



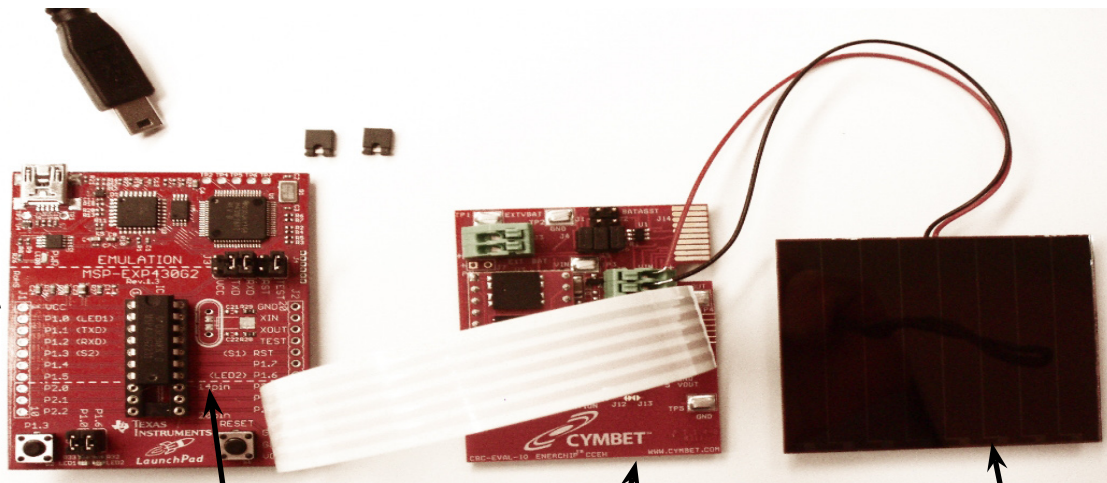
Texas Instruments LaunchPad Energy Harvesting Power Supply

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

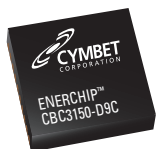
TI LaunchPad with
Jumpers removed to
isolate power domains

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
- Receive a free White Paper: Zero-Power Wireless Sensors
- 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 >](#)

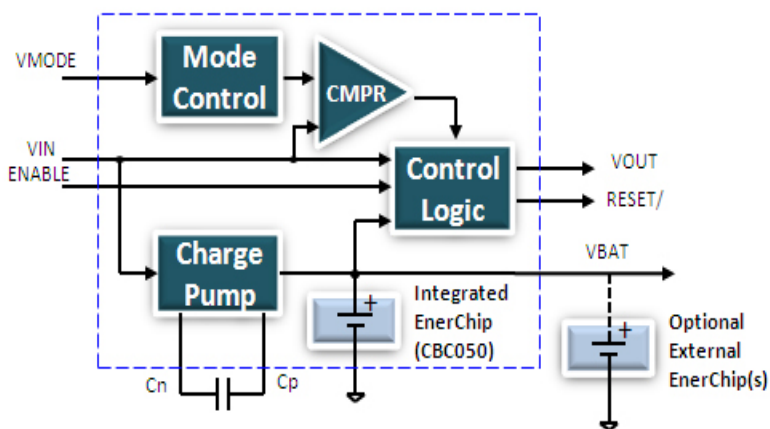
EnerChips: Compare to SuperCaps and Coin Cells

Feature	EnerChip CC	SuperCap	Coin Cell
High-cycle life (>5000)	✓	✓	X
No external charge circuit	✓	✓	X
No sockets/holders	✓	✓	X
SMT Assembly	✓	-	-
Low self discharge	✓	X	✓
Stable output voltage	✓	X	✓
Smaller area	✓	X	X
No hazardous chemicals	✓	X	X
Internal Supply Supervisor	✓	X	X
Power Fail Indicator	✓	X	X
Integrated DC-DC Converter	✓	X	X

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.

EnerChip™ CC CBC3150 Block Diagram



Cymbet Distribution Partners



Cymbet Product Solutions

Product	Description
	CBC012 – EnerChip 12uAh Rechargeable Solid State Battery - 6 pin DFN
	CBC050 – EnerChip 50uAh Rechargeable Solid State Battery - 16 pin QFN
	CBC3112 – EnerChip CC 12uAh Rechargeable Solid State Battery with Integrated Power Management -20 pin DFN
	CBC3150 – EnerChip CC 50uAh Rechargeable Solid State Battery with Integrated Power Management –20 pin DFN
	EnerChip Bare Die – 1uAh, 5uAh, 12uAh, 50uAh. Wire bond or bumped attach.
	CBC915 EnerChip Energy Processor with Maximum Peak Power Tracking
	CBC5300 - EnerChip EH Energy Harvesting Module
	CBC-EVAL-05 EnerChip Evaluation Kit with CBC3112 and CBC3150
	CBC-EVAL-08 EnerChip Solar Energy Harvesting Evaluation Kit
	CBC-EVAL-09 EnerChip Energy Processor Universal Energy Harvesting Kit
	CBC-EVAL-10 EnerChip CC Solar Energy Harvesting Evaluation Kit
	CBC-EVAL-11 EnerChip CC RF Induction Charging Evaluation Kit

Cymbet Strategic Investors



Industry Awards and Recognition



Eco-Friendly Environmental Compliance

