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 upgrades and special editions 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 first Droid, 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."

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.
Step 3

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 very, very boring.

The battery is rated at 3.7 V and 1540 mAh.
Step 4

- Whoa! This Droid has a SIM card!
  - 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 almost anywhere in the world.

  - For a more complete explanation of Verizon, CDMA, SIM cards, and other, similar things, check out our Verizon iPhone Teardown.

- 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!
Step 5

- 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 spudgers, 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.

Step 6

- 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.
Step 7

- 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 of 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.
Step 8

- The main ICs on the front side of the motherboard include:
  - Qualcomm **MDM6600** 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 **TQM7M5013** Linear Power Amplifier
  - **Avago** A2F1106
  - A5005 K1116, A5002 K1118, A5001 K1118 (from bottom to top)
  - Kionix **KXTF9** 11425 1411 three-axis 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
Step 10

- 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.
Step 11

- Some careful prying with a spudger easily removes the Wi-fi antenna.
- Motorola Droid 3 Teardown

- 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.
Step 12

- 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 Droid 2.
- 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.
Step 13

- With a little encouragement, the qHD 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.