



24-Bit 2Msps SAR ADC Achieves 145dB Dynamic Range

MILPITAS, CA – November 3, 2015 – Linear Technology Corporation introduces the [LTC2380-24](#), a breakthrough no latency 24-bit 2Msps successive approximation register (SAR) analog-to-digital converter (ADC). The LTC2380-24 features an integrated digital filter that averages 1 to 65,536 conversion results real time, dramatically improving the dynamic range from 101dB at 1.5Msps to 145dB at an output data rate of 30.5sps. This makes the LTC2380-24 ideal for seismic, medical and many other applications demanding high dynamic range.

Using an on-chip digital filter to average conversion results, the LTC2380-24 eliminates the processing burden from the digital host, conserving digital resources and the associated power. Moreover, the LTC2380-24 allows results to be read out with a serial clock as low as 2MHz, easing interfacing to microprocessors, enabling use with slower devices. The LTC2380-24 achieves true 24-bit noise performance and features high DC accuracy with a maximum INL of $\pm 3.5\text{ppm}$ while dissipating 28mW from a single 2.5V supply.

The LTC2380-24 is available in small MSOP-16 and 4mm \times 3mm DFN-16 packages, priced starting at \$31.95 each in 1,000 piece quantities. It is drop-in compatible with the LTC2378-20 family of 1Msps 0.5ppm INL no latency SAR ADCs, allowing easy system upgrades to 24 bits. Samples and demo boards may be requested at www.linear.com/product/LTC2380-24, or by contacting your local Linear Technology sales office.


Photo Caption: 24-Bit 2Msps SAR ADC with 145dB Dynamic Range**Summary of Features: LTC2380-24**

- Guaranteed 24-Bit No Missing Codes
- Integrated Digital Filter
- 101dB Dynamic Range (Typ) at 1.5Msps
- 145dB Dynamic Range (Typ) at 30.5sps
- ± 0.5 ppm INL (Typ)
- -117 dB THD (Typ) at $f_{IN} = 2$ kHz
- Low Power: 28mW at 2Msps
- 50Hz/60Hz Rejection
- Single 2.5V Supply
- 16-Lead MSOP & 4mm \times 3mm DFN Packages

The USA list pricing shown is for budgetary use only. International prices may differ due to local duties, taxes, fees and exchange rates.

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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