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*Thermobility Wireless Power Generator WPG-1*

*WPG-1 wireless power generator uses thermoelectric technology to convert heat into electricity for wireless sensor and security systems...*

## **NEXTREME ANNOUNCES THERMOBILITY WIRELESS POWER GENERATOR EVALUATION KIT FOR SENSOR AND SECURITY APPLICATIONS**

**DURHAM, N.C. (April 26, 2011)** — Nextreme Thermal Solutions, the leader in microscale thermal and power generation solutions, announces the availability of the Thermobility Wireless Power Generator (WPG-1) evaluation kit for wireless sensor and security systems. The WPG-1 uses innovative solid-state thin-film thermoelectric technology to convert waste heat into electricity for a variety of self-contained, autonomous applications.

Thermobility™ uses differences in temperature to enable “wireless power” anywhere there is an adequate heat source and eliminates the need to use traditional wired power sources or replaceable batteries. When paired with wireless transmitters, the Thermobility solution can provide electric power for *decades* of maintenance-free operation, thus expanding the possibilities for new wireless sensor and security applications in industrial control, transportation, automotive and building management. Thermobility is the ideal power source for wireless transmission applications.

As the first in a series of wireless power generators, the Thermobility WPG-1 provides a constant selectable voltage output of 3.3, 4.1 or 5.0 Vdc to electrical loads of 15kΩ or higher. The WPG-1 is about the size of a golf ball and consists of a pin-fin heat sink, a custom circuit board, Nextreme's eTEG™ HV56 thermoelectric power generator module and a metal attachment plate that is applied to the desired heat source. The device incorporates a Linear Technologies LTC® 3108 Ultralow Voltage Step-Up Converter and Power Manager chip to provide up to 1mW of electrical power, and operates at temperature differentials as low as 15-20K relative to ambient. Larger temperature differences can generate significantly more power.

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The WPG-1 evaluation kit is designed for ease of use with any flat-surface heat source and can be customized for pipes and other non-flat surfaces. For simple bench-top testing, the WPG-1 can be placed directly on a laboratory grade hotplate with temperature control. For evaluation with other surfaces, the attachment plate can be mated with either thermal grease for normal horizontal application or double-stick thermal pad for vertical mounting.

Electrical power output connections can be made using the on-board 2-pin or 6-pin connectors. The 6-pin connector is a Texas Instruments proprietary connector that mates to the eZ430 wireless target board, making the WPG-1 an ideal wireless power source for the eZ430 development platform.

The Thermobility WPG-1 generator is available for immediate shipment for \$495.

More information on the Thermobility platform and wireless power generation can be found at [www.nextreme.com/thermobility](http://www.nextreme.com/thermobility). Contact Nextreme at 3908 Patriot Drive, Suite 140, Durham, NC 27703-8031; call (919)-597-7300; e-mail [info@nextreme.com](mailto:info@nextreme.com); or go to [www.nextreme.com](http://www.nextreme.com).

### **About Nextreme Thermal Solutions™, Inc.**

Nextreme Thermal Solutions offers electronics cooling and energy harvesting solutions for telecommunications, semiconductor, consumer, medical, aerospace and government markets. The company uses microscale thermoelectric technology and high-volume semiconductor manufacturing processes to address the growing needs for advanced thermal management and clean-energy solutions world-wide. Nextreme also offers sophisticated modeling, design, engineering, and contract manufacturing services to deliver fully-optimized solutions from standard and customized products that solve the most challenging thermal and power generation issues. Nextreme's headquarters and manufacturing facility are based near Research Triangle Park, North Carolina. Visit [www.nextreme.com](http://www.nextreme.com).

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