



News Release | [www.linear.com](http://www.linear.com)

## **-55°C to 125°C Buck-Boost DC/DC uModule Regulator, up to 36V<sub>IN</sub>, 34V<sub>OUT</sub> & 98% Efficiency**

MILPITAS, CA – September 21, 2010 – Linear Technology Corporation introduces the [LTM4609MP](http://www.linear.com/4609), a buck-boost DC/DC uModule<sup>®</sup> system-in-a-package that is guaranteed and tested for the wide -55°C to 125°C temperature range. The LTM4609MP is designed to deliver precision regulation in demanding environments in applications such as military, avionics, heavy industrial machinery, and harsh environment sensors. These uModule devices are backed by Linear Technology's rigorous reliability and quality test standards (reports are available online at [www.linear.com/4609](http://www.linear.com/4609)).

The LTM4609MP is a high voltage and high efficiency DC/DC system in a surface mount 15mm x 15mm x 2.8mm LGA (land grid array) package. The device regulates an output voltage from a variable input voltage greater than, less than or equal to the output voltage. The LTM4609MP operates from 4.5V<sub>IN</sub> to 36V<sub>IN</sub>, regulates an output voltage from 0.8V to 34V and can deliver an output power up to 100W. Included in this uModule regulator is a synchronous buck-boost DC/DC controller, four N-channel MOSFETs, input and output bypass capacitors and compensation circuitry in a small plastic molded package. Only an inductor, feedback and sense resistors, and bulk capacitors are required to implement a very low profile, compact and high efficiency design. Application examples are point-of-load and intermediate-bus regulation in networking, industrial and automotive systems and high-power battery-operated devices.

With the LTM4609MP's onboard proprietary 4-switch synchronous MOSFET design, the device achieves up to 98.3% efficiency in boost mode and up to 97.3% efficiency in buck mode (condition: V<sub>IN</sub>: 6.5V to 36V, V<sub>OUT</sub>: 30V, I<sub>OUT</sub>: 2A). The LTM4609MP is offered for operation from -40°C to 85°C with 125°C maximum junction temperature. Pricing for 1,000-piece quantities starts at \$37.20 each. For more information, visit [www.linear.com/4609](http://www.linear.com/4609).


**Photo Caption:** -55°C to 125°C High Voltage Buck-Boost DC/DC uModule<sup>®</sup> Regulator

### **Summary of Features: LTM4609MP**

- Single Inductor Buck-Boost Architecture
- Fully tested from -55°C to 125°C
- Synchronous 4-Switch Operation for High Efficiency (up to 98%)
- Wide Input Voltage Range: 4.5V to 36V
- Wide Output Voltage Range: 0.8V to 34V
- 15mm x 15mm x 2.8mm LGA 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<sup>®</sup> 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.

LT, LTC, LTM, uModule and  are registered trademarks of Linear Technology Corp. All other trademarks are the property of their respective owners.

#### **Press Contacts:**

##### **North America / Worldwide**

John Hamburger, Director Marketing  
Communications  
[jhamburger@linear.com](mailto:jhamburger@linear.com)  
Tel 408-432-1900 ext 2419

Doug Dickinson, Media Relations Manager  
[ddickinson@linear.com](mailto:ddickinson@linear.com)  
408-432-1900 ext 2233

##### **UK & Nordic**

Alan Timmins  
[alan@ezwire.com](mailto:alan@ezwire.com)  
Tel: +44-1-252-629937