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## **Dual Isolated RS232 uModule Transceiver Integrates Isolated Power**

MILPITAS, CA – January 11, 2010 – Linear Technology Corporation introduces the LTM2882, a 2-channel isolated RS232 uModule<sup>®</sup> transceiver that guards against large ground-to-ground differentials and common mode transients. In practical RS232 systems, ground potentials may vary widely from node to node, often exceeding the tolerable range, resulting in an interruption of communications or destruction of a transceiver. The LTM2882 breaks ground loops by isolating the logic level interface and line transceiver using internal inductive signal isolation. This allows for a much larger common mode voltage range plus superior common mode rejection >30kV/us. A low EMI DC-DC converter generates the power supplies for driving RS232 levels and provides an additional isolated 5V supply output for powering any supporting external components. With 2,500V<sub>RMS</sub> of galvanic isolation, onboard secondary power and two fully compliant RS232 transmitters and receivers, the LTM2882 requires no external components, providing a complete, small uModule solution for isolated serial data communications.

The LTM2882 addresses a wide range of RS232 applications, including industrial communications and test/measurement equipment, where breaking ground loops or working with large common mode voltages is demanded. The  $\pm 10\text{kV}$  ESD-protected transceiver operates at up to 1Mbps and only consumes 30uA of shutdown current when disabled. The two drivers can be enabled and disabled in less than 2us using the uncommitted auxiliary isolated digital channel

and are protected from short-circuits to any voltage within the absolute maximum range of  $\pm 15\text{V}$ . Their receiver counterparts are protected from common mode voltages within the absolute maximum range of  $\pm 25\text{V}$ . The LTM2882 meets RF and magnetic field immunity test requirements per European standard EN 550024. Users will appreciate how the self-powered LTM2882 takes many precautions to guarantee safe and reliable communications in RS232 systems.

Two versions of the LTM2882 are available to support 3.3V and 5V input supply voltages. The LTM2882 is available in low profile 11.25 x 15mm x 2.8mm surface mount LGA and BGA packages. All integrated circuits and passive components are housed in this Linear Technology, RoHS-compliant uModule package. Pricing starts at \$8.45 each in 1,000 piece quantities. Please visit [www.linear.com](http://www.linear.com) for product selection information.


**Photo Caption:** 2.5kV Dual Isolated RS232 Transceiver with Power

### Summary of Features: LTM2882

- Isolator  $\mu$ Module Technology
- Isolated RS232 Transceiver:  $2500\text{V}_{\text{RMS}}$
- Integrated Isolated DC/DC Converter: 1W, 65% Efficiency
- No External Components Required
- 1.62V to 5.5V Logic Supply for Flexible Digital Interface
- High Speed Operation
  - 1Mbps for 250pF/3kOhm Load
  - 250kbps for 1nF/3kOhm Load
  - 100kbps for 2.5nF/3kOhm TIA/EIA-232-F Load
- 3.3V (LTM2882-3) or 5V (LTM2882-5) Operation
- No Damage or Latchup to  $\pm 10\text{kV}$  ESD HBM on Isolated RS232 Interface & Across Isolation Barrier
- High Common Mode Transient Immunity: 30V/us
- Common Mode Working Voltage:  $560\text{V}_{\text{PEAK}}$
- True RS232 Compliant Output Levels
- Low Profile (15mm x 11.25mm x 2.8mm) Surface Mount LGA & BGA Packages

## 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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