

LTC News for Immediate Release

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**Synchronous Buck-Boost White LED Driver Provides
Both LCD Backlighting & Flash**

MILPITAS, CA – May 4, 2006 – Linear Technology Corporation announces the LTC3452, a synchronous buck-boost DC/DC converter optimized for driving two banks of white LEDs from a single Li-Ion battery. Up to five parallel LEDs can be driven at up to 25mA each for backlighting LCD panels, while two LEDs can be driven at up to 200mA each (or one LED at 400mA) for camera flash applications. The LTC3452's synchronous buck-boost topology delivers up to 90% efficiency over the entire usable Li-Ion range of 2.7V to 4.2V, maximizing battery run-time. The combination of a 4mm x 4mm QFN package and a constant 1MHz switching frequency ensures a very compact solution footprint required in most handhelds.

The LTC3452 operates in either synchronous buck, synchronous boost or buck-boost mode, depending on the input voltage and the maximum LED forward voltage drop. Optimum efficiency is achieved by sensing which LED requires the largest forward voltage drop at its programmed current and regulating the common output rail for the lowest dropout. Maximum LED current for each display is programmable with a single external resistor. Dual enable pins allow for PWM brightness control for the TFT display while an independent on/off control is used for the flash output. Other features include: internal soft start, open/shorted LED protection and over-temperature protection.

The LTC3452EUF is available from stock in a 4mm x 4mm DFN package. Pricing starts at \$1.80 each for 1,000-piece quantities.

Photo Caption: Synchronous Buck-Boost MAIN/CAMERA White LED Driver in QFN

Summary of Features: LTC3452

- High Efficiency: $\geq 90\%$ Over Entire Single-Cell Li-Ion Battery Range
- Wide VIN Range: 2.7V to 5.5V
- Independent MAIN/CAMERA Current Control
- 500mA (total) Continuous Output Current
- Constant Frequency 1MHz Operation
- Internal Soft Start
- Open/Shorted LED Protection
- PWM Brightness Control
- Over Temperature Protection
- Low Shutdown Current: 6uA
- Small Thermally Enhanced 16-Lead (4mm x 4mm)QFN Package

Company Background

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

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