Texas Instruments LaunchPad Energy Harvesting Power Supply

Cymbet EVAL Kits Provide Energy Harvesting Power Solutions

Experiment with Energy Harvesting and the MSP430 Launchpad

The Texas Instruments MSP-EXP430-G2 LaunchPad Value Line Development Kit is a very cost effective way to experiment with the TI MSP430 Microcontroller. The LaunchPad is normally powered from the USB cable. Now you can harvest ambient energy to power the LaunchPad using the Cymbet EVAL-09 EnerChip™ Energy Processor Universal Energy Harvesting kit, EVAL-10 EnerChip CC Solar Energy Harvesting Kit, or the EVAL-11 RF Induction Charging Kit. Each of the Cymbet EVAL Kits can be connected to the LaunchPad power input pins to supply power. An example of the using the LaunchPad and the EVAL-10 Solar EH kit is shown in the photo.

TI LaunchPad with Cymbet EVAL-10 Solar Energy Harvesting Kit

USB Cable to PC for Data logging Application

TI LaunchPad with Jumpers removed to isolate power domains

Cymbet EnerChip CC EVAL-10 Solar Energy Harvesting Kit power jumper cable is included

EVAL-10 Amorphous Solar Cell for indoor or outdoor use included

Open Source Data Logging Application Firmware is Downloadable on Cymbet.com

Cymbet has created an open source firmware example of a data logging application. The firmware is downloaded into the MSP430 via the USB cable. The Cymbet EVAL kit power cable is then connected and the LaunchPad power related jumpers are removed. The LaunchPad is powered by the EnerChip EVAL kit. Pressing one of the push buttons starts the temperature data logging function. Once the data logging is complete, the USB cable is reattached to the LaunchPad and the recorded data is uploaded to the PC for viewing. Data logging sensors are used in many industries and can now be powered without the nuisance of legacy battery technology wear-out and replacement.

Technical Support for Creating EH-based Sensors and Data Loggers:

- Datasheets and schematics can be found on www.cymbet.com
- Register to win an Enerchip Evaluation Kit
- TI and Cymbet kits are available at Avnet, Digi-Key and Mouser

Win a Free Cymbet Eval Kit

Enter Here

www.cymbet.com

For Additional Assistance Contact:
support@cymbet.com

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## EnerChip Applications

- **Standby supply** for non-volatile SRAM, Real-time clocks, controllers, supply supervisors, and other system-critical components.
- **Wireless sensors and RFID tags** and other powered, low duty cycle applications.
- **Localized power source** to keep microcontrollers and other devices alert in standby mode.
- **Power bridging** to provide back-up power to system during exchange of primary batteries.
- **Medical devices** can utilize EnerChip permanent power features for monitoring and wearables.
- **SmartCard Power** applications can leverage the small size of the EnerChip.
- **Energy Harvesting** is enabled by the thousands of charge cycles available on the EnerChip.

### Cymbet Strategic Investors

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