



Fast 16-bit 5Msps Dual SAR ADC Offers Flexible Differential Inputs with Wide Common Mode Range

MILPITAS, CA – February 24, 2014 – Linear Technology Corporation introduces the [LTC2323-16](#), a dual 16-bit 5Msps simultaneous sampling, successive approximation register (SAR) ADC with flexible differential inputs. The LTC2323-16 supports a wide input common mode range and simplifies system-level design by relaxing the signal conditioning requirements to drive the ADC with a wide range of analog signals up to Nyquist frequencies.

The LTC2323-16 leads a family of 16-, 14- and 12-bit SAR ADCs, featuring sample rates of 5Msps and 2Msps while achieving 81dB SNR at 16 bits, 80dB SNR at 14 bits and 73dB SNR at 12 bits. The 14- and 12-bit versions feature sign plus magnitude transfer functions, making them ideally suited for control loop applications. The LTC2323 family integrates a precision bandgap reference with low drift and guaranteed 20ppm/°C maximum temperature coefficient into a small 20mm² QFN-28 package. The devices can be powered from a 3.3V or 5V supply and consume just 55mW with a 3.3V supply and 80mW with a 5V supply. The high speed SPI-compatible CMOS or LVDS serial interface is ideal for highly integrated high speed systems.

The LTC2323-16 is available today in commercial, industrial and automotive (-40°C to 125°C) temperature grades. Pricing begins at \$13.95 each in 1,000-piece quantities. The DC1996A evaluation board for the LTC2323 SAR ADC family is available at www.linear.com/demo or via a local Linear Technology sales office. For more information, visit www.linear.com/product/LTC2323-16


Photo Caption: Dual, 16-Bit, 5Msps, Simultaneous Sampling, Differential Input SAR ADC

Summary of Features: LTC2323-16

- 5Msps Throughput Rate
- ± 4 LSB INL (Typ)
- Guaranteed 16-Bit, No Missing Codes
- 8V_{P-P} Flexible Differential Inputs with Wide Input Common Mode Range
- 81dB SNR (Typ) at $f_{IN} = 2.2$ MHz
- -85 dB THD (Typ) at $f_{IN} = 2.2$ MHz
- Guaranteed Operation to 125°C
- Single 3.3V or 5V Supply
- Low Drift (20ppm/°C Max) 2.048V or 4.096V Internal Reference
- 1.8V to 2.5V I/O Voltages
- CMOS or LVDS SPI-Compatible Serial I/O
- Power Dissipation 40mW/Ch (Typ)
- Small 28-Lead (4mm × 5mm) 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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