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## **Configurable Supply Monitor Integrates Adjustable Watchdog & Reset Timers for Multi-Rail Systems**

MILPITAS, CA – August 24, 2009 – Linear Technology Corporation introduces the LTC2939, a 6-channel supply monitor with processor supervisory functions that can be configured for low voltage applications down to 1.2V. One of sixteen preset or adjustable voltage threshold combinations can be selected, all of which maintain an accuracy of  $\pm 1.5\%$  from  $-40^{\circ}\text{C}$  to  $125^{\circ}\text{C}$ . These preset set points are selected via an external resistive pair on a single pin, while the actual thresholds are set by integrated precision dividers for 5V, 3.3V, 2.5V and 1.5V supply monitoring. Built-in power supply glitch immunity allows the LTC2939 to practically eliminate false detections, while only using 80uA of supply current. Set points, reset timeout period and watchdog timeout period are all at the discretion of the designer when using the LTC2939 to monitor multiple positive and negative power rails.

The LTC2939 is suitable for large systems where board space is at a premium and a single supervisor is needed. Often times, multiple supervisor ICs can be found throughout a board, monitoring only a few power rails. The LTC2939 is small and provides the necessary flexibility to consolidate these devices into one IC without compromising functionality or performance. Reset and watchdog timeout periods are easily adjusted using a single external capacitor. A three-state watchdog input allows users to conveniently disable the watchdog function if needed. In addition, a watchdog status output is available, which triggers upon either a watchdog timeout or anytime an undervoltage condition occurs.

The LTC2939 is also available in a 4-channel version, the LTC2938. Both devices are available today in commercial, industrial and automotive temperature grades. The LTC2938 is available in a 12-pin 4mm x 3mm DFN or 12-lead MSOP package. The LTC2939 is available in a 16-lead package. All packages are RoHS compliant. The devices are priced starting at \$2.15 each in 1,000 piece quantities and are available today in production quantities. Please visit [www.linear.com](http://www.linear.com) for product selection information.


**Photo Caption:** Six-Supply Monitor with 16 User-Selectable Combinations of Fixed &  
Adjustable Voltage Thresholds

**Summary of Features: LTC2938/39**

- Simultaneously Monitors Four (LTC2938) or Six Supplies (LTC2939)
- Sixteen User-Selectable Combinations of 5V, 3.3V, 2.5V, 1.8V, 1.5V, 1.2V and/or  $\pm$  Adjustable Voltage Thresholds
- Guaranteed Threshold Accuracy:  $\pm 1.5\%$
- Adjustable Reset and Watchdog Timeout
- Watchdog Status Output
- Low Supply Current: 80uA Typical
- Power Supply Glitch Immunity
- Guaranteed /RST for  $V_{CC} > 1V$
- High Temperature Operation to 125°C
- 12-Lead 4mm x 3mm DFN or 12-Lead MSOP (LTC2938) & 16-Lead MSOP Package (LTC2939)

**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<sup>®</sup> 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.

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