



## **PMBus Digital Power System Manager Monitors Board Energy Consumption**

MILPITAS, CA – October 28, 2014 – Linear Technology Corporation introduces the [LTC2975](#), a 4-channel PMBus digital power system manager featuring current, power and energy monitoring of the intermediate bus input to point-of-load (POL) converters. Monitoring circuit board power and energy consumption is the first step in managing, optimizing and reducing it to lower server utility and cooling costs. The LTC2975 relieves the host of burdensome computation and polling by conveniently providing the energy consumed, reported in joules, and the elapsed time through a PMBus interface. When combined with its digital measurements of POL output voltages, currents and power, the input data enables long-term monitoring of a power system's conversion efficiency. The LTC2975 adds comprehensive software-based monitoring and control to the power system on FPGA, ASIC and DSP boards, accelerating time to market, enhancing system reliability and optimizing board energy consumption.

Supply output voltages are trimmed, margined and monitored using a best-in-class 16-bit ADC (analog-to-digital converter) with 0.25% total unadjusted error, improving board yields and long-term performance. Supply sequencing, supervision and EEPROM fault-logging are built in. Faults trigger EEPROM black box recording, simplifying failure analysis while providing insight into future system improvements. Multiple LTC2975s connect together to sequence and fault-manage more than four rails. Several PMBus compatible commands are provided for flexible programming and data read back of the power system. Register configuration is accomplished through the LTpowerPlay™ development environment, which supports all Linear Technology

digital power system management devices. Once programmed, no software coding is needed for autonomous operation.

Specified over the 0°C to 70°C commercial and –40°C to 105°C industrial temperature ranges, the LTC2975 is offered in a 64-pin 9mm x 9mm QFN package. 1,000-piece pricing starts at \$9.75 each. Device samples and evaluation circuit boards are available online or from your local Linear Technology sales office. For more information, visit

[www.linear.com/product/LTC2975](http://www.linear.com/product/LTC2975)

**Photo Caption:** 4-Channel PMBus Power System Manager with Input Energy Monitoring for Comprehensive Digital Power System Management


### Summary of Features: LTC2975

- Digitally Manage Four Power Supplies
- Margin or Trim Supplies to Within 0.25% of Target Voltage
- Monitor Supplies with  $\pm 0.25\%$  Total Unadjusted Error
- PMBus-Compliant Commands over I<sup>2</sup>C/SMBus Digital Interface
- EEPROM for Configuration & Black Box Fault Logging
- Supported by LTpowerPlay™ GUI
- Supply Sequencer – Time Based, Cascade, Supports Tracking
- Monitor (16-Bit ADC):
  - o Input Voltage, Current, Power & Energy
  - o Four Supply Output Voltages, Currents & Power
  - o Device & Four External Temperatures
- Supervise: Input Voltage, Supply Voltages & Currents, External Temperatures
- Coordinate Sequencing & Fault Management across Multiple LTC PSM Devices
- Operates Autonomously without Additional Software
- Programmable Watchdog Timer
- Powered from 3.3V, or 4.5V to 15V
- –40°C to 105°C Operation
- 64-Pin 9mm × 9mm QFN Package

The USA list pricing shown is for budgetary use only. International prices may differ due to local duties, taxes, fees and exchange rates.

## 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 over 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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