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Dual-Slot PCI Express Hot Swap Controller Provides Fault Protection & Compact Size

MILPITAS, CA – December 19, 2006 – Linear Technology Corporation introduces the LTC4242, a narrow, dual-slot PCI Express Hot Swap™ controller for mid-range networking or storage servers and embedded applications. The device simplifies the application by eliminating complex software interfaces, yet provides a rugged and compact solution for independently controlling the main supplies (12V and 3.3V) and the auxiliary (3.3V AUX) supply on two slots. Each supply is continuously monitored for under-voltage and over-current faults. The 12V supply inputs are protected up to 20V, providing increased ruggedness. Together with analog current limit amplifiers, electronic circuit breakers with adjustable response time provide dual level over-current protection. Control for the auxiliary supplies is completely independent with separate ON and FAULT pins. The internal 3.3V AUX MOSFET features a low 0.25 Ohm ON resistance which, together with the exposed backside metal on the QFN package and thermal shutdown protection, minimizes heat in the device. A separate V_{CC} pin allows the part to power up without the main supplies being present and the ability to ride out glitches in the auxiliary supply, ensuring continuous reliable operation.

The 5mm x 7mm QFN package is narrow enough to fit between the PCI Express connectors if needed for board space optimization. The optional leaded package, 36-pin SSOP, is a proprietary package designed for narrow applications, requiring less than 8mm including the landing area for the pins. Despite the small form factor, the controller offers independent control of the main and auxiliary supplies for each port, separate FAULT outputs for main and auxiliary supplies, power-good outputs for each slot and board-present inputs for each slot.

Specified over the commercial and industrial temperature ranges, the LTC4242 is offered in 5mm x 7mm 38-lead QFN and 36-lead SSOP packages. Available from stock, pricing begins at \$3.30 each in 1,000 piece quantities.

For more sophisticated monitoring, Linear Technology also offers the single-slot LTC4245 which includes an integrated ADC and I²C interface for high-end PCI Express applications.

Photo Caption: Dual Slot Hot Swap Controller for PCI Express

Summary of Features: LTC4242

- Allows Safe Insertion into PCI Express Backplane
- Controls Two Independent PCI Express Slots
- Independent Control of Main and Auxiliary Supplies
- 20V Rating for 12V Supply Input Pins
- Integrated 0.25 Ohm AUX Switches
- 36-Lead SSOP & 38-Lead QFN Packages

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, 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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