

## ICEdot Teardown

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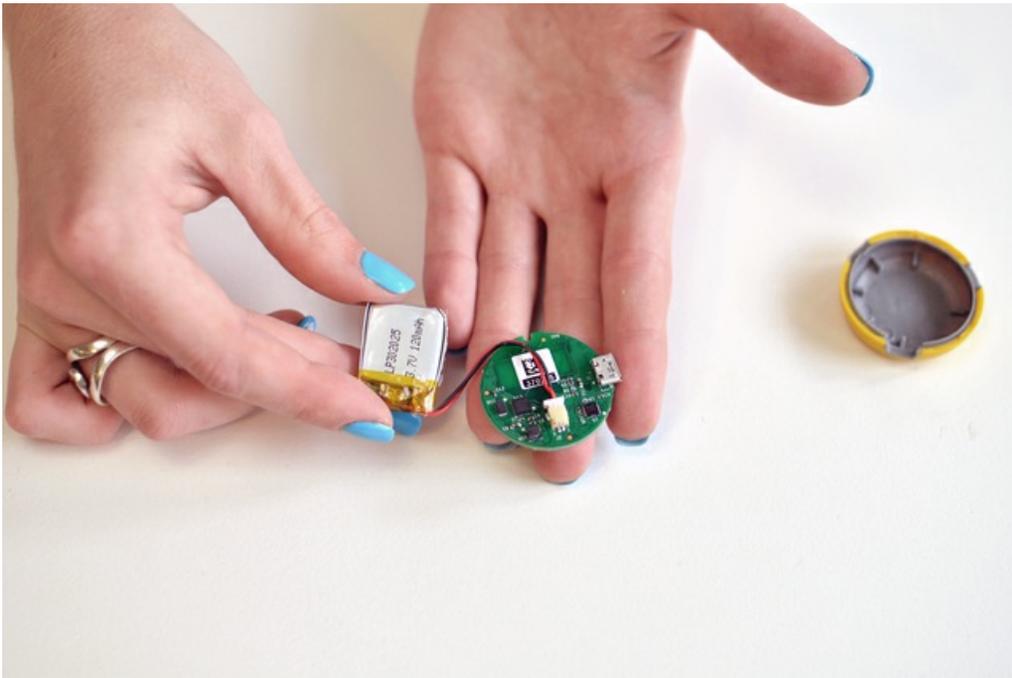
## Inside the ICEdot



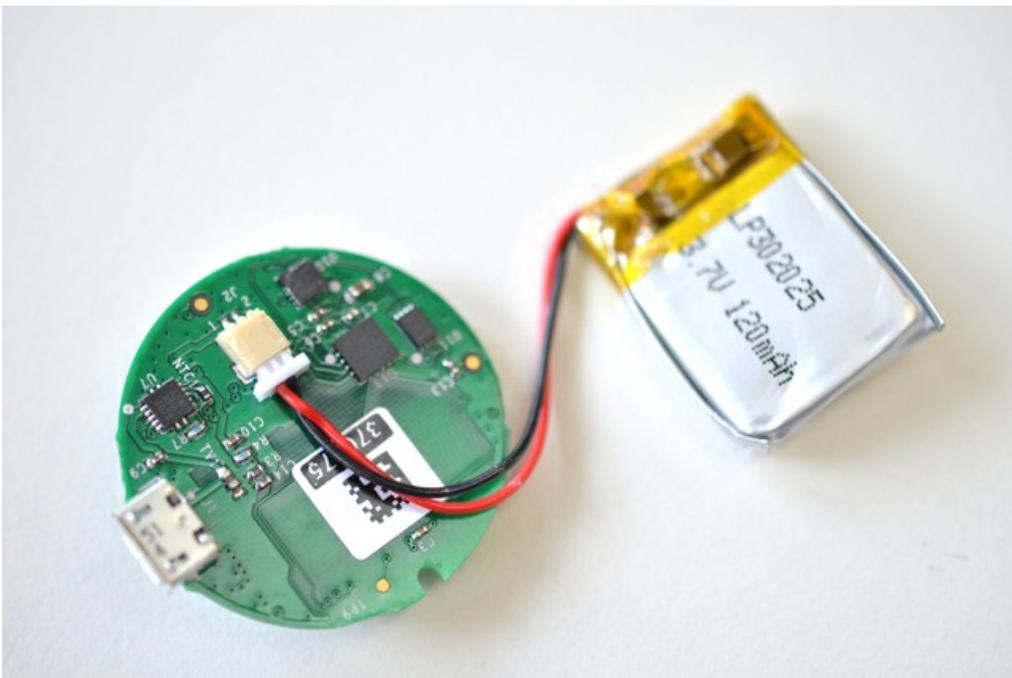
The [ICEdot crash sensor](https://adafru.it/cEU) is a Bluetooth low-energy device that senses extreme changes in movement, like when you're in a bike accident. It connects to an online service via an iPhone app and after a crash is detected it launches a 45-second countdown on the phone which, if not canceled, then notifies your emergency contact. When you first get the device, you can set up your account with multiple contacts and choose between a phone call, sms, or email notifications. Emergency medical personnel can text the ID of your ICEdot to a number and receive back your important medical info.



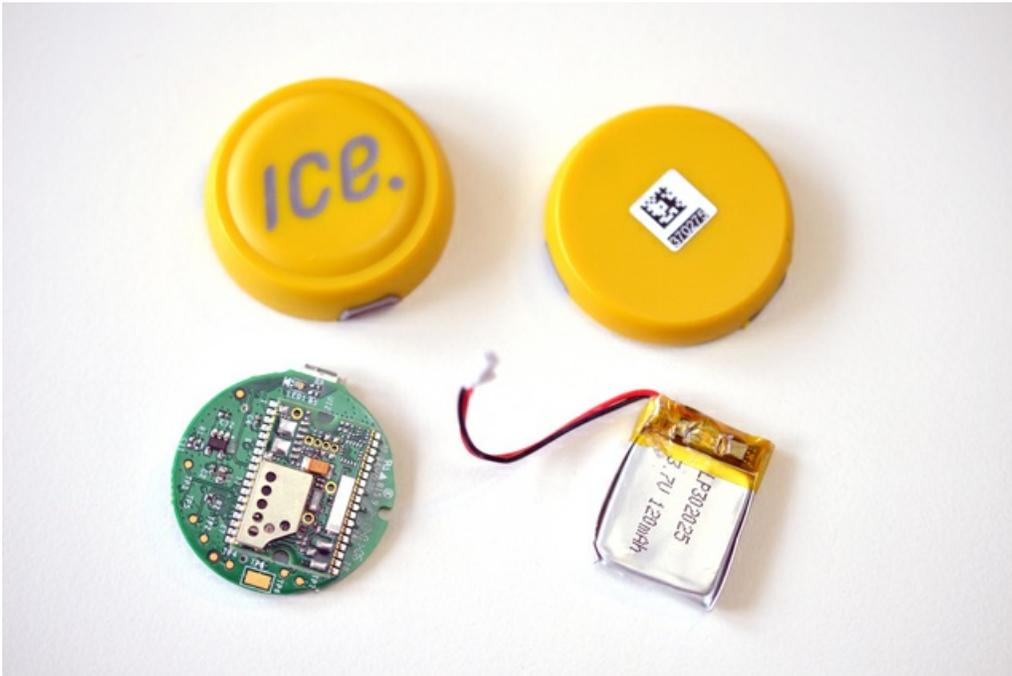
The ICEdot attaches to your helmet with a bracket and zip ties, and the device charges via micro USB. The pack also contains stickers with your ICEdot ID for placing on your license in your wallet etc.



We used a flathead screwdriver to gently pry the ICEDot open. Be cautious not to pry against the soft lithium polymer battery, or it could be damaged.



The plastic shell has a rubber gasket inside. The contents of the shell are a small double-sided circuit board and 120mAh rechargeable lipo battery, a lot like the [150mAh battery \(http://adafru.it/1317\)](http://adafru.it/1317) we have in the Adafruit store.



On one side of the board is a Bluetooth low-energy module (BTLE) module by Texas Instruments, containing a [CC2540 microcontroller](https://adafruit.it/cF2) (<https://adafruit.it/cF2>).

The other side of the board has a [bq24024](https://adafruit.it/cF3) (<https://adafruit.it/cF3>) lipo charger, a L3GD20 3-axis gyro (just like the [one we carry](http://adafruit.it/1032) (<http://adafruit.it/1032>)!), and [LIS3DH](https://adafruit.it/cF4) (<https://adafruit.it/cF4>) 3-axis accelerometer.

To save costs, the designers used the CC2540 as both a BTLE controller and the microcontroller that reads all the sensor data from the gyroscope & accelerometer and decides whether it's time to activate the help function on the paired phone.