



HTC Evo 4G Teardown

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INTRODUCTION

We pulled a couple of strings to acquire the most desirable Android phone today, the HTC Evo 4G!

Check out [Wired's video](#) of our HTC Evo 4G disassembly!

TOOLS:

- [Phillips #00 Screwdriver](#) (1)
 - [T5 Torx Screwdriver](#) (1)
 - [iFixit Opening Tools](#) (1)
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Step 1 — HTC Evo 4G Teardown



- Today is a glorious day in the history of teardowns. We welcome the HTC Evo 4G to grandest stage of them all.
- The Evo 4G's technical highlights include:
 - 1 GHz Qualcomm Snapdragon processor
 - 4.3 inch LCD Display
 - 512 MB RAM
 - Dual cameras (1.3 MP front and 8MP back)
 - HDMI output (requires adapter)
 - Android 2.1

Step 2



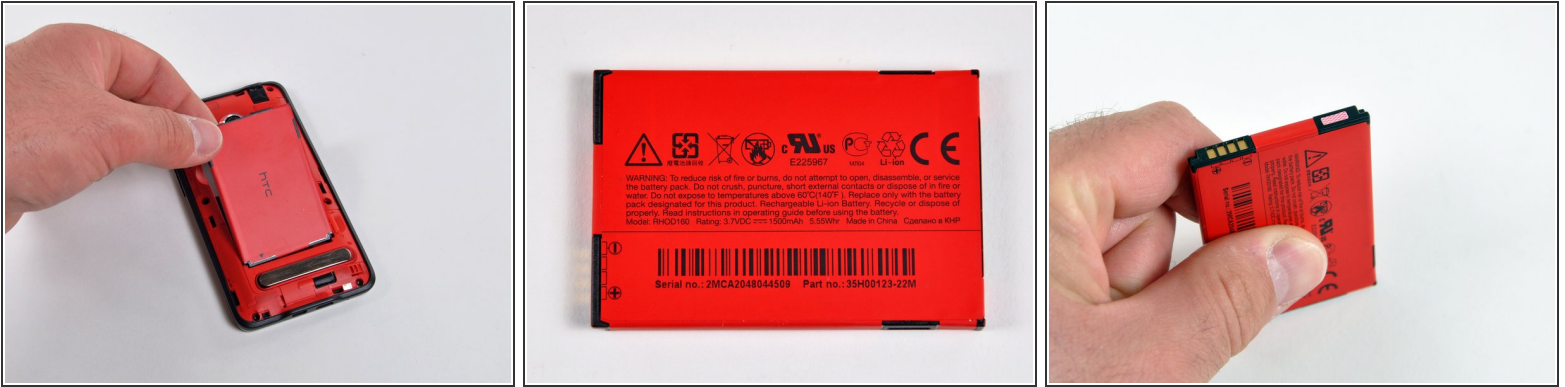
- The top of the Evo's smooth-contoured rear case is dominated by an 8 Megapixel camera and its two LED flashes.
- A flip-out stand on its bottom edge allows the Evo to sit horizontally for watching videos on the 4.3" behemoth of a display.

Step 3



- After a bit of careful prying, the rear case easily pops off the Evo.
- Holy red innards! Maybe it's because the [Republic of China's](#) flag is 3/4 red?

Step 4



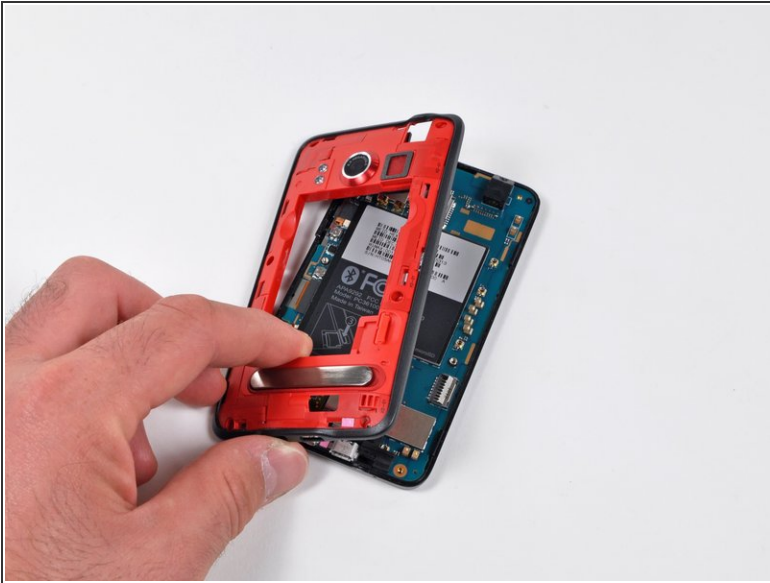
- Like most reasonable phones, changing the Evo's battery is a snap.
- The 3.7 V, 1500 mAh rechargeable Li-ion battery weighs in at 31 grams.
 - That's 23% more capacity than an [iPhone 3GS](#), 15% more than a Droid Incredible, and 7% more than a [Nexus One](#).
- Look out! There's a liquid damage indicator on the battery's top edge.

Step 5



- We delve deeper into the Evo 4G by removing six T5 Torx screws and carefully prying off the internal frame with an iPod opening tool.

Step 6



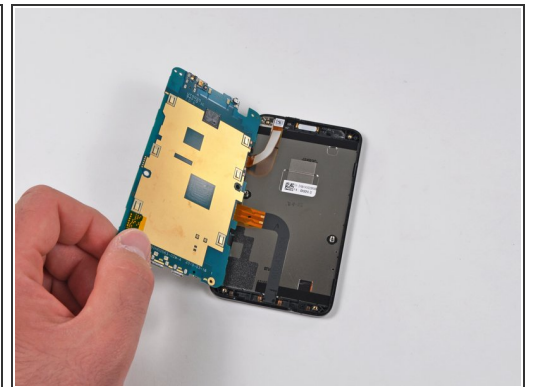
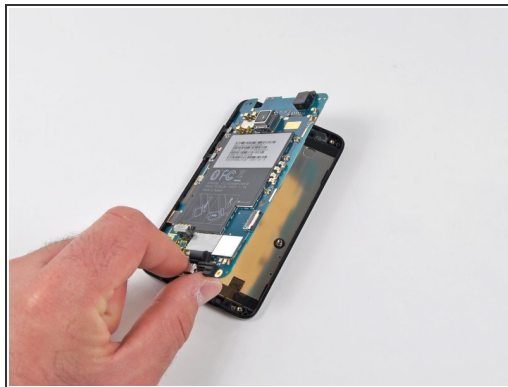
- The internal frame is easily removed from the rest of the Evo.
- It houses the stand, antennas, LED flashes, and speaker.

Step 7



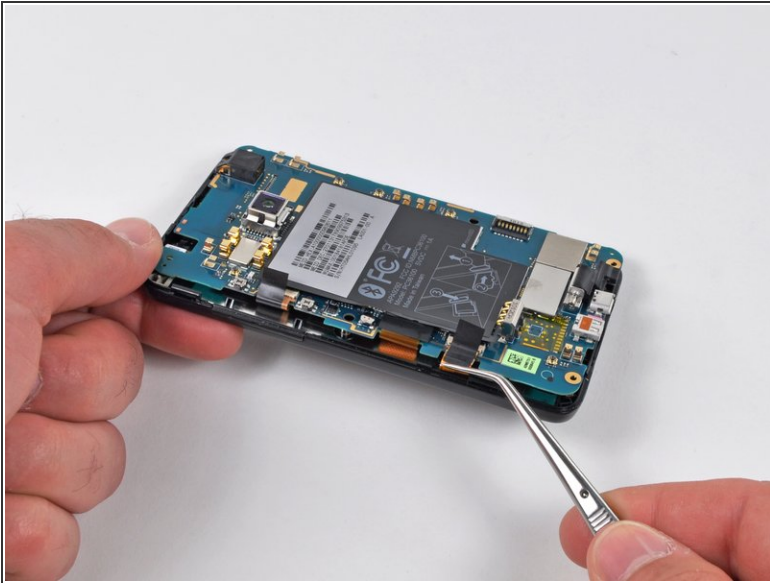
- Two small Phillips screws secure the LED flash to the internal frame.
- The dual LED flash assembly consists of no more than two LEDs soldered to a small interconnect board.

Step 8



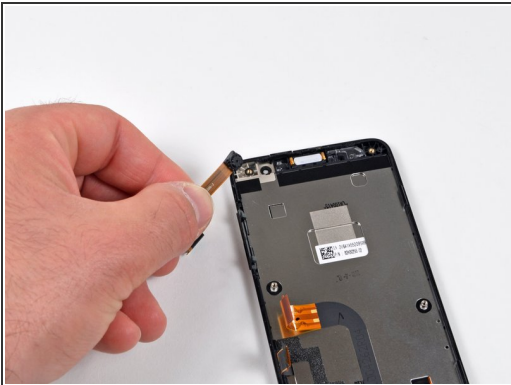
- A small Phillips screw near the top left corner of the Evo is all that keeps the left side of the logic board snug in its cradle.

Step 9



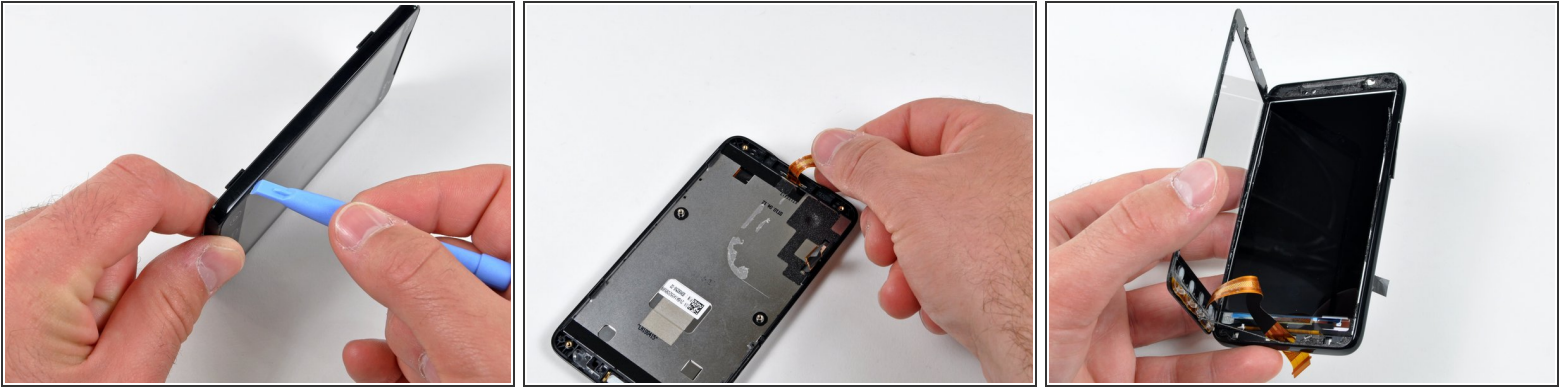
- After disconnecting ribbon cables for the display, digitizer, and front camera, the logic board can be removed from the front half of the Evo.

Step 10



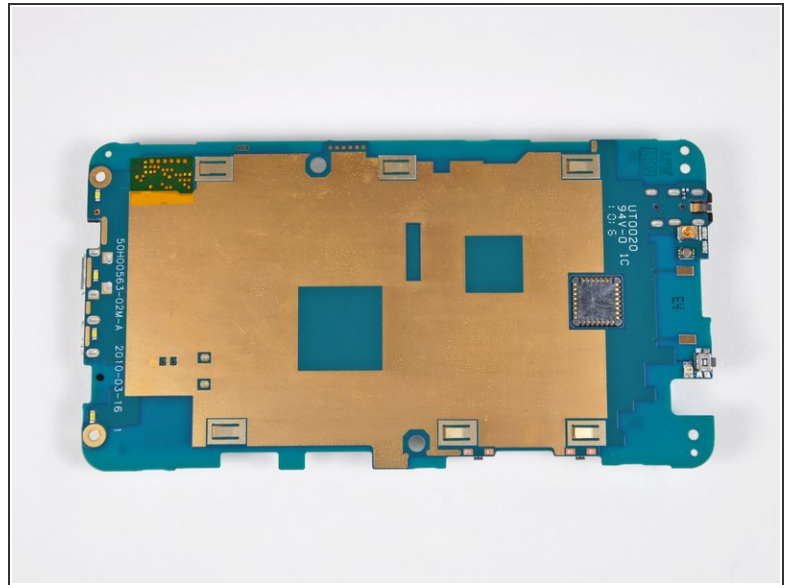
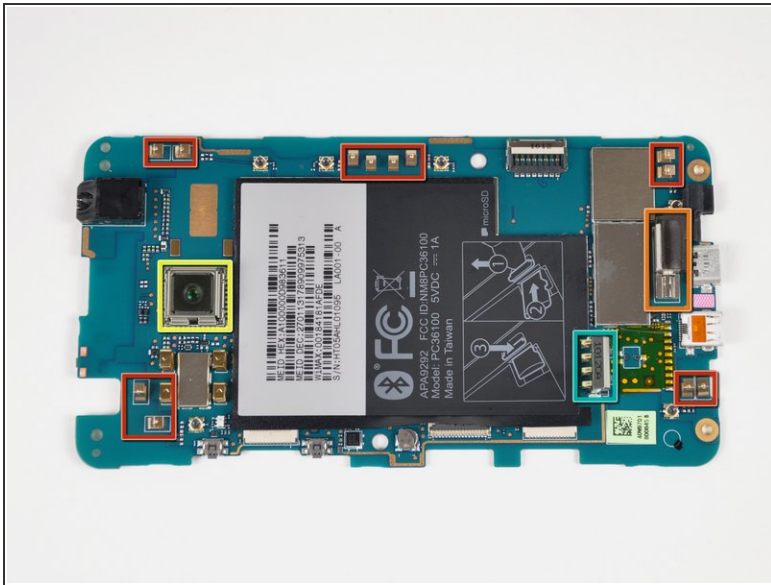
- The forward facing 1.3 Megapixel camera lifts right out of its enclosure in the top portion of the Evo 4G.

Step 11



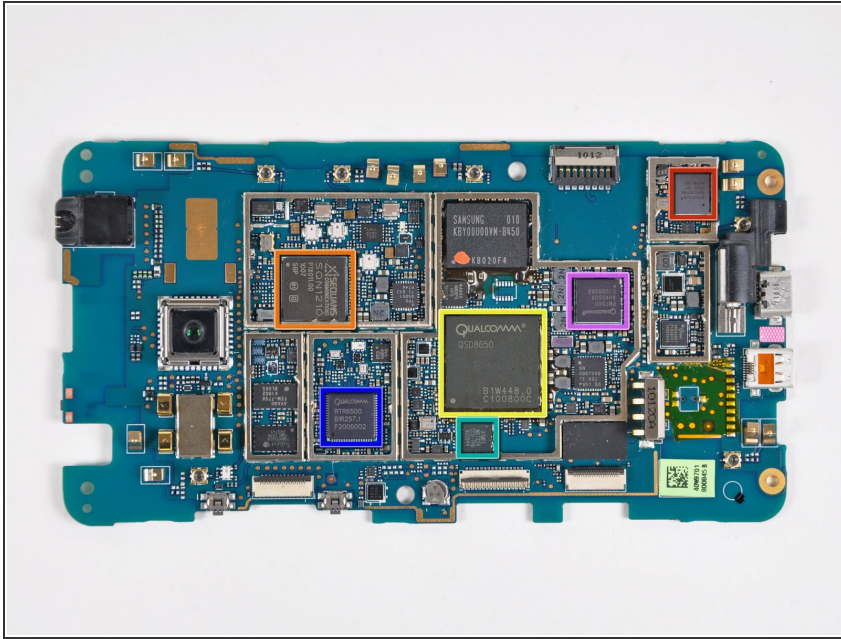
- We used an iPod opening tool to separate the glass from the LCD and frame.
- Removing the glass is not terribly difficult with the Evo 4G. This is great news for those unfortunate enough to drop their shiny phone and crack the glass.

Step 12



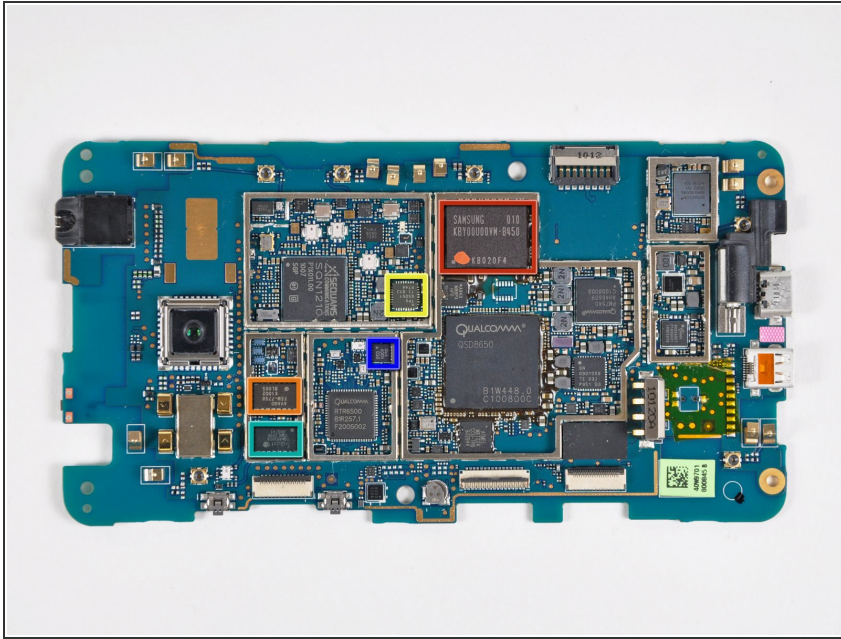
- Standing out on the board:
 - Several rows of pressure contacts connecting the antennas to the logic board.
 - The vibrator motor for...well...vibrating.
 - 8 Megapixel camera sensor.
 - Battery connector.
- The other side of the board is about as featureless as it can be.

Step 13



- Big players on the board include:
 - A Broadcom BCM4329 integrating Wi-Fi, Bluetooth, and FM connectivity to provide speeds up to 50 Mbits/s in 802.11n.
 - Sequans SQ1210 RF combo chip.
 - Qualcomm's QSD8650 Snapdragon processor.
 - Atmel's MXT224 Touchscreen controller.
 - Qualcomm's RTR6500 CDMA2000 transceiver with GPS.
 - Qualcomm's PM7540 power management IC.

Step 14



- More fun packages:
 - Samsung KBY00U00VM NAND Flash.
 - Avago's FEM7758 front end module.
 - Texas Instruments TPS65051 6-channel Power Mgmt IC.
 - Triquint TQM613029 CDMA PA-Duplexer Module.
 - Bosch Sensortec [BMA150](#) Digital, triaxial acceleration sensor

Step 15



- The fallen remains of what was once an HTC Evo 4G.
- As always, thank you for choosing iFixit as your number one source for gadget teardowns.

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