thus performs all signal conditioning and conversion for a single channel system.

The AD7715 is ideal for use in smart, microcontroller, or DSP-based systems. It features a serial interface that can be configured for three-wire operation. Gain settings, signal polarity, and update rate selection can be configured in software using the input serial port. The part contains self-calibration and system calibration options to eliminate gain and offset errors on the part itself or in the system.

CMOS construction ensures very low power dissipation, and power-down mode reduces the standby power consumption to 50  $\mu$ W typical. The part is available in a 16-lead, 0.3 inch-wide, plastic dual-in-line package (PDIP) as well as a 16-lead 0.3 inch wide small outline (SOIC\_W) package and a 16-lead TSSOP package.

### Product Highlights

The AD7715 consumes less than 450  $\mu$ A in total supply current at 3 V supplies and 1 MHz master clock, making it ideal for use in low-power systems. Standby current is less than 10  $\mu$ A.

The programmable gain input allows the AD7715 to accept input signals directly from a strain gage or transducer removing a considerable amount of signal conditioning.

The AD7715 is ideal for microcontroller or DSP processor applications with a three-wire serial interface reducing the number of interconnect lines and reducing the number of optocouplers required in isolated systems. The part contains on-chip registers which allow software control over output update rate, input gain, signal polarity, and calibration modes.

The part features excellent static performance specifications with 16-bits no missing codes,  $\pm 0.0015\%$  accuracy, and low rms noise ( $< 550$  nV). Endpoint errors and the effects of temperature drift are eliminated by on-chip calibration options, which remove zero-scale and full-scale errors.

## Features

Charge-balancing ADC 16-bits no missing codes 0.0015% nonlinearity

Programmable gain front end Gains of 1, 2, 32 and 128 Differential input capability

Three-wire serial interface

SPI-, QSPI™-, MICROWIRE™-, and DSP-compatible

Ability to buffer the analog input

3 V (AD7715-3) or 5 V (AD7715-5) operation

Low supply current: 450  $\mu$ A maximum @ 3 V supplies

Low-pass filter with programmable output update

16-lead SOIC/PDIP/TSSOP



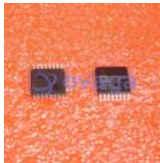


## Related Products



### [ADAS3022BCPZ](#)

Analog Devices, Inc  
LFCSP-40



### [AD7266BSUZ](#)

Analog Devices, Inc  
TQFP-32



### [AD574AJNZ](#)

Analog Devices, Inc  
PDIP-28



### [AD7401YRWZ](#)

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SOIC-16



### [AD7938BSUZ](#)

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### [AD7192BRUZ-REEL](#)

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### [AD7124-8BCPZ-RL7](#)

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### [AD9680BCPZ-500](#)

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