



High Power PD Controller Addresses IEEE 802.3at PoE+ Standard

MILPITAS, CA – December 8, 2008 – Linear Technology Corporation introduces the LTC4265, an 802.3af/802.3at compliant Power over Ethernet (PoE) interface controller for high-power Powered Device (PD) applications needing up to 25.5W. In 2003, the IEEE 802.3af definition specified a maximum power delivery of up to 12.95W, which was more than adequate for applications like VoIP phones, security cameras and wireless access points. However, the desire for additional functionality means today's applications are more power hungry than ever. 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 LTC4265 is an IEEE 802.3at High Power PD Interface Controller with 2-Event Classification Recognition that is backward compatible with IEEE 802.3af and unlocks the next level of potential for PoE applications.

The LTC4265 caters to a new breed of high performance devices, utilizing the new PoE+ standard, including video teleconferencing stations, RFID readers, pan-tilt-zoom security cameras and longer range wireless access points. The LTC4265 recognizes the PSE as either Type-1 hardware complying with the IEEE 802.3af power levels or Type-2 hardware complying with IEEE 802.3at power levels, allocating power accordingly. 2-Event hardware classification allows Type-2 PSEs to identify connection to an 802.3at compliant PD, and provides a signal to the PD that is able to source the higher power levels associated with 802.3at power. This new classification mechanism ensures interoperability between Type 1 and Type 2 devices.

The LTC4265 also features a slew of 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 support. A rugged 100V MOSFET isolates the controller and external DC/DC converter during detection and classification, while providing 100mA of inrush current limiting for smooth power-up

transitions. The LTC4265 also includes complementary power good outputs, an on-board signature resistor, undervoltage/overvoltage lockout and comprehensive thermal protection.

The LTC4265 is offered in commercial and industrial versions, supporting operating temperature ranges from 0°C to 70°C and -40°C to 85°C respectively, and is available in a small, RoHS-compliant, 4mm x 3mm DFN-12 package. The LTC4265 is priced starting at \$1.40 each in 1,000 piece quantities and is available today in production quantities. The LTC4265 provides an upgrade path from Linear's existing PD products, including the IEEE 802.3af pin-compatible LTC4264, 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 for samples, demoboard, applications support and more product information.

Photo Caption: 25.5W Power over Ethernet PD Interface Controller


Summary of Features: LTC4265

- IEEE 802.3af/at Powered Device (PD) Controller
- IEEE 802.3at 2-Event Classification Signaling
- Configurable Classification Current
- Flexible Auxiliary Power Support Using SHDN Pin
- Rugged 100V Onboard MOSFET with 100mA Inrush Current Limit
- Complementary Power Good Outputs
- Onboard Signature Resistor
- Comprehensive Thermal Protection
- Undervoltage & Overvoltage Lockout

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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