High Power PD Controllers with Built-In Switchers Address IEEE 802.3at PoE+ Standard

MILPITAS, CA – June 30, 2009 – Linear Technology Corporation introduces the LTC4269-1, LTC4269-2 and LTC4278, IEEE 802.3at compliant Power over Ethernet (PoE+) interface controllers with integrated switching regulators for high-power Powered Device (PD) applications up to 25.5W and beyond. The new IEEE 802.3at definition, also known as the PoE+ standard, simultaneously expands the power budget and improves the classification mechanism used by Power Sourcing Equipment (PSE) and PDs to identify each other. The LTC4269 and LTC4278 support 2-event classification, are backward compatible with IEEE 802.3af devices, and open up the next level of PoE applications. These devices integrate both the PD controller and either a synchronous flyback controller (LTC4269-1 and LTC4278) or synchronous forward controller (LTC4269-2) for a complete IEEE 802.3at PD control solution.

The LTC4269 and LTC4278 cater to a new breed of applications utilizing the new PoE+ standard, including video conferencing stations, RFID readers, pan-tilt-zoom security cameras and long range wireless access points. The LTC4269 and LTC4278 distinguish PSEs and PDs as either Type 1 hardware, complying with IEEE 802.3af power levels, or Type 2 hardware, complying with IEEE 802.3at power levels, allocating power accordingly. 2-event hardware classification allows a Type 2 PSE to identify connection to a Type 2 PD and signals the PD that it can source the higher power levels associated with 802.3at power. This new classification mechanism ensures interoperability between Type 1 and Type 2 devices.

The LTC4269 and LTC4278 offer enhancements to the conventional PoE features. For efficient power allocation, users can configure a classification load current that represents the PD power classification. A shutdown pin with signature corrupt provides flexible auxiliary power supply support. A rugged 100V Hot Swap™ MOSFET isolates the PoE interface controller and DC/DC converter during detection and classification, while providing 100mA of inrush current

for smooth power-up transitions with any PSE. The LTC4269 and LTC4278 also include complementary power good outputs, an onboard signature resistor, undervoltage lockout, soft-start ramping and comprehensive thermal protection.

The LTC4269-1 and LTC4278 integrate a synchronous flyback controller that features Linear's patented No-Opto feedback topology to provide full IEEE 802.3 isolation. In addition, the LTC4278 accommodates 10V to 57V auxiliary power to provide the ultimate in power sourcing options. The LTC4269-2 integrates a synchronous forward controller that boasts greater than 94% efficiency. All versions are offered in commercial and industrial grades, supporting operating temperature ranges from 0°C to 70°C and -40°C to 85°C, respectively, and are available in a compact, RoHS-compliant, 7mm x 4mm 32-pin DFN package.

The LTC4269-1 is priced starting at $2.40 each, and the LTC4269-2 and LTC4278 are priced starting at $2.60 each in 1,000 piece quantities. The LTC4269 and LTC4278 provide an upgrade path from Linear's existing PD products, including the IEEE 802.3af pin-compatible LTC4268-1 and are supported by Linear's deep technical expertise in PoE circuit design, ensuring a smooth transition to the new PoE+ standard. Please visit www.linear.com/PoE for samples, demo boards, applications support and further product information.

Photo Caption: 25.5W Power over Ethernet PD Interface Controller with Switching Regulator

Summary of Features: LTC4269 and LTC4278

- Complete 25.5W Power Interface Port for IEEE 802.3at Powered Device (PD)
- PoE+ 2-Event Classification with PSE Indicator Bit
- Programmable Classification Current for 802.3at (Class 4) & 802.3af (Class 0-3) PDs
- Integrated Synchronous No-Opto Flyback Controller (LTC4269-1 & LTC4278) or Synchronous Forward Controller (LTC4269-2)
- Adjustable Frequency from 50kHz to 250kHz (LTC4269-1 & LTC4278) & 100kHz to 500kHz (LTC4269-2)
- Flexible Auxiliary Power Support Using SHDN Pin
- Rugged 100V, 0.7Ohm (typ) Onboard Hot Swap™ MOSFET with 100mA Inrush Limit
- Compact 32-Pin 7mm x 4mm DFN 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® 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.

Press Contacts:

North America

John Hamburger, Director Marketing Communications
jhamburger@linear.com
Tel: 408-432-1900 ext 2419

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

UK & Nordic

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