



## **Virtual Remote Sense Controller Eliminates Remote Sense Wires**

MILPITAS, CA – April 15, 2010 – Linear Technology Corporation announces the LT4180, a Virtual Remote Sense™ DC/DC controller that eliminates the remote sense wires required to compensate for the voltage drop in cables, wires and circuit board trace runs. Voltage drops in wiring and cables that cause load regulation errors are usually corrected by an additional set of sensing wires. The LT4180 continuously interrogates the line impedance and corrects the regulator's output voltage. The device maintains a corrected regulated voltage at the load regardless of current or line impedance. The 3V to 50V input voltage range address a variety of applications, including remote instrumentation, battery charging, wall adaptors, notebook power, surveillance equipment and halogen lighting.

The LT4180 operates with any topology regulator in either isolated or non-isolated power supplies. The output correction is obtained by modulating the output and measuring the incremental change in voltage that occurs with a change in current. Any modulation noise is eliminated by the supply bypass capacitor located at the load.

According to Robert Dobkin, vice president of engineering and CTO for Linear Technology. "The LT4180 provides a new function for power supply designers. Excellent regulation is obtained without sense wires, eliminating the need for point-of-load regulators. Difficult regulation problems such as long wire runs or system retrofits can be accommodated. With halogen lights, the light output drops more quickly than power, so keeping the correct voltage more than compensates for any additional cost of the power supply."

Three temperature grades are available: an extended grade version from -40 to 85°C, an industrial grade version from -40°C to 125°C and a military grade option from -55°C to 125°C. The 1,000-piece price starts at \$2.95 each. The LT4180 is offered in an SSOP-24 package. All versions are available from stock. For more information, visit [www.linear.com](http://www.linear.com).


**Photo Caption:** Virtual Remote Sense™ Controller

**Summary of Features: LT4180**

- Tight Load Regulation without Remote Sense Wires
- Compatible with Isolated & Non-Isolated Power Supplies
- Works with any Topology
- $V_{IN}$  Range from 3V to 50V
- Ability to Drive Opto-Coupler
- Low Turn-On Transients
- Undervoltage & Overvoltage Protection
- Spread Spectrum Modulation Dither
- +/-1% Internal Reference Voltage Over Temperature
- SSOP-24 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, uModule® products, 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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