AD7760BSVZ

Data Sheet

2.5 MSPS, 24-Bit, 100 dB Sigma-Delta ADC with On-Chip Buffer; Package: TQFP_EP (pad size 7.50mm); No of Pins: 64; Temperature Range: Industrial

Manufacturers	Analog Devices, Inc
Package/Case	TQFP-64
Product Type	Data Conversion ICs
RoHS	Rohs
Lifecycle	

Images are for reference only

Please submit RFQ for AD7760BSVZ or Email to us: sales@ovaga.com We will contact you in 12 hours. RFQ

General Description

The AD7760 is a high performance, 24-bit Σ-Δ analog-to-digital converter (ADC). It combines wide input bandwidth and high speed with the benefits of Σ-Δ conversion to achieve a performance of 100 dB SNR at 2.5 MSPS, making it ideal for high speed data acquisition. Wide dynamic range combined with significantly reduced antialiasing requirements simplify the design process. An integrated buffer to drive the reference, a differential amplifier for signal buffering and level shifting, an overrange flag, internal gain and offset registers, and a low-pass digital FIR filter make the AD7760 a compact, highly integrated data acquisition device requiring minimal peripheral component selection. In addition, the device offers programmable decimation rates, and the digital FIR filter can be adjusted if the default characteristics are not appropriate for the application. The AD7760 is ideal for applications demanding high SNR without a complex front-end signal processing design.

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, with the final filter having default or user-programmable coefficients. The sample rate, filter corner frequencies, and output word rate are set by a combination of the external clock frequency and the configuration registers of the AD7760.

The reference voltage supplied to the AD7760 determines the analog input range. With a 4 V reference, the analog input range is ±3.2 V differential biased around a common mode of 2 V. This common-mode biasing can be achieved using the on-chip differential amplifier, further reducing the external signal conditioning requirements.

The AD7760 is available in an exposed paddle, 64-lead TQFP and is specified over the industrial temperature range from −40°C to +85°C.

Features

120 dB dynamic range at 78 kHz output data rate

100 dB dynamic range at 2.5 MHz output data rate

112 dB SNR at 78 kHz output data rate

100 dB SNR at 2.5 MHz output data rate

2.5 MHz maximum fully filtered output word rate

Fully differential modulator input

Programmable oversampling rate (8X to 256X)

On-chip differential amplifier for signal buffering

Low-pass finite impulse response (FIR) filter with default or user-programmable coefficients

Modulator output mode

Overrange alert bit

Digital offset and gain correction registers

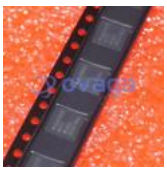
Application

Data acquisition systems

Vibration analysis

Instrumentation

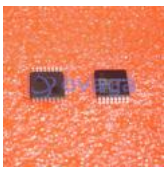
Related Products



[ADAS3022BCPZ](#)

Analog Devices, Inc

LFCSP-40



[AD7266BSUZ](#)

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TQPF-32

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PDIP-28

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SOIC-16

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AD7124-8BCPZ-RL7

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LFCSP-64