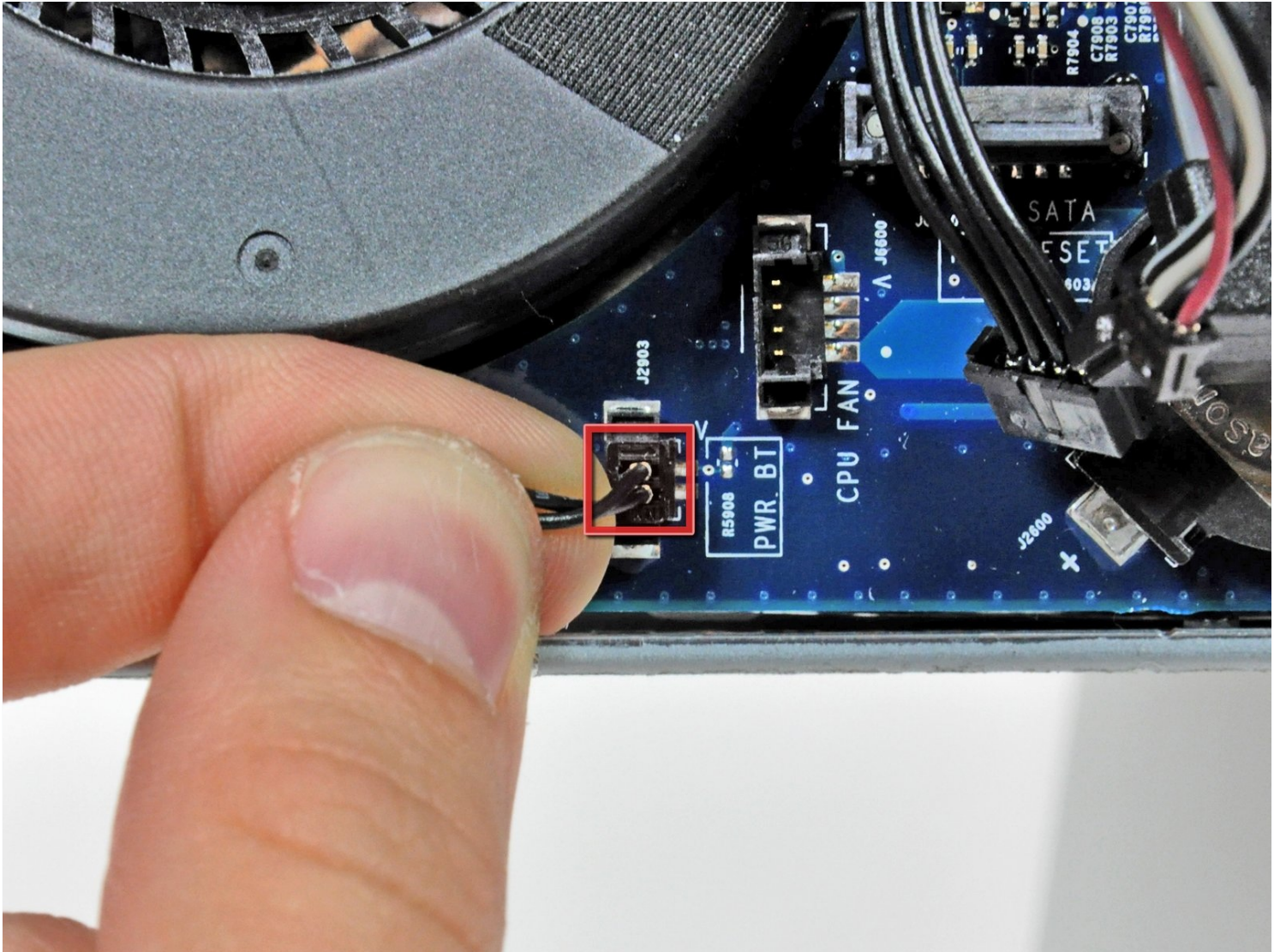# iMac Intel 17" Logic Board Replacement

Like brain surgery? Use this guide to replace...

Written By: Walter Galan

INTRODUCTION

Like brain surgery? Use this guide to replace your logic board.

Note: The logic boards of the 1.83 Ghz models are not interchangeable with the 2.0 Ghz+ models. Several connectors are incompatible, including the power supply.
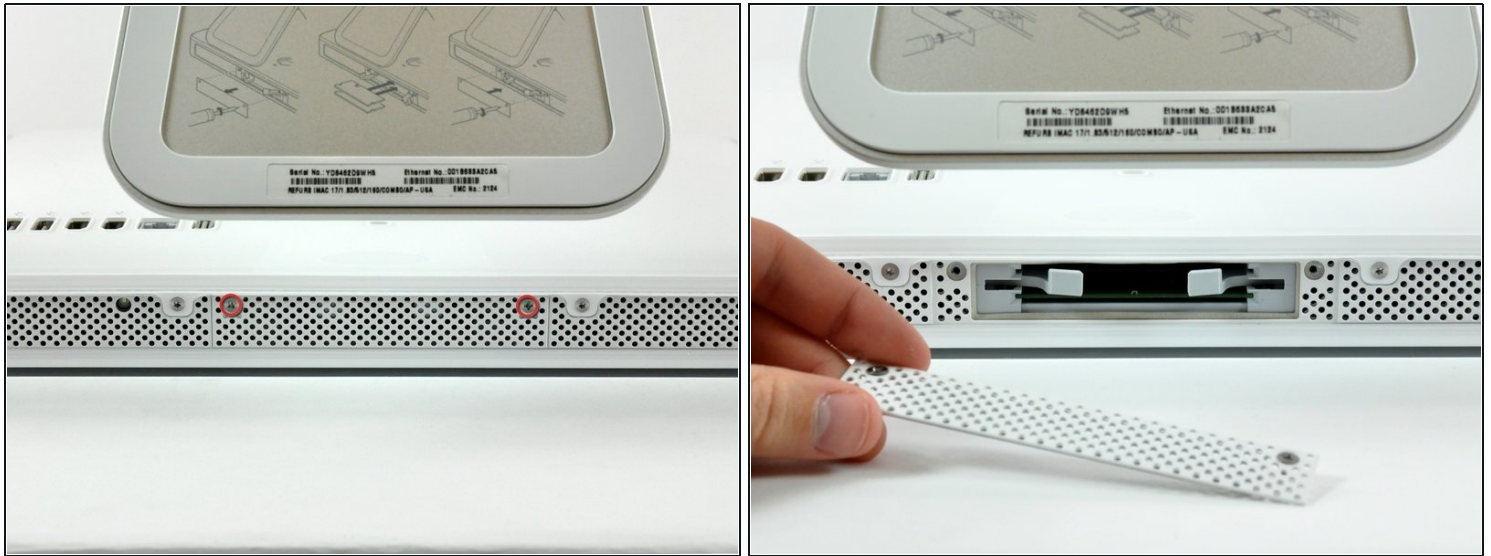
🔧 TOOLS:

Phillips #1 Screwdriver (1)
Plastic Cards (1)
Spudger (1)
TR10 Torx Security Screwdriver (1)
T6 Torx Screwdriver (1)
TR8 Torx Security Screwdriver (1)

Step 1 — Access Door

- Loosen the two captive Phillips screws securing the access door to the iMac.

- Remove the access door from the iMac.

⚠️ **Before beginning the repair, unplug the computer and press and hold the power switch for 20-30 seconds, to discharge internal capacitors.**

Step 2 — Front Bezel

- Remove the following four screws:
  - Three 6 mm T8 Torx.
  - One 8 mm T8 Torx.

- Flip your iMac over and lay it stand-side down on a flat surface.

- To lift the front bezel off the iMac, simultaneously:
  - Use your thumbs to press in the RAM arms and hold the iMac down.

  - Use your index fingers to pull the small bridge of material on the front bezel toward yourself.

  - Pull the Front bezel up with your index fingers.

- Once the small bridge of material has cleared the RAM arms, lift the front bezel by its lower edge just enough to clear the bottom edge of the rear case.
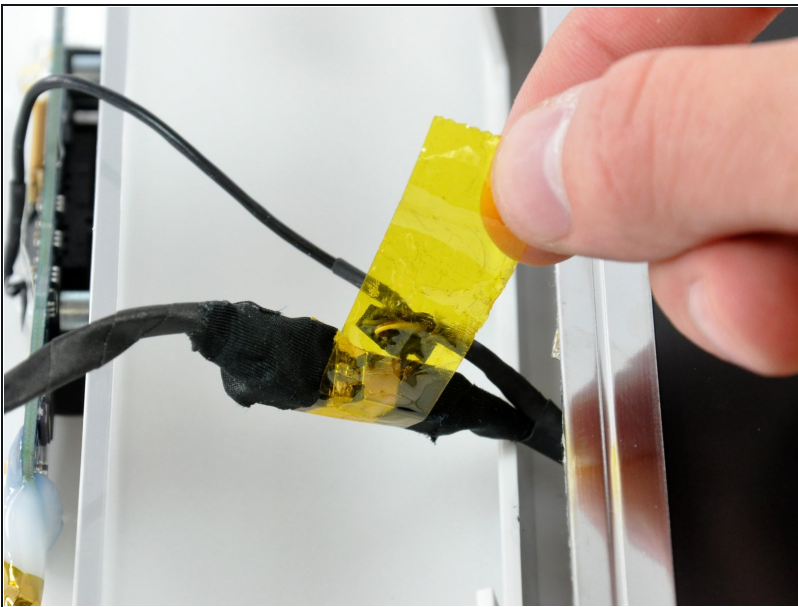
Step 4

ⓘ Re-orient your iMac so it sits upright on the stand.

- Insert a plastic card up into the corner of the air vent slot near the top of the rear case.

- Push the card toward the top of the iMac to release the front bezel latch.

- Pull the front bezel away from the rear case.

- Repeat this process for the other side of the front bezel.

ⓘ It may be necessary to apply several layers of duct tape to the top of the access card to aid in releasing the latches.

- If the bezel refuses to release, try pressing the lower edge back onto the rear case and repeat this opening process.
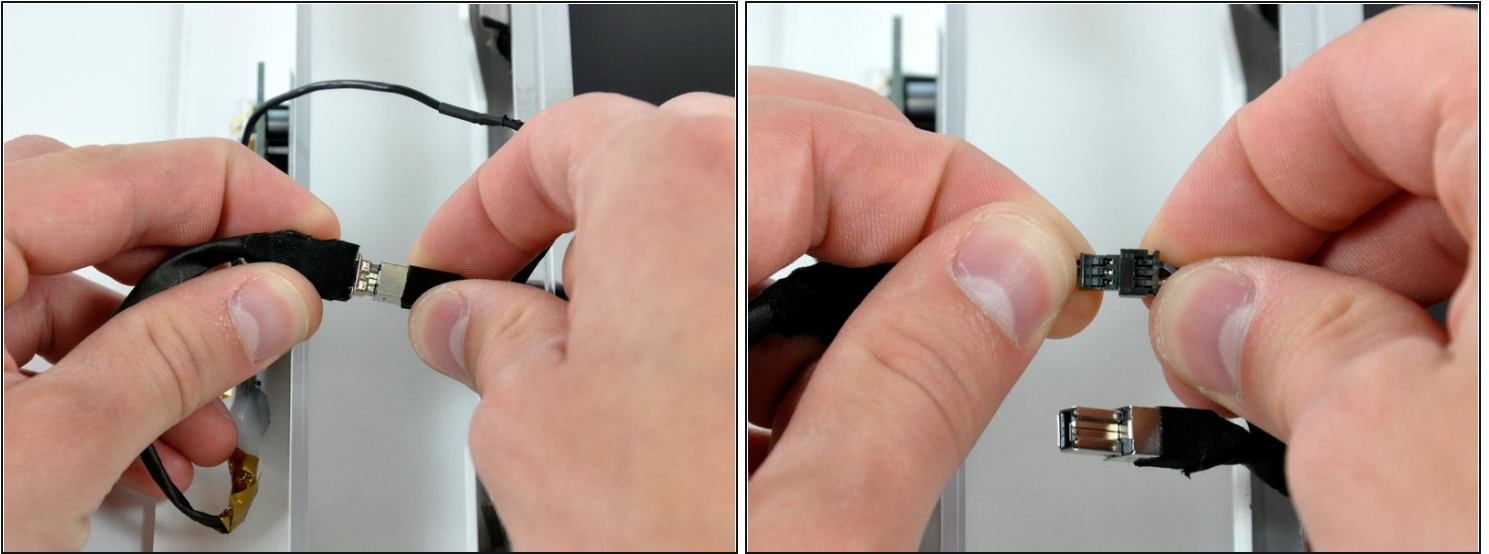
Step 5

- Lay your iMac stand-side down on a table.

- Lift the front bezel from its lower edge and rotate it away from the rest of your iMac, minding the RAM arms that may get caught.

- Lay the front bezel above the rest of the iMac.

Step 6

- If necessary, remove the piece of kapton tape(it is ok to toss this) wrapped around the microphone and camera cables.

Step 7
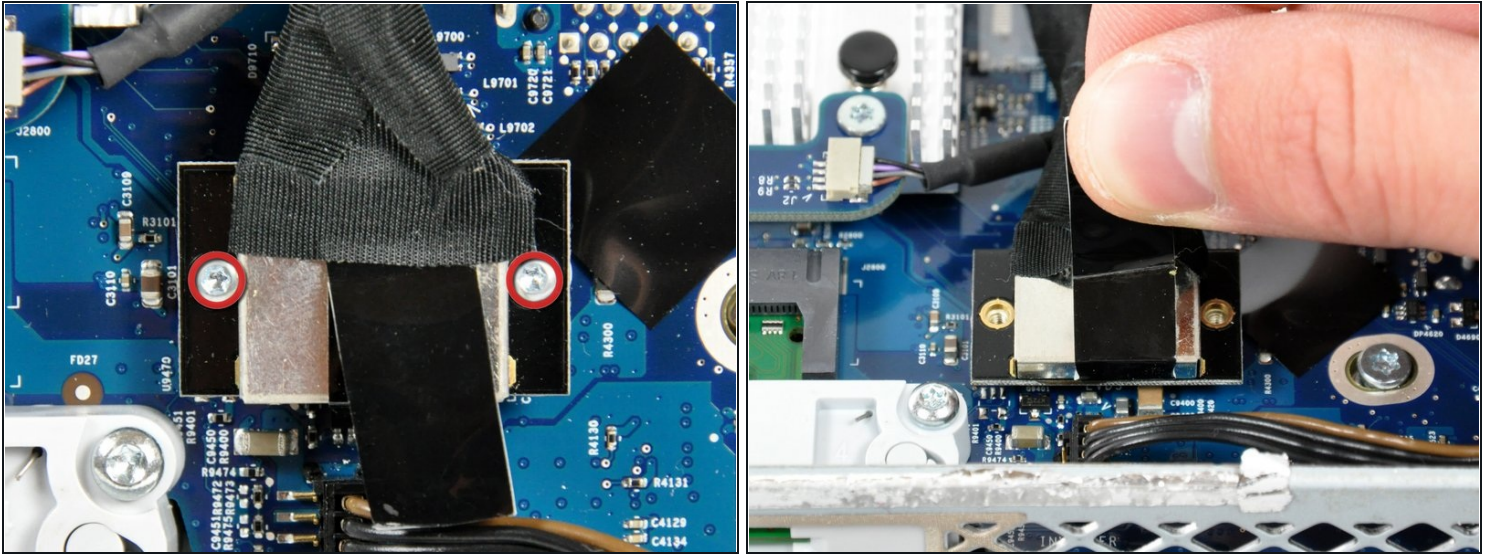

- Disconnect both the camera and microphone cables.

Step 8 — Display

- Peel up the lower EMI shield from the rear case.

- ⓘ It is only necessary to peel the shield up from three sides. Leave it attached to the display.

- ⓘ We have found it helpful to tape the EMI shield against the display to keep it out of the way.
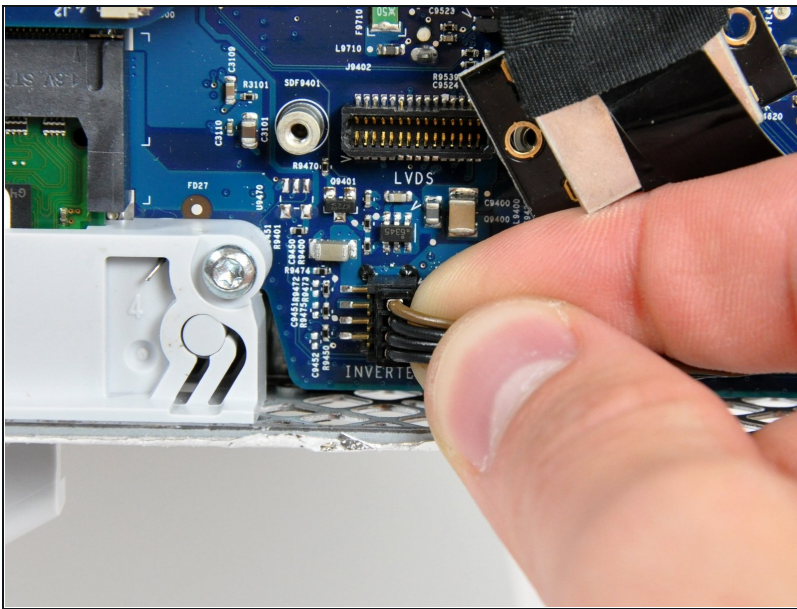
Step 9

- Remove the two 4.8 mm T6 Torx screws securing the display data cable to the logic board.

- Grab the display data cable connector by its black tab and pull it straight up off the logic board.

Step 10

- Inverter cable on 24inch iMac pulls off to the left.

- Pull the inverter cable connector straight up off its socket on the logic board.

Step 11

- Peel back the aluminum EMI tape from the two vertical edges of the display.

- ⊡ During reassembly, it is helpful to use several small strips of tape to hold the EMI shielding along the left and right edges of the display footprint out of the way before lowering the display into the rear case of your iMac.

Step 12

📌 Allow the EMI shield to hang down from the display.

● Remove the four 8 mm with 2 mm thick head coarse-thread T10 Torx screws securing the display to the rear case.

ⓘ These screws are recessed, so a thin screwdriver such as [this](#) is essential for removal. Bit drivers tend to be too short for this application.

ⓘ It is strongly recommended to use a magnetized screwdriver so the screws won't fall into the iMac.
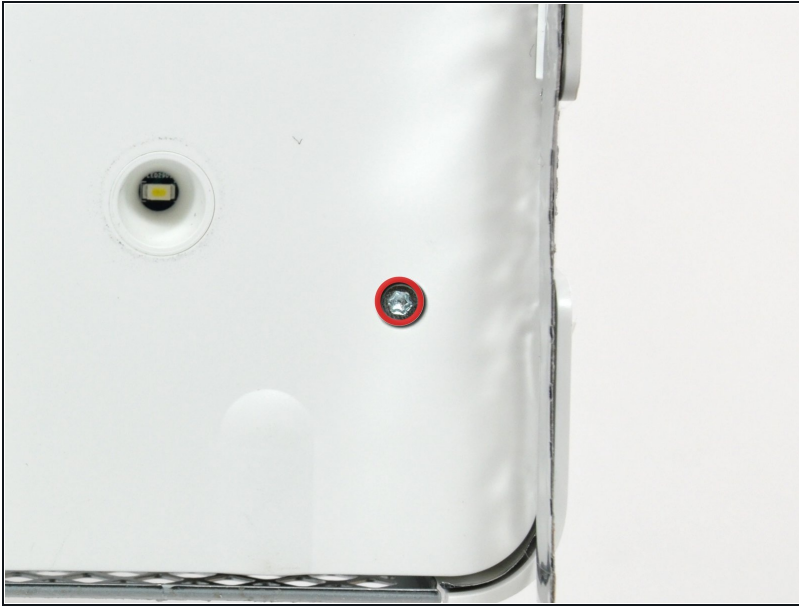
Step 13

- Lift the display from its lower edge and pull it toward yourself to peel off the EMI shield attached to its top edge.

- ⓘ Be mindful of any cables that may get caught during removal.
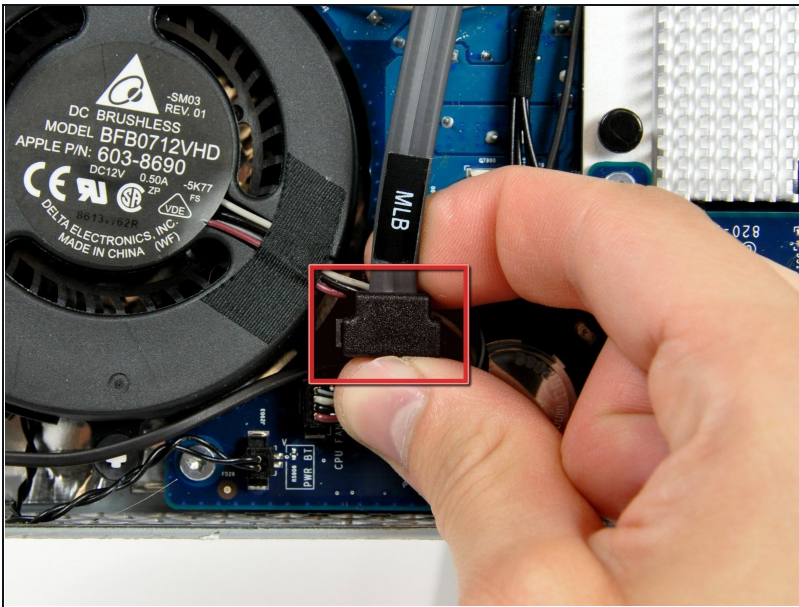
Step 14 — Speakers

- Remove the 30 mm T10 Torx screw securing the left speaker to the rear case.

Step 15

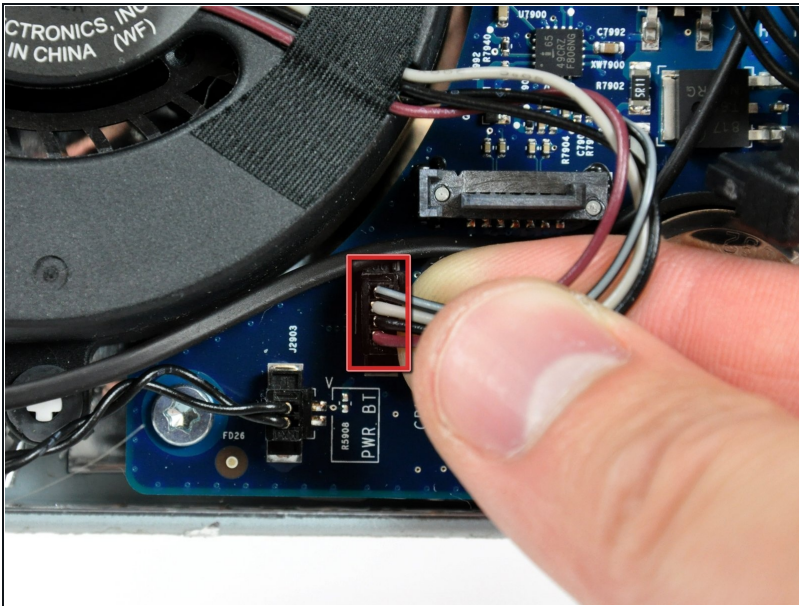- Remove the 17 mm T10 Torx screw from the right speaker.

Step 16

- Pull the SATA data cable connector away from its socket on the logic board.

- (i) The SATA connector on most iMacs tends to stick in its socket on the logic board. If you are having trouble disconnecting the SATA cable, insert a [metal spudger](#) or any other thin tool into the gap between the SATA connector and its socket and twist the spudger's shaft to safely separate the two pieces.
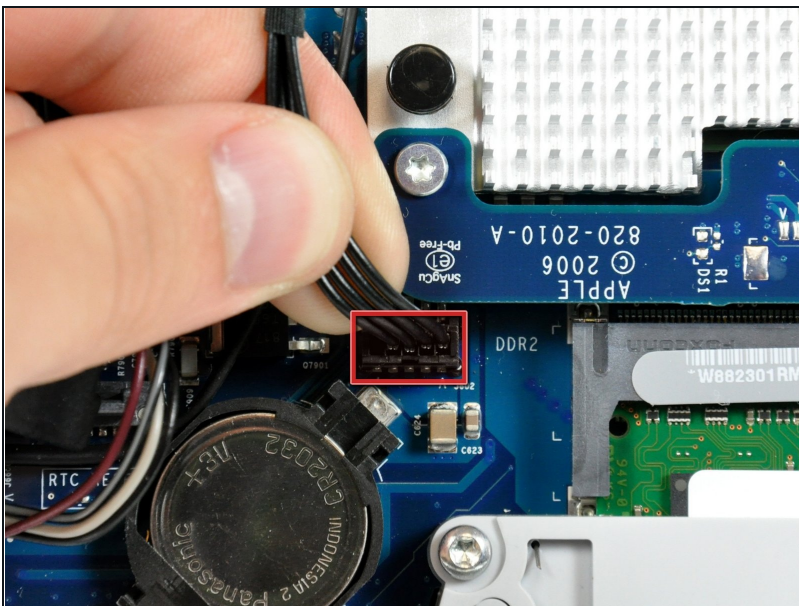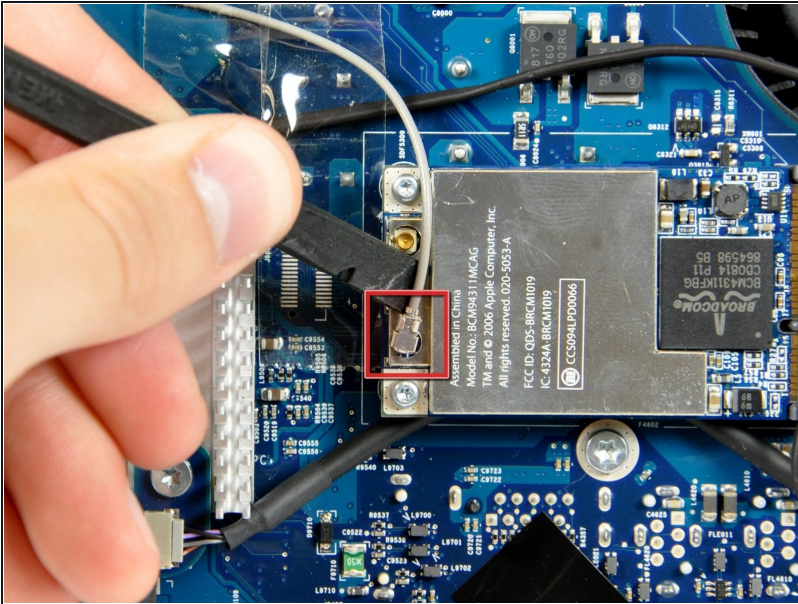
Step 17

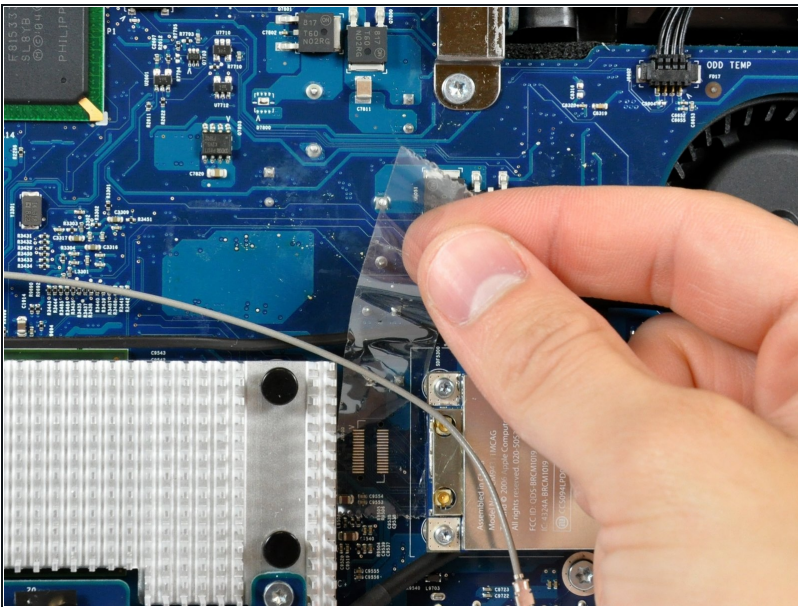- Disconnect the CPU fan by pulling its connector up off the logic board.

Step 18

- Disconnect the hard drive power cable by pulling its connector up off the logic board.

Step 19

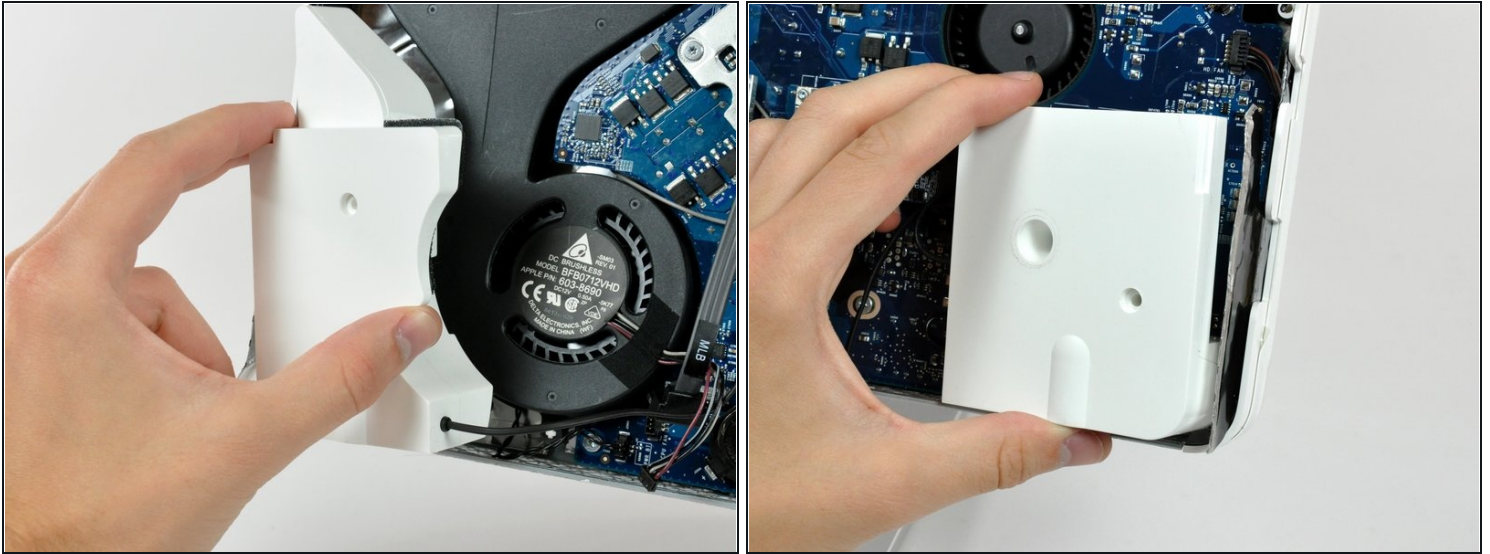- Use the flat end of a spudger to pry the AirPort Extreme antenna connector up off the AirPort Extreme card.

Step 20

ⓘ If necessary, remove any tape covering the left speaker cable.

Step 21

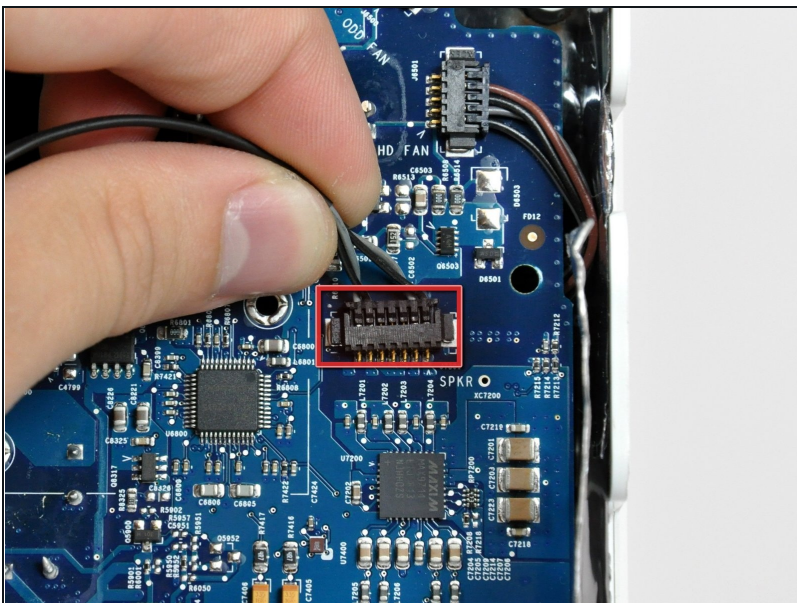
- Lift the left and right speakers out of the rear case.

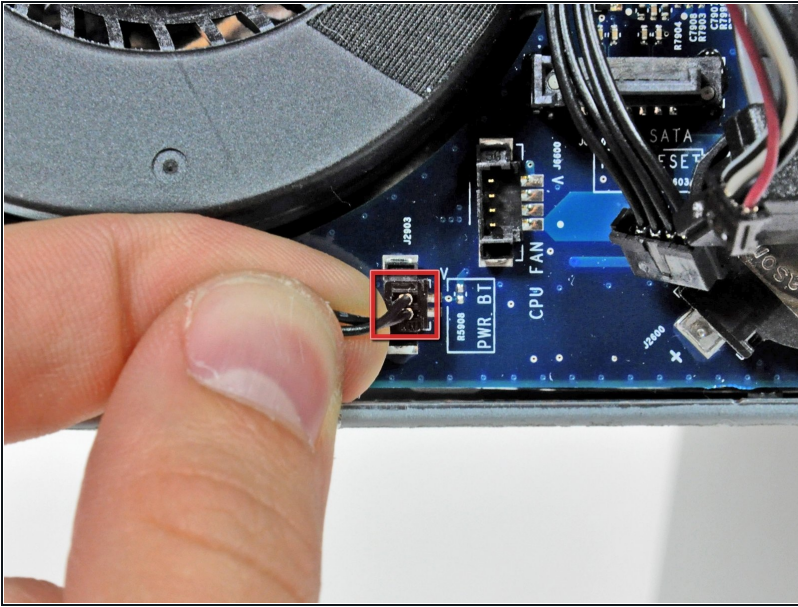⚠ The speaker cables are still attached to the logic board.

ⓘ The right speaker cable may be routed under the power button cable or the CPU fan cable (or both). If so, disconnect both cables by pulling their connectors away from the face of the logic board.
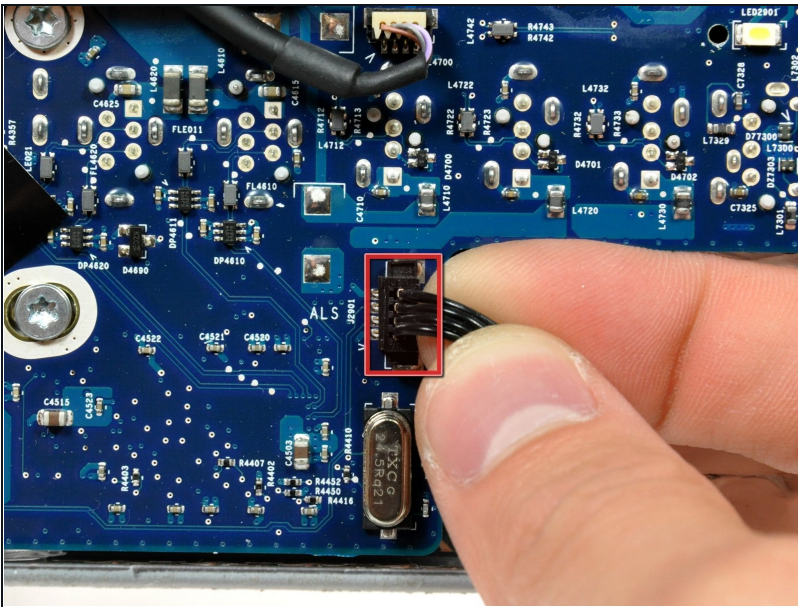
Step 22

- Disconnect the speaker cable connector by pulling its connector away from the socket on the logic board.

ⓘ Pull the connector parallel to the face of the logic board.

Step 23 — Logic Board

- Pull the power button cable connector up off its socket on the logic board.
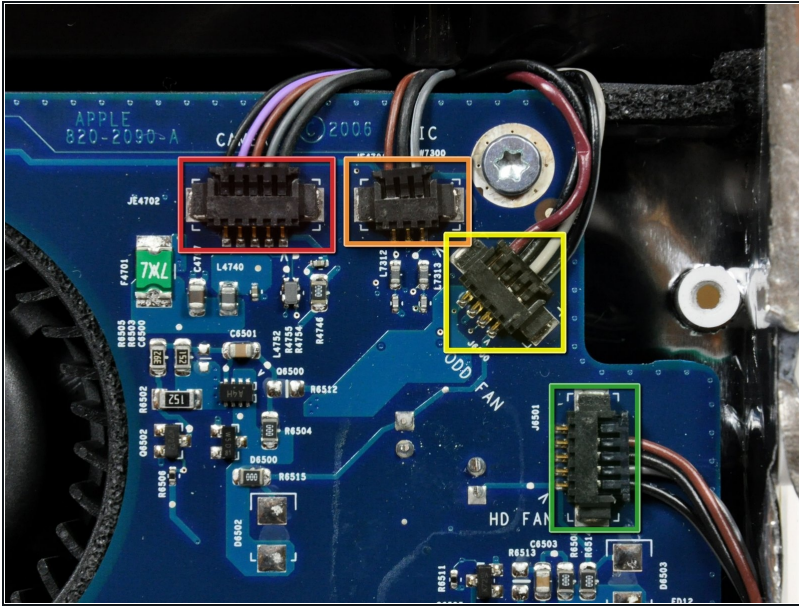
Step 24

- Disconnect the ambient light sensor by pulling its connector up off the socket on the logic board.
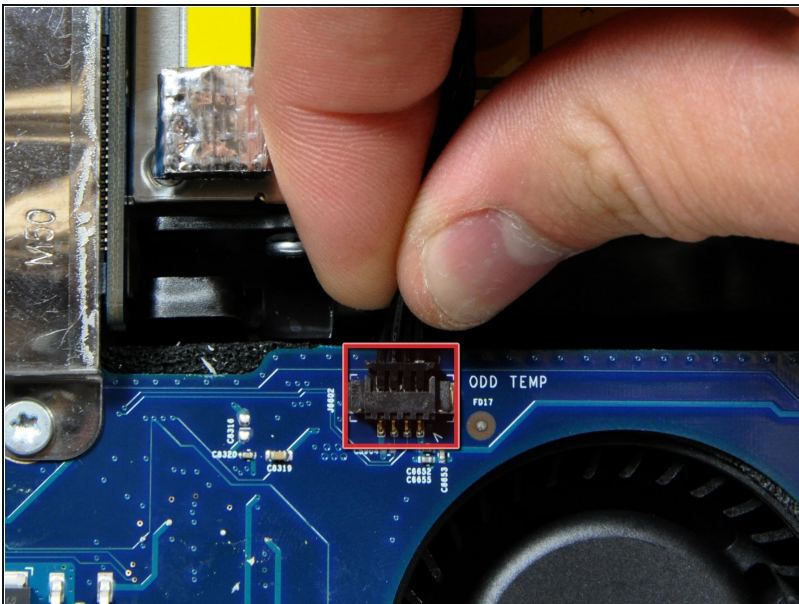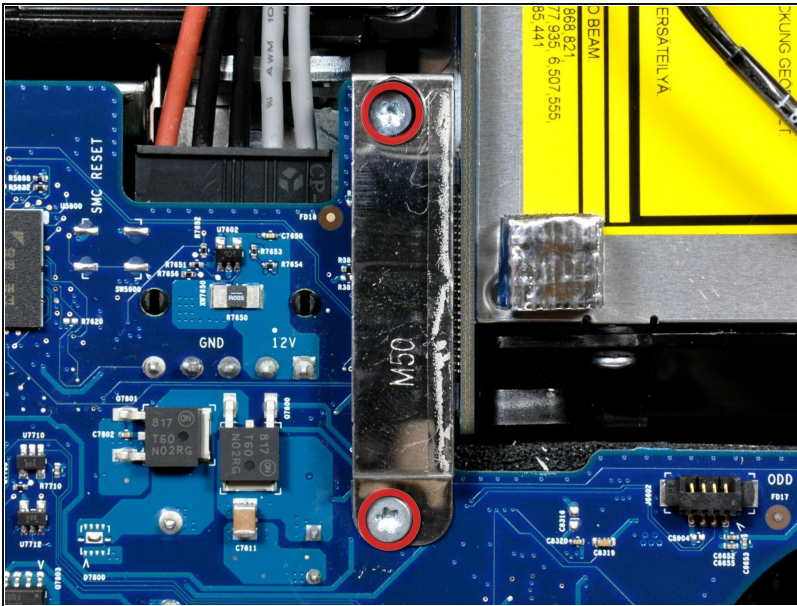
Step 25

- Disconnect the following four connectors by pulling them straight away from their sockets:
  - Camera cable.
  - Microphone cable.
  - Optical drive fan cable.
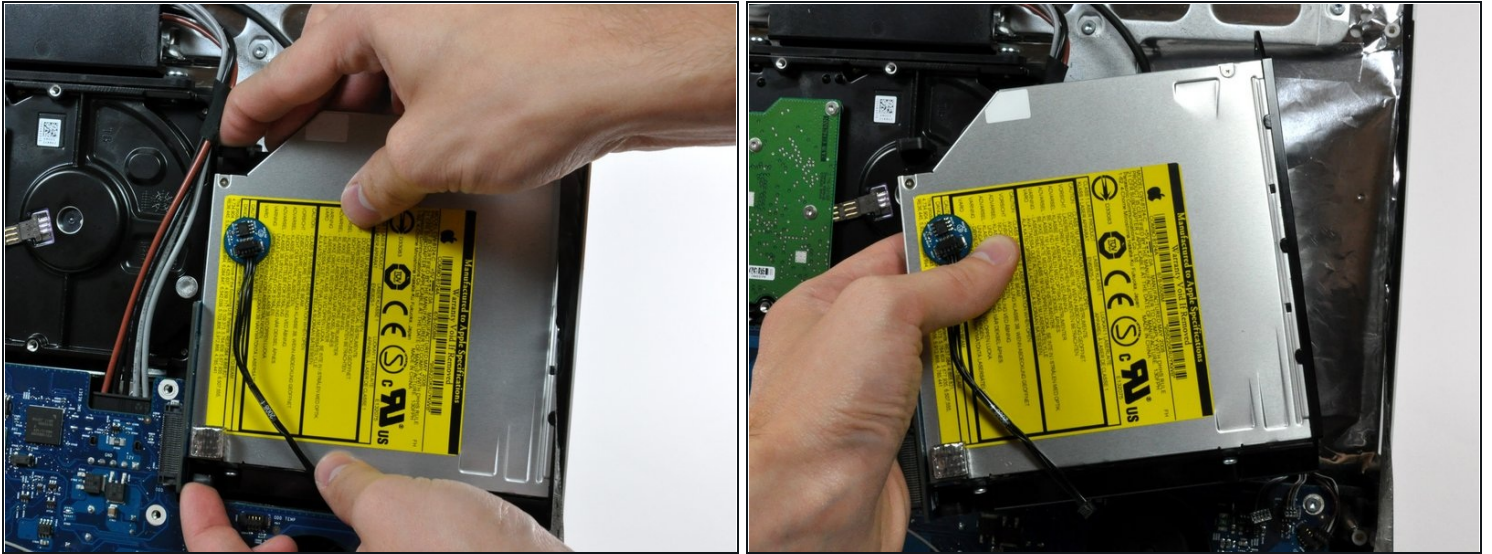 - Hard drive fan cable.

Step 26

- Disconnect the optical drive thermal sensor cable from its socket on the logic board.

Step 27

- Remove the two 7 mm fine thread T10 Torx screws securing the optical drive clip to the logic board.
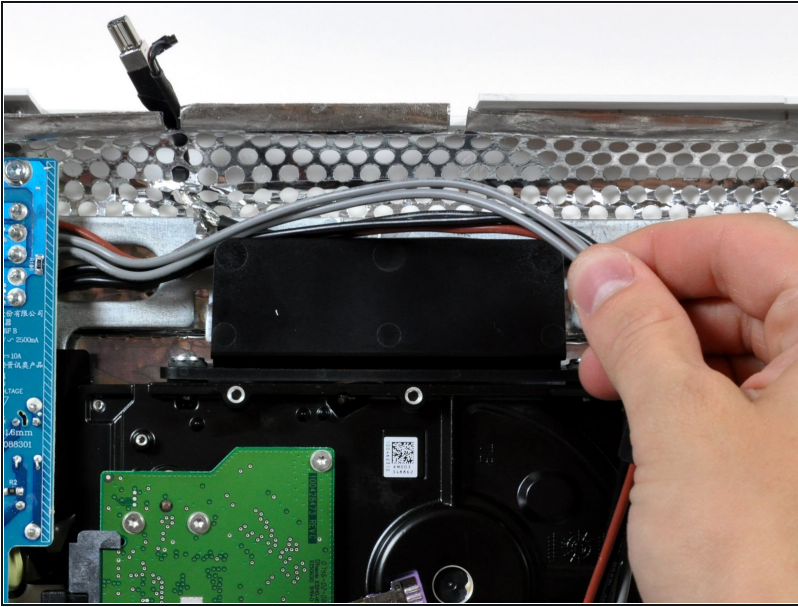
- Remove the optical drive clip.

Step 28

- Squeeze the two optical drive bracket ears together while pulling the drive up toward yourself.

- *ⓘ* It may be helpful to hold the logic board down near the optical drive connector when pulling the drive toward yourself to avoid both components lifting together.

- Pull the optical drive away from the side of the rear case and remove it from the iMac.

- *ⓘ* If your optical drive is particularly stubborn to remove, try the method used in the optical drive guide from the A1144 G5 iMac.
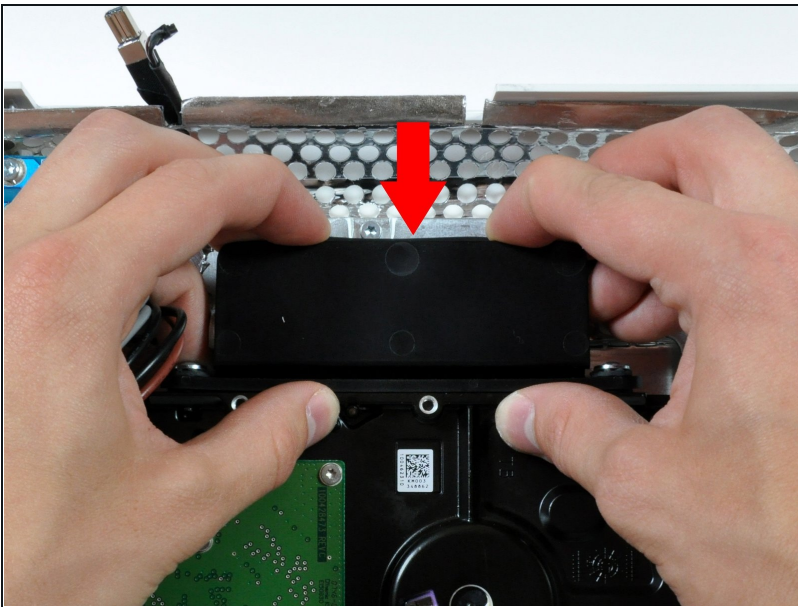
Step 29

- De-route the bundle of power supply cables from behind the hard drive bracket.

- ⓘ Some logic boards can be removed without taking out the hard drive.
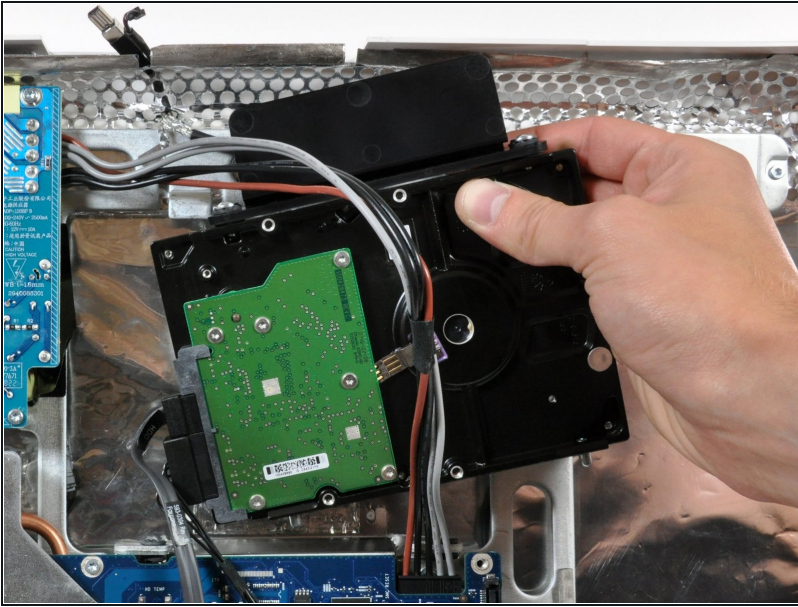
Step 30

- Press the hard drive bracket down to free it from the rear case, then rotate the top of the drive toward yourself.

- ⚠ Pressing the top of the hard drive bracket down to release it from the rear case requires a substantial amount of force, so we recommend laying your iMac stand-side down on a table to avoid knocking it over.
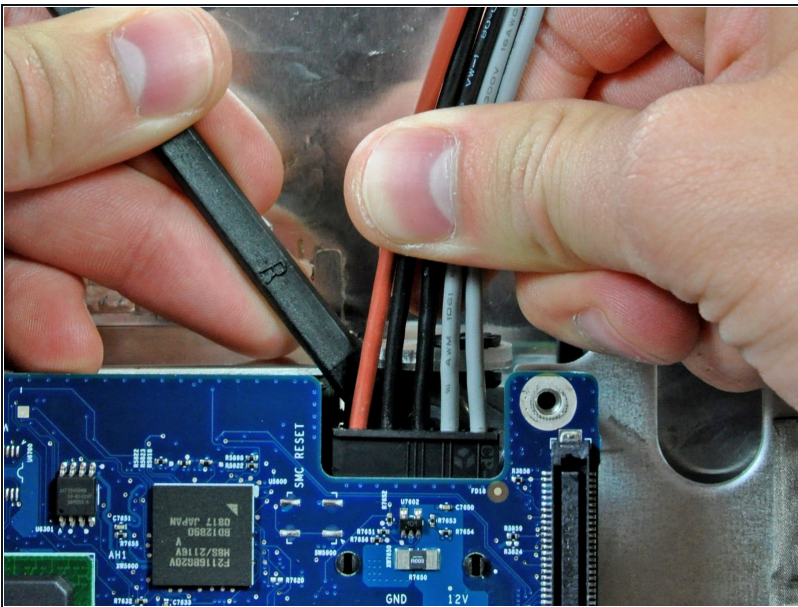
Step 31

- Lift the hard drive (with cables attached) straight up off its lower pins and remove it from the rear case.

- ⓘ Be mindful of the hard drive cables, as they may catch on the logic board during removal.
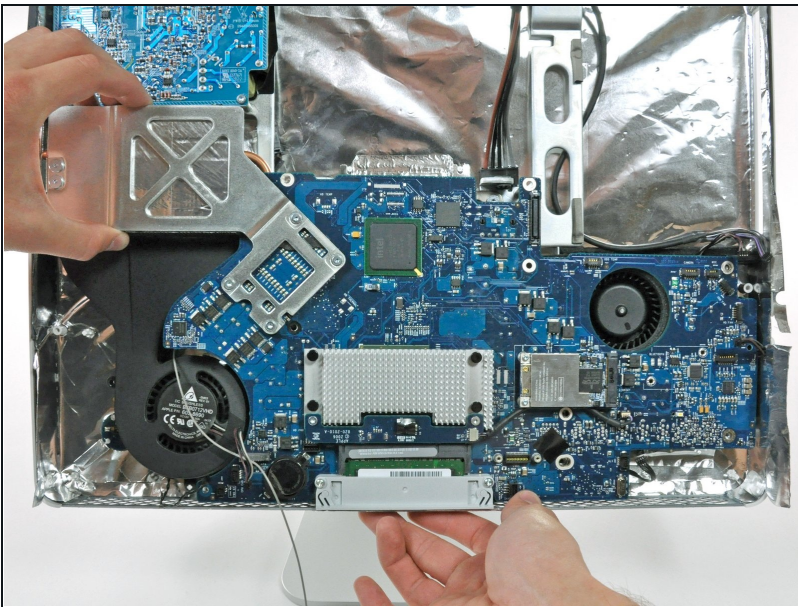
Step 32

- Unplug the power supply cable bundle from the logic board by simultaneously depressing the locking mechanism (toward yourself) with a spudger and pulling the connector away from its socket.

- ⓘ The locking mechanism faces the rear case.

Step 33

- Remove the following six screws securing the logic board to the rear case:
  - Three fine-thread 7 mm T10 Torx.
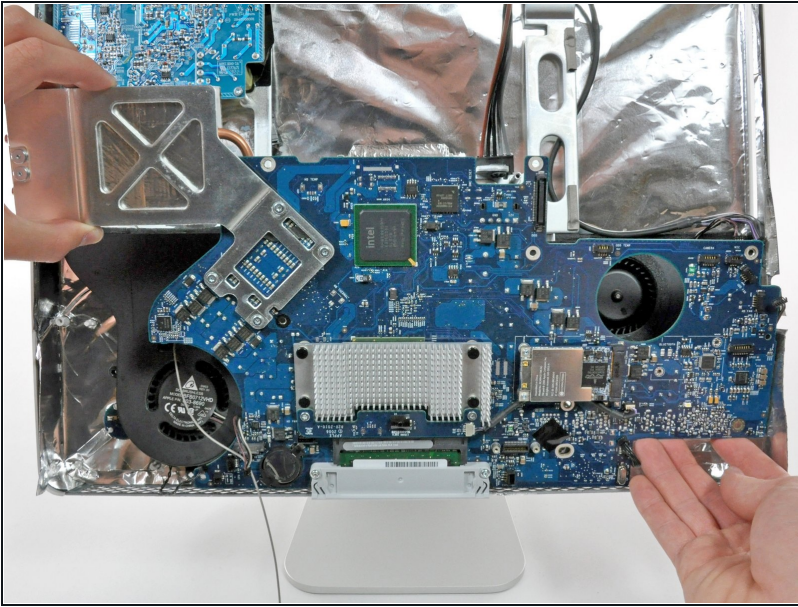 - Three coarse-thread 7 mm T10 Torx.

Step 34

⚠ Be sure to touch the chassis before proceeding to discharge any static.

- Grab the logic board from its left edge and rotate it out from the rear case, using your other hand to press the RAM arms in enough to clear the rear case.

ⓘ Be mindful of the ports attached to the rear of the logic board as they may stick to the rear case.

Step 35

- Pull the logic board straight out of the rear case, minding any cables that may get caught.

- ⊡ During reassembly of the logic board, pay attention to the position of the I/O connectors. When the board is back in the case, insert a USB or Thunderbolt cable into one of the connectors to align it perfectly.

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