



## **SoftSpan 16-/14-/12-Bit Current Output DACs Draw Less than 1uA Supply Current**

MILPITAS, CA – October 2, 2007 – Linear Technology Corporation introduces the LTC2751 family of extremely low-power, software-programmable 16-/14-/12-bit digital-to-analog converters (DACs). These current output DACs typically draw only 0.7uA of supply current (2uA max), while generating an output swing up to  $\pm 10V$ . Six unique output voltage ranges can be programmed via SoftSpan™ software, including two unipolar ranges (0V to 5V, 0V to 10V) and four bipolar ranges ( $\pm 10V$ ,  $\pm 5V$ ,  $\pm 2.5V$ ,  $-2.5V$  to  $+7.5V$ ). Software programmability eliminates the need for expensive precision resistors, gain stages and manual jumper switching.

The LTC2751-16 offers accurate DC specifications, including  $\pm 1\text{LSB}(\text{max})$  INL and DNL over the  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  industrial temperature range. With its precision linearity and supply current less than 1uA, the LTC2751-16 can be used in DC precision positioning systems, high-resolution gain and offset adjustment applications, and portable instrumentation.

The LTC2751-16 also offers excellent AC specifications, including full-scale settling time of only 2us and low 2nV•s glitch impulse, which is key for AC applications such as waveform generation. Low glitch reduces the transient voltages between code changes in the DAC. Fast settling and low glitch reduce harmonic distortion, making it possible to produce higher frequency, lower noise output waveforms.

The LTC2751 DACs use a bidirectional input/output parallel interface that allows readback of any internal register, as well as the DAC output span setting. A power-on reset circuit returns the DAC output to 0V when power is first applied and a CLR pin asynchronously clears the DAC to 0V in any output range.

The LTC2751 DACs are available today in pin-compatible 16-bit, 14-bit, and 12-bit QFN-38 (5mm x 7mm) packages. Pricing begins at \$4.95 for the LTC2751-12 in 1,000-piece quantities.


**Photo Caption:** 16-/14-/12-Bit Current Output SoftSpan™ DAC Family with Parallel I/O

**Summary of Features: LTC2751-16/LTC2751-14/LTC2751-12**

- Six Programmable Output Ranges:
  - Unipolar 0V to +5V, 0V to +10V
  - Bipolar  $\pm 5V$ ,  $\pm 10V$ ,  $\pm 2.5V$ , -2.5 to +7.5V
- Low 2uA(max) Supply Current
- $\pm 1\text{LSB}$  INL,  $\pm 1\text{LSB}$  DNL Over Temperature
- Low 2nV\*s Glitch Impulse
- Fast 2us Settling Time
- 2.7V to 5.5V Single Supply Operation
- Parallel Interface with Readback of All Registers
- Asynchronous CLR pin Clears DAC Output to 0V in Any Output Range
- Power-On Reset Clears DAC Output to 0V
- 38-Pin 5mm x 7mm QFN Package

**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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