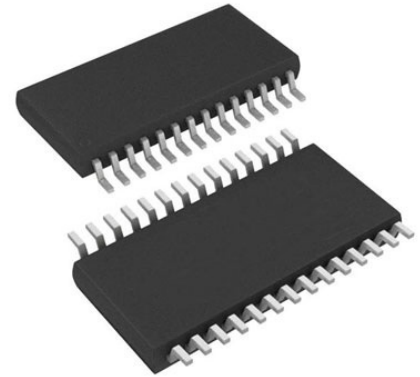


Analogue to Digital Converter, 24 bit, Differential, Single Ended, Serial, SPI, 2.5 V

Manufacturers	<a href="#">Analog Devices, Inc</a>
Package/Case	TSSOP-28
Product Type	Data Conversion ICs
RoHS	Rohs
Lifecycle	



Images are for reference only

Please submit RFQ for AD7764BRUZ or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

## General Description

The AD7764 is a high performance, 24-bit, sigma-delta ( $\Sigma$ - $\Delta$ ) analog-to-digital converter (ADC). It combines wide input bandwidth, high speed, and performance of 109 dB dynamic range at a 312.5 kHz output data rate. With excellent dc specifications, the converter is ideal for high speed data acquisition of ac signals where dc data is also required.

Using the AD7764 eases front-end antialias filtering requirements, simplifying the design process significantly. The AD7764 offers pin-selectable decimation rates of 64 $\times$ , 128 $\times$ , and 256 $\times$ . Other features include an integrated buffer to drive the reference, as well as a fully differential amplifier to buffer and level shift the input to the modulator.

An overrange alert pin indicates when an input signal exceeds the acceptable range. The addition of internal gain and internal overrange registers makes the AD7764 a compact, highly integrated data acquisition device requiring minimal peripheral components.

The AD7764 also offers a low power mode, significantly reducing power dissipation without reducing the output data rate or available input bandwidth.

The differential input is sampled at up to 40 MSPS by an analog modulator. The modulator output is processed by a series of low-pass filters. The external clock frequency applied to the AD7764 determines the sample rate, filter corner frequencies, and output word rate.

The AD7764 device boasts a full band, on-board FIR filter. The full stop-band attenuation of the filter is achieved at the Nyquist frequency. This feature offers increased protection from signals that lie above the Nyquist frequency being aliased back into the input signal bandwidth.

The reference voltage supplied to the AD7764 determines the input range. With a 4 V reference, the analog input range is  $\pm 3.2768$  V differential, biased around a common mode of 2.048 V. This common-mode biasing is achieved using the on-chip differential amplifier, further reducing the external signal conditioning requirements.

The AD7764 is available in a 28-lead TSSOP package and is specified over the industrial temperature range of  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$ .

## Features

High performance 24-bit  $\Sigma$ - $\Delta$  ADC

115 dB dynamic range at 78.125 kHz output data rate

109 dB dynamic range at 312.5 kHz output data rate

312.5 kHz maximum fully filtered output word rate

Pin-selectable oversampling rates of 64 $\times$ , 128 $\times$ , and 256 $\times$

Low power mode

Flexible serial peripheral interface (SPI)

Fully differential modulator input

On-chip differential amplifier for signal buffering

On-chip reference buffer

Full band, low-pass, finite impulse response (FIR) filter

Overrange alert pin

Digital gain correction registers

Power-down mode

Synchronization of multiple devices via the SYNC pin

Daisy chaining

## Application

Data acquisition systems

Vibration analysis

Instrumentation

## Related Products



### [ADAS3022BCPZ](#)

Analog Devices, Inc  
LFCSP-40



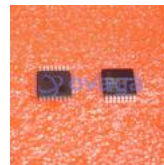
### [AD574AJNZ](#)

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](#)

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TSSOP-24



[AD7124-8BCPZ-RL7](#)

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LFCSP-32



[AD9680BCPZ-500](#)

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LFCSP-64