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## **2A, 2MHz Synchronous Buck-Boost DC/DC Converter Offers Extended Battery Run Time for Li-Ion & Alkaline-Powered Devices**

MILPITAS, CA – March 15, 2007 – Linear Technology announces the LTC3533, a synchronous buck-boost converter that delivers up to 2A of output current from a Li-Ion/Polymer source or 800mA from dual cell alkaline/NiCad/NiMH sources. Its 1.8V to 5.5V input range and 1.8V to 5.25 output range provides a regulated output with inputs above, below or equal to the output. The topology incorporated in the LTC3533 provides a continuous transition through all of the operating modes, making it ideal for applications that must maintain a constant output voltage even as the battery voltage declines below the output. In many cases, this can add up to 25% more battery run time. The LTC3533's constant switching frequency ensures low noise and is user programmable from 300kHz up to 2MHz, in order to optimize the trade off between efficiency and external component size. The combination of tiny externals and a 3mm x 4mm DFN package provide a very small solution footprint, typically required in many handheld applications.

The LTC3533 includes two N-Channel MOSFETs and two P-Channel MOSFETs ( $R_{DS(ON)}$  of 0.06 Ohm and 0.08 Ohm, respectively) to deliver efficiencies of up to 96%. Programmable Burst Mode<sup>®</sup> operation allows the user to program the load current that activates Burst Mode power savings. Burst Mode operation requires only 40uA of quiescent current and shutdown current is less than 1uA, further extending battery run time. Other features include soft-start, current limiting, thermal shutdown and output disconnect.

LTC3533EDE is available from stock in a 14-lead DFN package. Pricing is \$3.55 each for 1,000-piece quantities.

**Photo Caption:** 2A Buck-Boost Offers 25% Longer Battery Run-Time

### **Summary of Features: LTC3533**

- 1.8V to 5.5V (Input) & 5.25V (Output) Voltage Range
- 2A Continuous Output Current: VIN > 3V
- 0.8A Continuous Output Current: VIN > 1.8V
- Single Inductor
- Synchronous Rectification: Up to 96% Efficiency
- Output Disconnect in Shutdown
- Programmable Frequency from 300kHz to 2MHz
- Adjustable Burst Mode Operation; I<sub>Q</sub>=40u, <1uA Shutdown Current
- Small Thermally Enhanced 14-Lead (3mm x 4mm x 0.75mm) DFN 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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