



Octal Voltage, Current & Temperature Monitor Provides Accurate Internal & Remote Measurements

MILPITAS, CA – September 1, 2011 – Linear Technology Corporation introduces the [LTC2991](#), an 8-channel I²C temperature, voltage and current monitor for 3V and 5V systems. The LTC2991 is a highly integrated monitoring solution that incorporates a 14-bit ADC, 10ppm/°C voltage reference and I²C digital interface to provide submillivolt voltage resolution and 1% current measurement, as well as ±0.7°C remote accuracy and ±1°C internal accuracy, when making temperature measurements. Eight single-ended voltage inputs can be configured to measure any combination of internal temperature, remote temperature, remote voltage and internal V_{CC} for single or repeated measurements. The LTC2991 provides a highly configurable, yet simple solution for simultaneously monitoring combinations of temperature, voltage and current without compromising accuracy on any parameter.

The LTC2991 caters to a wide variety of applications, including supply voltage monitoring and remote diode temperature measurement, particularly in industrial or computing systems where thermal management is crucial for maximizing performance. When making differential measurements of diode or transistor voltages to calculate temperature, the LTC2991 allows for cancellation of error due to sensor series resistance and limits temperature noise to 0.07°RMS (Celsius or Kelvin). The LTC2991's 0.06 °C resolution is the result of an averaging 14-bit $\Delta\Sigma$ ADC. The number of supporting components and area required is minimized thanks to the internal 10ppm/°C voltage reference. A PWM output is also available for controlling fans and heaters, or setting up alarm applications. The I²C serial interface enables easy configuration and read back of the device's control, status and data registers, with support of up to 400kbit/s in I²C fast mode.

The LTC2991 is available today in a small 16-lead MSOP package that is RoHS compliant and specified over the commercial and industrial temperature ranges. Pricing starts at \$4.50 each in 1,000 piece quantities. Please visit www.linear.com/product/LTC2991 for more product selection and information.


Photo Caption: I²C Temperature, Current & Voltage Monitor

Summary of Features: LTC2991

- Measures Voltage, Current, Temperature
- Measures Four Remote Diode Temperatures
- 0.7°C External Temperature Accuracy, 0.06°C Resolution
- 1°C Internal Temperature Sensor
- 14-Bit ADC Measures Voltage/Current
- PWM Temperature Output
- 3V to 5.5V Supply Operating Voltage
- 8 Selectable Addresses
- Internal 10ppm/°C Voltage Reference
- 16-Lead MSOP Package

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, and μ Module[®] subsystems.

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