



News Release | www.linear.com

Triple-Output DC/DC uModule Regulator in 15mm x 15mm Surface Mount Package Features Two 4A Switch-Mode Regulators Plus One 1.5A Linear Regulator

MILPITAS, CA – August 18, 2009 – Linear Technology Corporation introduces the LTM4615, a complete triple-output DC/DC uModule[®] regulator system containing two 4A switch mode regulators and one 1.5A very low dropout (VLDO[™]) linear regulator in a compact 15mm x 15mm x 2.8mm surface mount package. The output voltage for each of the two switching regulators is adjustable from 0.8V to 5V, and the third output is adjustable from 0.4V to 2.6V, making it suitable for powering the new generation of lower voltage multiple-rail 65nm and 45nm digital ICs.

The LTM4615's versatile configuration provides a compact DC/DC system, capable of regulating three outputs (4A, 4A, 1.5A) or two outputs (8A, 1.5A) while operating from one, two or three input supplies. The device's low (2.8mm) package height prevents thermal shadowing and allows smooth air flow over components in its vicinity. For systems that rely on FPGAs or ASICs requiring multiple voltage rails, the LTM4615 reduces the DC/DC bill-of-materials, shrinks board space, lowers profile, and reduces design time while offering a high reliability solution in a thermally efficient land grid array (LGA) package.

The LTM4615 includes all the components for devising a triple output point-of-load regulator: inductors, capacitors, DC/DC controllers, compensation circuitry and power switches (MOSFETs). All are encapsulated and protected within the plastic surface mount LGA package. The LTM4615 is guaranteed to have only +/-2% total DC output error (switch-mode regulators) and +/-1% error (VLDO), which include errors introduced by the reference voltage as well as line and load regulation. As a current mode device with high switching frequency, the LTM4615 has a very fast transient response to line and load changes while operating with excellent stability with a variety of output capacitors.

The switching regulator efficiencies are greater than 90%, depending on the voltage and current conditions. The device supports output voltage tracking. Safety features include

short-circuit and overtemperature protection. The LTM4615 has an internal operating temperature range from -40°C to 125°C. The device is RoHS compliant, with the ability to be soldered with Pb-free (lead-free) and Pb-based solder during board assembly. The LTM4615 is now available, priced at \$17.20 in 1000-piece quantities. For more information, visit www.linear.com.


Photo Caption: Triple DC/DC uModule® System with Onboard Inductors

Summary of Features: LTM4615

- Complete Triple DC/DC System in an 15mm x 15mm x 2.8mm LGA Package
 - a. Two 4A Switch Mode Regulators: 2.375V to 5.5V Input Range
 - b. One 1.5A VLDO Linear Regulator: 1.14V to 3.5V Input Range
- Current Share Two 4A Outputs for 8A Capability
- Current Mode Operation with Fast Short-Circuit Protection

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.

LT, LTC, LTM, uModule and  are registered trademarks and VLDO is a trademark 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
Tel 408-432-1900 ext 2419

Doug Dickinson, Media Relations Manager
ddickinson@linear.com
408-432-1900 ext 2233

UK & Nordic

Alan Timmins
alan@ezwire.com
Tel: +44-1-252-629937