

QCard™ 2.0

MacBook 802.11ac update

15" MacBook Pro Retina



Preparation

You'll need a few tools to install the QCard in your MacBook Pro.

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. We recommend iFixit.com.



3. **A six lobe torx screwdriver.**

Yes, there are two different screwdrivers. 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.

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Remove all of the screws and take the bottom off.

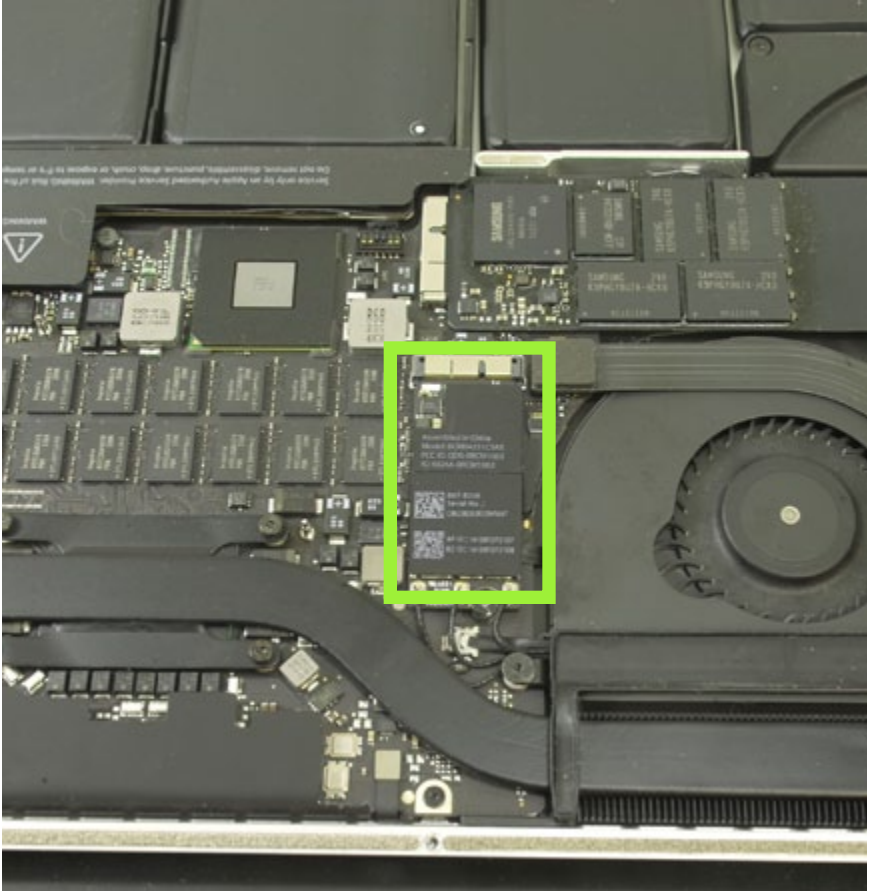
They are 5 lobe Torx screws. There are ten of them, located around the perimeter.



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

Remove the back.

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



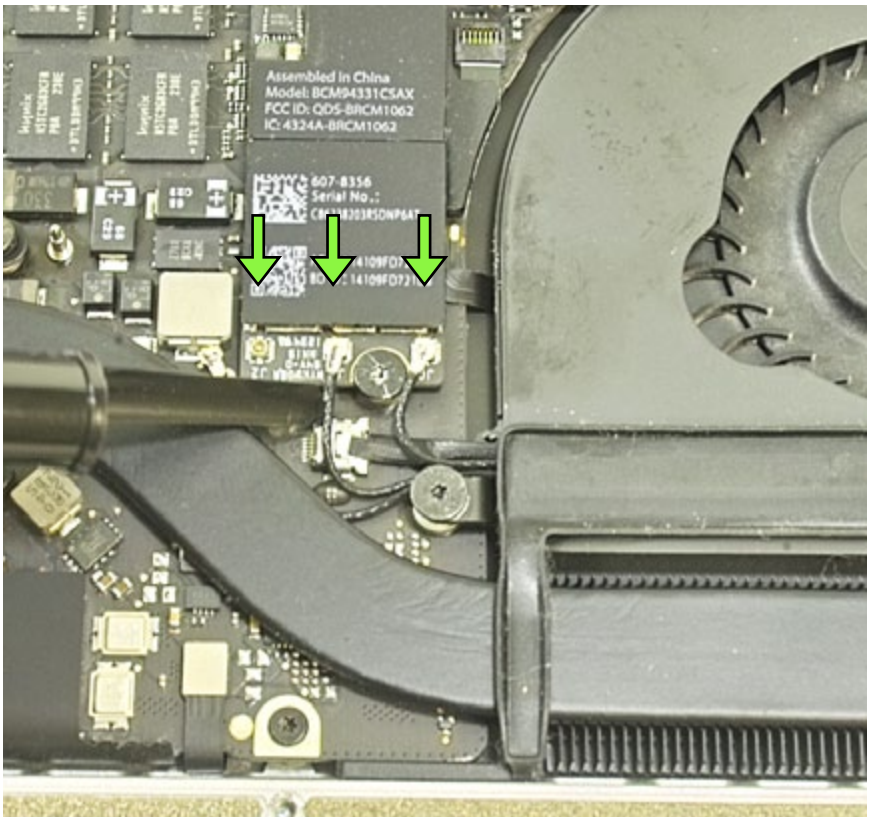
To help, it's the card in the green rectangle.

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Remove the wires from the card

The first step is to remove the three wires at the bottom of your card. They are attached with snaps. Before you take the wires off, mark them with the labels we provided to match the ports on the card. 0 with j0, 1 with j1, 2 with j2.

To remove the wires, use your spudger or pen cap (used in the image) to gently pry them free.



Remove the screw from the card

Next remove the 6 lobe torx screw from the card.



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Remove the card

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.

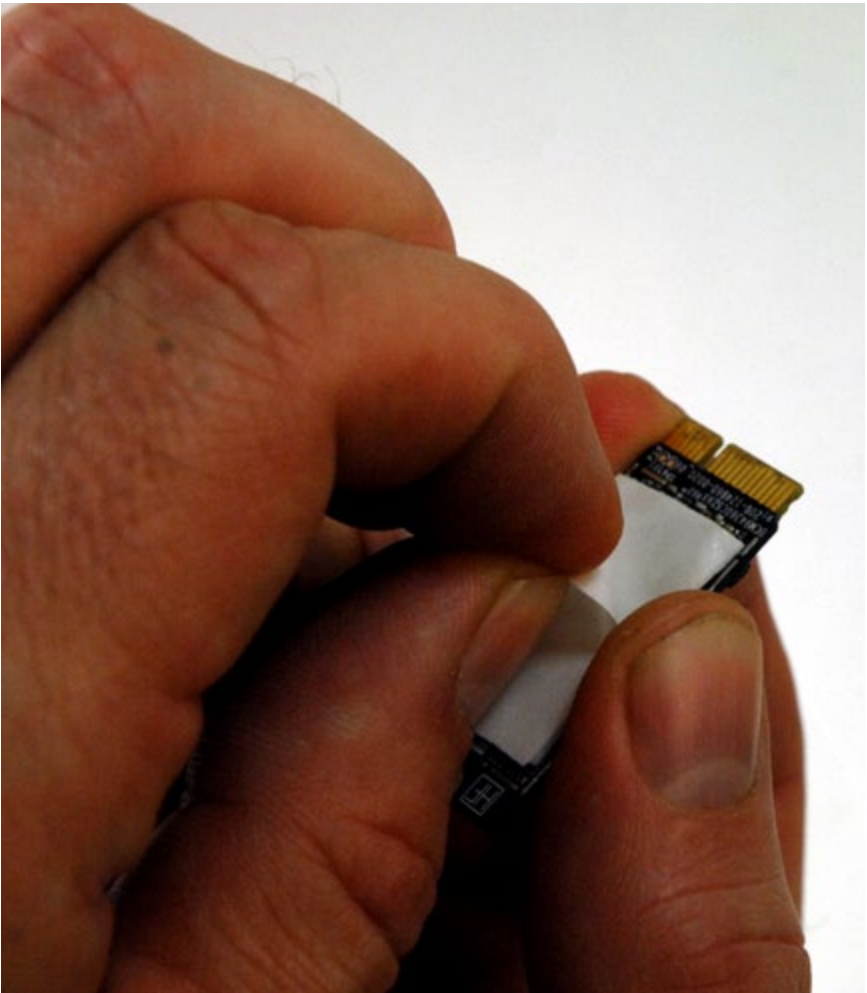
To remove the card itself- gently pull up the back like in the picture and pull it out.



Put the new Qcard2 in

Take your new QCard out of the bag, and put the card you just took out of your Mac in the bag. There's a piece of foam tape on the bottom of the QCard, replacing the foam on your other card.

Remove the backing on the tape and insert it into your Mac in the reverse of how you took the old one out.

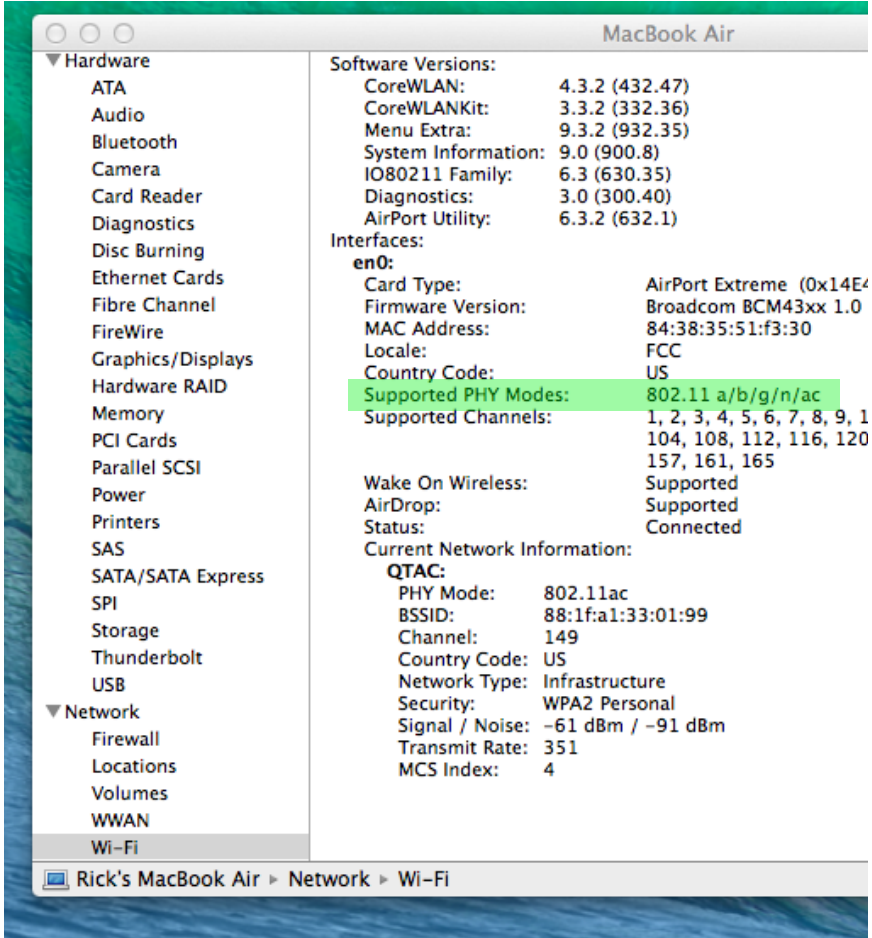


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Testing

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

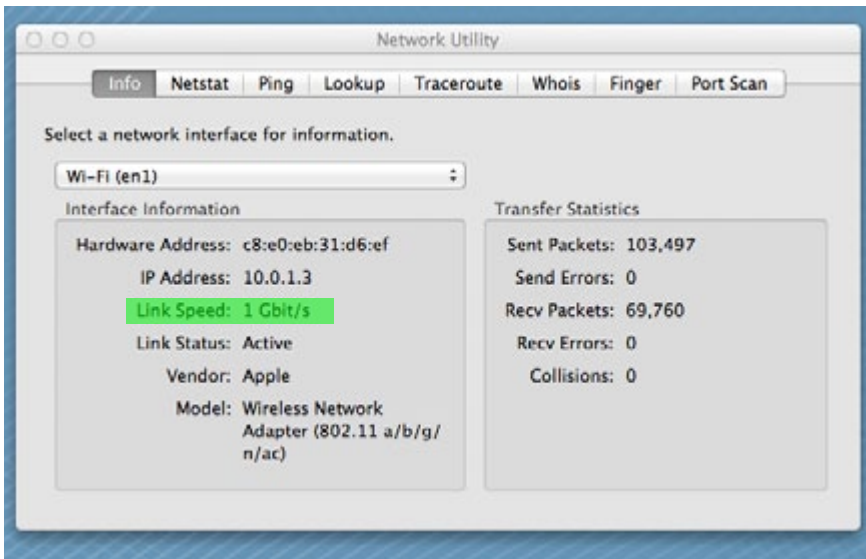
Under SUPPORTED PHY MODES;, it should say 802.11 a/b/g/n/ac like in the picture below. If the ac isn't there, it's not installed correctly.



The picture is from a MacBook Air, but it works the same.

What to expect

My Speed isn't what I expected: Upgrading your AirPort card will only improve your speed if you have an access point that supports the 802.11 ac standard as well. If you need to upgrade, we recommend the AC Apple Base Station. Also, your internet speeds may be limited by your ISP. Satellite and wireless systems can be notoriously slow. To verify your speed, open your Network Utility and look at **Link Speed**.



Where are the drivers? No drivers are needed with the QCard. It uses the same exact chipset that Apple uses.