



iPad 4 Wi-Fi Teardown

We tore down the iPad 4 on November 1, 2012.

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INTRODUCTION

We got our hands on the fourth generation of iPad; we shall call it iPad 4. The iPad 4 is kind of like a fourth book added on to a trilogy: its release was a bit sudden and unexpected, but it's a part of the group, nonetheless. This fourth iteration of iPad shares a lot of similarities with the previous version, so instead of our traditional, exploratory teardown, we're going to play "spot the differences" by illustrating all the changes from the last generation.

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TOOLS:

- [iFixit Opening Picks set of 6](#) (1)
- [iOpener](#) (1)
- [Phillips #00 Screwdriver](#) (1)
- [iFixit Opening Tools](#) (1)
- [Spudger](#) (1)

Step 1 — iPad 4 Wi-Fi Teardown



- Welcome, ladies and gentlemen.
- Apple has stunned the tech world once again. A mere 7 months after the announcement of the iPad 3, the iPad 4 was introduced on October 23, 2012.
- Tech Specs:
 - Dual-core A6X processor with quad-core GPU
 - 9.7 inch LCD, backlit in-plane switching LED with 2048×1536 pixel Retina display
 - 16, 32, or 64 GB flash memory ([at launch](#))
 - 5 MP rear-facing camera
 - Lightning connector

Step 2



- One of the major differences between the 3rd and 4th generation iPads is the connector. The 3rd gen (top) has the 30-pin dock connector, while the 4th gen (bottom) has the Lightning connector.
- The iPad 4 has a new model number, A1458.

Step 3



- [Continuing the trend](#), this iPad is glued shut. This isn't our first adhesive-riddled iPad, and we've been working to figure out how to make the painful opening process a lot easier.
- Our heated-up [iOpener](#) lets us apply heat just where it's needed, softening the troublesome adhesive. Once we've snuck a few guitar picks in the seam, we're nearly home-free.

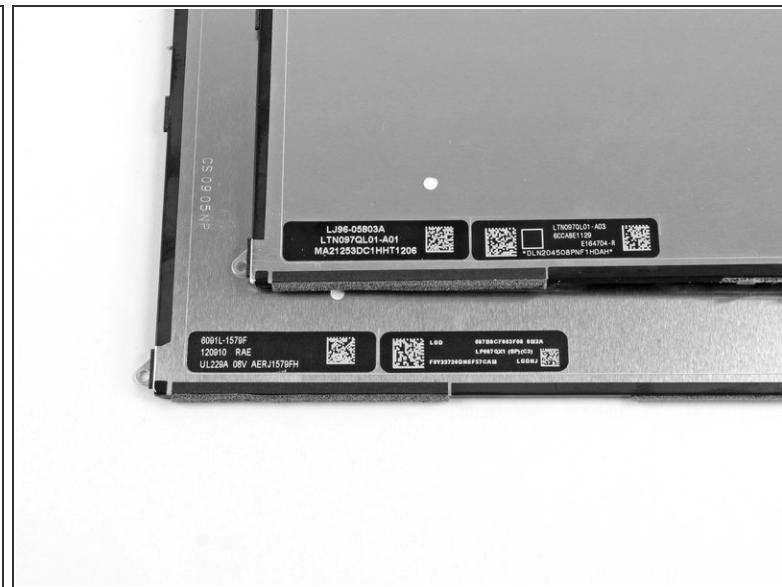
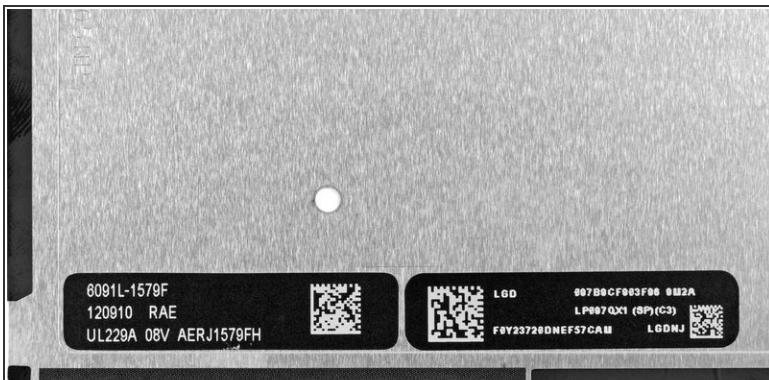
i We're happy to report that no iPads were cracked in the creation of this teardown. We [haven't always](#) been so fortunate.

Step 4



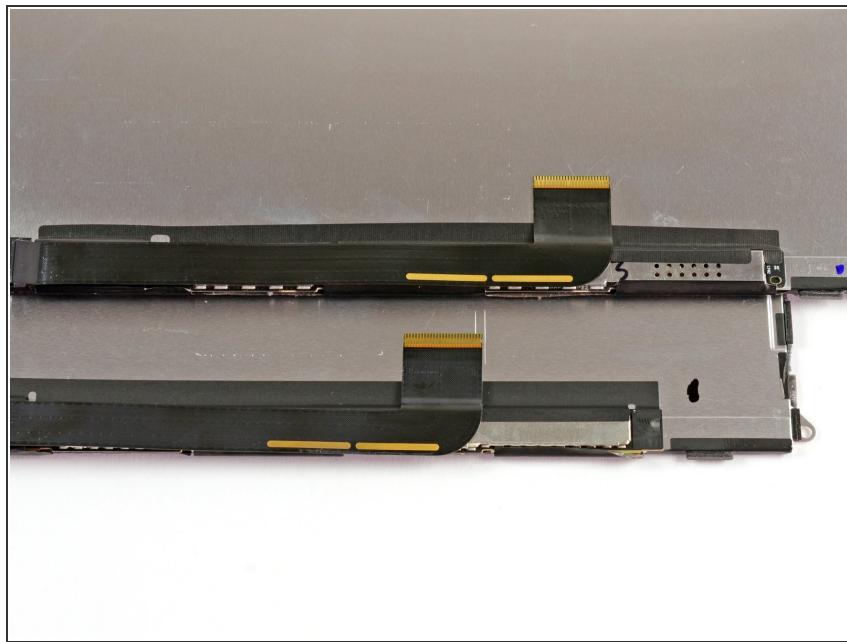
- With the adhesive out of the way, we open up the iPad.
- As expected, this stage looks no different from the previous generation.
- Now that the hard part is out of the way, it's time for a break with a hot cup of drinking chocolate.

Step 5



- As opposed to the Samsung display we found in the iPad 3, the new iPad LCD is manufactured by LG.
- Apple has reportedly been working to move away from Samsung as a primary supplier, so this LG display is not surprising. However, Apple often relies on multiple suppliers for a single component, meaning there are quite likely other LCD manufacturers lurking inside other iPad 4s.

Step 6



- Continuing to examine differences in the LCD cables...
- Well, Apple used a different color Sharpie.

Step 7



- We lift up the LCD to reveal the battery.
- The battery is labeled with the same model number (A1389) as in the [last round](#), so it's no surprise that it's another 3.7 V, 43 Whr package.
- Like the iPad 3, the battery is adhered *very* securely to the rear case. Since batteries are consumables that wear out, the trend of glued-in, hard-to-access batteries in iPads and other Apple devices is unfortunate.

Step 8



- Skipping ahead to the good stuff, we get a quick look at the biggest improvement in the iPad 4—the A6X and its supporting hardware:
 - Apple A6X Processor
 - Hynix H2JTDG8UD2MBR 16 GB NAND Flash
 - Apple [338S1116](#) Cirrus Logic Audio Codec
 - 343S0622-A1 Dialog Semi PMIC
 - Apple 338S1077 Cirrus Logic Class D Audio Amplifier
 - QVP TI 261 A9P2

Step 9



- The backside of the board, however, boasts no dramatic improvements:
 - **Broadcom [BCM5974](#) Touch Screen Controller**
 - **Broadcom BCM5973A1 Touch Screen Controller**
 - **Texas Instruments CD3240B0 Touch Screen Line Driver**
 - **2 x 4Gb Elpida LP DDR2 = 1 GB DRAM in separate packages in a 64-bit configuration**
 - **2 x Fairchild BCAH/FDMC Voltage Regulator / Reference**
 - **Murata 339S0171 Broadcom BCM4334 WiFi Module**

Step 10



- Apple didn't save any space by switching to the smaller Lightning connector (lower); rather they let the Lightning cable sit in a frame the same size as the 30-pin dock connector (upper).

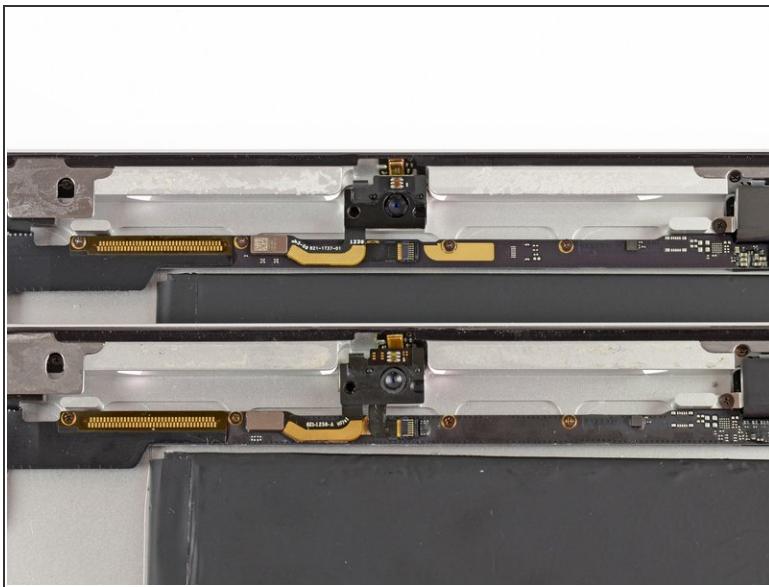
i We were hoping that space savings would yield [bigger, better speakers](#). Very disappointing, indeed.

Step 11



- If you're new to our site, we'll let you in on a little secret: we **love** our [54 Bit Driver Kit](#). It makes quick work freeing the Lightning connector, even with a couple of hard to find screws.
- There is a bit of adhesive holding the connector in, but nothing compared to some adhered components we've [seen before](#).
- Repair techs, DIY-ers, and clumsy iPad-users, rejoice! The Lightning connector is on its very own ribbon cable, meaning that procuring a replacement connector should be fairly inexpensive.

Step 12



- Despite looking almost identical in this shot, we do spot one more difference between the 3rd (top) and 4th (bottom) generations: the front-facing camera!
- We've got a 1.2MP FaceTime HD camera, with the ability to shoot 720p HD video. That's a big improvement from the .3MP FaceTime camera in the iPad 3.
- Compared to the iPad 3, this camera is actually slightly thicker (an extra .4 mm), but it still manages to fit into the same space.

Step 13



REPAIRABILITY SCORE:



- iPad 4 Repairability Score: **2 out of 10** (10 is easiest to repair)
 - The LCD is easy to remove once the front panel is gone.
 - The battery is not soldered to the logic board, making the replacement process a tad less difficult.
- Just like in the iPad 2 & 3, the front panel is glued to the rest of the device, greatly increasing the chances of cracking the glass when trying to remove it.
- Gobs, gobs, and gobs of adhesive hold everything in place, including the prone-to-start-a-fire-if-punctured battery.
- The LCD has foam sticky tape adhering it to the front panel, increasing chances of it being shattered during disassembly.
- You can't access the front panel's connector until you remove the LCD.

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