



Ultralow Noise DC/DC uModule Regulators Meet Both EMI & Multi-Gigabit SERDES Specifications

MILPITAS, CA – November 25, 2008 – Linear Technology Corporation introduces the LTM4606 and LTM4612, ultralow noise DC/DC uModule™ regulators designed to deliver low noise power by attenuating both radiated energy and conducted wideband harmonic energy. The LTM4606, designed to regulate outputs from 0.6V up to 5V, has been verified by Xilinx Corporation, demonstrating flawless high speed multi-gigabit-per-second digital data transmission in SERDES (serializer-deserializer) and RocketIO™ applications. In addition, both the LTM4612, designed for regulation of outputs up to 15V, and the LTM4606 have been tested by an accredited EMI laboratory facility (MET Labs, Santa Clara CA) and received CISPR22 Class B certification.

These DC/DC uModule regulators are complete systems protected in an encapsulated surface-mount plastic package and incorporate the inductor, MOSFETs, regulator IC and compensation network. This ultralow noise uModule family eliminates the need for external filters, magnetic shields and ferrite beads and eases a system designer's difficult tasks of emissions reduction and board layout. Ultralow noise operation is achieved by controlling the slew rate of the MOSFET gate drive, adding input pi-filters, careful layout, shielded inductor, and component selection inside these DC/DC uModule regulators.

The LTM4606 and LTM4612 are housed in a 15mm x 15mm x 2.8mm LGA (land grid array) package weighing less than 2g. The LTM4606 operates from a 4.5V to 28V input supply, regulates an output voltage from 0.6V to 5V and delivers up to 6A to the load. The LTM4612 operates from a 5V to 36V input supply, regulates an output voltage from 3.3V to 15V and delivers up to 5A to the load. They are both characterized for operation over the -40°C to 125°C E and I grade temperature range as well as over the wider temperature range of -55°C to 125°C (internal temperature) MP grade. 1,000-piece pricing for the LTM4606EV and LTM4612EV is \$16.50 and \$19.89.


Photo Caption: Ultra Noise DC/DC uModule Systems for RocketIO and Low EMI Applications

Summary of Features: Ultra Noise LTM4606 & LTM4612

- Complete DC/DC Systems in an Encapsulated Surface-mount Package with Inductor, Power Stages, DC/DC Regulator IC & Compensation Circuitry
- Low EMI & Low Radiated Noise
- Low Heat Dissipation, High Frequency Operation
- Small Land Grid Array (LGA) Package
- Simple Copy & Paste Board Layout

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. For more information, visit www.linear.com.

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Press Contacts:

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