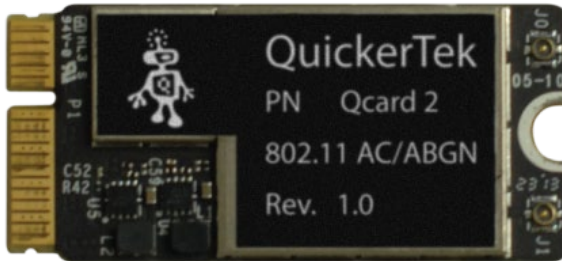


QCard™ 2.0

MacBook 802.11ac update



version 1.0

1

Preparation

You'll need a few tools to complete this job.

1. **An anti static mat.** You'll want to pay attention to the anti-static part. An actual anti-static work mat is best, but not everyone has one. You don't want a piece of metal or plastic, as the metal could cause a discharge from the computer (what we're trying to avoid) and the plastic will build up static electricity, which will discharge on your metal computer. Foam will work, foamcore board as well. One thing you can do is get some liquid fabric softener like you use in the washing machine and put it in a spray bottle. Now spray it on the floor in the area you're going to work. It also helps avoid shocks in general (and will make your work area smell nice). Also, if there is a piece of metal, like a shelf next to where you're working, touch it for a little to discharge yourself.

2. **A five (pentalobe) lobe Torx Screwdriver.** There's no way to get around this. Apple has all of its screws on the back of the MacBook Pro like this.



3. **A six lobe torx screwdriver.** Yes, there are two different screwdrivers. Use size T5.

4. **A spudger.** Not absolutely necessary for this job, but handy. It's basically a long tool about the size of a pencil, with a point on one end and the other end flat. You can get away with a **plastic** mechanical pencil or even a cap from a pen.



5. **A screw separation mat.** This is to keep your screws organized as you take them out of your computer. Some coffee cups or small boxes will work too.

2

Remove all of the screws and take the bottom off.

They are 5 lobe Torx screws. There are ten of them, located around the perimeter. Note- the screws at the back are longer than the others.

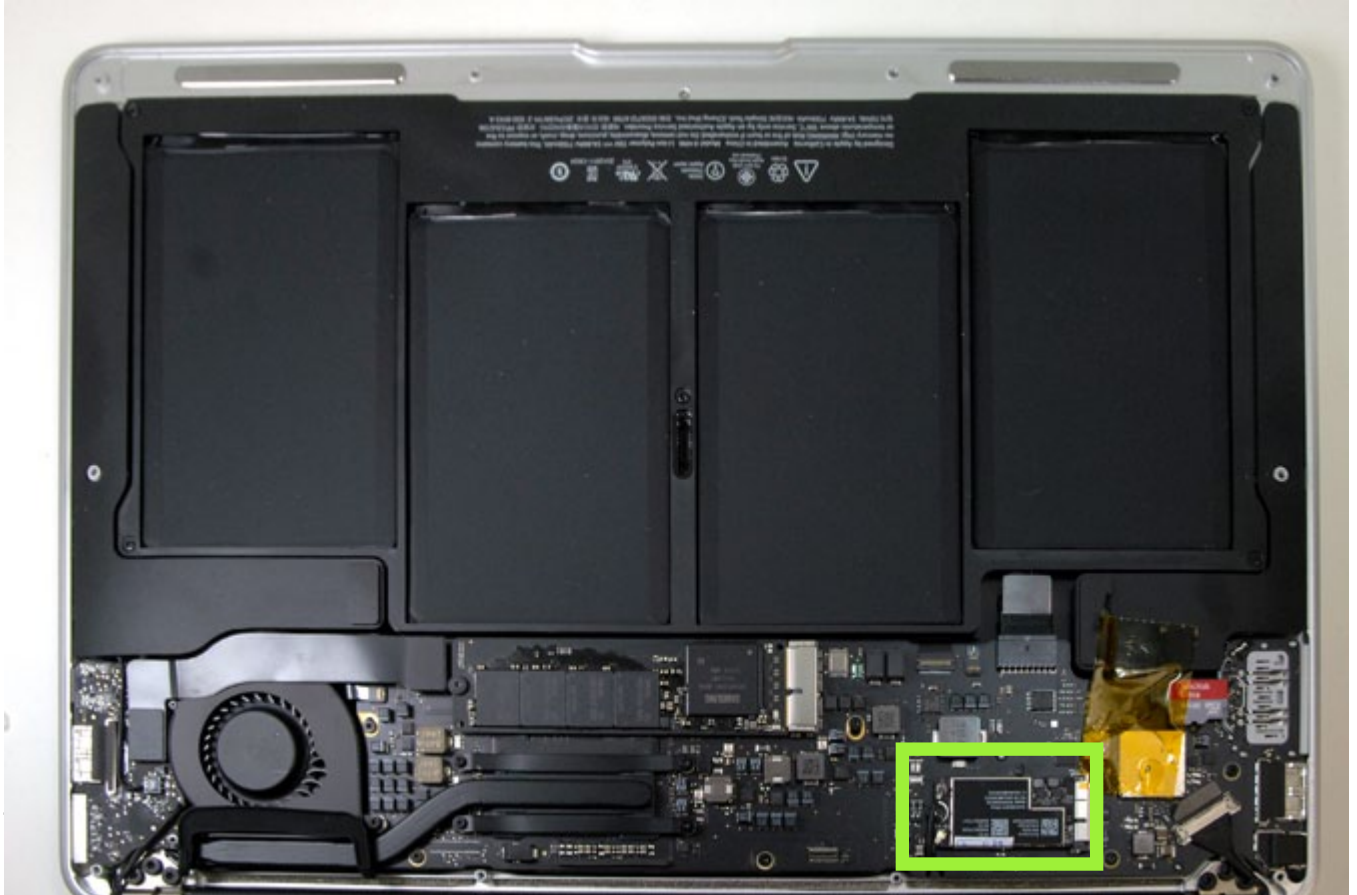


You want to remove the bottom from the back at this black part.

3

Remove the back.

In the lovely way Macs are laid out, it's right in obvious view.



4

Remove the wires from the chip

The first step is to remove the two wires at the bottom of your chip. They are attached with snaps. To remove them, use your spudger to gently pry them free. One is longer and one is shorter. Pay attention to that, as it will make the difference as to where it goes later. If you don't trust yourself, take a sharpie and put a black dot on the wire attached to the j1 port.



5

Remove the screw from the chip

Next remove the 6 lobe torx screw from the chip.



6

Remove the chip

Now, for this step, make sure that you haven't been moving around. If you have, make sure that you are discharged by touching something metal, like a shelf or something.

To remove the chip itself- gently pull up the back like in the picture and pull it out.



Put the new Qcard2 in

Installing the new chip is simply the reverse of how you took it out.

Testing

To make sure you installed the chip correctly, turn your Mac on and go to ABOUT THIS MAC, under the apple button.

Under SUPPORTED PHY MODES; it should say 802.11 a/b/g/n/ac like in the picture below. If the ac isn't there, it's not installed correctly.

