



16-Bit, 210Msps ADC Delivers 80dB SNR for High Performance Communications & Instrumentation Systems

MILPITAS, CA – April 28, 2014 – Linear Technology Corporation announces the [LTC2107](#), a 16-bit 210Msps high performance high-speed analog-to-digital converter (ADC) for high-end communications receivers and instrumentation applications. The LTC2107 has superior AC performance specifications, achieving 80dB SNR performance, 4dB higher than alternative products, and industry leading 98dB SFDR at baseband. Exceptional aperture jitter of only 45fs_{RMS} enables direct sampling of frequencies up to 500MHz with excellent SNR performance.

The LTC2107's unique features simplify receiver design and improve system performance. An optional internal transparent dither circuit improves the ADC's SFDR response well beyond 100dBFS for low level input signals. The digital output randomizer and alternate bit polarity mode dramatically reduce unwanted tones caused by digital feedback. The flexible digital outputs can run as full-rate CMOS for sample rates below 100Msps, or double data rate (DDR) LVDS to minimize routing of lines to the FPGA.

The LTC2107 also features a programmable gain amplifier (PGA) front end that sets the ADC input range to either 2.4V_{P-P} or 1.6V_{P-P}. This gives the user the flexibility to trade off between noise and distortion. The best distortion performance is achieved in the 1.6V_{P-P} range while the 2.4V_{P-P} range results in the best noise performance.

The LTC2107 delivers an extensive feature set in a 7mm x 7mm QFN package, and dissipates 1.3W without the need for heat sinking. Designed for ease of use, the LTC2107 requires only a single 2.5V analog supply for operation and comes with a clock duty cycle stabilizer for maintaining the ADC's performance over varying duty cycles. The LTC2107 can accept high frequency, wide dynamic range signals, offering a wide analog input bandwidth of 800MHz.

The LTC2107 is available today in both commercial and industrial temperature grades, and is competitively priced starting at \$99.00 each in 1,000-piece quantities. Demo boards and samples are available via the Linear Technology website www.linear.com/product/LTC2107


Photo Caption: 16-Bit 210Mps ADC with 80dB SNR

Summary of Features: LTC2107

- 98dBFS SFDR, 80dBFS SNR
- Aperture Jitter = 45fs_{RMS}
- PGA Front-End 2.4V_{P-P} or 1.6V_{P-P} Input Range
- Optional Internal Dither
- Optional Data Output Randomizer
- Power Dissipation: 1280mW
- Shutdown Mode
- Serial SPI Port for Configuration
- Clock Duty Cycle Stabilizer
- 48-Lead (7mm × 7mm) QFN Package

About Linear Technology

Linear Technology Corporation, a member of the S&P 500, has been designing, manufacturing and marketing a broad line of high performance analog integrated circuits for major companies worldwide for over three decades. The Company's products provide an essential bridge between our analog world and the digital electronics in communications, networking, industrial, automotive, computer, medical, instrumentation, consumer, and military and aerospace systems. Linear Technology produces power management, data conversion, signal conditioning, RF and interface ICs, μ Module[®] subsystems, and wireless sensor network products. For more information, visit www.linear.com

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