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Analog Devices' 24-bit Sigma-Delta A/D Converter Achieves Twice the Speed of Competing Converters and Industry's Best Noise Performance

NORWOOD, Mass.--(BUSINESS WIRE)-- [Analog Devices, Inc.](http://www.analog.com) (ADI), a global leader in high-performance signal processing technology and the data converter market share leader*, today introduced a multiplexed 24-bit sigma-delta A/D converter that doubles the throughput rate of alternative sigma-delta converters while dissipating less power. Designed for process automation and instrumentation systems where data channel density is increasing and channels must be monitored faster, ADI's new AD7176-2 A/D converter achieves a 50 kSPS (thousand samples per second) multi-channel scan rate. In an automated, high-precision production line, the performance of the AD7176-2 allows for faster manufacturing while achieving the precision, low-input bandwidth signal measurements that are inherently associated with the sigma-delta architecture. Measured on a single channel, the AD7176-2 delivers as many as 17.2 noise-free bits at 250 kSPS and 22 noise-free bits at 5 SPS.

- Download data sheet, view product page, access ADI's Circuits from the Lab™ reference circuits and request samples: <http://www.analog.com/AD7176-2>
- Learn more about designing with the sigma-delta converter architecture through this interactive tutorial: <http://designtools.analog.com/dt/sdtutorial/sdtutorial.html>
- Get support at ADI's EngineerZone™, an online technical support community: http://ez.analog.com/community/data_converters/precision_adcs

The AD7176-2 A/D converter includes high-precision, on-chip peripherals, including a 2.5 V, ± 2.5 ppm/°C reference and $\pm 2.5\%$ internal oscillator that reduce board space and lower bill of materials costs while maintaining high performance. The new converter features flexible on-chip digital filters, which optimize settling, resolution and line frequency rejection. The new converter also can be configured on a per-channel basis allowing for different filter and output data rates as well as per-channel offset and gain error correction.

AD7176-2 24-bit Sigma-Delta A/D Converter Key Features:

- 5 SPS to 250 kSPS output rate for fast and flexible updates
- 17.2 noise free bits at 250 kSPS for more accurate measurements
- Up to 90 dB 50 Hz and 60 Hz line frequency rejection using enhanced 50 Hz and 60 Hz rejection filters
- 7.8 mA total current consumption

Pricing, Availability and Complementary Products

Product	Sample Availability	Channel Configuration	Reference	Price Each In 1,000 Quantities	Package
AD7176-2	Yes	4 pseudo/2 full differential	2.5 V ± 2 ppm/°C	\$10.25	24-lead TSSOP

The AD7176-2 can be designed into circuits together with ADI's single-supply, low-noise, low-offset [AD8656](http://www.analog.com/AD8656) CMOS amplifier and single supply, attenuating input stage, [AD8475](http://www.analog.com/AD8475) differential driver.

About Analog Devices

Innovation, performance, and excellence are the cultural pillars on which Analog Devices has built one of the longest standing, highest growth companies within the technology sector. Acknowledged industry-wide as the world leader in data conversion and signal conditioning technology, Analog Devices serves over 60,000 customers, representing virtually all types of electronic equipment. Analog Devices is headquartered in Norwood, Massachusetts, with design and manufacturing facilities throughout the world. Analog Devices is included in the S&P 500 Index.

* [Analog Devices, Inc.](#) leads the worldwide data converter market with a 48 percent share, according to industry analyst firm [Databeans, Inc.](#) in its market research report titled "2011 Data Converters." Analog Devices' 48 percent share is larger than the combined market share of the nearest eight competitors.

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