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Analog Devices' Synchronous Demodulator with Configurable Analog Filter Improves Signal Measurement Sensitivity in Low-Power Applications

ADI's ADA2200 demodulator raises performance threshold for low-power signal processing applications, while reducing system complexity and board space.

NORWOOD, Mass.--(BUSINESS WIRE)-- [Analog Devices, Inc.](http://www.analog.com) (NASDAQ: ADI) released today a [synchronous demodulator](#) with the industry's best combination of integration, performance, flexibility and power consumption.

The ADA2200 uses ADI's patent pending [sampled analog technology](#) (SAT), developed at Lyric Semiconductor, Inc. (acquired by ADI in mid-2011), and incorporates a configurable analog filter to enable designers of portable and low-power instrumentation to maximize battery life and perform precision magnitude and phase measurements on analog signals in the presence of large noise sources. Compared to traditional discrete implementations, this compact, integrated solution reduces PCB area by up to 25 percent and provides designers with a higher degree of flexibility, reducing system design and optimization time and facilitating circuit design reuse across multiple sensors, products and platforms.

- To learn more and order the ADA2200: <http://www.analog.com/ADA2200>
- For support and evaluation board documentation: <http://wiki.analog.com/resources/eval/ada2200eval>
- Connect with engineers and experts on [EngineerZone](#)™, an online technical support community: <https://ez.analog.com/community/>

The low-power (390- μ A at 3.3V and $f_{CLK} = 500$ kHz) and rail-to-rail operation of the ADA2200 make it ideal for advanced battery-powered and low-voltage systems serving medical, industrial and communications markets and can be used in a wide variety of applications including impedance measurement, gas detection, air or fluid analysis, strain gauges and proximity measurement.

About The ADA2200 and Patent Pending SAT Technology

The ADA2200 features a highly integrated analog signal chain, including a configurable infinite impulse response (IIR) filter, low-pass finite impulse response (FIR) 1/8x decimation filter, mixer with 0°/90° phase selection, reference clock and A/D converter driver output. Optimized for input sampling rates up to 1 MHz, the ADA2200 enables demodulation of signal input bandwidths to 30 kHz, achieves 0.009° phase detection sensitivity and operates over a -40°C to +85°C temperature range.

ADI's proprietary SAT technology uses charge sharing among capacitors to perform "digital-like" computations in the analog domain. By processing the signal entirely in the analog domain, this analog-in, sampled-analog-out device reduces A/D converter sample rates, lowering A/D converter power consumption by up to 87 percent and offloads computationally heavy tasks from the digital processor or microcontroller. This allows designers to simplify their system architecture, shorten development time, and reduce system size and power consumption.

Pricing and Availability

Part Number	Availability	Price Each Per 1000	Package
ADA2200	NOW	\$2.95	16-lead TSSOP

About Analog Devices, Inc.

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. www.analog.com.

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