

Energy Harvesting Modules and Kits



ENERCHIP™ EH ENERGY HARVESTING MODULE

The EnerChip EH CBC5300 is a self-contained Energy Harvesting power module in a 24-pin DIP configuration. The CBC5300 module is designed to accept a wide range of energy transducer inputs, store the harvested power, and deliver managed power to the target system. The purpose of this module is to enable system designers to quickly develop Energy Harvesting applications.

For quantities of 250 and up, call for quote.

MOUSER STOCK NO.	Cymbet Part No.	Fig.	Parasitic Load Current (Typ.)		VOUT, 2µA Load Battery charged (Typ.)	Vin Operating Voltage Range	VBAT Charging 25°C (Typical)	Battery Cutoff 4.7kΩ load (Typical)	Price Each			
			Boost Conv. Off	Boost Conv. On					1	10	25	100
722-CBC5300-24C	CBC5300-24C	A	800nA	20µA	3.55 V	0.25 - 4 V	4.06 V	3.3 V				



EVALUATION KITS

EnerChip™ CC CBC3112 & CBC3150 Evaluation Kit

The EnerChip CC EVAL-05 Evaluation Kit is used to demonstrate the capabilities of the EnerChip Thin Film Batteries and the EnerChip CC with Integrated Battery Management capabilities.

The kit can be used to demonstrate:

- 1) either EnerChip battery, 2) either EnerChip CC device or
- 3) the EnerChip CC in parallel with the other EnerChip battery

EnerChip™ EH Solar Energy Harvester Evaluation Kit

CBC-EVAL-08 is a demonstration kit combining a solar panel energy transducer with the CBC5300 EnerChip EH module having two 50µAh EnerChip batteries connected in parallel. The EnerChips provide storage and starting power for the energy harvesting module. The purpose of this demonstration platform is to enable designers to quickly develop Energy Harvesting applications.

For quantities of 100 and up, call for quote.

MOUSER STOCK NO.	Cymbet Part No.	Fig.	Description	Price Each		
				1	10	25
722-CBC-EVAL-05	CBC-EVAL-05	B	EnerChip CC Evaluation Kit			
722-CBC-EVAL-08	CBC-EVAL-08	C	EnerChip Solar Energy Harvesting Demo Kit			



EZ430-RF2500-SEH DEVELOPMENT TOOL

The eZ430-RF2500 is a complete wireless development tool for the MSP430 and CC2500 that includes all the hardware and software required to develop an entire wireless project with the MSP430 in a convenient USB stick. The tool includes a USB-powered emulator to program and debug your application in-system and two 2.4-GHz wireless target boards featuring the highly integrated MSP430F2274 ultra-low-power MCU.

The Texas Instruments eZ430-RF2500-SEH Development Tool featuring the Cymbet CBC-EVAL-08 EnerChip™ EH Solar Energy Harvesting Evaluation Kit helps designers create a perpetually powered wireless sensor network based on the ultra-low-power MSP430 microcontroller (MCU).

MOUSER STOCK NO.	TI Part No.	Fig.	Description	Price Each
595-EZ430-RF2500	EZ430-RF2500	-	2.4 GHZ MSP430 Wireless Development Tool	



ENERGY HARVESTING DEMONSTRATION KITS AND MODULES

AdaptivEnergy is the leading developer and supplier of piezo-based energy harvesting DC power supplies to enable self-sustaining microelectronics. Their ruggedized, maintenance-free Joule-Thief™ products capture ambient mechanical energy and convert it to power many applications including wireless sensing, structural health monitoring, and RFID. AdaptivEnergy offers dependable power—no more wires or battery servicing—to make possible a new generation of intelligent green solutions.

Joule-Thief™ Demonstration Kits

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 transmissions from a 60Hz vibratory source to a USB-based receiver.

MOUSER STOCK NO.	AdaptivEnergy Part No.	Fig.	Description	Price Each
740-TI-A-V3A3-NE03	TI-A-V3A3-NE03	-	50Hz Resonance Joule-Thief™ Energy Harvesting Demonstration Kit	
740-TI-A-V3B3-NE03	TI-A-V3B3-NE03	-	60Hz Resonance Joule-Thief™ Energy Harvesting Demonstration Kit	

Random Vibration Demonstration Kit

AdaptivEnergy's Joule-Thief™ energy harvesting power supplies convert ambient mechanical energy, such as vibration and impact events, into a standard DC voltage output. The Random Vibration Demonstration Kit includes everything you need to evaluate the JTRA-e5mini energy harvesting module within your vibration environment. This includes an example self-sustaining microelectronics application with wireless sensors and Texas Instruments' low power MSP430 Wireless Development Tool.

MOUSER STOCK NO.	AdaptivEnergy Part No.	Fig.	Description	Price Each
740-TI-A-V2E4-TA02	TI-A-V2E4-TA02	D	Random Vibration Energy Harvesting Demonstration Kit	

Joule-Thief™ Modules

Specifications:

- 50, 60, or 120 Hz RLP® Smart Energy Beam™ Standard
- Capacitive or Li-Ion Battery Storage
- Efficient Energy Key™ Collection Electronics
- Standard 3.6V DC Voltage Output
- Easily mounted with embedded magnets or fasteners
- Energy collected is dependant on frequency and amplitude of vibration source

MOUSER STOCK NO.	AdaptivEnergy Part No.	Fig.	Description	Price Each	
				1	10
740-V3A3-NE13	V3A3-NE13	E	50Hz Resonance Joule-Thief™ Energy Harvester DC Power Supply		
740-V3B3-NE13	V3B3-NE13	E	60Hz Resonance Joule-Thief™ Energy Harvester DC Power Supply		

Random Vibration Joule-Thief™ & Transport Energy Harvesting Unit

AdaptivEnergy's Joule-Thief™ energy harvesting power supplies convert ambient mechanical energy, such as vibration and impact events, into a standard DC voltage output. The JTRA-e5mini Random Vibration Joule-Thief™ module is an ideal solution for self-sustaining low power microelectronics such as wireless sensing and active RFID. Joule-Thief™'s stress-engineered Smart Energy Beam™ produces more power per unit volume than any other piezo-based energy harvesting technology available. AdaptivEnergy's highly efficient Energy Key™ electronics are integrated into the Random Vibration module, resulting in a very compact energy harvester with a 2-wire interface to your application.

MOUSER STOCK NO.	AdaptivEnergy Part No.	Fig.	Description	Price Each	
				1	10
740-V2E4-TA02	V2E4-TA02	F	Random Vibration Joule-Thief™ Energy Harvester DC Power Supply		
740-V3E3-NE03	V3E3-NE03	G	Ground Transport Energy Harvester		

