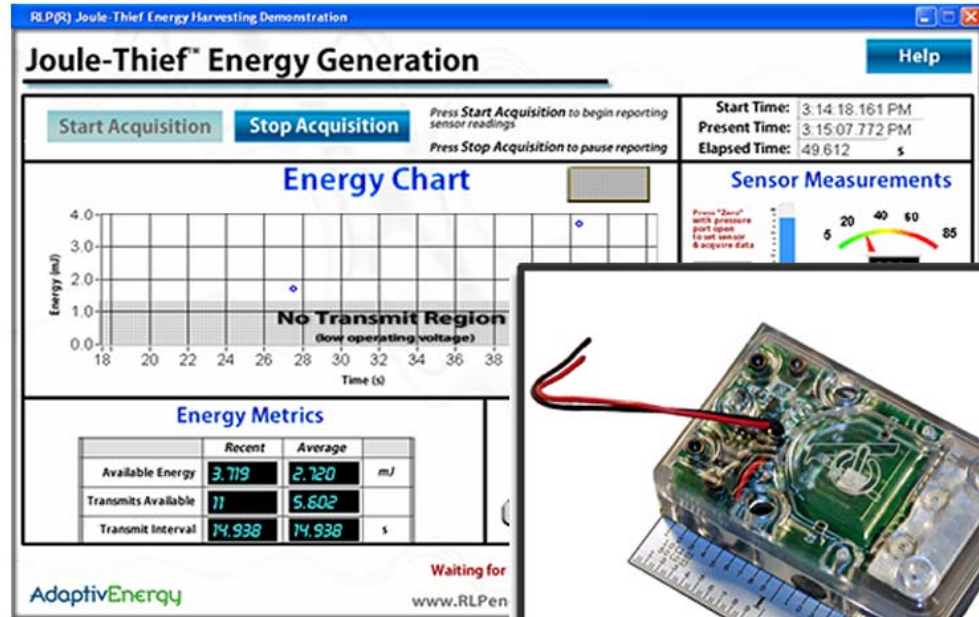




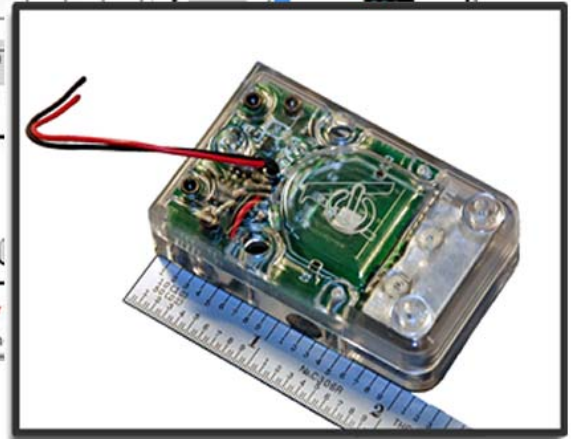
Joule-Thief™ Demonstration Kit

Powered
by
RLP™

Energy Harvesting



Software Interface



Joule-Thief™ Module

Kit Contents

- ⊗ Joule-Thief™ Module
- ⊗ Multifunctional Sensor Board
- ⊗ Software Interface
- ⊗ TI MSP430 Wireless Transmitter/Receiver
- ⊗ Sample Vibration Source
- ⊗ Accessories

Joule-Thief™ is a miniature vibratory energy harvesting module ideal for battery extension or replacement in wireless sensing and other low power applications.

Built on AdaptivEnergy's Powered by RLP™ technology platform, this kit demonstrates battery-less wireless transmission from a 60Hz vibratory source to a USB-based receiver.

Application Specific Module Configurations Available

The Highest Power Output per unit Weight and Volume Energy Harvester Available!

Features

- ⊗ 60Hz Resonant Beam
- ⊗ 440 μ F Capacitive Storage
- ⊗ Battery-less Energy Key™ Collection Electronics
- ⊗ 1.4s sensor transmit interval
- ⊗ Manual and/or Automatic Data Transmit
- ⊗ MSI Pressure Sensor
- ⊗ Interactive System Interface and Energy Tracking
- ⊗ >50m Wireless Transmission radius
- ⊗ Easily mounted with embedded magnets

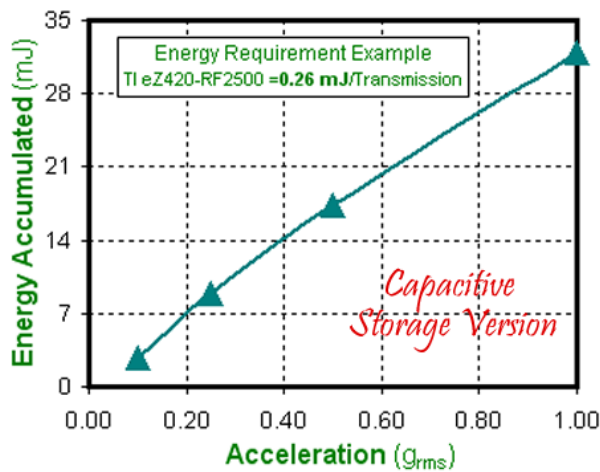


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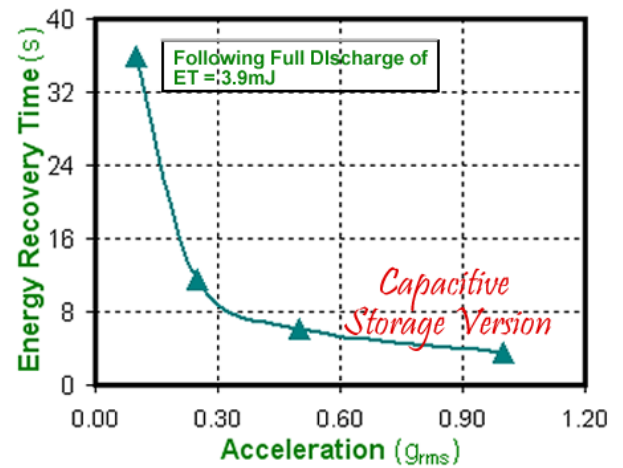
Energy Harvesting

Joule-Thief™'s stress-engineered smart energy beam produces optimal power output from its embedded piezo-electric material when combined with AdaptivEnergy's highly efficient proprietary circuitry. The energy collection and storage electronics are part of the Joule-Thief™ module, leading to a very compact energy harvester. The Joule-Thief™ energy harvester offers several options for energy storage including capacitors and Li-ion batteries.

With the base RLP® technology tested to billions of cycles at elevated stresses without failure, Joule-Thief™ is an extremely reliable long term power source ideal for wireless sensing applications.



Energy Accumulation (per minute)
VS.
Input Vibration Amplitude



Energy Recovery Time
VS.
Input Vibration Amplitude

AdaptivEnergy's compelling piezoelectric-based Powered by RLP™ Technology, coupled with miniature Energy Key™ circuitry, enables a new generation of portable pumping, cooling, and energy harvesting solutions.

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