



## High Efficiency PoE++ PD Controllers Provide up to 90W Delivered Power

MILPITAS, CA – August 27, 2012 – Linear Technology Corporation introduces the [LT4275](#), LTPoE++™, PoE+ and PoE-compliant powered device (PD) interface controllers for applications requiring up to 90W of delivered power. PoE+ limits the maximum PD power delivery to 25.5W, which is insufficient to power today's new class of power-hungry applications, such as picocells, base stations, signage and heated outdoor cameras. Linear Technology's [LTPoE++](#) standard addresses this market by expanding the power budget to four different power levels (38.7W, 52.7W, 70W and 90W), enabling complete high power LTPoE++ systems. The LTPoE++ standard employs a classification scheme that simply enables LTPoE++ power sourcing equipment (PSE) controllers and LTPoE++ PD controllers to reliably communicate with one another while maintaining interoperability with IEEE standard equipment. The LT4275A (LTPoE++), LT4275B (PoE+) and LT4275C (PoE) efficiently deliver power to PD loads using just one IC.

Unlike traditional PD controllers that integrate the power MOSFET, the LT4275 controls an external MOSFET to drastically reduce overall PD heat dissipation and maximize power efficiency, especially important at higher power levels. This novel approach allows users to size the MOSFET to their application's specific heating and efficiency requirements, enabling the use of low  $R_{DS(ON)}$  30mOhm MOSFETs if necessary. The LT4275 recognizes a PSE as either Type 1 hardware complying with the IEEE 802.3af 13W power level, Type 2 hardware, complying with IEEE 802.3at 25.5W power level or LTPoE++ hardware complying with 38.7W to 90W power levels, and passes power accordingly. For efficient power allocation, PD users can configure a classification that represents the PD power usage. A 100V abs max rated input voltage means the LT4275 easily survives and protects PDs from the most common Ethernet line surges. A programmable auxiliary power pin with signature corrupt provides support down to 9V. The LT4275 also includes a power good output, onboard signature resistor, undervoltage lockout and comprehensive thermal protection.

The LT4275 is offered in industrial and automotive grades, supporting operating temperature ranges from -40°C to 85°C and -40°C to 125°C, respectively, and is available in small RoHS-compliant 10-pin MSOP or 3mm x 3mm DFN packages. The LT4275 is priced starting at \$1.45 each in 1,000-piece quantities and is available in production quantities. The LT4275 provides an upgrade path from Linear Technology's existing PD products, including the LTC4265 PoE+ PD controller, and seamlessly connects to any of Linear Technology's latest PSE controllers, including the single-port [LTC4274](#), 4-port LTC4266 and 12-port [LTC4270/71](#) chipset. For more information, visit [www.linear.com/LTPoE++](http://www.linear.com/LTPoE++).

**Photo Caption:** 70W Power over Ethernet PD Interface Controller

### Summary of Features: LT4275

- IEEE 802.3af/at & LTPoE++ Powered Device (PD) Controller
- LTPoE++ Supports Power Levels up to 90W
- LT4275A Supports All of the Following Standards:
  - LTPoE++ 38.7W, 52.7W, 70W & 90W
  - IEEE 802.3at 25.5W Compliant
  - IEEE 802.3af up to 13W Compliant
- LT4275B is IEEE 802.3at/af Compliant
- LT4275C is IEEE 802.3af Compliant
- 100V Absolute Maximum Input Voltage
- Integrated Signature Resistor
- External Hot Swap™ N-channel MOSFET for Lowest Power Dissipation & Highest System Efficiency
- Programmable Aux Power Support as Low as 9V
- Available in 10-Pin MSOP & 3mm x 3mm DFN Packages

## About Linear Technology

Linear Technology Corporation, a member of the S&P 500, has been designing, manufacturing and marketing a broad line of high performance analog integrated circuits for major companies worldwide for three decades. The Company's products provide an essential bridge between our analog world and the digital electronics in communications, networking, industrial, automotive, computer, medical, instrumentation, consumer, and military and aerospace systems. Linear Technology produces power management, data conversion, signal conditioning, RF and interface ICs,  $\mu$ Module<sup>®</sup> subsystems, and wireless sensor network products. For more information, visit [www.linear.com](http://www.linear.com)

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