



## **16-bit, 160Msps ADC Delivers 77dB SNR for High Performance Communications Systems & Instrumentation**

MILPITAS, CA – September 6, 2007 – Linear Technology Corporation announces the LTC2209, a 16-bit 160Msps high performance high-speed Analog to Digital Converter (ADC) for leading edge communications equipment and instrumentation applications. The LTC2209 extends the sampling frequency of the LTC2208 family, offering a pin-compatible upgrade path for existing designs. The LTC2209 has excellent signal to noise ratio (SNR) performance of 77.1dB and spurious free dynamic range (SFDR) of 100dB at baseband, consuming only 1450mW from a 3.3V supply.

The LTC2209 has two unique features that simplify receiver design and improve system performance. The first is an internal transparent dither circuit that improves the ADC's SFDR response well beyond 100dBc for low level input signals. The second feature is a digital output randomizer that dramatically reduces unwanted tones caused by digital feedback. The flexible digital outputs can be run as CMOS or LVDS.

The LTC2209 also features a programmable gain amplifier (PGA) front end that eases the ADC driver output power requirements when driving the lower input range of 1.5V<sub>P-P</sub>. This improves the distortion performance and power consumption of the driver with minimal impact on ADC noise performance.

The LTC2209 delivers an extensive feature set in a 9mm x 9mm QFN package, ensuring low power consumption of 1450mW without the need for heat sinking. Most importantly, total solution size with integrated bypass capacitance is less than half the nearest competitor and power consumption is equivalent to competitive parts sampling at half the speed. Designed for ease of use, the LTC2209 requires only a single 3.3V supply for operation and comes with a clock duty cycle stabilizer for maintaining the ADC's performance over varying duty cycles. The LTC2209 can accept high frequency, wide dynamic range signals, offering a wide analog input bandwidth of 700MHz.

The LTC2209 family includes speed grades of 160Msps, 130Msps, 105Msps, 80Msps, 65Msps, 40Msps, 25Msps and 10Msps, all with superior SFDR and SNR performance. In addition to the 16-bit LTC2209, the pin-compatible LTC2209-14 14-bit version will also be available. (Samples and demo boards for the LTC2209 are available from our website). The LTC2209 is available today in both commercial and industrial temperature grades, and is competitively priced at \$72.50 each in 1,000-piece quantities.

The following provides a table of the entire LTC2209 product family. All parts can be ordered in optional lead-free packages for RoHS compliance.


### Photo Caption: 16-Bit, 160Msps ADC

Part Number	Resolution	Speed	Power	Availability	Price (1k)
LTC2209	16-bit	160Msps	1450mW	Nov	\$72.50
LTC2208	16-bit	130Msps	1250mW	Now	\$65.00
LTC2207	16-bit	105Msps	850mW	Now	\$56.67
LTC2206	16-bit	80Msps	640mW	Now	\$48.33
LTC2205	16-bit	65Msps	450mW	Now	\$43.33
LTC2204	16-bit	40Msps	350mW	Now	\$35.00
LTC2203	16-bit	25Msps	220mW	Now	\$30.00
LTC2202	16-bit	10Msps	150mW	Now	\$25.00
LTC2209-14	14-bit	160Msps	1450mW	Dec	\$60.00
LTC2208-14	14-bit	130Msps	1250mW	Now	\$55.00
LTC2207-14	14-bit	105Msps	850mW	Now	\$45.00
LTC2206-14	14-bit	80Msps	640mW	Now	\$33.00
LTC2205-14	14-bit	65Msps	450mW	Now	\$28.00

### 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)

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