



iMac Intel 20" EMC 2266 Teardown

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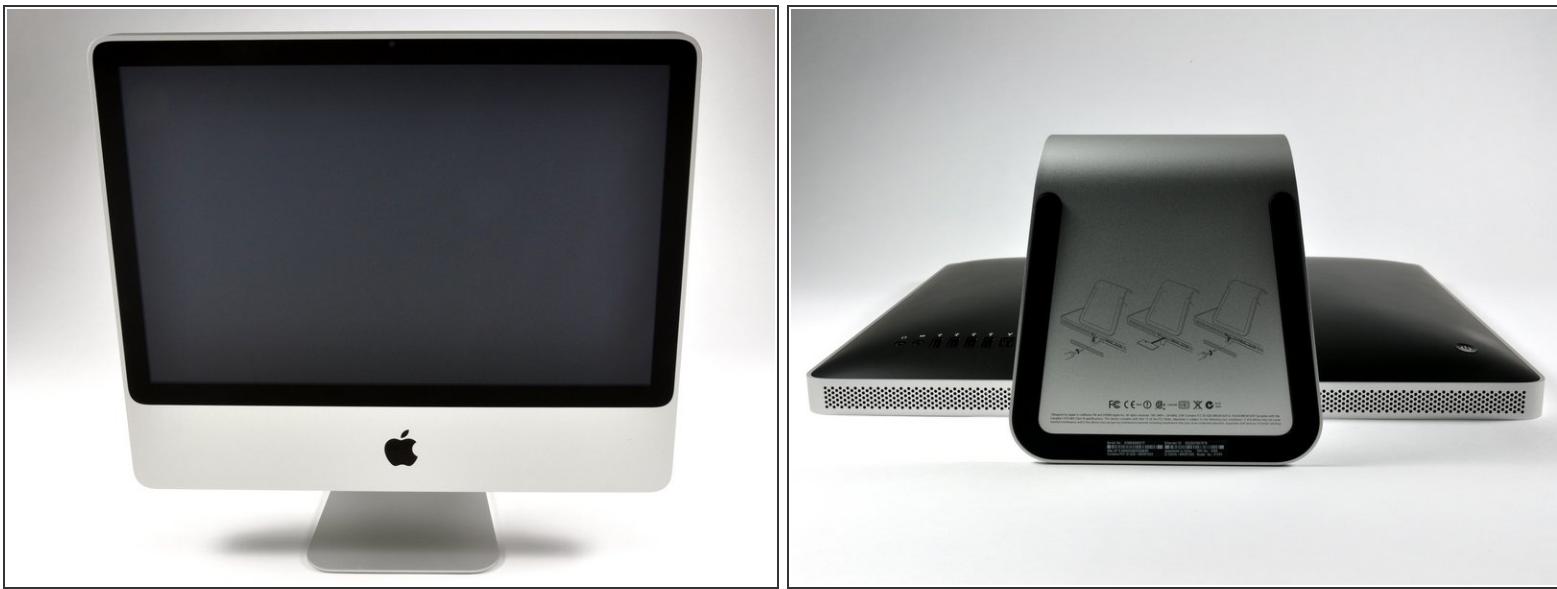
INTRODUCTION

We picked up the new iMac 20" from our local Apple store on March 3rd.

TOOLS:

- [Phillips #1 Screwdriver \(1\)](#)
- [Heavy-Duty Suction Cups \(Pair\) \(1\)](#)
- [T8 Torx Screwdriver \(1\)](#)
- [T10 Torx Screwdriver \(1\)](#)
- [T6 Torx Screwdriver \(1\)](#)
- [Spudger \(1\)](#)

Step 1 — iMac Intel 20" EMC 2266 Teardown



- It's here!
- We turned it on (only briefly, of course); the LCD display is beautifully clear, even though its resolution (1680x1050) is smaller than the 1920x1200 resolution found in the [MacBook Pro 17" Unibody](#).
- The speakers are also surprisingly loud and clear, given that the sound seemingly comes out of nowhere...
- Feel free to comment on specific steps as we go. We'll do our best to accommodate any special requests for pictures.

Step 2



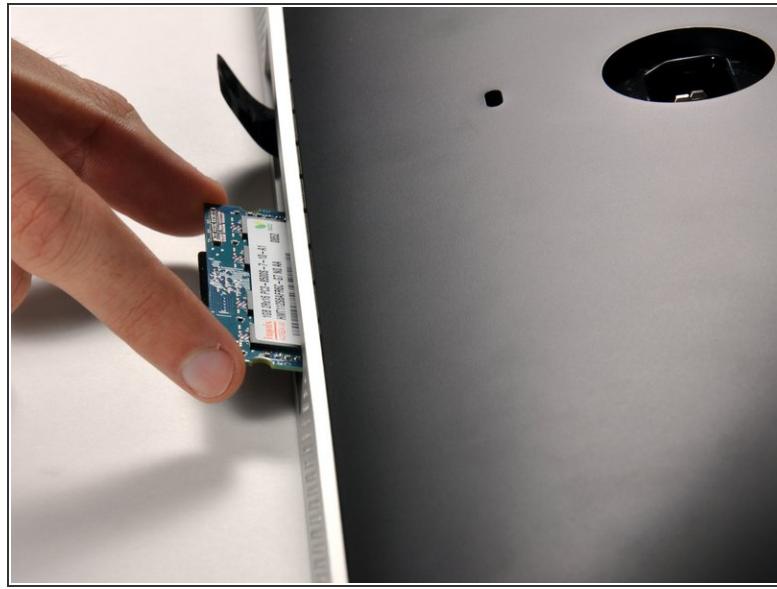
- The ports:
 - Optical digital audio out / in
 - Four USB 2.0 ports
 - FireWire 800, 7 watts
 - Gigabit Ethernet
 - Mini DisplayPort (with support for DVI, dual-link DVI, and VGA)

Step 3



- Look at those lovely cords. Yay for cords. Going wireless will add an extra \$50 to your iMac's pricetag -- \$20 for the mouse and \$30 for the keyboard.
- Apple should really have an Aluminum mouse. The included white plastic Mighty Mouse looks like something thrown in as an afterthought.
- Our keyboard has no number pad, but in their online store Apple offers a "keyboard with numeric keypad" as a no-cost alternative to the standard one.
- Apple confirmed that nothing from the PC world was used in the creation of this iMac, as evident by the "Everything Mac" slogan.

Step 4



- It has begun.
- Unscrewing the single exterior screw -- the RAM cover. We brainstorm on what magical wonders may lie underneath...
- Behold: RAM!

(i) Unfortunately, this is the extent of Apple-approved user-serviceability for this iMac.

Step 5



- We use only the best parts around here. Our suction cups come straight from Maranello, Italy (in Ferrari red, of course).

Step 6



- Fourteen magnets hold the front glass panel in place. Our suction cups were very handy for this operation.
- The glass panel comes off with a gentle pull straight up.

(i) The suction cups made removing the glass surprisingly painless. However, getting dust or fingerprints on either the glass or LCD is a concern. You must make sure both the LCD panel and glass are completely clean prior to reassembly.

- The rear of the glass has a metallic bezel, as well as seven alignment posts. The magnets that help hold the glass in place are in the iMac's aluminum front bezel.

Step 7



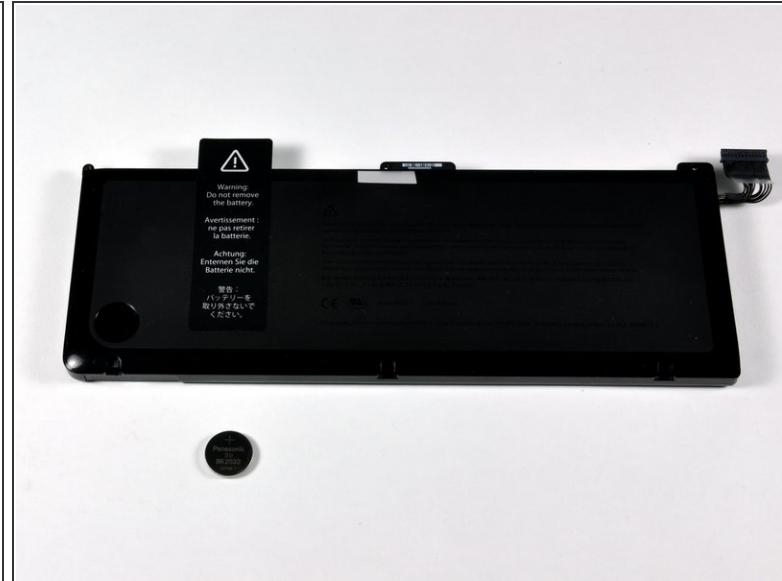
- The display is less glossy now.
- Twelve screws are exposed:
 - Eight 12.8 mm T8 Torx screws.
 - Four 24.6 mm T8 Torx screws.
- The front bezel then simply rotates up. The microphone cable must be disconnected before the bezel is entirely free.

Step 8



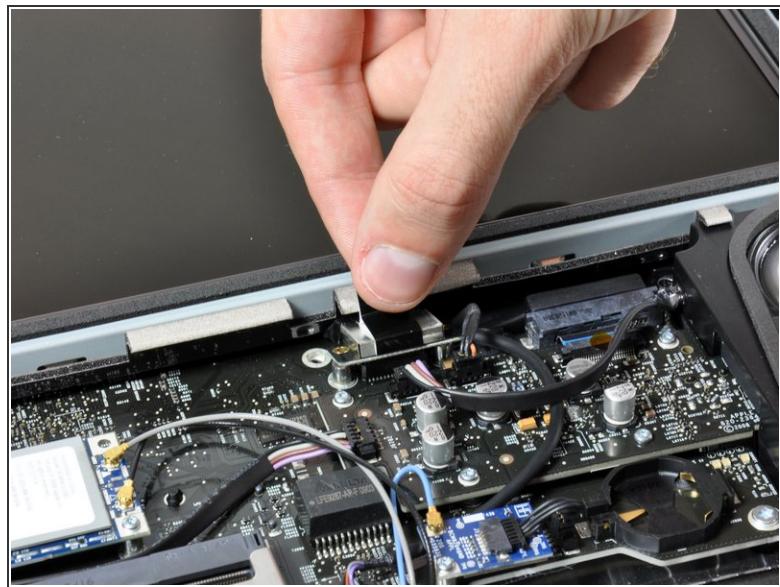
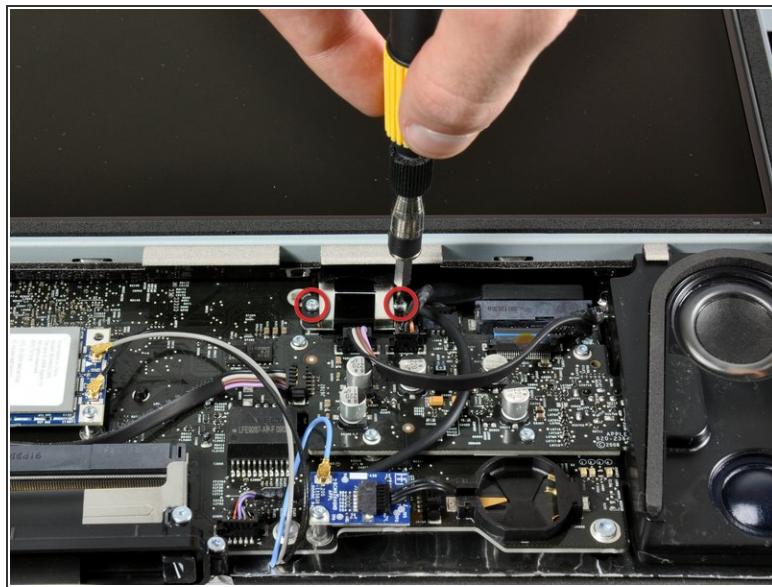
- It almost looks like Tim Burton joined the iMac design team...

Step 9



- We wanted to see how the iMac clock battery (190 mAh) stacks up with the 17" Unibody's behemoth (12,820 mAh), so we put them next to each other:
 - 17" Unibody wins.

Step 10



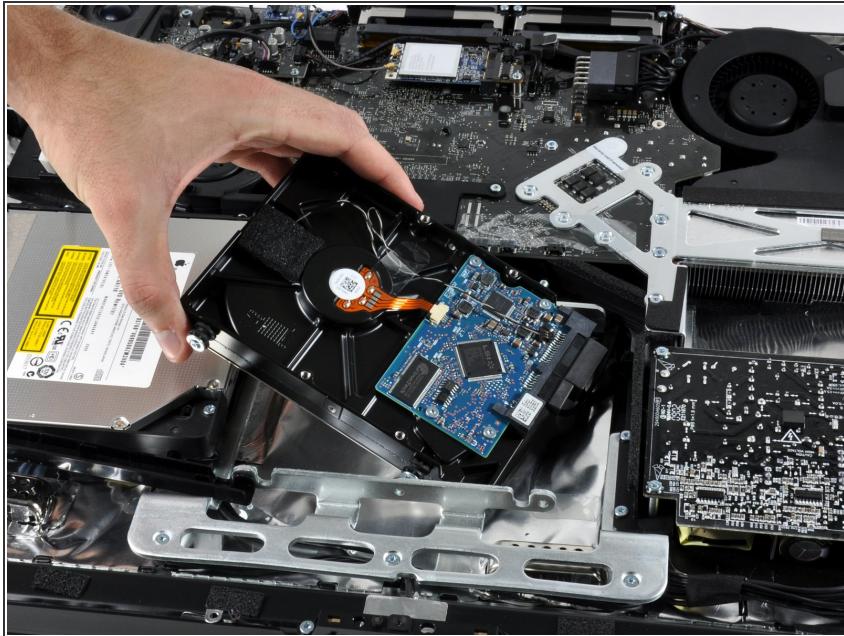
- Most components are buried beneath the LCD assembly. This isn't a new design for Intel iMacs, but is certainly not as convenient as the rear-accessible iMac G5.
- Unscrewing the two T6 screws securing the display data cable.
- After removing the two screws, we pulled the connector straight up, wiggling back and forth as necessary.

Step 11



- The LCD panel is held in place with eight 11.8mm T8 Torx screws.
- *(i)* The LCD in this iMac is not LED backlit, but uses the more traditional CCFL backlight.
- There are five cables (four inverter cables and one temperature sensor) to disconnect before the LCD panel can be removed from the iMac.
- This display is an [AU Optronics M302EW02](#). The manufacture date shown on the back of the LCD is 09/04, that's probably the 4th week of 2009.

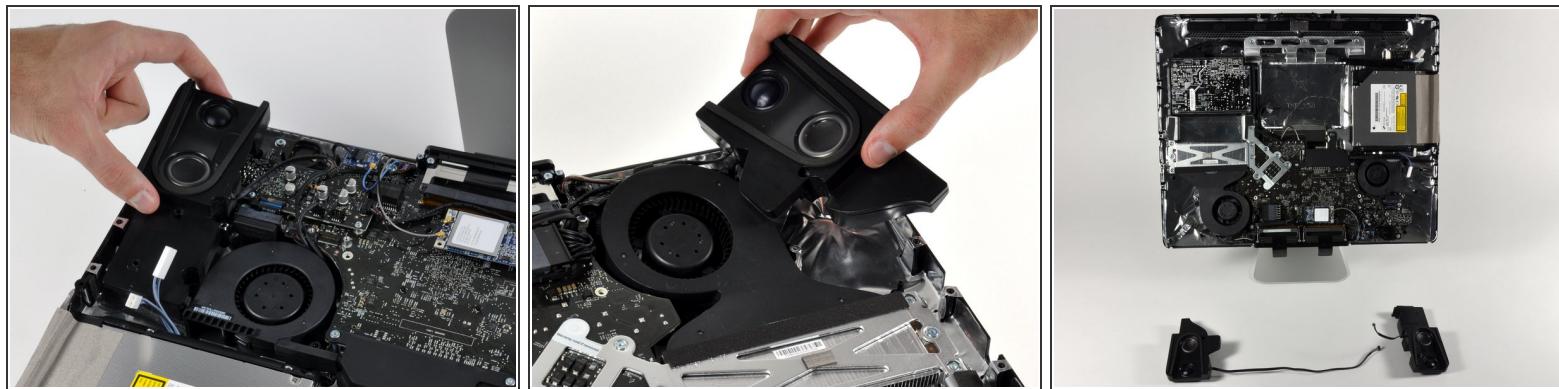
Step 12



- Removing the desktop 320GB SATA hard drive.
- After disconnecting the temperature sensor cables, we rotated the long black clip toward the drive to unlock it, then swung it to the side.
- We then unplugged the SATA cables and pulled out the hard drive without removing any additional screws.

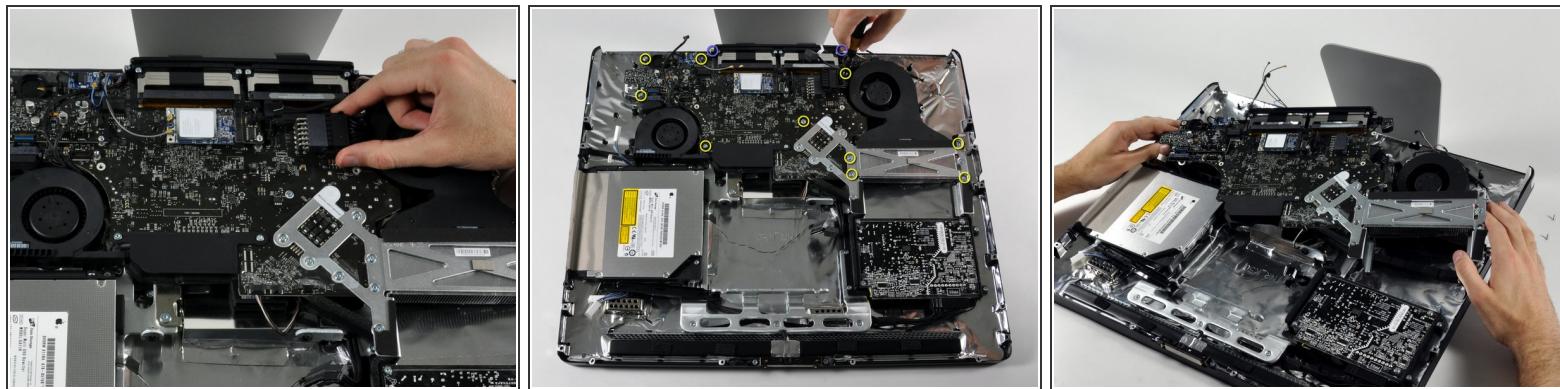
i This screw-less design for the hard drive is nice, but unfortunately getting to this point requires removing 21 screws.

Step 13



- Each speaker is attached by one screw and one connector cable.
- Only the right speaker needs to be removed to gain access to the logic board, but we removed them both.
- The Bluetooth board is the blue board in the top center.
- The 802.11n card is on the right with two antenna wires running to it from below the logic board.

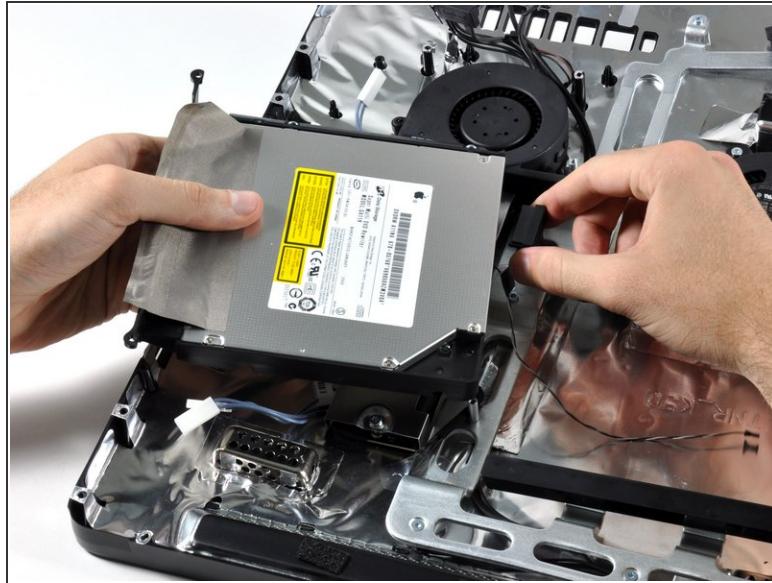
Step 14



- Removing the logic board.
- First off, let's disconnect 13 connectors.
- Next, we remove 10 T10 Torx screws... (Second image)
- ...and 2 T8 Torx screws.

(i) It's out! (Third image)

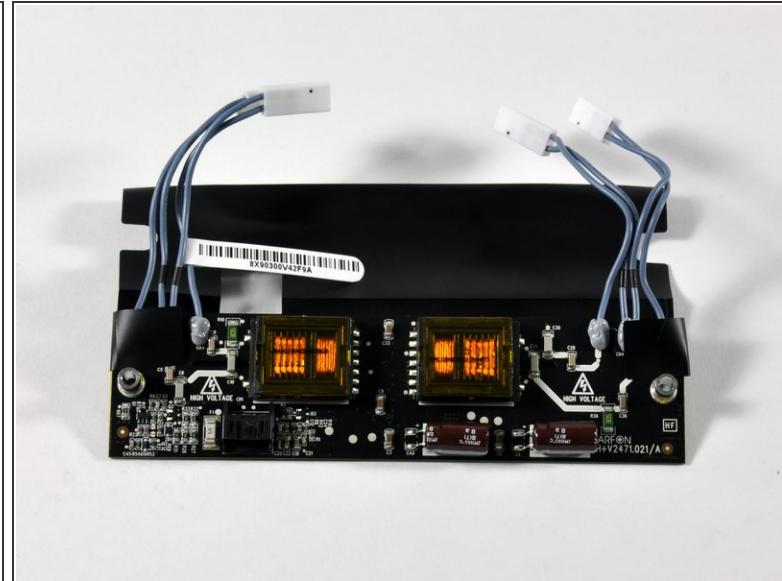
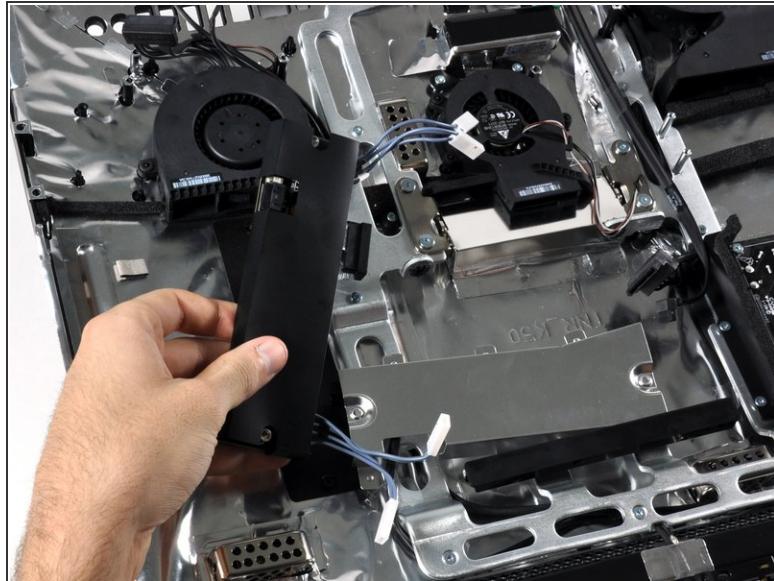
Step 15



- Apple's flat-panel iMacs have always been an interesting cross between a laptop and a desktop. This iMac features a laptop-style optical drive and RAM, but a desktop hard drive.
- This is a 12.7mm SATA 8x double-layer SuperDrive.

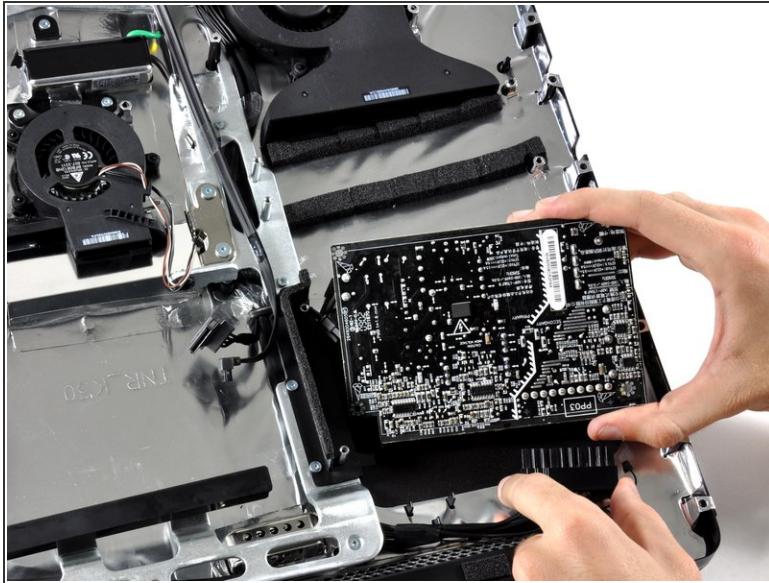
ⓘ As far as we know, this leaves the AppleTV as the only shipping Apple product with a PATA drive.

Step 16



- As we mentioned earlier, this iMac still uses an LCD with a CCFL backlight. This particular display features four backlights, each of which require their own high-voltage AC power.
- All four are powered by a single large inverter.

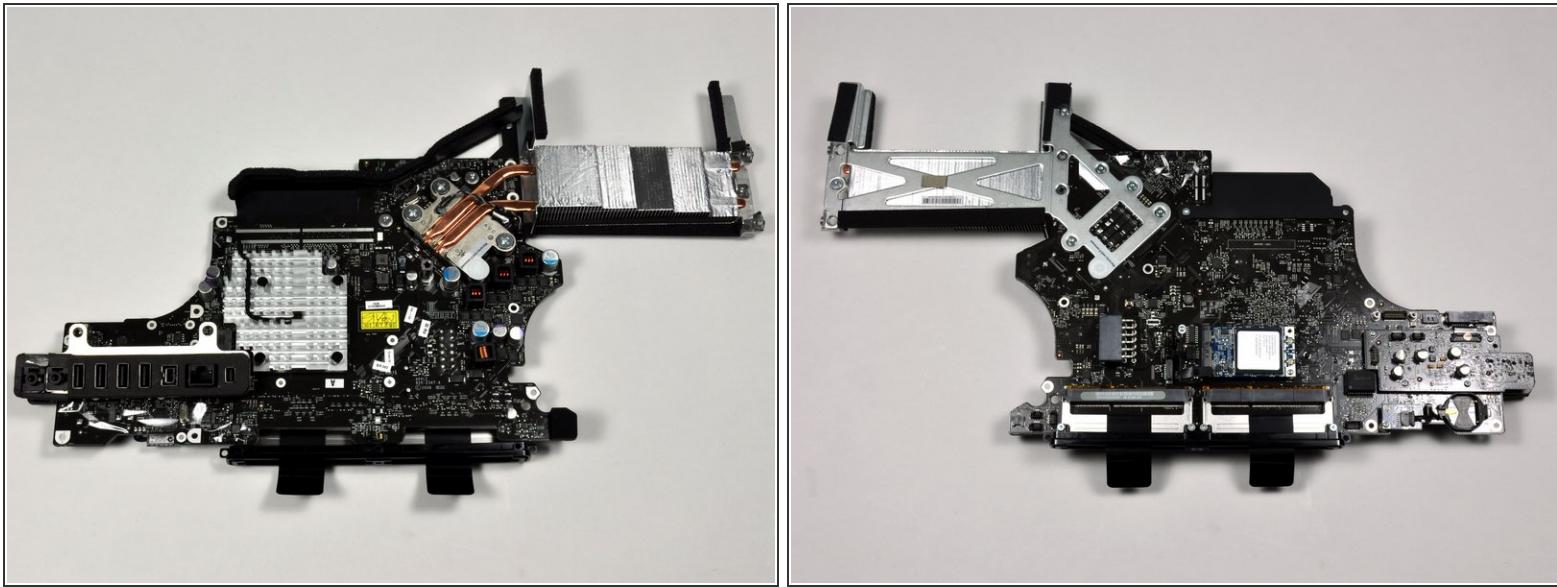
Step 17



⚠ This is the power supply. If you're doing this at home, **be very careful handling it, as capacitors can remain charged even after power has been disconnected from the computer.**

- This iMac isn't very [colorful](#), internally or externally. However, the power supply (once removed) is surprisingly vibrant.

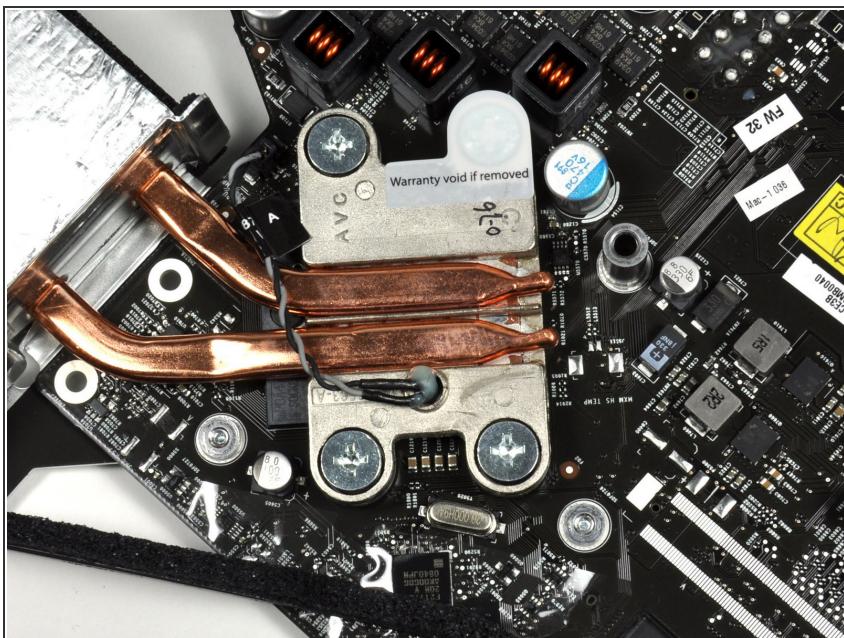
Step 18



- The large and awkward logic board.
- The ports are all soldered directly to the logic board, and connect at a slight angle to fit the curvature of the iMac's rear housing.

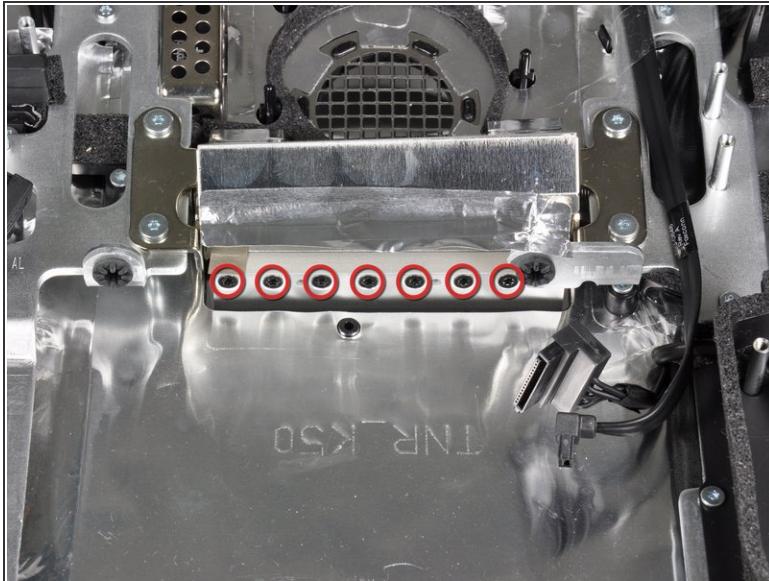
i If you want to see more detail, we have hi-res shots of the [top](#) and [bottom](#).

Step 19



- The heat sink directly above the 2.66 GHz Core 2 Duo processor.
- i** The gray and black cable is a temperature sensor, one of at least six we've found in this iMac so far.
- The processor appears to be socketed, but unfortunately there's a "Warranty void if removed" sticker that must be removed to access it.

Step 20



- On the 20" iMac the stand is *very* integrated into the computer. Removing the stand requires you to first remove almost all internal components.
- The stand is fastened to the housing with 7 T10 Torx screws.

i The stand is very heavy and sturdy. Just the aluminum stand by itself weighs 33.3 ounces -- almost 70% of the weight of a MacBook Air.

Step 21



- It was a lot prettier when we started.
- There you have it! Be sure to check back often for more [teardowns](#), [guides](#), and [quality parts and tools](#).