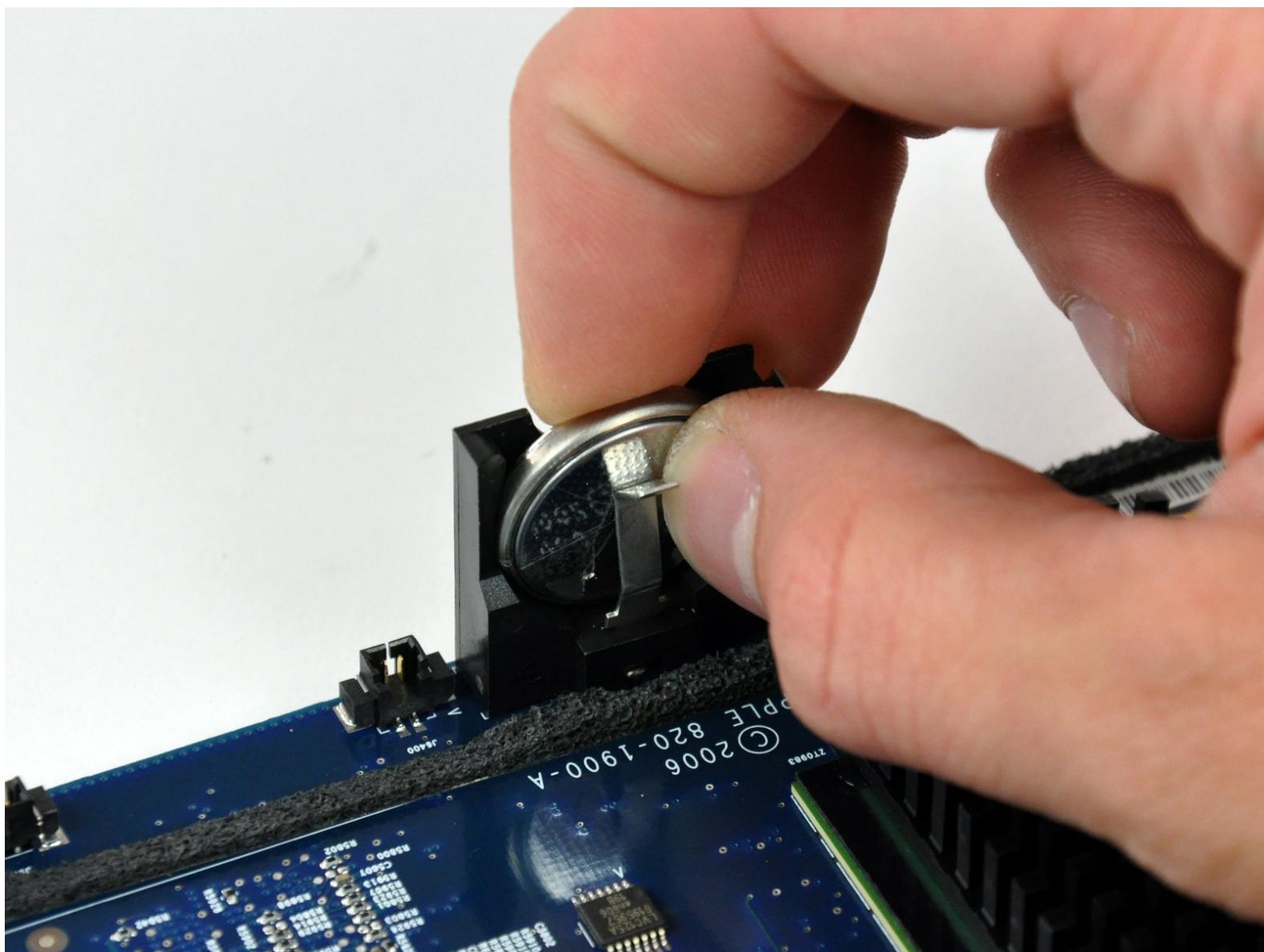




Mac mini Model A1176 Logic Board Replacement

Written By: Walter Galan



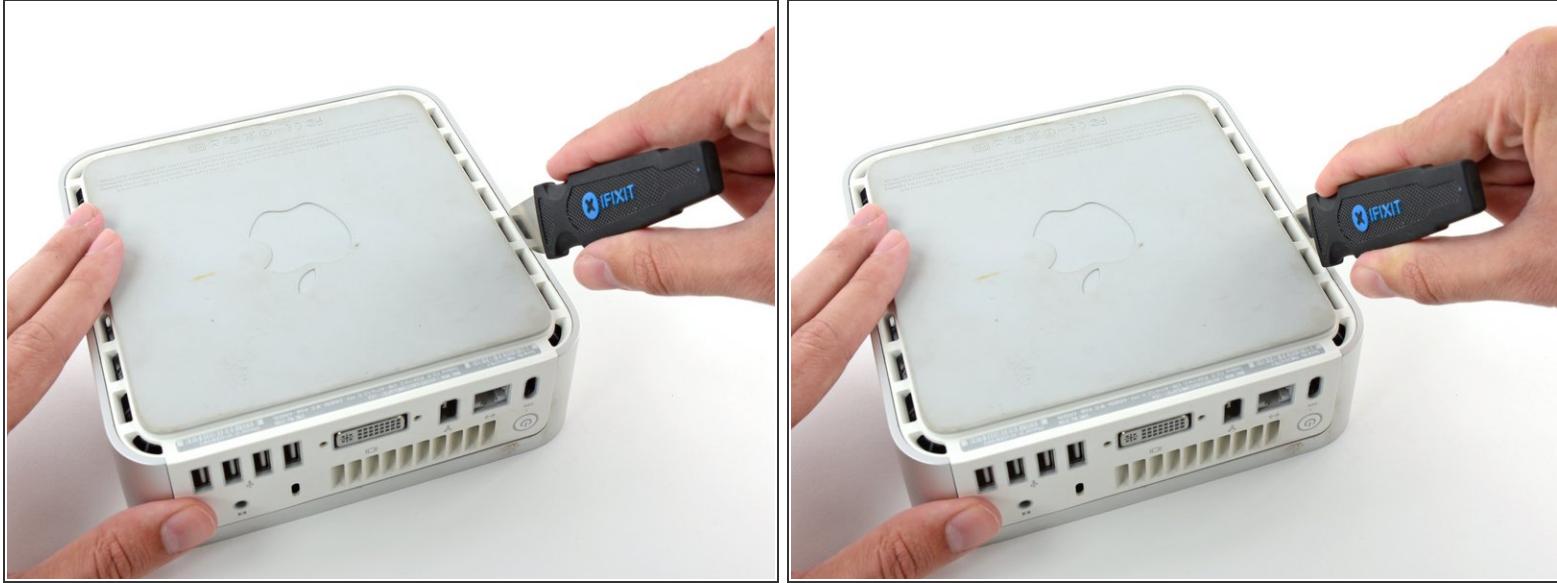
INTRODUCTION

This guide will show you how to replace the logic board.

TOOLS:

- [Jimmy](#) (1)
- [Phillips #00 Screwdriver](#) (1)
- [Spudger](#) (1)
- [T10 Torx Screwdriver](#) (1)
- [Tweezers](#) (1)

Step 1 — Top Housing



- Power down your Mac mini, disconnect all of the cables, and flip it over.
- Insert the Jimmy into the crack between the aluminum top housing and the plastic lower housing.
- The Jimmy should reach a stop about 3/8" down.

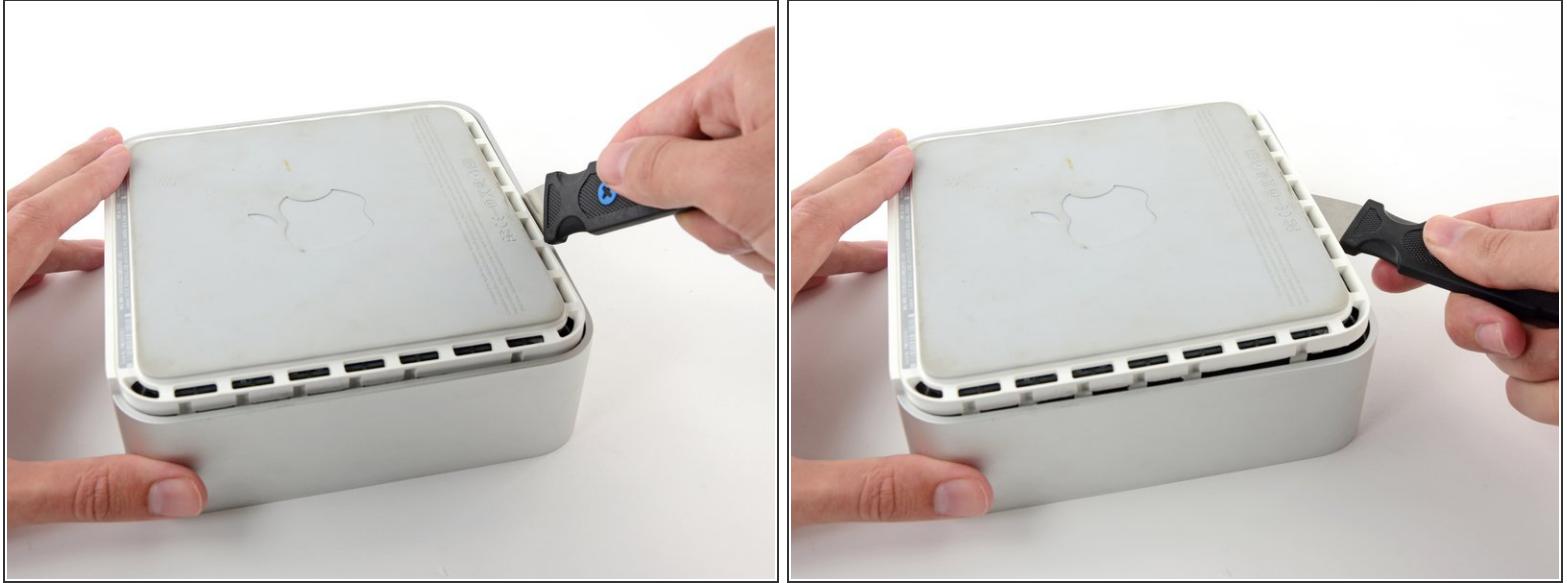
Step 2



- Gently bend the Jimmy outwards to pry the crack open a little larger and lift the lower housing up a small amount.

i There are several plastic clips on the lower housing that fit into a channel in the aluminum top housing. Your goal is to use the Jimmy to push these clips inward enough to free them from the channel, while gently pulling up on the lower housing.

Step 3



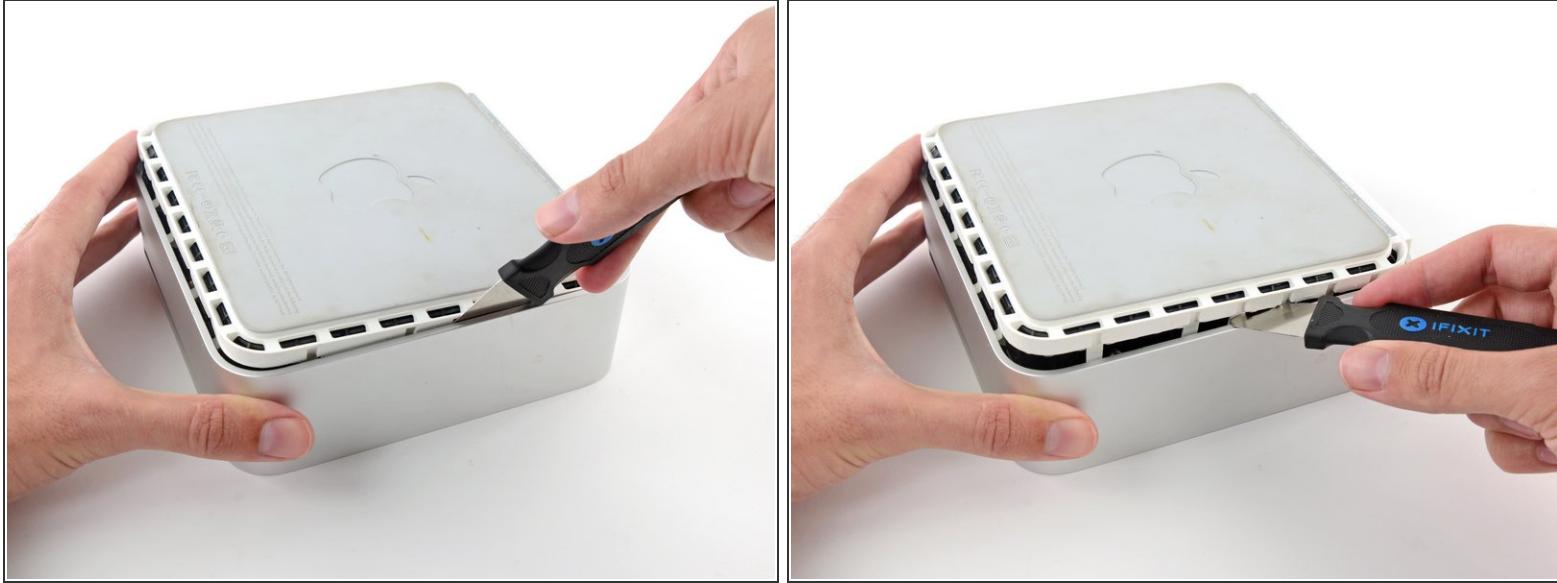
- Once you have the first side free, rotate the Mac mini and start prying up on the front edge.
- Use the same prying motion to both bend the clips inward and lift the lower housing up out of the top housing.

Step 4



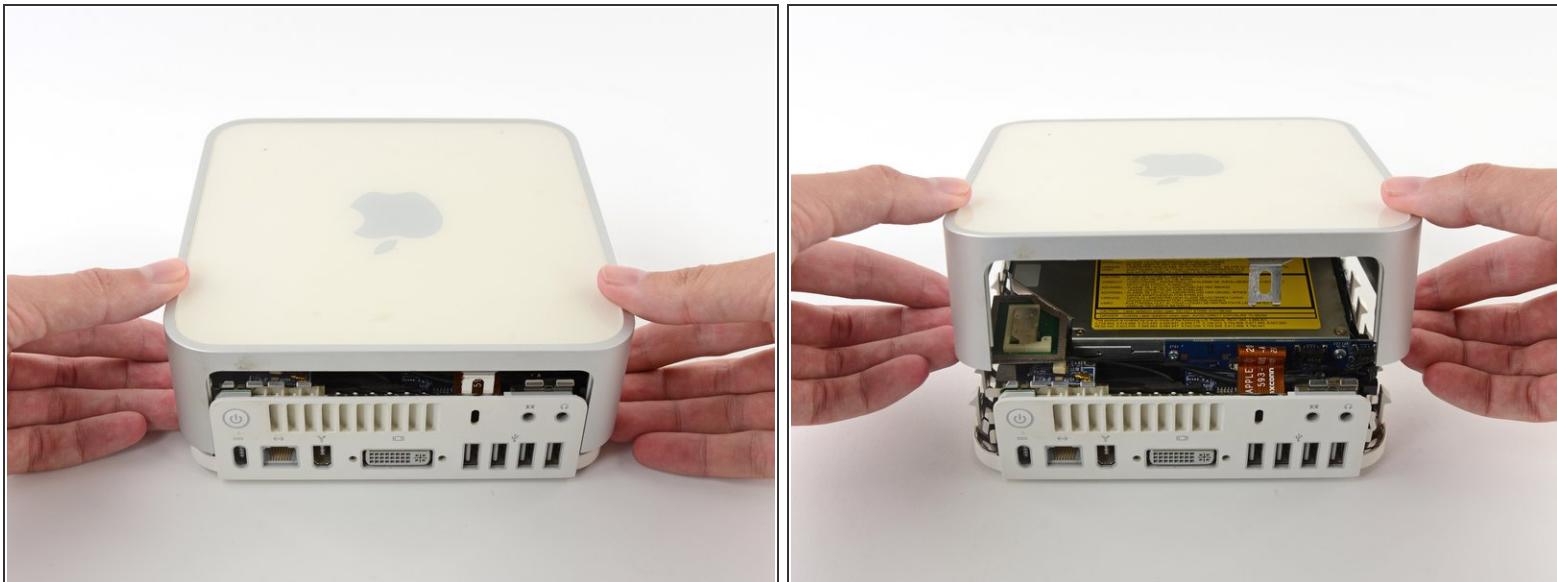
- You may need to move the Jimmy along the edge to pry up all of the clips. Be patient and do a little bit at a time.

Step 5



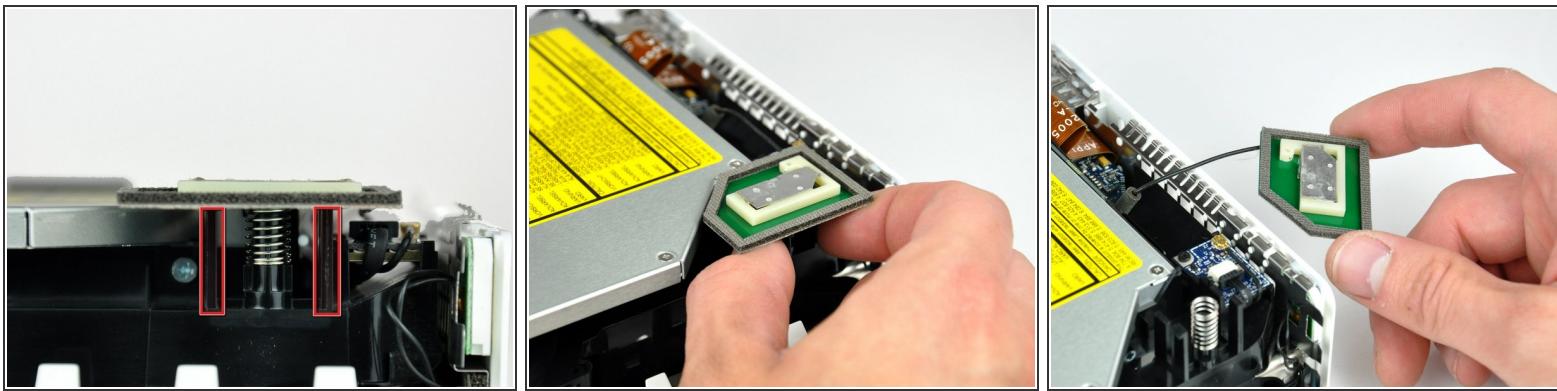
- Keep working around the perimeter, freeing the clips along the final edge.

Step 6



- Flip the Mac mini back over and lift the top housing off of the lower housing.

Step 7 — Internal Frame



⚠ Later in this guide you will remove several recessed Phillips screws. Bit drivers are generally too large to fit in the recesses, so be sure to have a thin shafted Phillips screwdriver on hand.

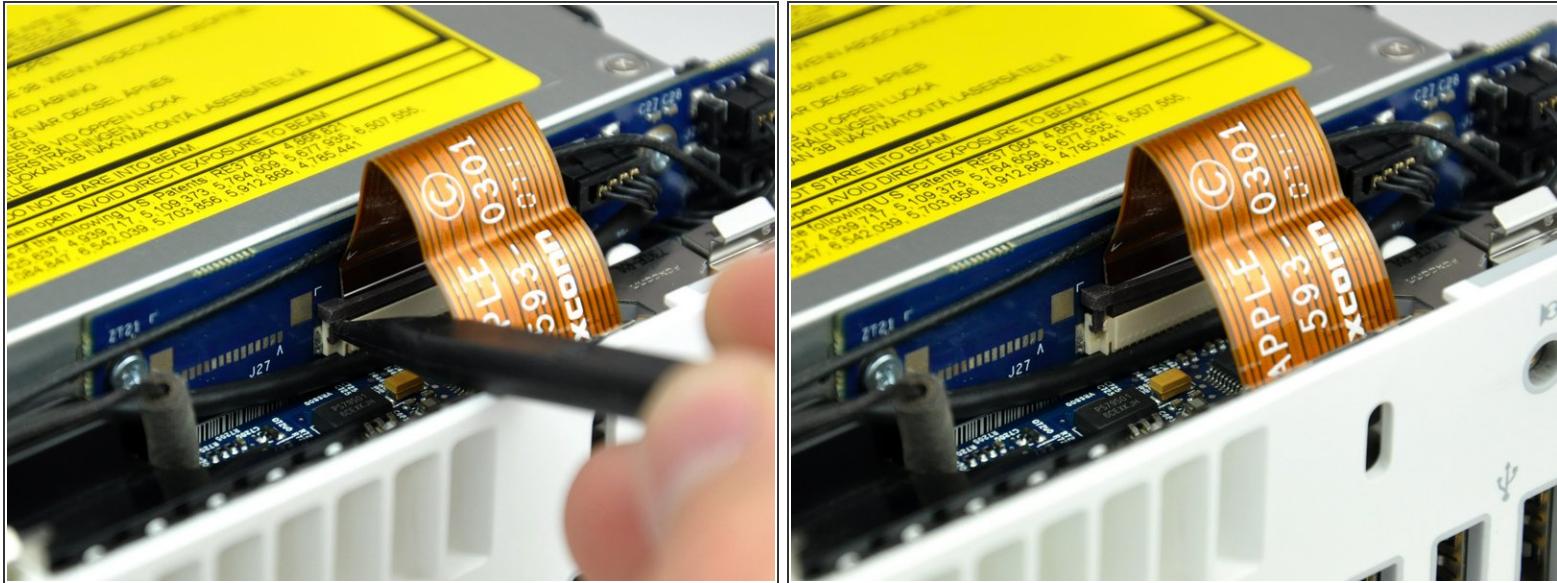
ⓘ First remove the AirPort antenna (the larger of the two), located near the power button.

- Slightly squeeze the two retaining arms toward each other and lift the AirPort antenna off its post.

⚠ Squeezing the two posts excessively will surely break them off the internal frame. Work delicately.

★ During reinstallation, you will have to slightly squeeze the two posts together so they fit into the openings on the AirPort antenna board.

Step 8



- Use the tip of a spudger to slightly lift the left side of the ZIF cable lock up from its socket.

⚠ The ZIF cable lock will lift about 1 mm and stop. **Do not** try to completely remove the ZIF cable lock.

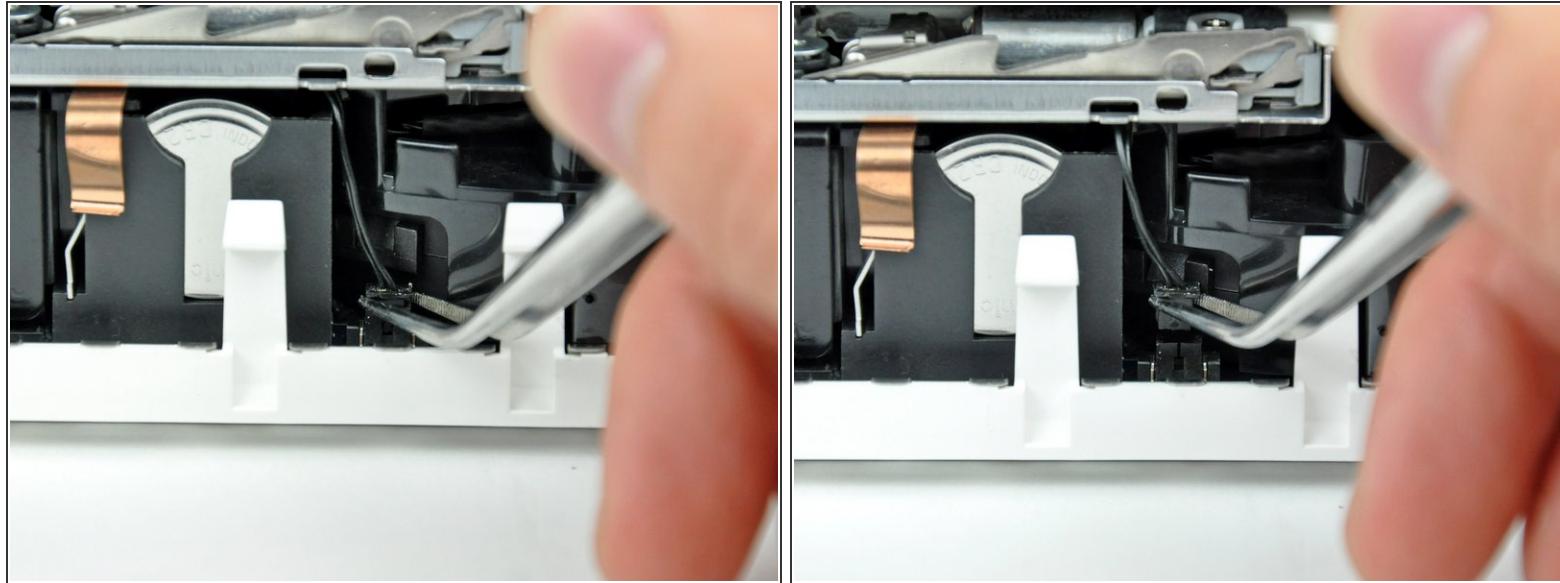
Step 9



- Lift the audio board ribbon cable up out of its socket.

ⓘ If it refuses to lift from its socket, the ZIF cable lock is not fully released. Make sure it is evenly lifted about 1 mm from the socket on the interconnect board.

Step 10

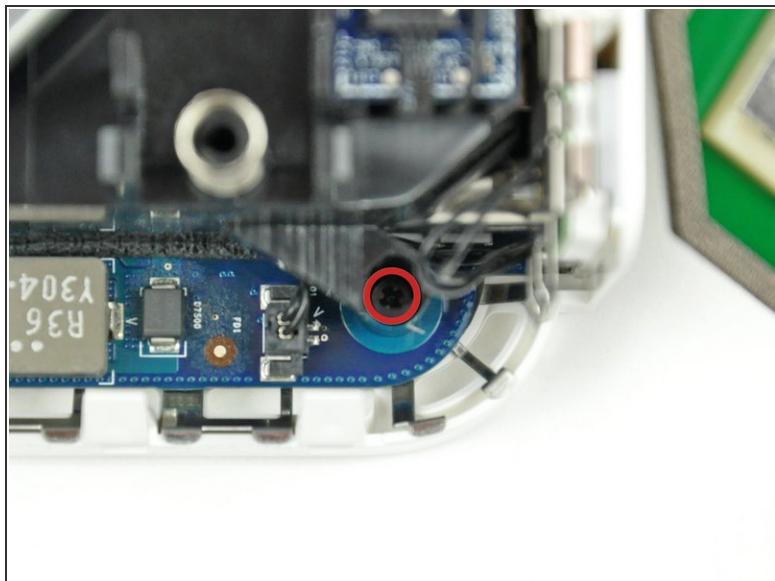


- ⓘ Rotate the mini so that the SuperDrive slot loading mechanism is facing you.
- Use a pair of tweezers to lift the hard drive thermal sensor cable connector up off its socket on the logic board.

⚠ Use tweezers to grab the connector (as seen in the picture), **not the wires**.

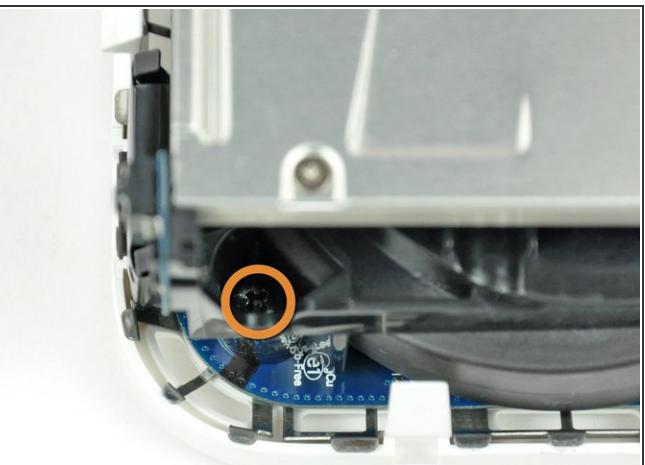
- ⓘ The connector is located under the optical drive opening, next to the PRAM battery.

Step 11



- ⓘ In the next few steps, you will remove the four Phillips screws securing the internal frame to the bottom case. Included in each step is an overview picture showing the general location and a closeup showing the actual screw.
 - Remove the recessed Phillips screw near the power button securing the internal frame to the bottom housing.

Step 12



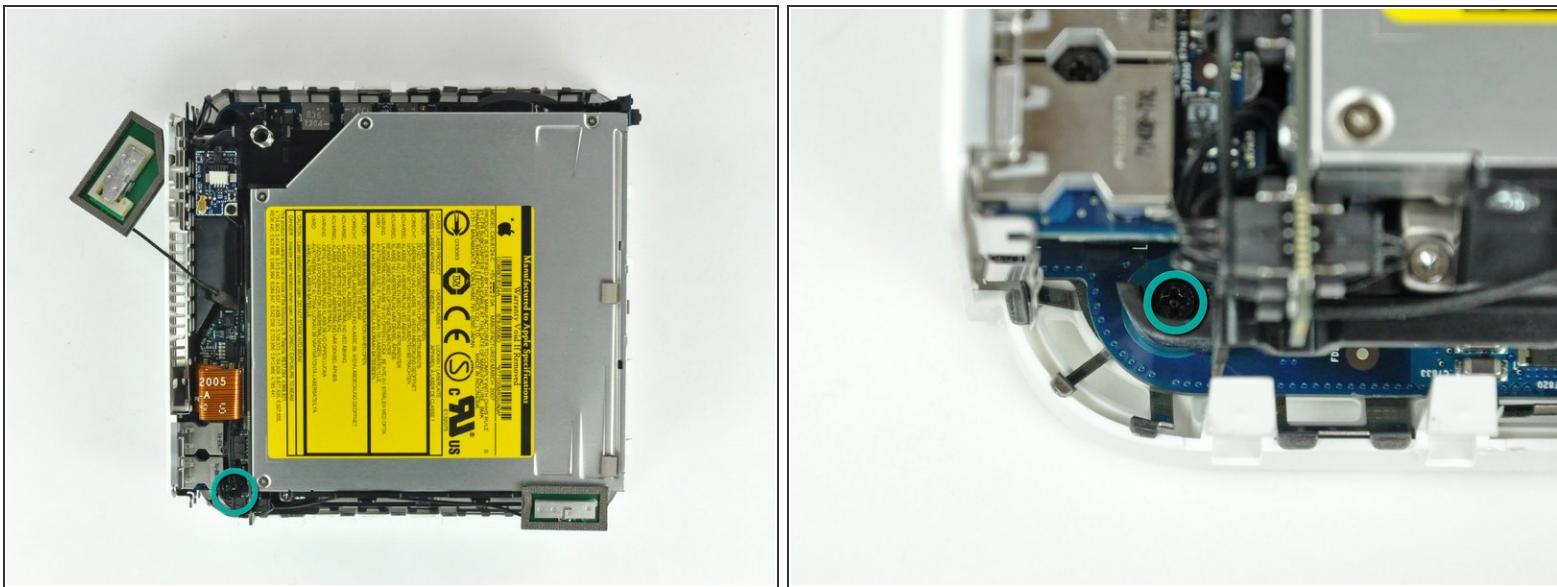
- Remove the recessed Phillips screw near the sleep light securing the internal frame to the bottom housing.
- (i)* This screw is the longest of the four screws securing the internal frame to the bottom case.

Step 13



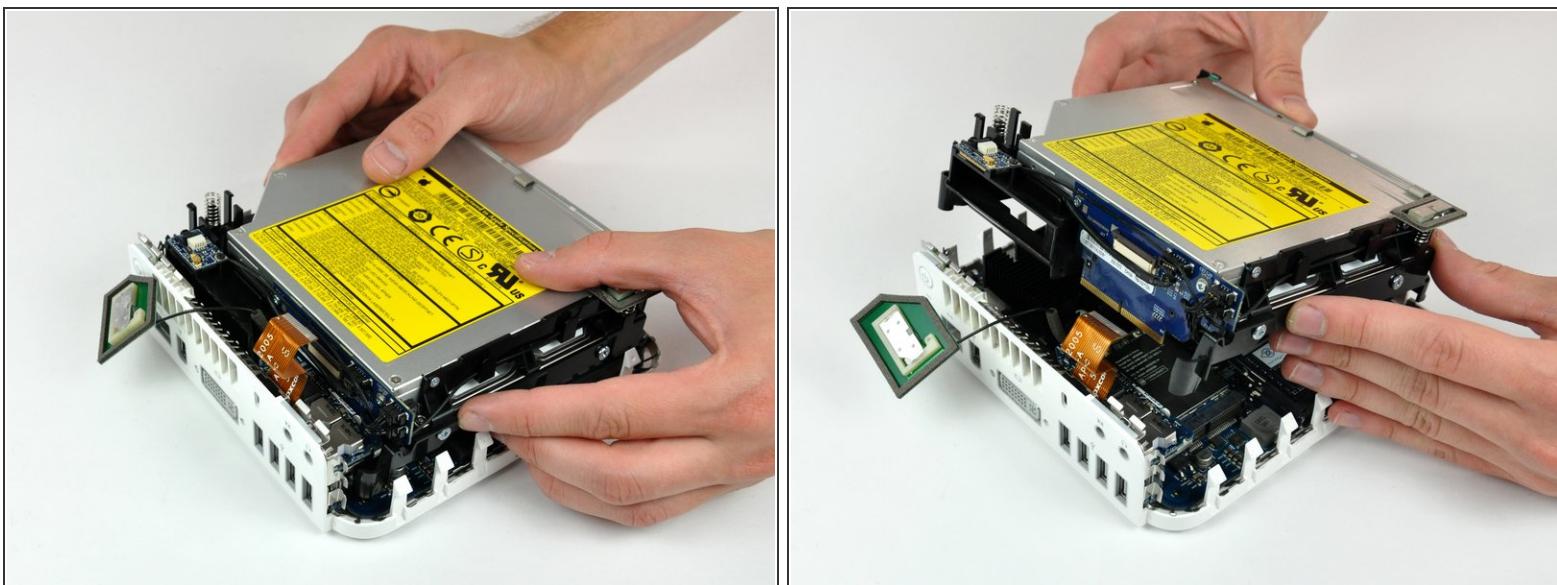
- Remove the Phillips screw from the internal frame near the Bluetooth antenna.

Step 14



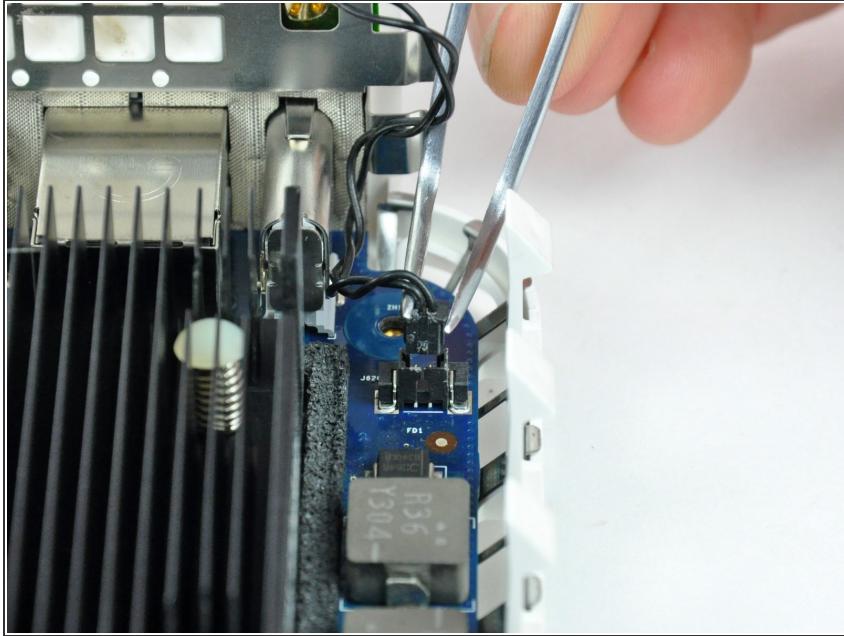
- Remove the Phillips screw near the audio ports securing the internal frame to the bottom case.

Step 15



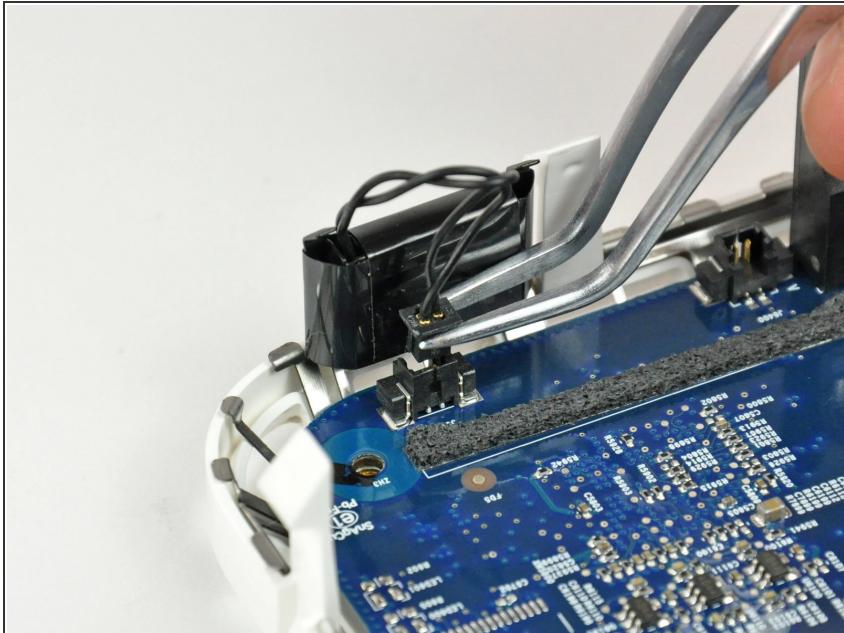
- Gently lift the internal frame up from the bottom housing, minding the AirPort antenna and any other cables that may get caught.
- It may be necessary to pull up near the interconnect board to separate it from the logic board.

Step 16 — Logic Board



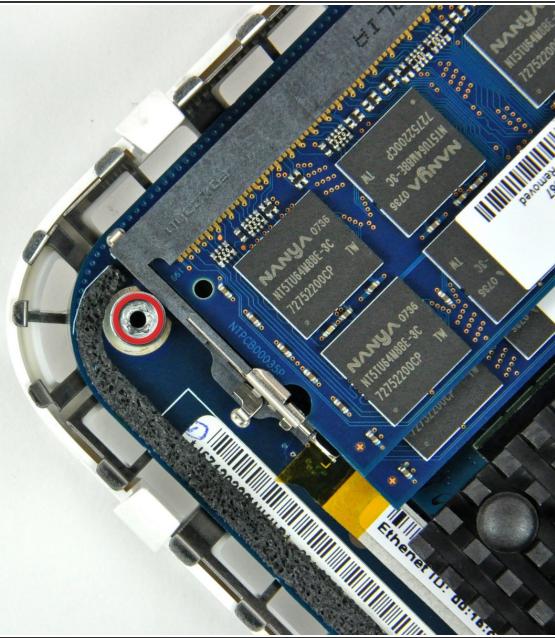
- Firmly grasp the power button cable connector with a pair of tweezers and lift it straight up off the logic board.

Step 17



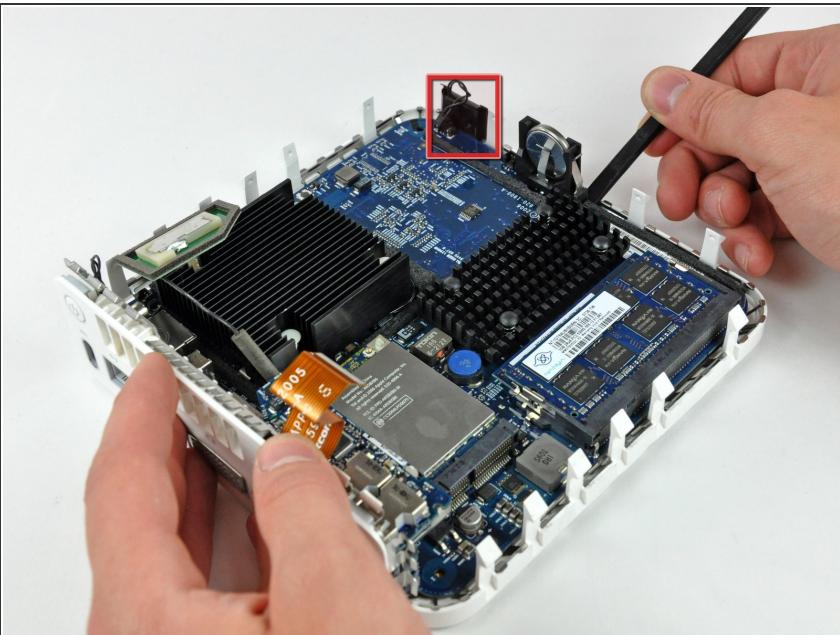
- Firmly grasp the sleep light cable connector with a pair of tweezers and lift it straight up off the logic board.

Step 18



- Remove the single T10 torx lug securing the logic board to the bottom housing.

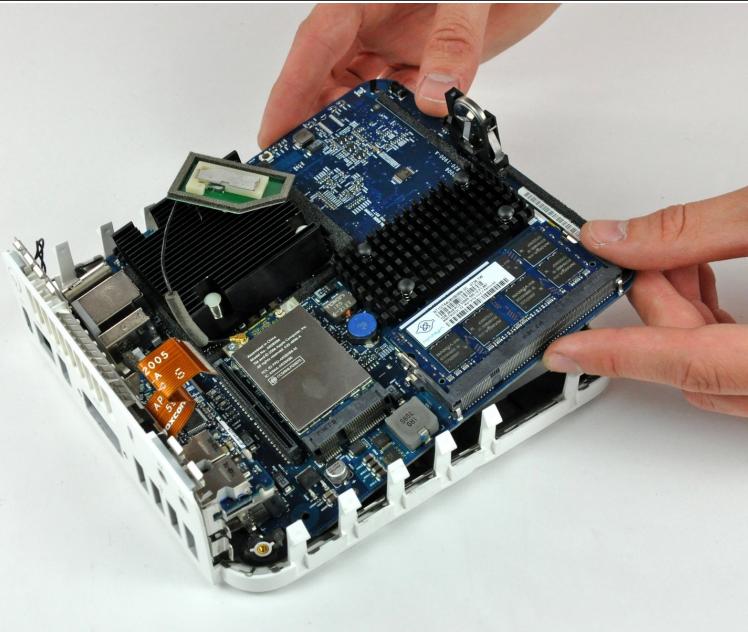
Step 19



- Use the flat end of a spudger to slightly lift the logic board near the PRAM battery to separate it from the bottom housing.

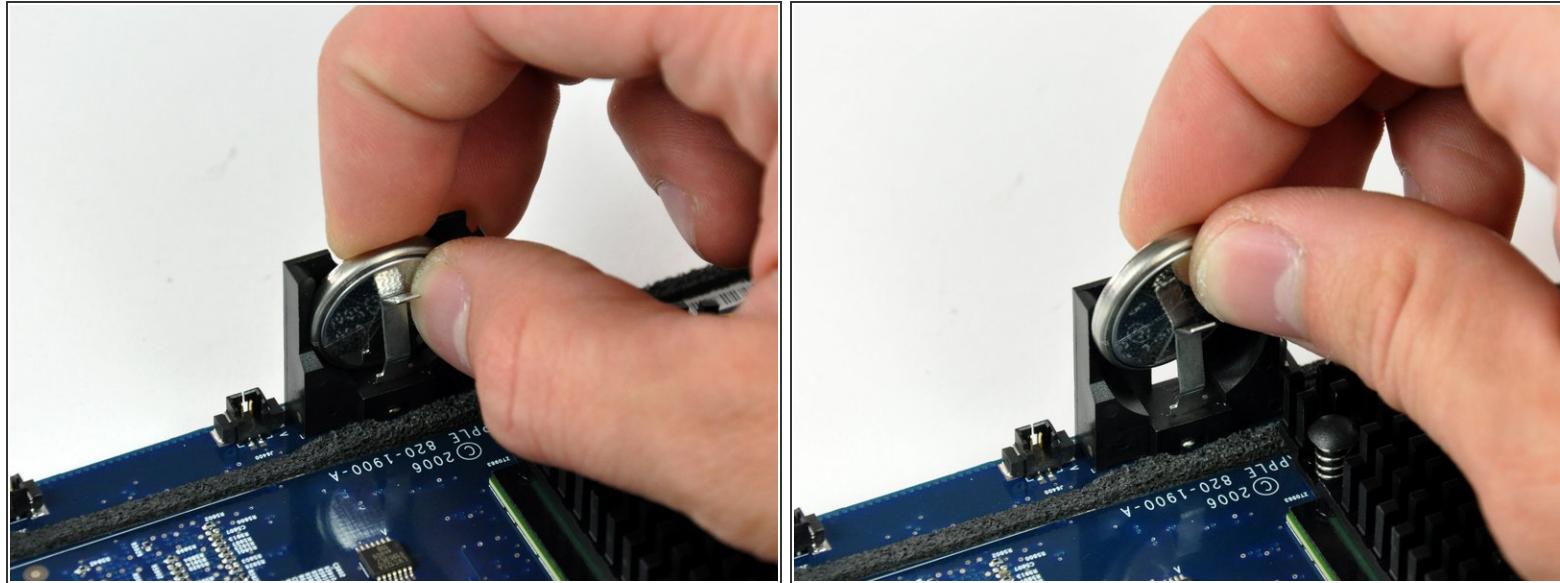
It will be necessary to gently pull the sleep light (shown in red) away from the mini to clear the edge of the logic board.

Step 20



- Gently lift the free end of the logic board and wiggle the board as you pull it away from the I/O ports.

Step 21 — Logic Board



- Push the PRAM battery toward the center of the logic board and pull it up out of its holder. You'll have to push the battery in further than you'd expect in order to get it to pop free.

⚠ Don't bend the metal finger too much or it will break off, requiring a new logic board.

- When inserting the new battery, make sure the side with writing along the edges faces the black plastic holder. You should also ensure that the metal connectors make contact with the battery (you can bend them forward if they do not).

Step 22



- Simultaneously pull the tabs on each side of the RAM chip away from the center of the chip. These tabs lock the chip in place and releasing them will cause the chip to "pop" up.
- Pull the RAM chip directly out from its connector.

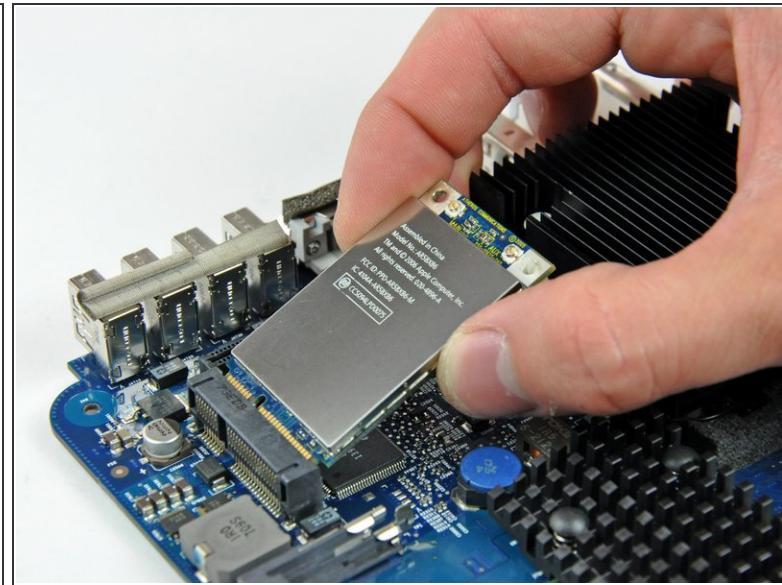
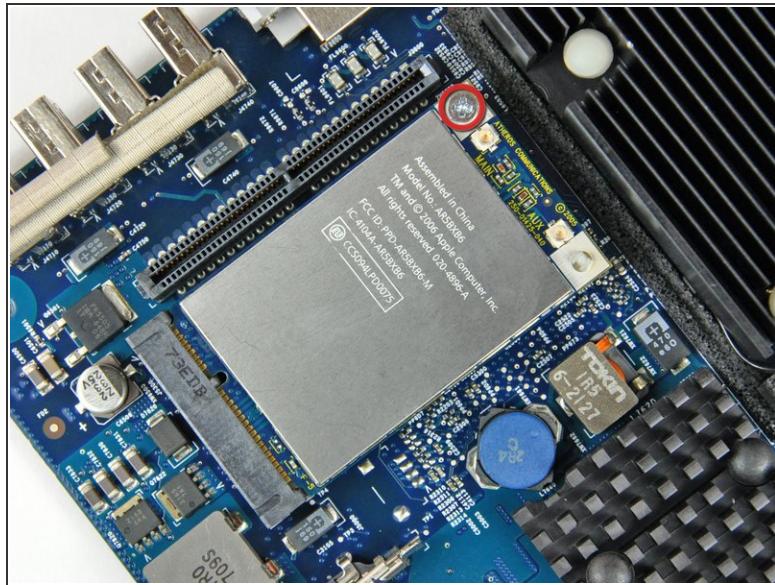
(i) If there are two RAM chips installed, repeat the above procedure for the second chip.

Step 23



- Use the flat end of a spudger to pry the AirPort antenna cable connector up off the AirPort card.

Step 24



- Remove the single Phillips screw securing the AirPort card to the logic board.
- After removing this screw, the free end of the AirPort card should pop up slightly.
- Pull the AirPort card away from its socket on the logic board.

To reassemble your device, follow these instructions in reverse order.