



Nexus One Teardown

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INTRODUCTION

Well, we went for it. After forking out a bank-account-devastating \$530, we have the Superphone in hand! Keep your eyes peeled as we tear this baby apart.

After all was said and done, we made a [video slideshow](#) of it as well. Enjoy!

TOOLS:

- [Phillips #00 Screwdriver](#) (1)
- [iFixit Opening Tools](#) (1)
- [T4 Torx Screwdriver](#) (1)

Step 1 — Nexus One Teardown



- The Nexus One, manufactured by HTC, is the latest and greatest Android phone. It sports:
 - A 1 GHz Qualcomm (QCOM) Snapdragon processor.
 - A 3.7" 480x800 widescreen WVGA AMOLED display.
 - A 5MP digital camera w/ LED flash that also records .mp4 video.
 - 802.11n wireless capability for when you can't depend on 3G.
 - 7 hours of 3G talk time from a removable 3.7V, 1400 mAh lithium battery.
- The box's color scheme *kind of* looks like [Google's](#).
- Pawning apps on the clear plastic protective sleeve? Guess the app store really *is* that desperate.

Step 2



- Droid, meet Nexus One. Anyone else see the transition from Terminator to T-1000?
- iFixit's Android family. Darwin would agree that progress has been made.

Step 3



- The unbelievably easy task of removing the plastic rear cover gives access to the replaceable battery. Hey Apple, take notes!
- Inside the battery compartment you can see:
 - The 5MP camera lens
 - LED flash bulb
 - External speaker
 - The warranty-killing VOID sticker

Step 4



- Warranty = VOID. No turning back now.
- This phone is very nicely put together. After removing three screws and prying with a plastic opening tool, the battery tray comes right out.

Step 5



- The upper circuit board is held in place by another Phillips screw.
- After removing the screw, maneuver the upper board past the two metal clips holding it in place and lift it out of the phone body.
- The large black-coated foil section is the data connection between the two main circuit boards.

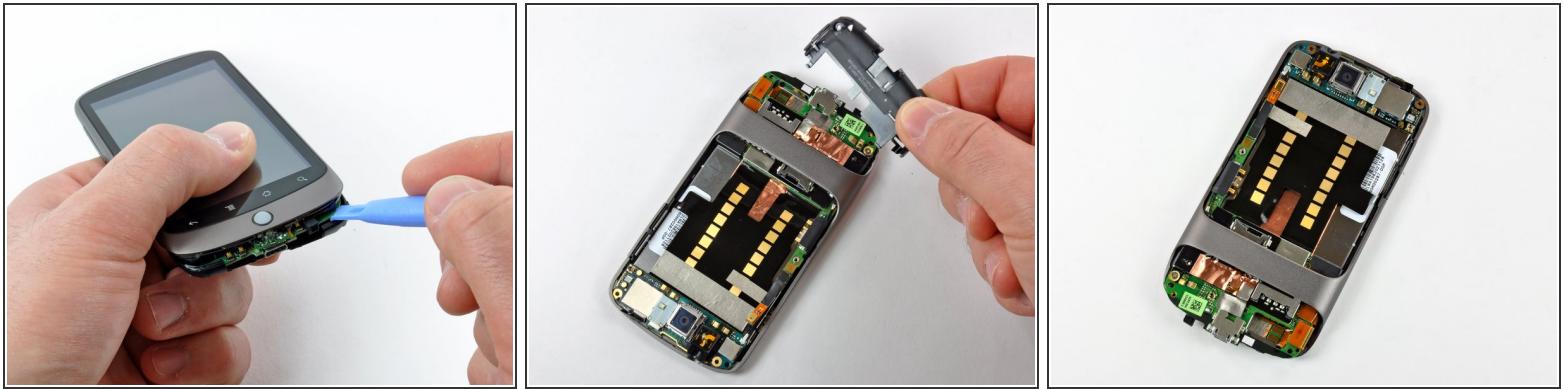
Step 6



- After some trying moments with a few [tools of destruction](#), we figured out the bottom cover can simply be popped off with a plastic opening tool.
- Guess what? We found more screws.
- This phone uses many foil antennas attached to the several plastic internal frame pieces.

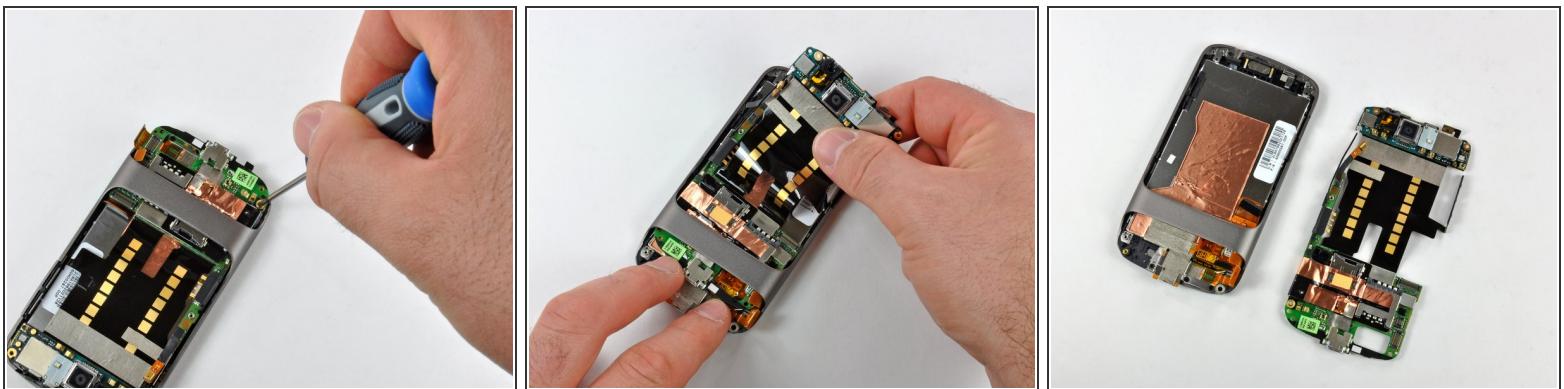
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Step 7



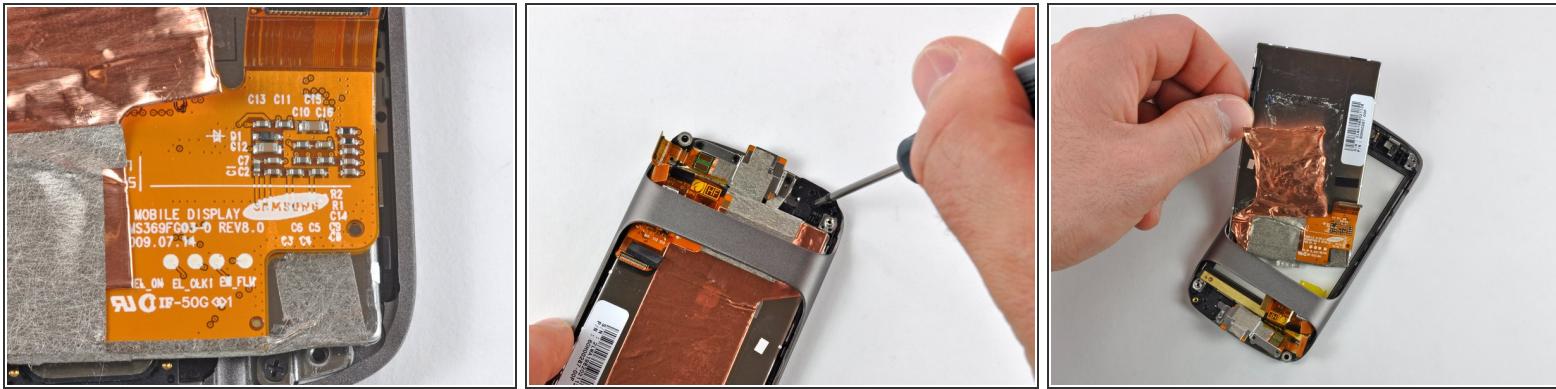
- With a quick pry of the plastic opening tool, we found that the black plastic frame slightly envelops the lower side of the logic board.
- And just like that, the plastic frame snaps off, revealing the lower logic board.
- It's quite a colorful phone on the inside. We've got oranges, greens, yellows, dark grays, and all sorts of fun stuff!

Step 8



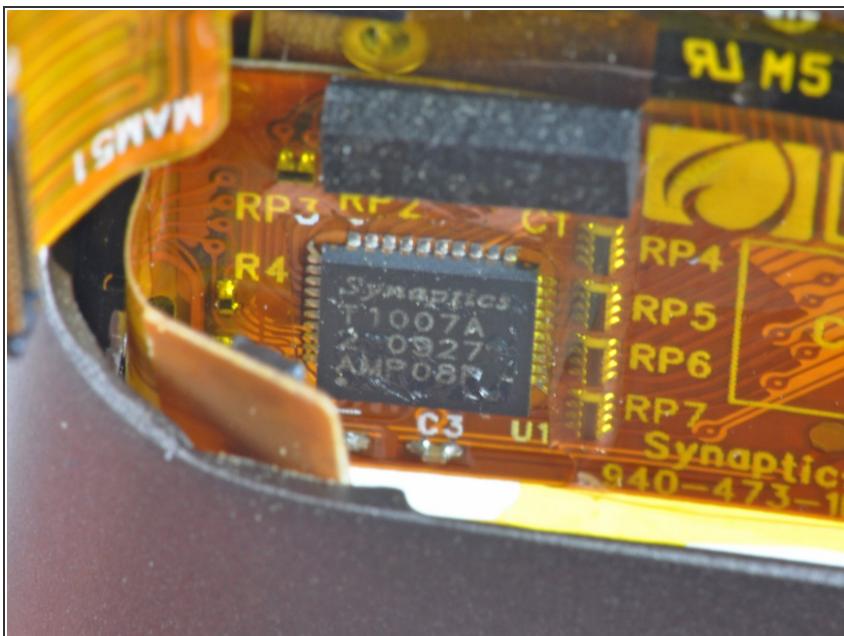
- We had to take care of one more Phillips screw.
- After that, the logic board assembly slowly-but-surely slid out from the rest of the phone.
- The camera and headphone jack are both soldered directly to the main board.

Step 9



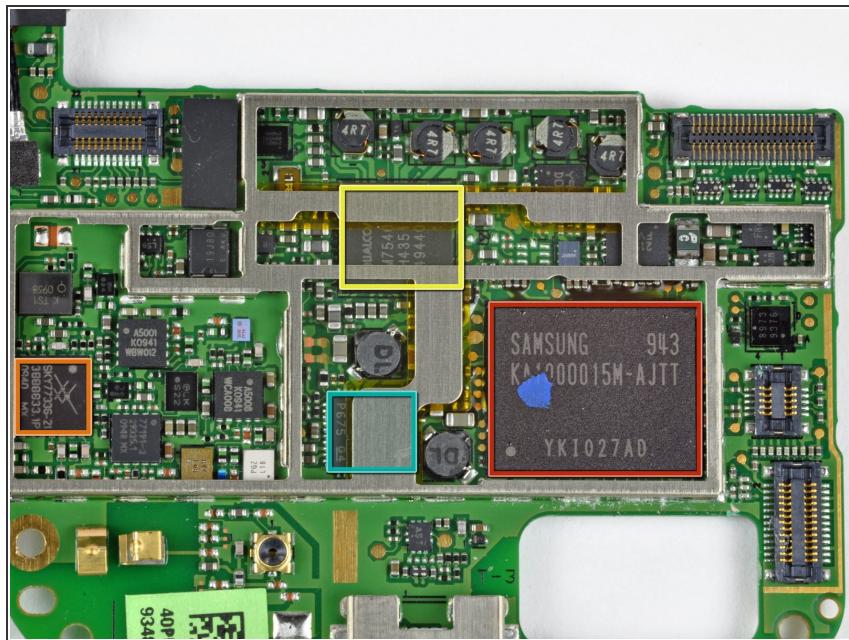
- The Nexus features a 3.7-inch (diagonal) widescreen WVGA AMOLED touchscreen.
- *i* This is the second device we've taken apart with an OLED display. The [Zune HD](#) we took apart last September also featured a Samsung-branded OLED display.
- The Nexus display features a resolution of 480 x 800. That's a few less pixels than [Motorola's Droid](#) (480 x 854), but far more than the [iPhone 3GS](#) (320 x 480).

Step 10



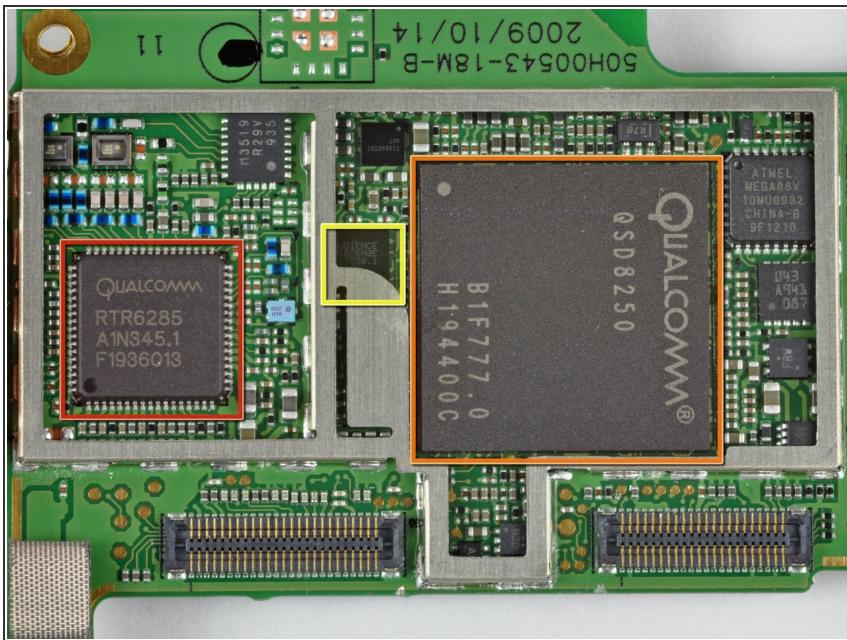
- Here's what looks to be the Synaptics (SYNA) touchscreen controller.
- The chip is labeled T1007A, 2 0927, AMP08P. It controls the ClearPad 2000 series capacitive dualtouch sensor used in this phone.
- *i* We haven't been able to find any specifics on this chip. If you can help out with details, let us know!

Step 11



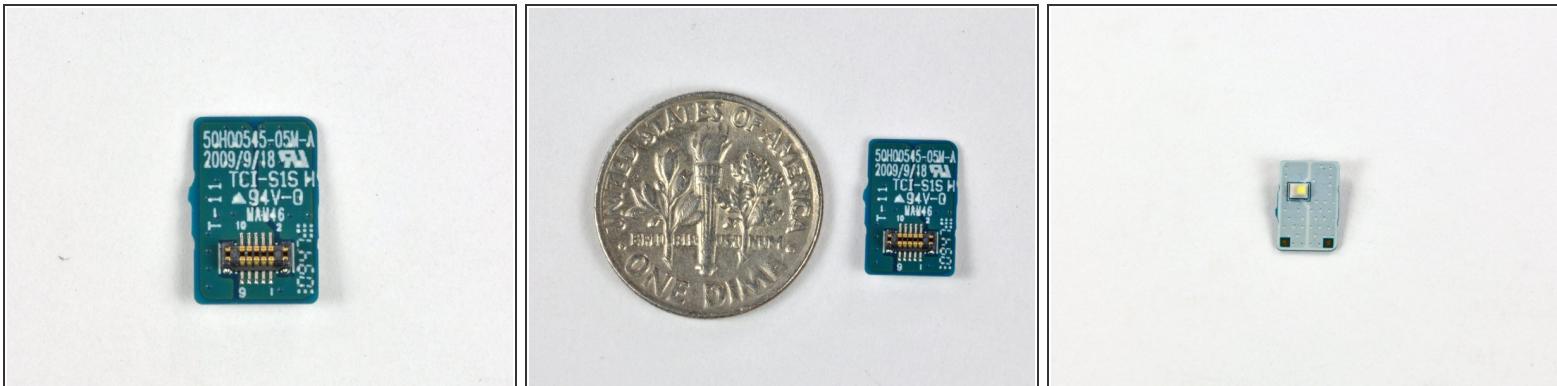
- A list of the chips we've identified so far:
 - Samsung 943 KA100015M-AJTT
 - Skyworks (SWKS) [SKY77336](#) GSM power amplifier (labeled SKY77336-21 3888833 1P 0940 MX)
 - Qualcomm (QCOM) [PM7540](#) power management chip (labeled PM7540 AH43510 C4944001)
 - The TI (TXN) [TPS65023](#) integrated Power Management IC (labeled TPS65023 TI 9AJ P675 G4)

Step 12



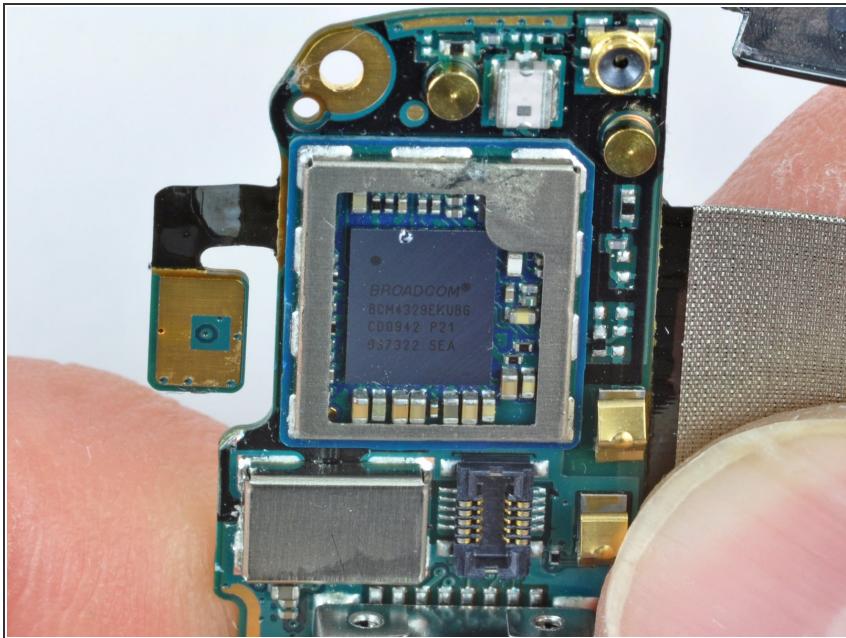
- Qualcomm (QCOM) appears to be the big winner on the Nexus. We've found at least three of their chips in here already.
- On the left is a RTR6285 RF transceiver.
- The large chip on the right is the nexus of the Nexus. It's a Qualcomm (QCOM) [QSD8250](#) "Snapdragon" 1 GHz ARM processor.
- The small chip between the two Qualcomm (QCOM) chips is an [Audience A1026](#) voice processor, including ambient noise cancellation.

Step 13



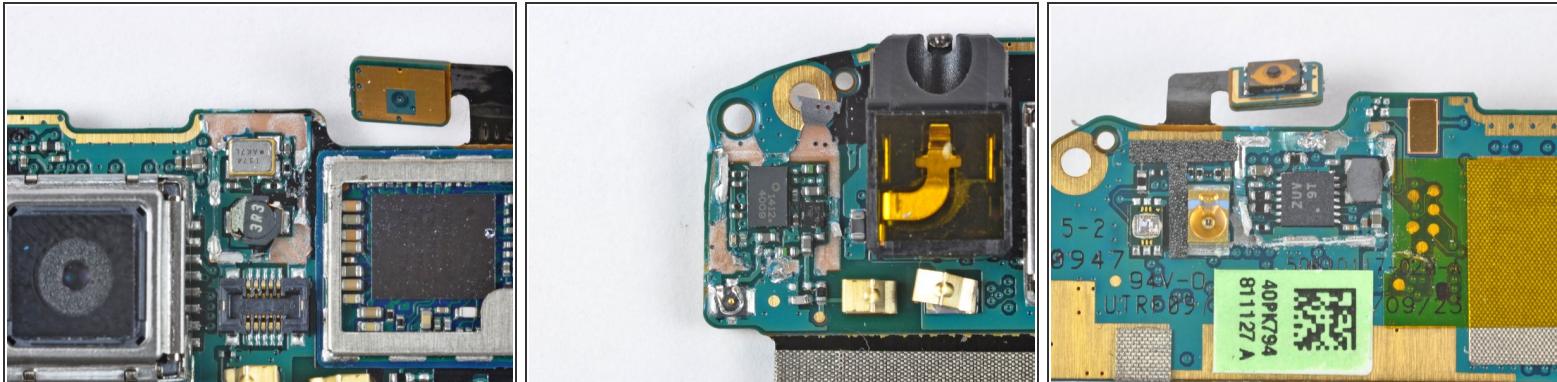
- What have we here?
- It's a plane, it's a bird, no... it's smaller than a dime? What are you?
- It's the LED flash.

Step 14



- The Bluetooth and 802.11n wireless is provided by a Broadcom (BCM) [BCM4329](#) chip.
- The 802.11n capability gives the Nexus an advantage over the iPhone 3GS, which only has 802.11g connectivity. The Broadcom (BCM) chip in the Nexus is the same chip [we found](#) in Apple's [newest \(3rd generation\) iPod touch](#).
- The package is labeled
BCM4329EKUBG CD0942 P21
937322 SEA

Step 15



- Three more chips.
- Unfortunately these were located underneath soldered EMI covers. For the sake of science and gadget lovers everywhere, we had to be a little forceful to get these covers off.
- Using the Nexus One post-teardown just became very iffy. Previous to this step, we felt good about its functionality, but no longer...

Step 16



- There you go, folks...
- Hopefully our kryptonite wasn't too much for the Nexus "Superphone" One.