# Synchronous 400mA DC/DC Buck-Boost Converter & 200mA Synchronous Buck in a 3mm x 3mm QFN

MILPITAS, CA – June 12, 2007 – Linear Technology announces the LTC3522, a dual channel, 1MHz synchronous converter. One channel utilizes a synchronous buck-boost topology that can deliver up to 400mA of continuous output current with inputs above, equal, or below the output. In single cell Li-Ion applications requiring a 3.3V output, the buck-boost topology enables up to 25% longer battery run-time. The second channel is a synchronous buck regulator, which can deliver up to 200mA of continuous output current to voltages as low as 0.6V. This combination is ideal for powering applications such as DSPs and microcontrollers that require both a 3.3V I/O rail and a 0.6V to 1.8V rail for the core voltage. The LTC3522's 1MHz switching frequency, enables the use of tiny, low cost ceramic capacitors and inductors, combined with its 3mm x 3mm QFN package, it provides a compact solution footprint.

The LTC3522's unique synchronous buck-boost topology on its 400mA channel enables it to regulate a constant output voltage when the input voltage is above, equal to or below the output, allowing it to use the entire stored energy of the Li-Ion battery. The LTC3522 utilizes automatic Burst Mode® operation, requiring only 25uA (both channels) of no load quiescent current. For applications that require very low noise, the Burst Mode function can be defeated and replaced with a continuous PWM mode. Shutdown current is less than 1uA, further extending battery run-time. Each channel has independent internal soft-start ensuring design flexibility. Other features include short-circuit protection, over-temperature protection, and a power good flags.

LTC3522EUD is available from stock in a 16-Lead QFN package. Pricing is $2.50 each for 1,000-piece quantities.

**Photo Caption:** Dual 1MHz Synchronous DC/DC Converter Offers 25% More Battery Run-Time

## Summary of Features: LTC3522

- Dual High Efficiency DC/DC Converters:
  Buck-Boost ($V_{OUT}$: 2.2V to 5.25V, $I_{OUT}$: 400mA for $V_{IN}$ > 3V, $V_{OUT}$ = 3.3V)
  Buck ($V_{OUT}$: 0.6V to $V_{IN}$, $I_{OUT}$: 200mA)
- 2.4V to 5.5V Input Voltage Range
- Pin Selectable Burst Mode Operation
- 25uA Total Quiescent Current for Both Converters in Burst Mode Operation
- Independent Power Good Indicator Outputs
- Integrated Soft-Start
- Thermal and Overcurrent Protection
- <1uA Current in Shutdown
- Small 16-Lead 0.75mm x 3mm x 3mm 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



**Press Contacts:**

John Hamburger, Director Marketing Communications
jhamburger@linear.com
Tel 408-432-1900 ext 2419

Doug Dickinson, Media Relations Manager
ddickinson@linear.com
408-432-1900 ext 2233