

Motorola Droid 3 Teardown

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INTRODUCTION

The Motorola Droid 3 has landed on our doorstep, and no new gadget would be complete without a proper iFixit teardown.

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TOOLS:

- iFixit Opening Tools (1)
- Spudger (1)
- T3 Torx Screwdriver (1)
- T5 Torx Screwdriver (1)

Step 1 — Motorola Droid 3 Teardown





- After various <u>upgrades</u> and <u>special editions</u> of the Droid 2, its successor has finally arrived! The third Droid to hail from the halls of Motorola is appropriately named "Droid³," or more officially, the Droid 3.
- With almost two years since the launch of the <u>first Droid</u>, Motorola has had plenty of time to load the Droid 3 with some impressive tech specs.
 - Android 2.3 OS (Gingerbread)
 - Dual-Core 1GHz processor
 - 5-Row full QWERTY keyboard
 - 8 MP Camera with 1080p video capture
 - 4" 960 x 540 qHD display with Gorilla Glass







- Motorola advertises that the Droid 3 is the "Thinnest Full QWERTY Smartphone Ever."
 - (i) When compared to the original Droid, it is clear that the Droid 3 *is* smaller. However, the thickness difference is hardly something to brag about.
- The rear-facing camera on the Droid 3 includes an LED flash and 8x zoom capability.
- The Droid 3 features both micro USB and micro HDMI ports, allowing for full 1080p output to any compatible device.
 - The port layout on the left side gives the Droid 3 an uncanny resemblance to the Motorola Atrix.







- Pulling off the back cover gives us our first glimpse at the user-replaceable battery.
- Motorola claims that the battery inside the Droid 3 will last for over 9 hours of continuous talk time, or over 300 hours of continuous stand-by time.
 - We suspect, however, that having the phone in standby for 300 hours would be <u>very</u>, <u>very</u> <u>boring</u>.
- (i) The battery is rated at 3.7 V and 1540 mAh.







- Whoa! This Droid has a SIM card!
 - (i) CDMA, the network protocol for Verizon, does not require SIM cards.
- A lack of SIM cards severely hampered international use of Verizon's network. This SIM will enable the Droid 3 to be used <u>almost anywhere</u> in the world.
 - For a more complete explanation of Verizon, CDMA, SIM cards, and other, similar things, check out our <u>Verizon iPhone Teardown</u>.
- A very attention-grabbing informational card included with the phone is neon orange for a reason. For some regions outside the USA, data charges might be as high as \$20.48 per MB!



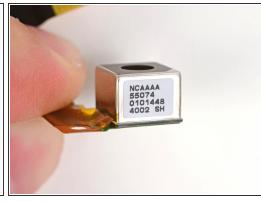




- Like its predecessors, the Droid 3's rear case is held in place by a few T5 Torx screws.
- Motorola likes to hide screws and latches beneath the information label, making opening the phone a rather sticky affair.
 - Of course, these obstacles are of little challenge to our <u>spudgers</u>, 54-piece bit driver kits, and talented fingers.
- With the screws unscrewed, the clips unclipped, and the stickers unsticked, we get a full-on exposè of the Droid 3's innards.



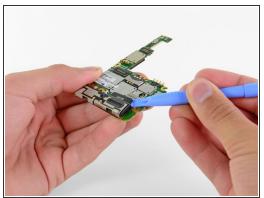




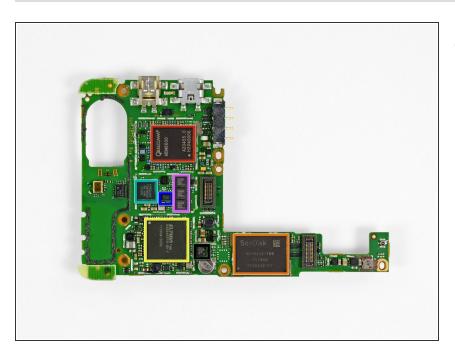
- Next, we use a plastic opening tool to lift the camera ribbon cable off its socket on the motherboard.
- The Droid 3 is equipped with an 8 MP rear-facing camera capable of recording 1080p video at 30 fps.







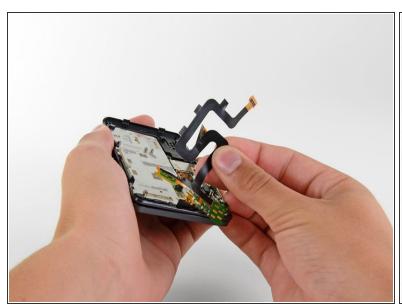
- Adiós motherboard screws, we hardly knew you...
- After removing a few more connectors, the motherboard easily lifts off the phone.
- In order to strip the motherboard bare, the speaker/antenna assembly must be pried off the board.
- The speaker assembly uses pressure contacts to transmit data to both the speaker and the antenna. Interestingly, a hole through the motherboard allows sound to pass through for better transmission to the outside of the phone.

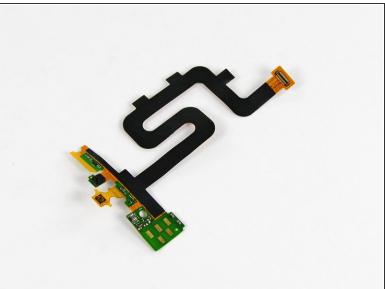


- The main ICs on the front side of the motherboard include:
 - Qualcomm <u>MDM6600</u> supporting HSPA+ speeds of up to 14.4 Mbps
 - SanDisk SDIN4C2 16GB MLC NAND flash
 - Elpida B4064B2PB-8D-F 512MB RAM and TI OMAP 4430 CPU
 - Triquint <u>TQM7M5013</u> Linear Power Amplifier
 - Avago A2F1106
 - A5005 K1116, A5002 K1118, A5001 K1118 (from bottom to top)
 - Kionix <u>KXTF9</u> 11425 1411 threeaxis accelerometer



- Big players on the back side of the motherboard:
 - The Qualcomm PM8028 chip works in conjunction with the Qualcomm MDM6600 to provide wireless data connection to the phone.
 - Hynix H8BCS0QG0MMR memory MCP containing Hynix DRAM and STM flash
 - ST Ericsson CPCAP 006556001
 - WL1285C 13M1HH3
 - 6792A 1113 T3971

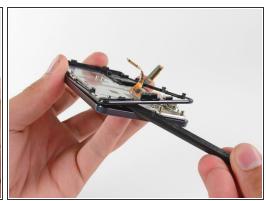




- What's this, a secret Mario Kart track? Sadly, no; it's just the headphone jack assembly.
- The Droid 3 sports a 3.5 mm headphone jack, compatible with just about every headphone set available today.
- The power/lock button is also found on this squiggly cable, as well as the secondary microphone for noise cancelling and clarity during phone calls.

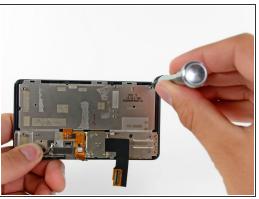






- Some careful prying with a spudger easily removes the Wi-fi antenna.
 - Droid 3 supports b, g, and n Wi-Fi signals. Wow!
- We politely evict the vibration motor from its home with some "convincing" from a plastic opening tool.
- More prying with a spudger gives us unbridled access to the sliding plate of the Droid 3.



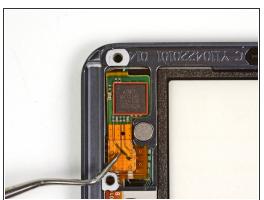




- One of the most important features on the Droid 3 is its 5-row slide-out full QWERTY keyboard.
 - We like the offset keys on the Droid 3, a feature that was frustratingly absent in the original Droid, but added in the <u>Droid 2</u>.
- As with its predecessors, the display assembly in this Droid is very difficult to access.
- Peeling off the keyboard reveals a handful of teeny tiny T3 Torx screws that secure the display assembly to the slider mechanism and keyboard.
- After some cringe-inducing maneuvering of the display data cable, we can separate the two pieces.







- With a little encouragement, the <u>qHD</u> LCD lifts out of the Gorilla Glass-equipped front panel.
 - The screen in the Droid 3 is 0.3" larger than the screens in both of its predecessors, measuring in at a total of 4". It also has a higher resolution, at 960 x 540 pixels.
- The ribbon cable attached to the rear of the LCD holds the earpiece speaker, the front-facing camera, the ambient light sensor, and the notification LED. Phew!
 - All of these components on one ribbon cable makes disassembly easy, but repair costly.
- An Atmel MXT224E capacitive touchscreen controller can be found within the front panel.





- The Motorola Droid 3 (Droid³) earns itself a repairability score of 6 out of 10.
 - There were no security screws in the entire device.
 - The battery was not soldered to anything and was easy to replace.
 - Many components are mounted to a single ribbon cable, meaning that replacing one requires replacing them all.
 - There is a lot of adhesive holding things together, making disassembly and reassembly difficult.
 - To get to the LCD, the entire device has to be taken apart.

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