

LTC News for Immediate Release

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**Five-Display Cell Phone LED Driver Features 1A
Total Output Current & 95% Efficiency**

MILPITAS, CA – August 10, 2005 – Linear Technology Corporation announces the LTC3208, a fully integrated, 850kHz, low noise, high efficiency 1x/1.5x/2x charge pump multi-display LED driver. It can drive up to 17 LED current sources: a 1-4 LED Main display, 1-2 LED Sub display, a 1-3 LED RGB display, a 1-4 Camera LED display, and a 1-4 LED Auxiliary display, all from a compact 5mm x 5mm QFN package. Each display has digital control with independent dimming and programming via a two-wire I²C™ serial interface. The LTC3208's input voltage range of 2.9V to 4.5V is optimized for single cell Li-Ion cellular applications. Efficiencies when driven from a Li-Ion battery (3.6V nominal) reach 95% with quiescent current of only 250uA, maximizing battery run-time. The LTC3208 requires only four small capacitors and one resistor to create a tiny, low profile (<34mm², 0.75mm high) solution footprint capable of powering all LEDs used in five separate displays.

The LTC3208 charge pump automatically optimizes efficiency based on V_{IN} and LED forward voltage conditions. The device powers up in 1x mode and automatically switches to boost mode (1.5x) when any enabled LED current source approaches dropout. A subsequent dropout switches the part into 2x mode. Maximum currents for the Main/Sub/RGB/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 and Sub displays, and 4096 color combinations are available for the RGB display. Internal circuitry prevents inrush current and excessive input noise during start-up and mode switching.

(more...)

The LTC3208EUH is available from stock in a 32-lead QFN (5mm x 5mm) package. Pricing starts at \$2.55 each for 1,000-piece quantities.

Summary of Features: LTC3208

- Up to 95% Efficiency without Inductors
- Multi-Mode, Automatic Mode Switching 1x/1.5x/2x Charge Pump for Optimal Efficiency
- Up to 1A Total Output Current
- 17 Current Sources Available as Main, Sub, RGB, CAM and Aux LED Drivers
- LED ON/OFF, Brightness Level and Display Configuration Programmable Using 2-Wire I²C Interface
- 0.5% (TYP) LED Current Matching
- Low Noise, Constant Frequency Operation
- 2.9V to 4.5V Input Voltage Range
- Tiny Solution Footprint <34mm², <0.75mm Profile
- 5mm x 5mm QFN-32 Package

COMPANY BACKGROUND: Linear Technology Corporation was founded in 1981 as a manufacturer of high performance linear integrated circuits. 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.

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READER SERVICE: Call toll-free 1-800-4-LINEAR (for literature only), or go to the company's web site: **<http://www.linear.com>**

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