



# Kindle Fire HD 6 Teardown

Teardown of the Fire HD 6 on October 8, 2014.

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# Fire HD 6



# TEARDOWN

## INTRODUCTION

Advertised as the "Most Powerful Tablet Under \$100", the Kindle Fire HD 6 was too tempting to pass up. Join us to find out if inexpensive means cheap, irreparable, or just down right economical. It's teardown time.

**Double Teardown Alert! We also tore down Amazon's new [Kindle 7th Generation!](#)**

Warm up with some hot tweets on [Twitter](#), join us on [Facebook](#), or find our [Instagram](#) photo finery.

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### TOOLS:

- [iFixit Opening Picks set of 6](#) (1)
- [T5 Torx Screwdriver](#) (1)
- [Plastic Cards](#) (1)
- [Tweezers](#) (1)

### PARTS:

- [Kindle Fire HD 6](#) (1)

## Step 1 — Kindle Fire HD 6 Teardown



- One hundred dollars. One Benjamin. A single C-note. That's the cost of a [Amazon's New Kindle Fire HD 6](#). Let's see what your not-so-hard-earned cash buys you:
  - 6" high definition touchscreen with 1280 x 800 resolution at 252 ppi
  - Quad-Core processor with two cores running at 1.5 GHz and two cores at 1.2 GHz
  - 1 GB of RAM
  - 8 GB (4.5 GB available to user) or 16 GB (11.6 GB available to user) of internal storage
  - 802.11b, 802.11g, or 802.11n Single-antenna Wi-Fi + Accelerometer + Gyroscope + Bluetooth
  - VGA Front-facing Camera + 2.0 MP Rear-facing HD camera

## Step 2



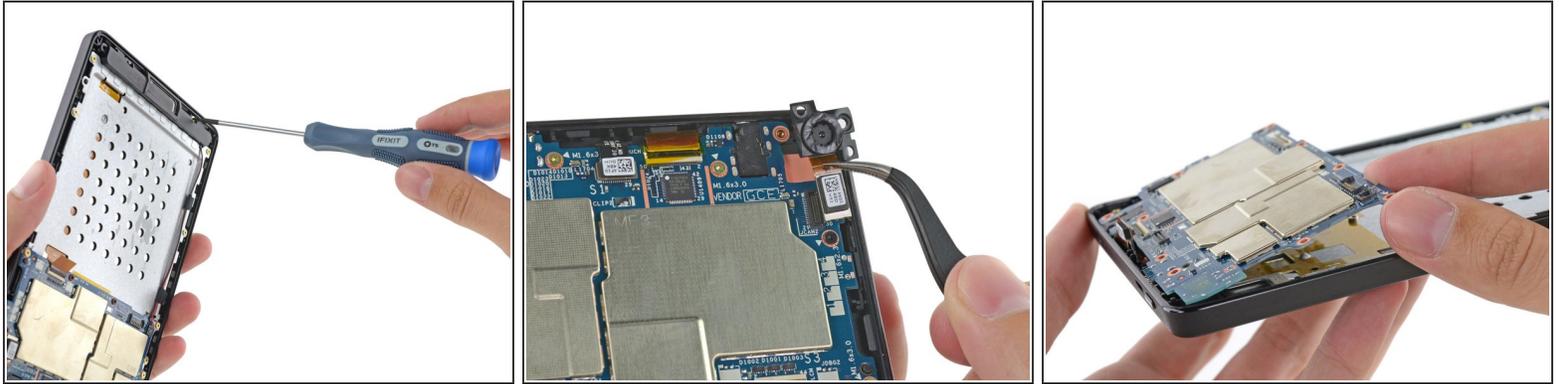
- Good news, everyone! You won't need anything fancier than an opening pick to crack this case. Plastic clips and no adhesive secure the panel.
- This looks familiar. It seems the Fire HD 6 is just a small [Kindle Fire](#).
- Already a very simple device, the Fire has undergone some serious streamlining internally (not to mention shrinking externally).
- It looks to us like the motherboard, rear camera, battery, and speaker are all clearly available for easy removal...

## Step 3



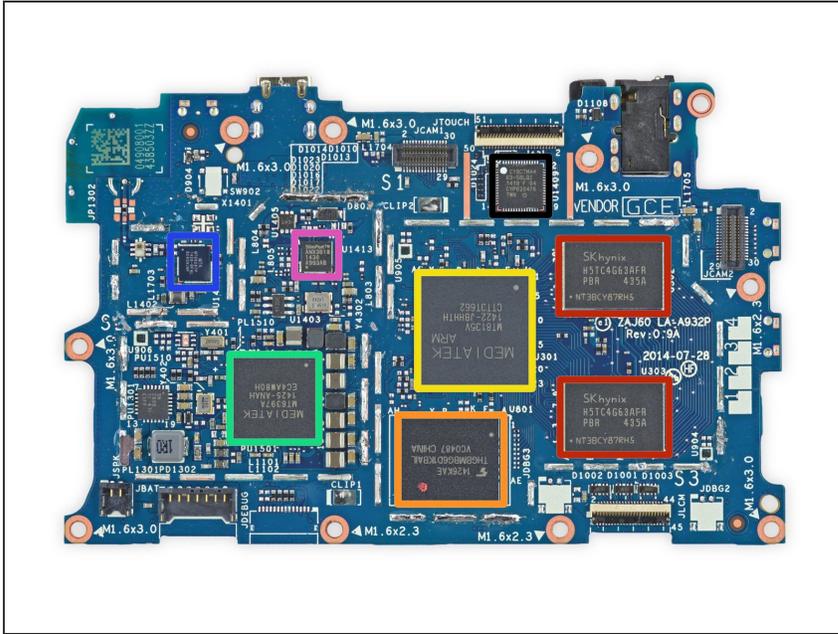
- Or so we thought. The battery, while up on top and otherwise ready to roll, is suffering from separation anxiety.
- ⓘ Dear Amazon, can you please tone down the [Kindle battery glue](#)? Thank you.
  - Even with our plastic card, we had to use excessive force to pry the battery out.
  - The 3.7 V, 3400 mAh (12.6 Wh) Lithium-ion Polymer battery in the Kindle Fire HD 6 is pretty hefty at 60 grams—about one fifth of the total weight of the Fire.
    - Amazon promises about 8 hours of use, but warns that "results may vary."
- ★ For the record, the [HDX 7"](#) clocks in at 17.29 Wh and the [original 7" Fire](#) tablet had a 16.28 Wh capacity.

## Step 4



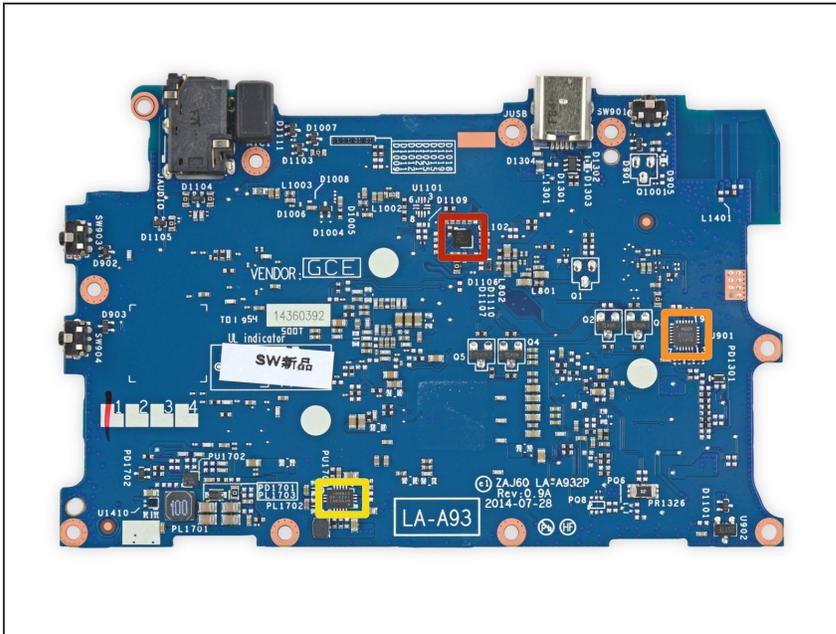
- Moving right along on the "removing modular components" train, we pull out the speaker, rear-facing camera, and *finally* (after *all* of that effort) the motherboard.
- The 2.0 MP rear-facing camera is...well...a camera.
  - Which is great if you ever wanted [2005 flip-phone](#) photography in a new unwieldy format.
- ⓘ According to Amazon, the rear-facing camera is capable of taking high-resolution photos (including panorama and HDR photos) and capturing 1080p HD video.

## Step 5



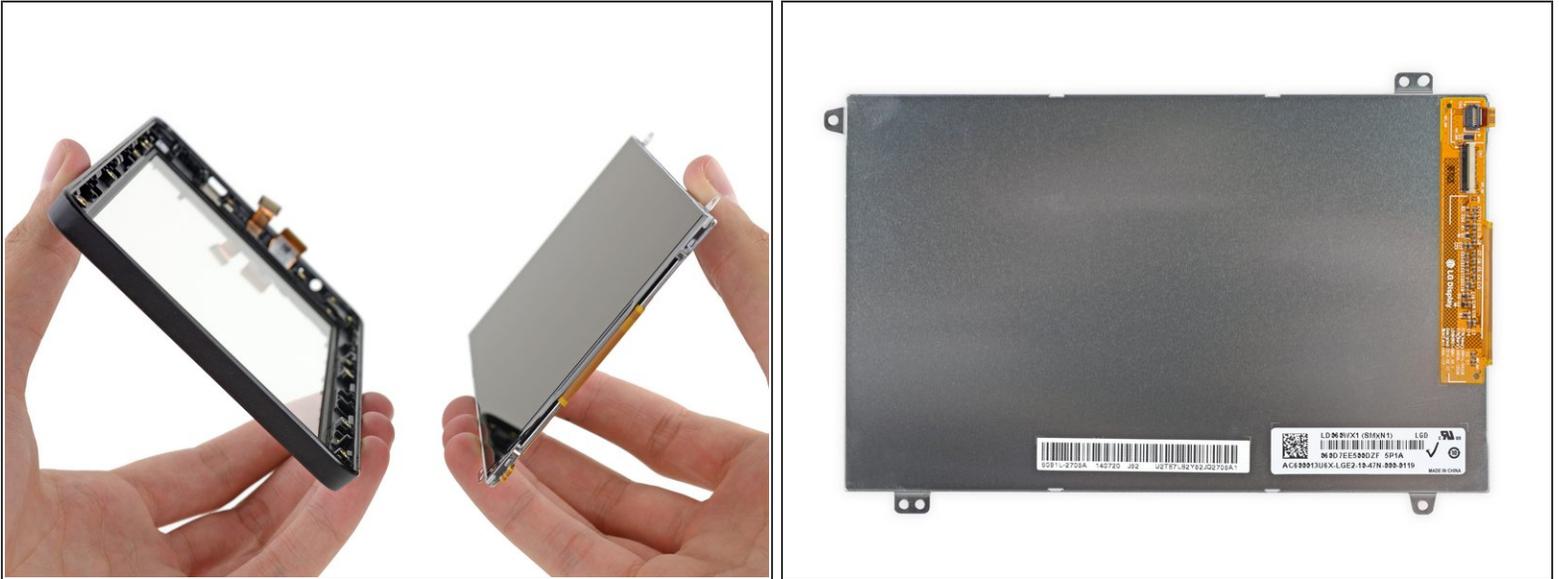
- These are the ICs that ignite the Kindle Fire HD 6:
  - SK Hynix [H5TC4G63AFR](#) 4 Gb (512 MB) DDR3L SDRAM (512 MB x 2 = 1 GB)
  - Toshiba THGBMBG6D1KBAIL 8 GB e-MMC NAND Flash
  - MediaTek [MT8135V](#) Applications Processor
  - MediaTek MT6397A 1425-ANAH EC4 AW80H
  - MediaTek MT6628TP Wi-Fi/Bluetooth Controller
  - SlimPort [ANX3618](#) SlimPort Connectivity IC
  - Cypress Semiconductor CY8CTMA4 63-56LQI 1419 F 04 CYP620476

## Step 6



- A few straggler ICs reside on the back side of the motherboard:
  - Maxim Integrated [MAX97236](#) Audio Amplifier with Jack Detection
  - M651 X171C1 L146
  - Novatek NT50357 1422-AD D7MN91

## Step 7



- Look ma, no optical adhesive! It's been a while since we've seen a tablet display come apart into non-fused glass and display components.
- ⓘ Definitely a design carryover from the [original Fire](#).
- The 6 inch, 1280 x 800 pixels (252 ppi) display is provided by LG Display.
- The display glass assembly contains the digitizer and the [VGA](#) front-facing camera.

## Step 8



- Fire HD 6 Repairability Score: **8 out of 10** (10 is easiest to repair).
  - The rear case is very easy to open, granting trouble-free access to the internals.
  - All the fasteners found inside are T5 Torx screws—one non-proprietary screwdriver is all you need.
  - Simplistic design and limited functionality means fewer components and less headache for disassembly.
  - Battery adhesive is much stronger than necessary, which makes disassembly hazardous.
  - The glass panel is fused to the front plastic frame, meaning a heat gun is required for replacing cracked glass (or you have to replace both components together).
- ⓘ Lack of available replacement parts has limited repair options in other Kindle models. We can only hope this model doesn't share the same fate.

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