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## **High Efficiency Quad PSE Controller Addresses IEEE 802.3at PoE+ Standard**

MILPITAS, CA – June 1, 2009 – Linear Technology Corporation introduces the LTC4266, a 4-port Power over Ethernet (PoE) controller for Power Sourcing Equipment (PSE) required to provide IEEE 802.3at (25.5W) or proprietary higher power levels. Next-generation PoE applications call for more power to support demanding features, while increasing power efficiency in an effort to be more “green” and reduce costs. The LTC4266 provides up to 100W over 4-pair Ethernet cabling and is fully compliant with the new IEEE 802.3at PoE+ standard and backward compatible with the prior IEEE 802.3af PoE standard. To help conserve power, the LTC4266 delivers the lowest-in-industry heat dissipation by using low  $R_{DS(ON)}$  MOSFETs and 0.25Ohm sense resistors, eliminating the need for expensive heat sinks and providing a more robust PSE solution.

The LTC4266 is suitable for a wide variety of PSE applications, including next-generation switches, routers, hubs and midspans. Users will appreciate the extremely low power dissipation which makes thermal design significantly easier than when designing with PSEs that integrate more fragile, normally higher  $R_{DS(ON)}$ , MOSFETs. Up to four independent PSE channels are available. IEEE 802.3at powered devices (PDs) can request up to 25.5W of power by responding to 2-event classification from the LTC4266, confirming that the PD is indeed a high power device. PD discovery is accomplished using a proprietary dual-mode, four point detection mechanism that ensures the best immunity from false PD detection. Advanced power management also includes prioritized fast shutdown, 14.5-bit per-port voltage and current readback, 8-bit programmable current limits and 7-bit programmable overload current limits. A 1MHz I<sup>2</sup>C interface allows a host controller to digitally configure the IC or query port readings.

The LTC4266 is offered in commercial and industrial temperature grades, and is available in RoHS-compliant 5mm x 7mm QFN-38 or SSOP-36 packages. The LTC4266 is priced starting at \$6.95 each in 1,000 piece quantities and is available today in production quantities. The LTC4266 provides an upgrade path from Linear's existing PSE controllers, including the IEEE 802.3af pin-compatible LTC4258 or LTC4259A, and is supported with years of technical experience in PoE circuit design for a smooth transition to the new PoE+ standard. Please visit [www.linear.com](http://www.linear.com) for more product information.

**Photo Caption:** 4-channel PoE+ PSE with 0.34Ohm Total Channel Resistance


### Summary of Features: LTC4266

- Four Independent PSE Channels
- Compliant with IEEE 802.3at Type 1 and 2
- 130mW/port at 600mA
- Advanced Power Management
  - 8-Bit Programmable Current Limit ( $I_{LIM}$ )
  - 7-Bit Programmable Overload Current Limit ( $I_{CUT}$ )
  - Fast Shutdown of Preselected Ports
  - 14.5-Bit Port Current/Voltage Monitoring
  - 2-Event Classification
- Very High Reliability 4 Point PD Detection:
  - 2-Point Forced Voltage
  - 2-Point Forced Current
- High Capacitance Legacy Device Detection
- LTC4259A-1 and LTC4258 Pin-Software-Compatible
- Supports 2-Pair & 4-Pair Output Power
- 1 MHz I<sup>2</sup>C Compatible Serial Control Interface
- Midspan Backoff Timer
- Supports Proprietary Very High Power up to 100W
- Available in 38-Pin 5mm x 7mm QFN & 36-Pin SSOP 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, 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.

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**Press Contacts:**

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

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