



News Release | [www.linear.com](http://www.linear.com)

## **12-Bit, 8-Channel 500ksps SAR ADC Features Compact Solution Size and Low Power**

MILPITAS, CA – August 30, 2007 – Linear Technology Corporation introduces the LTC2308, a 12-bit analog-to-digital converter (ADC) that measures eight single-ended input channels, four differential input channels, or combinations of both for digitizing multiple data acquisition signals with a single chip. The LTC2308 features an internal 8-channel multiplexer and communicates via an SPI-compatible serial interface at throughput rates up to 500ksps. With the combination of an internal reference and a tiny 4mm x 4mm QFN-24 package, the LTC2308 provides a high level of integration to reduce board area and total system cost, making it ideal for portable instruments and space-constrained designs.

The LTC2308 operates from a single 5V supply, drawing only 17mW at the 500ksps throughput rate. Power dissipation can be further decreased with two shutdown modes. Nap mode reduces the power to 1.15mW at 1ksps, and sleep mode shuts down all internal circuitry and reduces the power to 35uW. The LTC2308 measures unipolar or bipolar input signals, achieving excellent DC specifications, including  $\pm 2\text{mV}(\text{max})$  zero-scale error and  $\pm 4\text{LSB}(\text{max})$  full-scale error. The LTC2308 excels when digitizing AC input signals, measuring 73dB SINAD and -88dB THD at 1kHz. A separate digital output supply voltage ( $\text{OV}_{\text{DD}}$ ) allows users to configure the serial data output for power supplies ranging from 3V to 5V logic.

The LTC2308 is available today in both commercial and industrial temperature grades. The LTC2308 is competitively priced, beginning at 2.95 for 1,000-piece quantities.


**Photo Caption:** 12-Bit, 8-channel, 500ksps ADC

### Summary of Features: LTC2308

- 500ksps Throughput Rate
- Low Power Dissipation:
  - 17mW at 500ksps
  - 1.15mW at 1ksps (Nap Mode)
  - 35uW Sleep Mode
- 12-Bit, 8-Channel Multiplexer (8 Single-Ended Channels, 4 Differential Channels)
- 5V Single Supply Operation
- Tiny QFN-24 (4mm x 4mm) Package
- Internal Reference
- 73dB SINAD at 1kHz
- 4-Wire SPI-Compatible Serial Interface
- Unipolar or Bipolar Input Ranges
- Separate  $OV_{DD}$  Digital Output Voltage Supply: 2.7V to 5.5V

### About Linear Technology

Linear Technology Corporation, a manufacturer of high performance linear integrated circuits, was founded in 1981, became a public company in 1986 and joined the S&P 500 index of major public companies in 2000. Linear Technology products include high performance amplifiers, comparators, voltage references, monolithic filters, linear regulators, DC-DC converters, battery chargers, data converters, communications interface circuits, RF signal conditioning circuits, and many other analog functions. Applications for Linear Technology's high performance circuits include telecommunications, cellular telephones, networking products such as optical switches, notebook and desktop computers, computer peripherals, video/multimedia, industrial instrumentation, security monitoring devices, high-end consumer products such as digital cameras and MP3 players, complex medical devices, automotive electronics, factory automation, process control, and military and space systems. For more information, visit [www.linear.com](http://www.linear.com)

LT, LTC, LTM and  are registered trademarks of Linear Technology Corp.

### Press Contacts:

John Hamburger, Director Marketing Communications  
[jhamburger@linear.com](mailto:jhamburger@linear.com)  
Tel: 408-432-1900 ext 2419

Doug Dickinson, Media Relations Manager  
[ddickinson@linear.com](mailto:ddickinson@linear.com)  
Tel: 408-432-1900 ext 2233