Mac mini Model A1283 Logic Board Replacement

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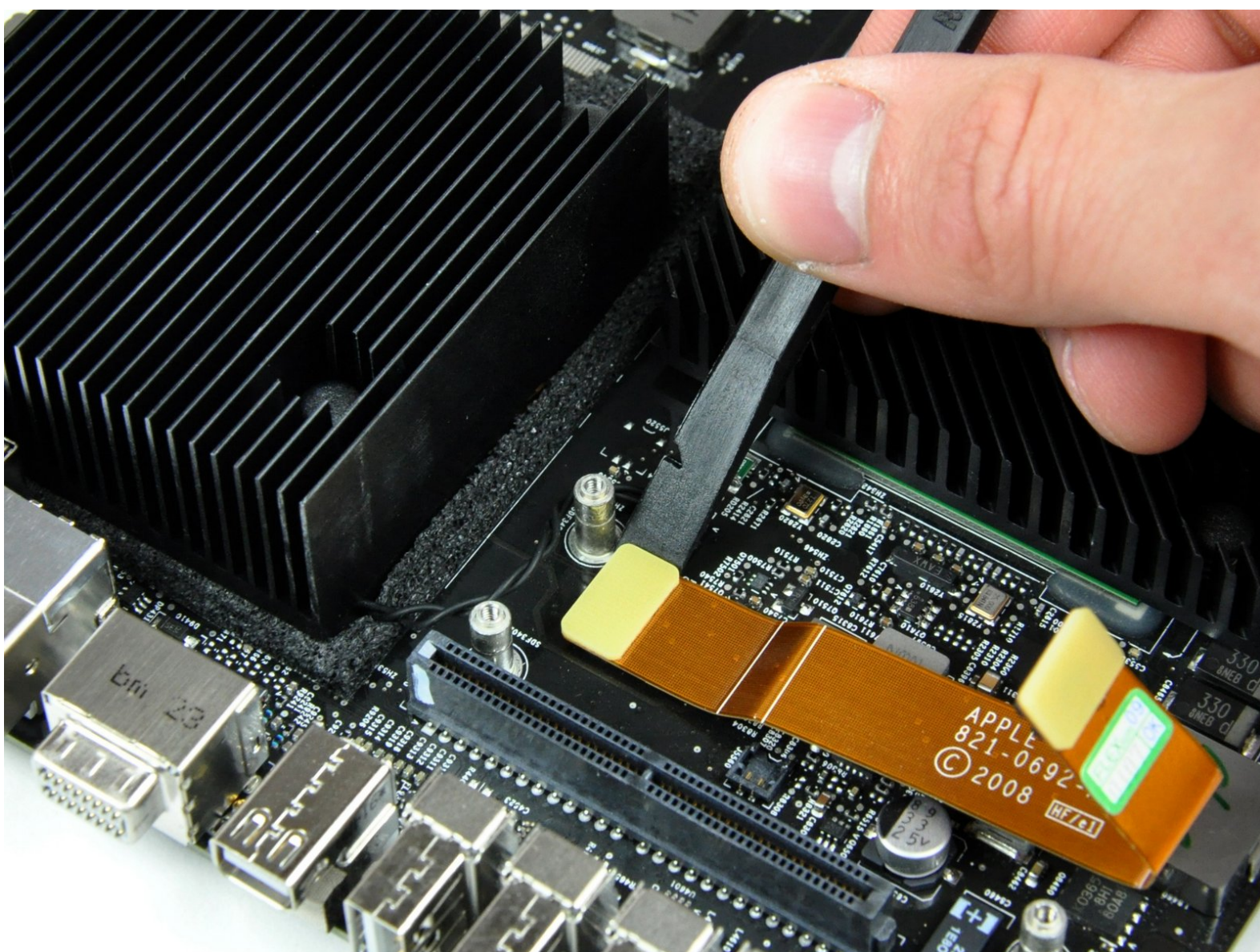
INTRODUCTION

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

🔧 TOOLS:

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

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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.

- ⓘ 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.

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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.
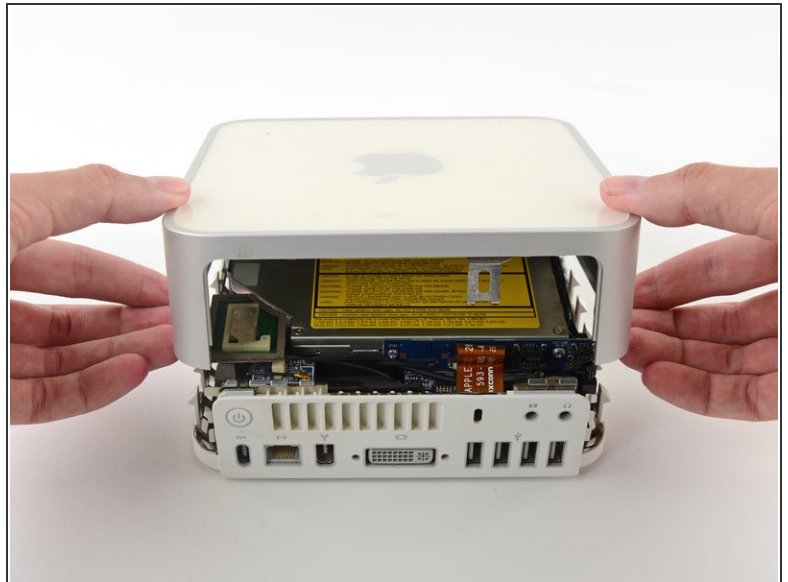
Step 4

- 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.

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Step 7 — Internal Frame

⚠ In the next few steps you will be removing the AirPort and Bluetooth antennas (shown in red) from the internal frame. Be very careful, as breaking the brackets will require replacing the internal frame.

● We will first remove the AirPort antenna, located in the lower left corner of this picture.

Step 8
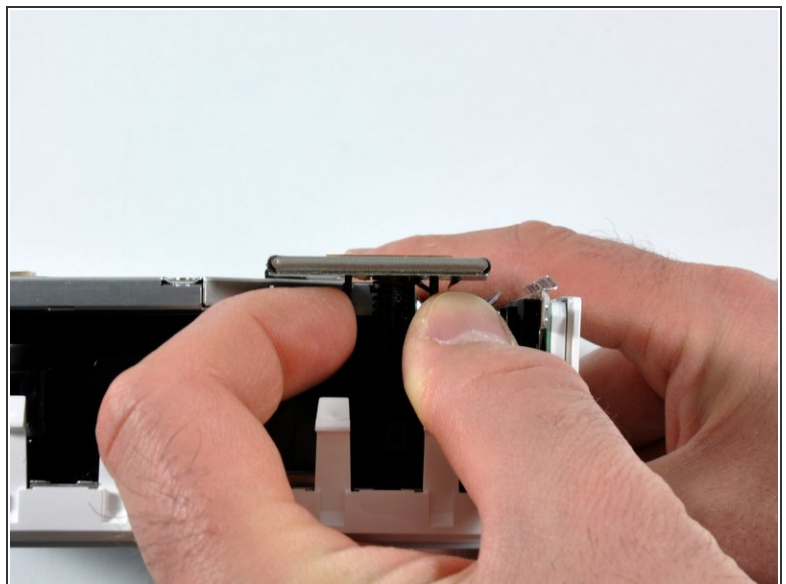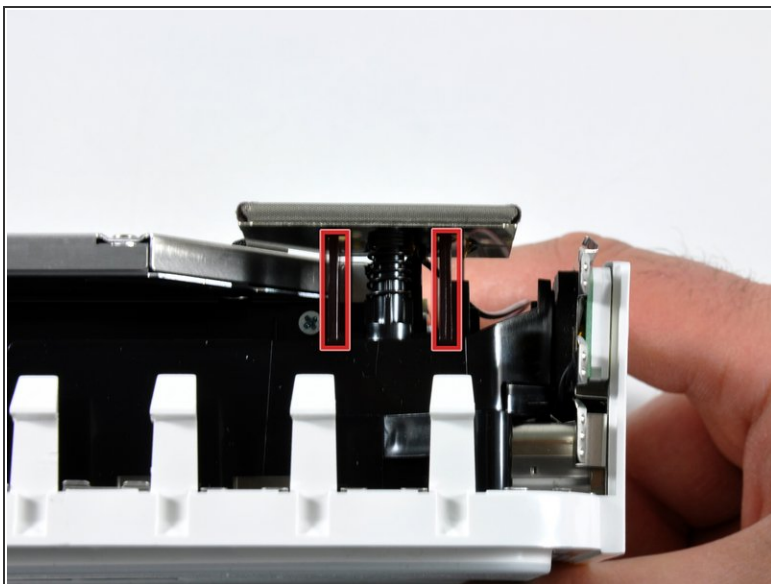
● Slightly squeeze the two retaining arms toward each other and lift the AirPort antenna off its post.

⚠ 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.
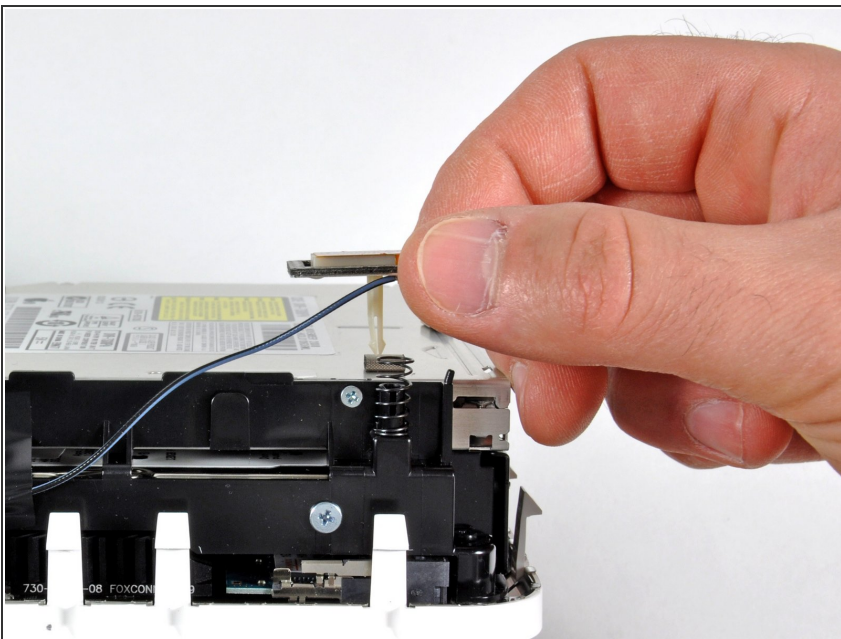
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Step 9
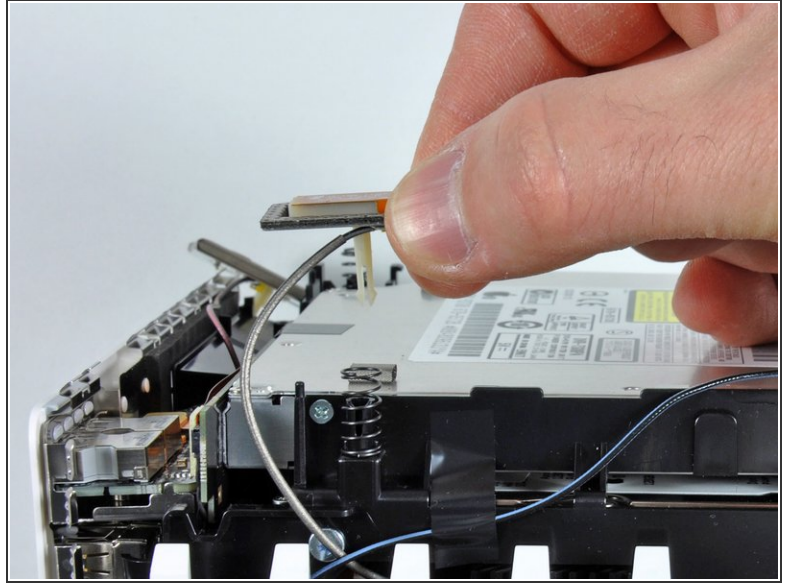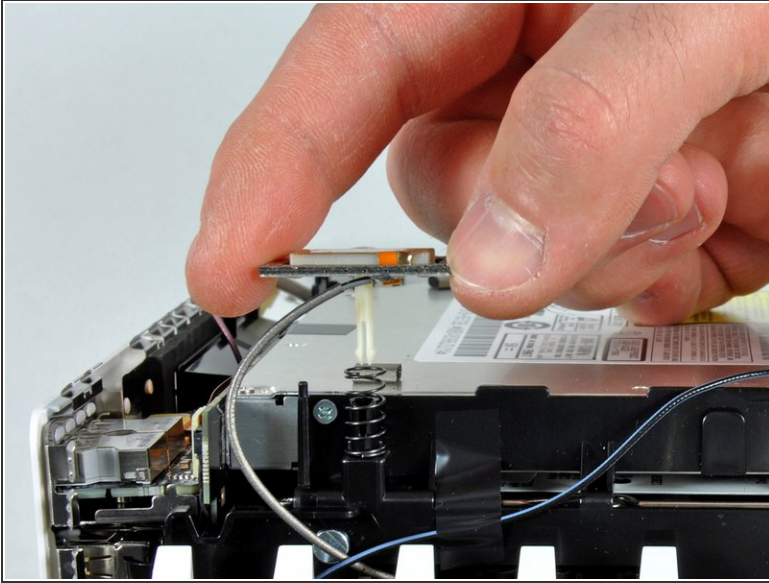
ⓘ The two Bluetooth antenna boards simply lift off the internal frame.

● Grab the Bluetooth antenna nearest the port side of the computer by the edges of the board and pull it straight up off the internal frame.

⚠ Pull carefully, as it may offer significant resistance and release suddenly.

Step 10

● Remove the antenna board near the front of the mini by pulling it straight up off the internal frame.

● If necessary, remove the piece of tape securing the antenna leads to the internal frame.

ⓘ Be sure to keep track of the springs under each of the three antenna boards.

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Step 11

- Use the flat end of a spudger to pry the audio ribbon cable connector up off the audio board.

Step 12

- Remove the following four screws securing the internal frame to the bottom housing:
  - Three 6.7 mm Phillips #00 screws
  - One 9.5 mm Phillips #00 screw
- ⓘ The screw in the lower right corner of this image is recessed deep in the internal frame and longer than the other three screws. A flashlight and a thin screwdriver aid in removal.

Step 13
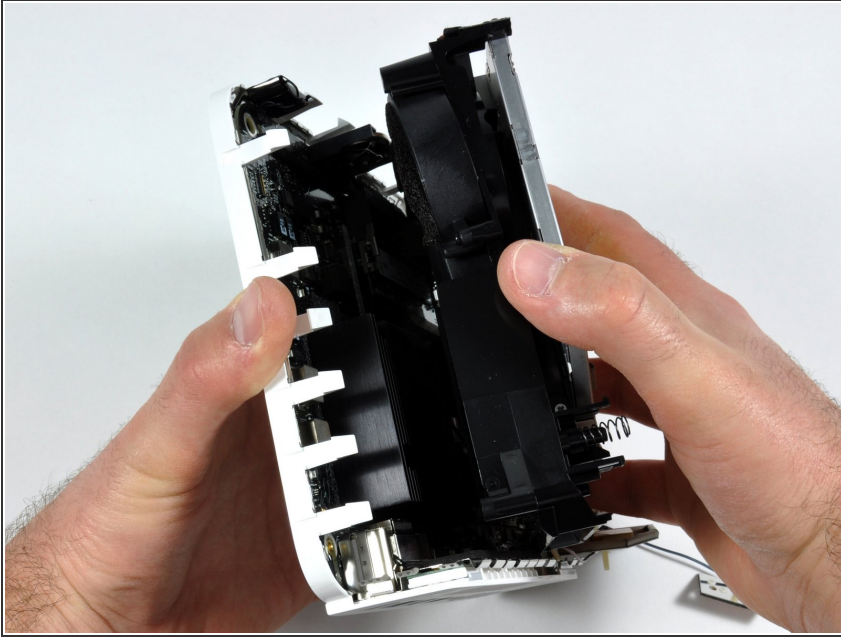
- Lift the internal frame off the bottom housing, starting at the rear edge, until you feel the concealed edge connector on the motherboard disconnect. Then lift straight off, minding the bluetooth and 802.11 antenna cables.

- ⓘ When reassembling, the wifi antenna wire routes to the inside of the vent and then over the top of the vent.

Step 14 — AirPort/Bluetooth Combo Card
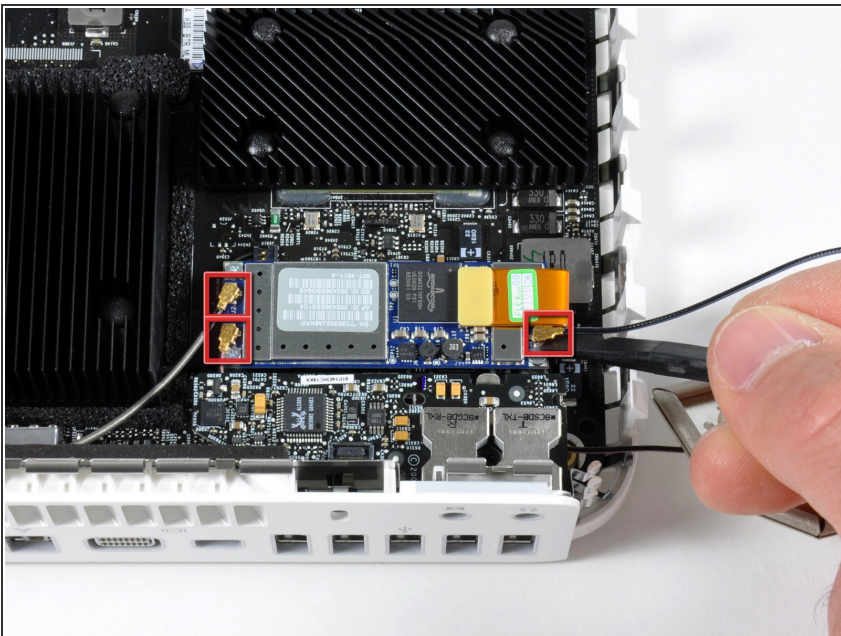
- Use the flat end of a spudger to pry the three antenna connectors off the AirPort/Bluetooth combo card.

- ⓘ The black/blue antenna cable attaches to the AirPort card near the corner of the mini, and the white antenna cable attaches nearest the center of the mini.

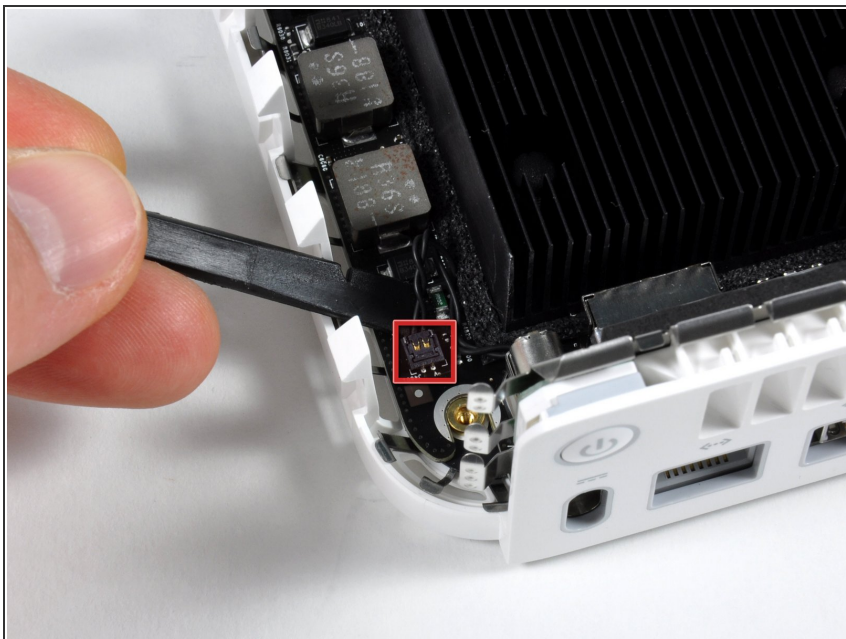This document was generated on 2020-11-16 01:35:42 PM (MST).
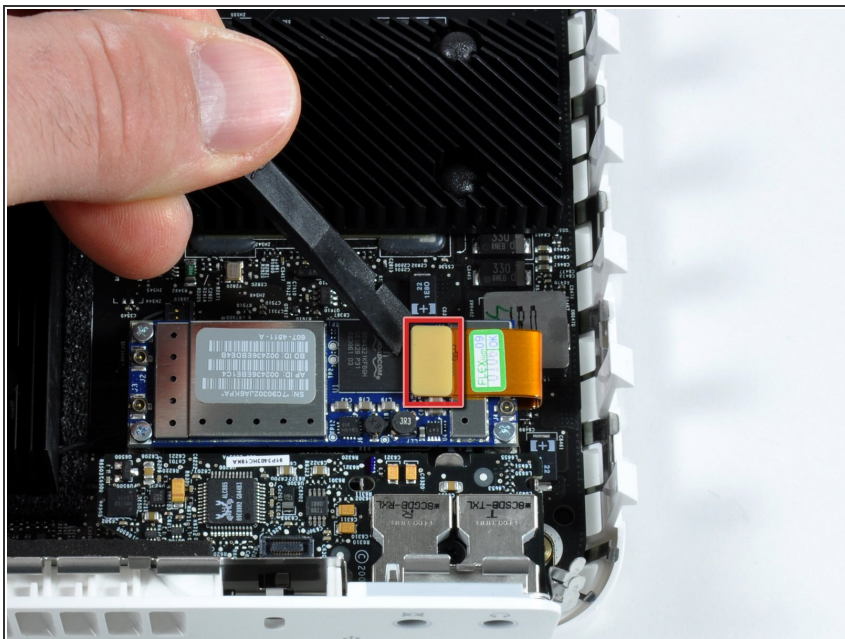
Step 15

- Use the flat end of a spudger to pry the AirPort/Bluetooth ribbon cable connector up off the combo card.

Step 16
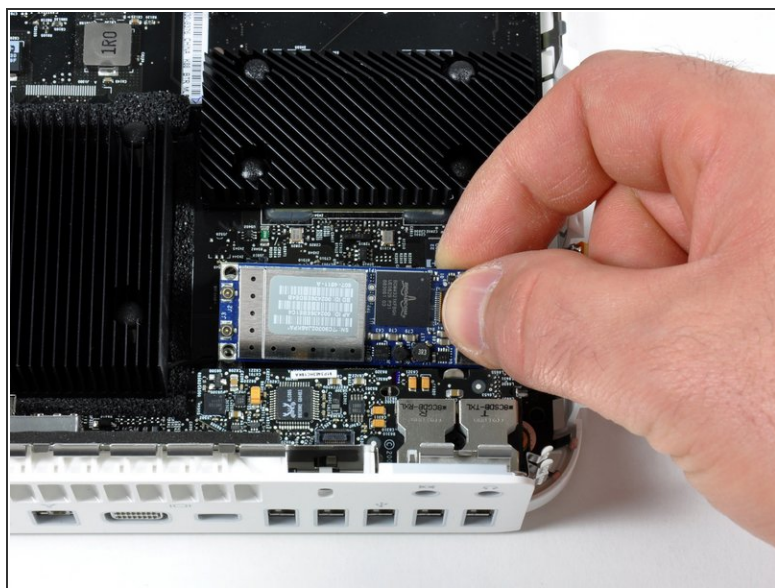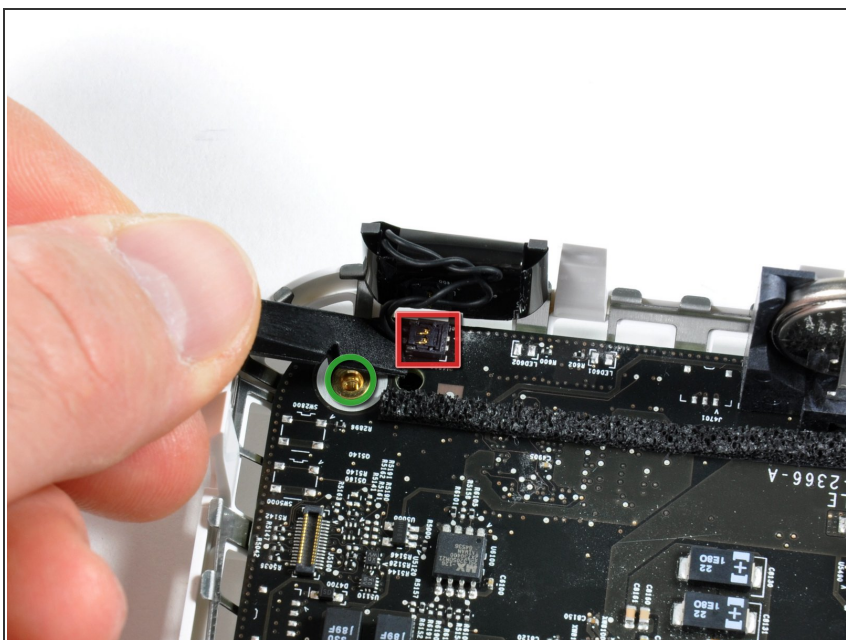

- Remove the three silver Phillips screws securing the combo card to the logic board.

- Lift the combo card out of your mini.

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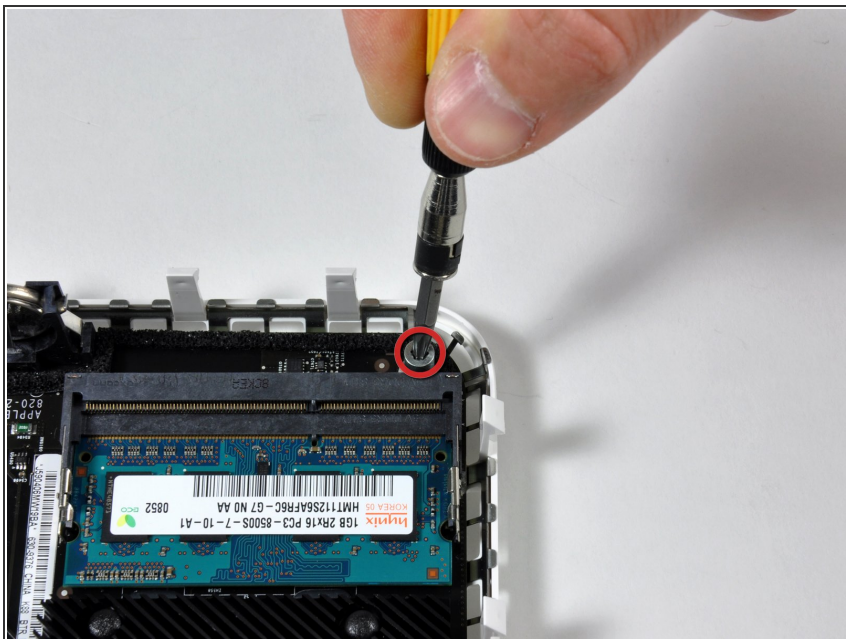
Step 17 — Logic Board

- Use the flat end of a spudger to pry the power button cable connector up off the logic board.
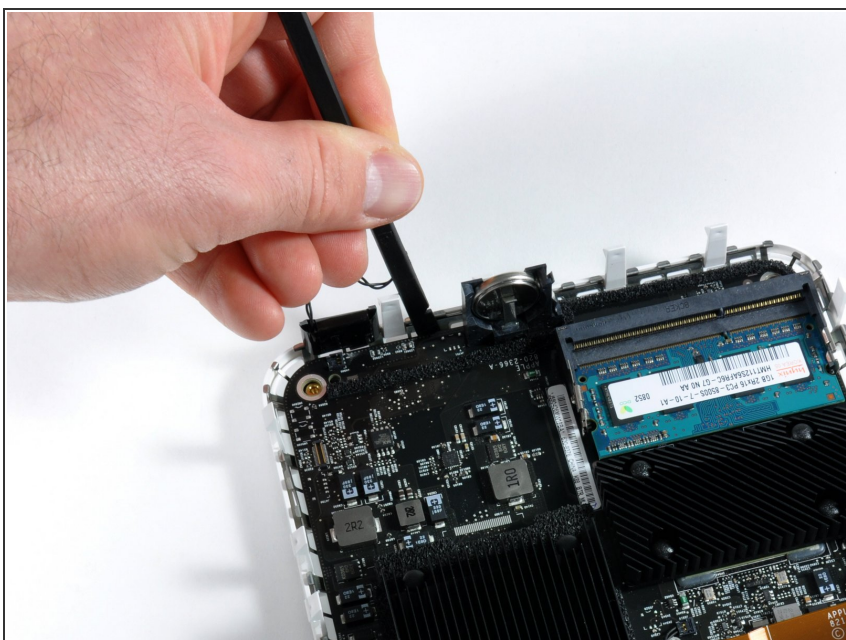
Step 18

- Use the flat end of a spudger to pry the sleep light cable connector up off the logic board.

- ⊞ During reassembly, make sure the cable does not come near the lug on the bottom case (shown in green) to avoid damaging the cable.
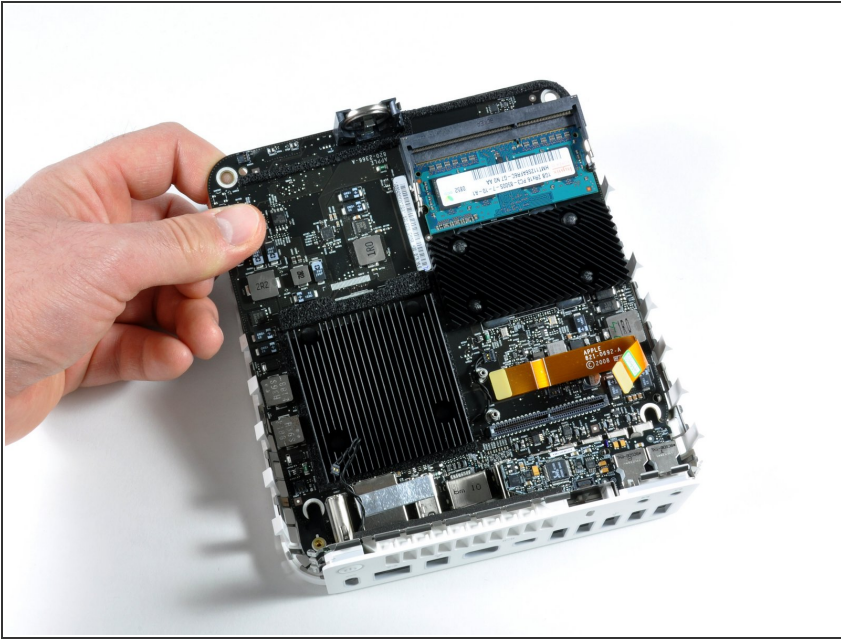
Step 19

- Remove the single T10 Torx lug next to the RAM sockets on the logic board.

Step 20

- Use a spudger to lift the free end of the logic board off the bottom housing near the PRAM battery.

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Step 21

- While slightly lifting the free end of the board pull it away from the port side of the mini, minding any edges that may get caught.
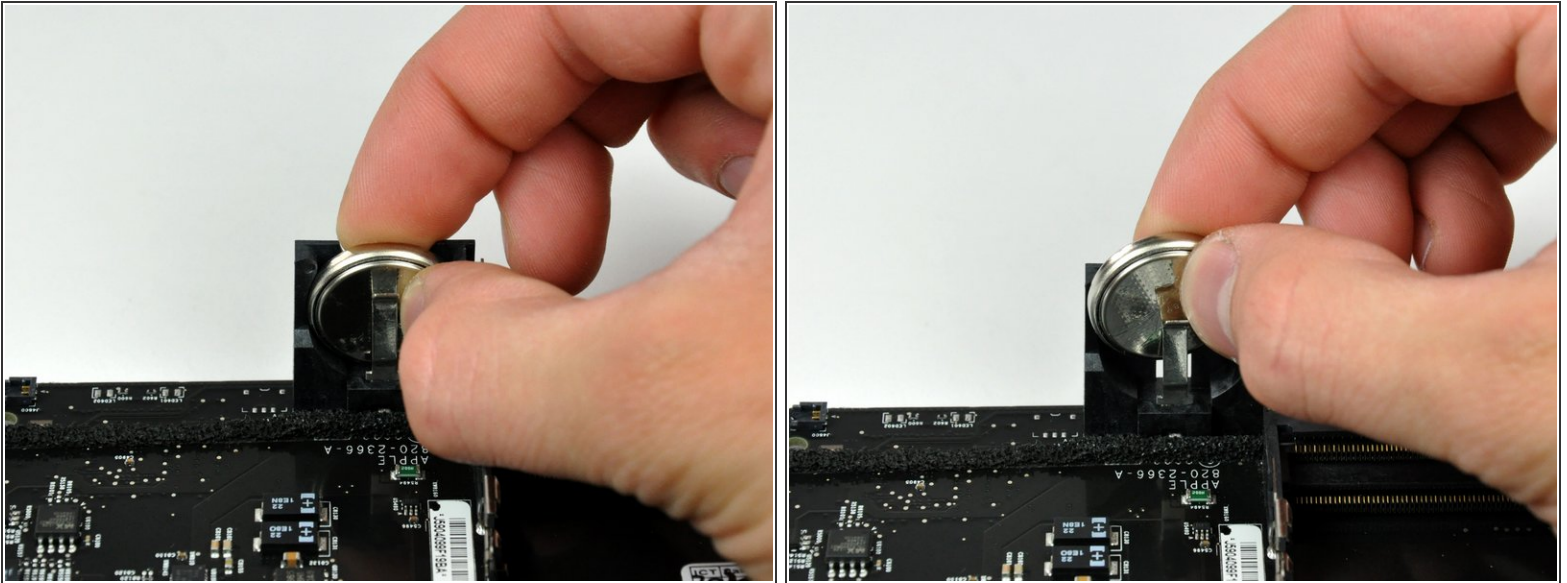
Step 22 — Logic Board
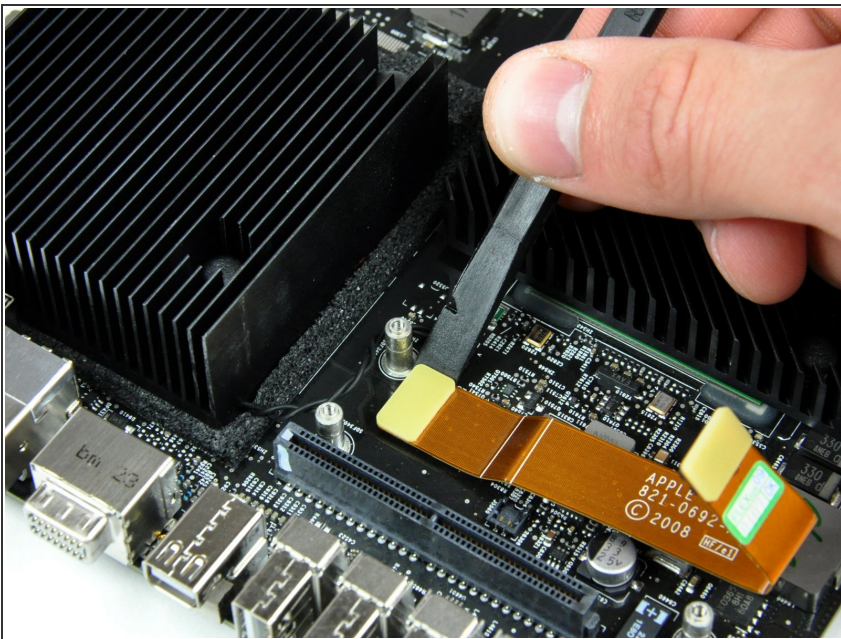
- Use the flat end of a spudger to pry the AirPort/Bluetooth ribbon cable connector up off the logic board and set it aside.

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Step 23

- 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 chip directly out from its connector.

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

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Step 24

- 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).

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