

LTC News for Immediate Release

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**Cell Phone LED Driver for Main, Camera & Auxiliary LEDs Feature
600mA Total Output Current & 94% Efficiency**

MILPITAS, CA – January 18, 2006 – Linear Technology Corporation announces the LTC3209-1 and LTC3209-2, highly integrated, 850kHz, low noise, high efficiency 1x/1.5x/2x multimode charge pumps for driving Main, Camera and Auxiliary LED displays in cellular phones. They can each drive up to 8 LED current sources at up to 600mA of total output current. The LTC3209-1 can drive up to a 6 LED Main display, one LED Camera display, and a one LED Auxiliary display, whereas, the LTC3209-2 can drive up to a 5 LED Main display, two LED Camera display, and a one LED Auxiliary display, all from a compact 4mm x 4mm QFN package. Each display has digital control with independent dimming and programming via a two-wire I²C™ serial interface. The LTC3209-1/-2's input voltage range of 2.9V to 4.5V have been optimized for single cell Li-Ion cellular applications. Efficiencies when driven from a Li-Ion battery (3.6V nominal) reach 94% with quiescent current of only 400uA, maximizing battery run-time. Both the LTC3209-1/-2 require only four small capacitors and one resistor to create a tiny, low profile (<25mm², 0.75mm high) solution footprint.

The LTC3209-1 and LTC3209-2 charge pumps feature low-noise constant-frequency operation and automatically optimize efficiency based on V_{IN} and LED forward voltage conditions. The devices power up in 1x mode and automatically switch to boost mode (1.5x) when any enabled LED current source approaches dropout; a subsequent dropout switches the parts into 2x mode. Maximum currents for the Main/CAM/Aux displays are set with a single resistor. LED currents are controlled with precision internal current sources while dimming and ON/OFF control for all displays are achieved via a 2-wire I²C serial interface. 256 brightness levels are available for the Main display, 16 for the CAM display, and 4 for the AUX display. Internal circuitry prevents inrush current and excessive input noise during start-up and mode switching. In addition, the device has short circuit, thermal and open/short LED protection.

(more...)

The LTC3209EUF-1 and LTC3209EUF-2 are available from stock in a 20-lead QFN (4mm x 4mm) package. Pricing starts at \$1.80 each for 1,000-piece quantities.

Summary of Features: LTC3209-1 & LTC3209-2

- Up to 94% Efficiency without Inductors
- Multimode, Automatic Switching 1x/1.5x/2x Charge Pump for Optimal Efficiency
- Up to 600mA Total Output Current
- 8 Current Sources Available as Main, Camera and Auxiliary LED Drivers:
 - LTC3209-1: 6 MAIN, 1 CAM, 1 AUX
 - LTC3209-2: 5 MAIN, 2 CAM, 1 AUX
- LED ON/OFF, Brightness Level Configurable Using 2-Wire I²C Interface
- Low Noise, Constant Frequency Operation
- Internal Soft-Start Limits Inrush Current During Start-Up and Mode Switching
- Short Circuit/Thermal/Open-Short LED Protection
- 2.9V to 4.5V Input Voltage Range
- 4mm x 4mm x 0.75mm QFN-20 Package

About Linear Technology Corporation

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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