

NXP LPC4078 MCU Power Backup with EnerChip™ Battery



Applications

EnerChips are the ideal MCU backup alternative to batteries or supercapacitors, especially when the finished product has limited PCB space, size constraints or needs to be sealed or installed in a hard-to-reach location. They are also an excellent choice if you have any of these design requirements:

- Battery must be RoHS and WEEE compliant
- Product can be discarded without removing battery
- Product must have battery installed during shipping via air
- Battery must be rechargeable to support a lifetime of power outages
- Battery must provide backup power for several hours during a main power failure

LCP4078	CBC3112		CBC3150	
Iq (nA at 3V)	Back up time (hrs)	Package Size (mm x mm)	Back up time (hrs)	Package Size (mm x mm)
1000	12	7 x 7	50	9 x 9

** To calculate power usage/backup times visit the [Cymbet.com Design Center](http://www.cymbet.com/DesignCenter) MicroController Back-up. Scroll to the bottom and choose 'Calculating Back Up Time.'

Advantages of Combining These Two Parts

Cymbet EnerChips are solid-state, rechargeable batteries with the following characteristics when compared to conventional rechargeable batteries:

- Low self-discharge
- Are solder reflow tolerant
- Flat discharge voltage profile
- High charge/discharge cycle life
- Simple voltage controlled charging
- Have no flammable solvents to leak or catch fire
- Are offered in low profile surface mount packages

Documentation

- **Cymbet Application Note:** [AN-1027](#)
- **Cymbet Evaluation Kits:** [CBC-EVAL-05B](#)
- **Data Sheets:** [NXP LPC4078](#), [CBC3112](#), [CBC3150](#)
- **All Cymbet Documents and Downloads:** <http://www.cymbet.com/products/datasheets-downloads.php>

Simple Schematic and Evaluation Kit Photo

