Samsung Galaxy Tab 3 7.0 3G Teardown

Samsung Galaxy Tab 3 7.0 3G Teardown model: SM-T211

Written By: Denz Choe

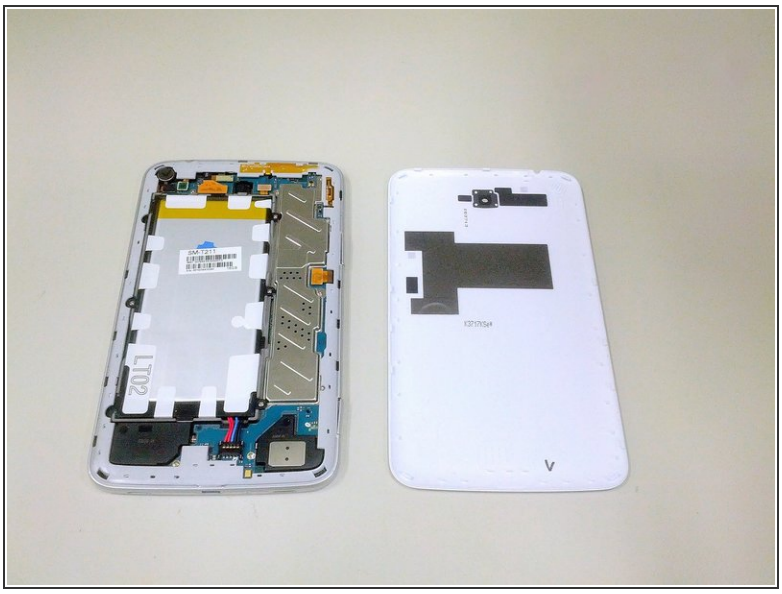
INTRODUCTION

Galaxy Tab 3, tearing down just for the fun of it. Why? Because we can do it?

TOOLS:

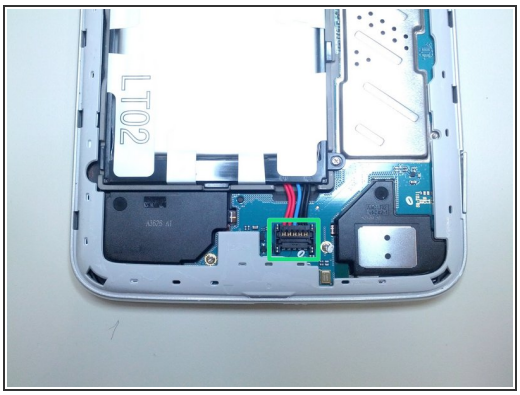
- Spudger (1)
- iFixit Opening Tools (1)
- Tweezers (1)
- Phillips #0 Screwdriver (1)

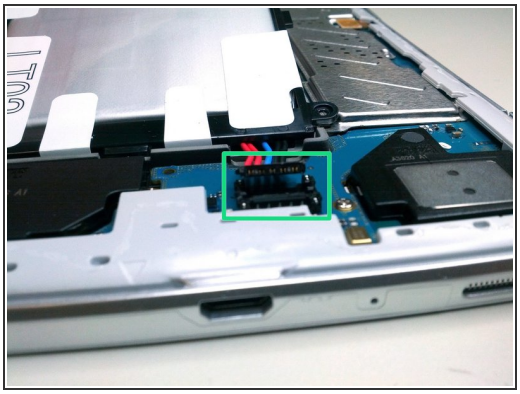
Step 1 — Samsung Galaxy Tab 3 7.0 3G Teardown

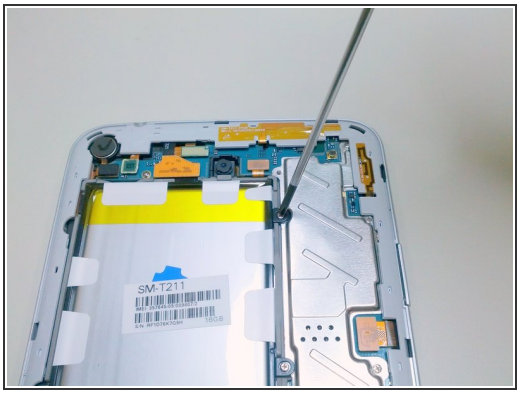


- Technical Specifications
  - 1.2GHz Dual Core, Marvell SoC
  - 1 GB of RAM
  - 1024 x 600 - 7 inch display
  - 16 GB flash memory
- Before you begin, remember to place the screen side on a smooth surface (I got my screen scratched while opening it on a rough table (Ouch!)
- Using plastic opening tools and a spudger, look for either the micro SD cover or the SIM cover and open it. You will be able to identify a tiny little gap just enough for the plastic opening tool (wedge) to go through
- Go around the device with the tool gently. Your ears will be able to tell when the plastic catch detach itself from the main body by listening for "clicks"

Step 2





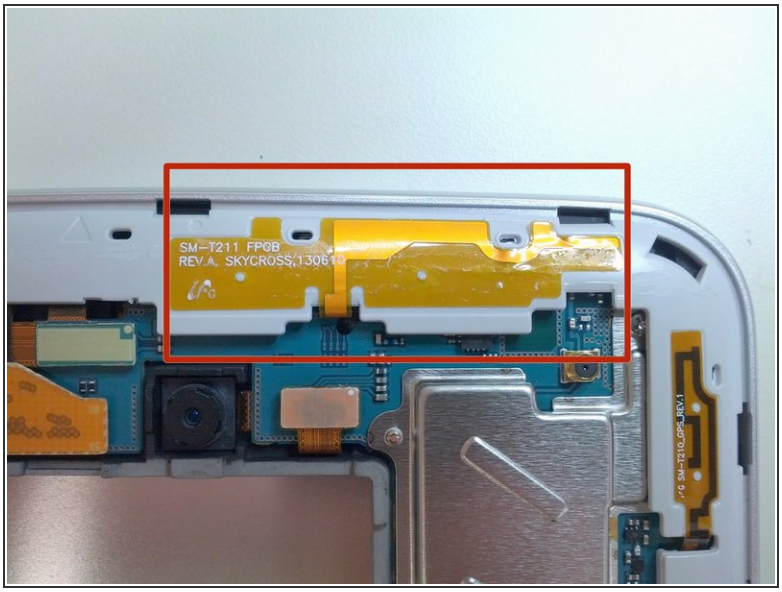


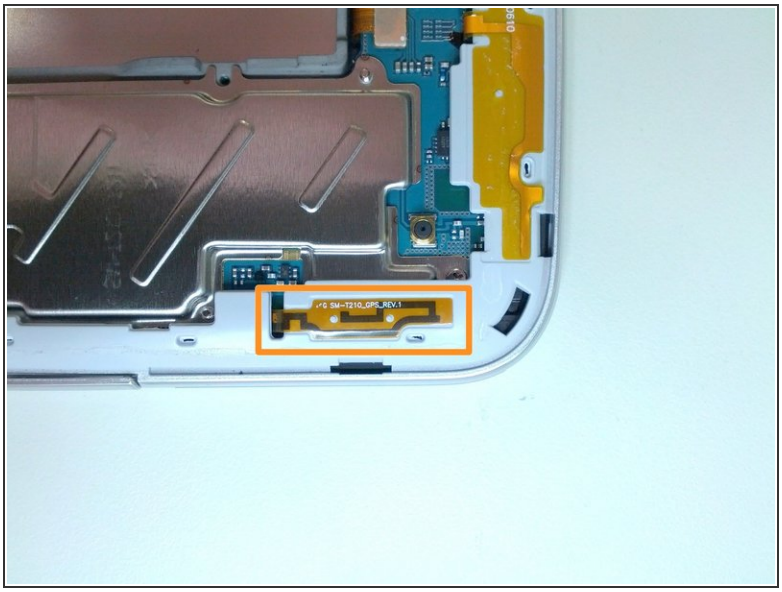
- Once the back cover has been detached, you might want to detach the battery first to lighten the Tab's body when flipping around

⚠ Gently lift up the connector with the help of a tweezer.

- Unscrew the batteries with Phillips #00 Screwdriver

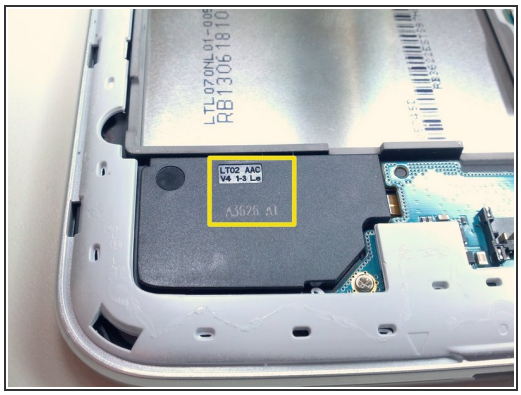
Step 3

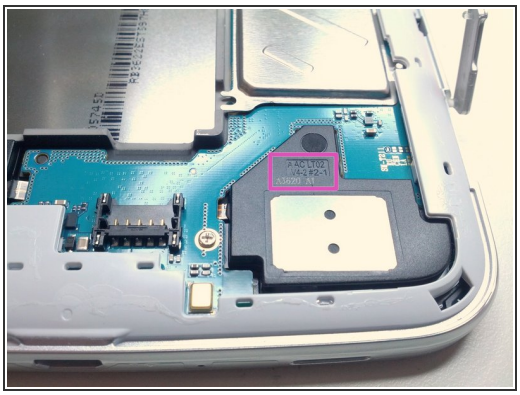




- Removing the back cover exposes the PCB antenna on the plastic main body
  - 2.4 GHz flexible PCB antenna for WiFi and Bluetooth
  - GPS flexible PCB antenna

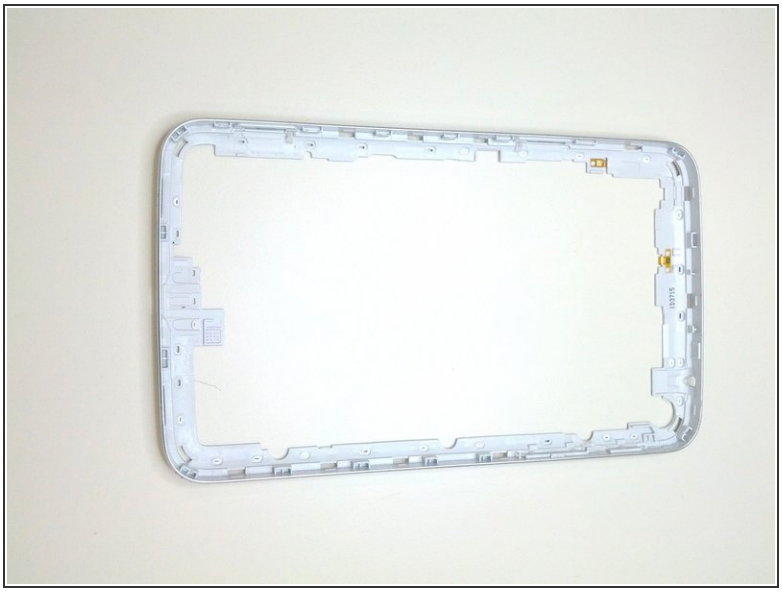
Step 4





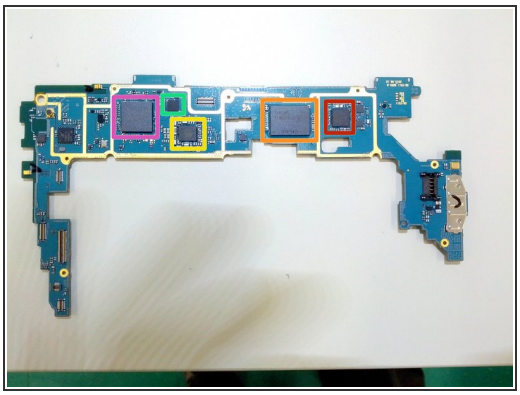
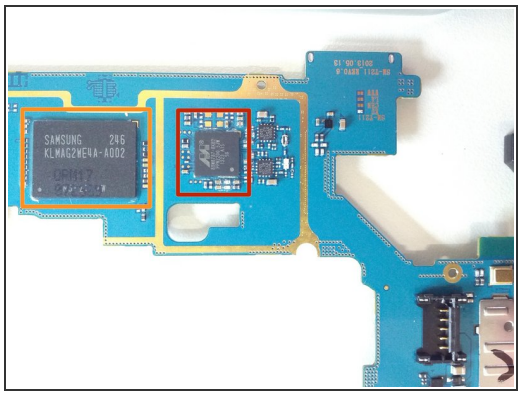
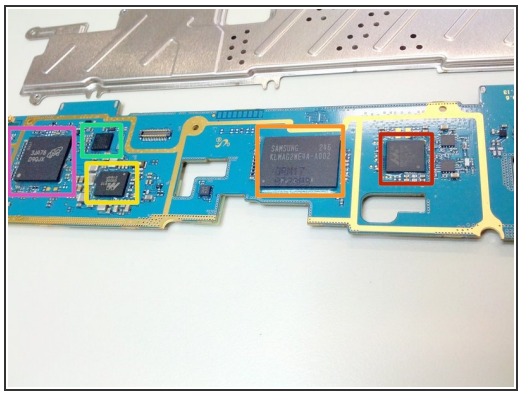
- Opening the back cover reveals more secrets
  - Right Speaker information: LT02 AAC V4 1-3 Le A3626 A1
  - Left Speaker information: AAC LT02 V4-2 #2-1 A3620 A1
  - Removing the battery exposes the LCD-Shield pair manufacturing number GP3100/3110/3113

Step 5



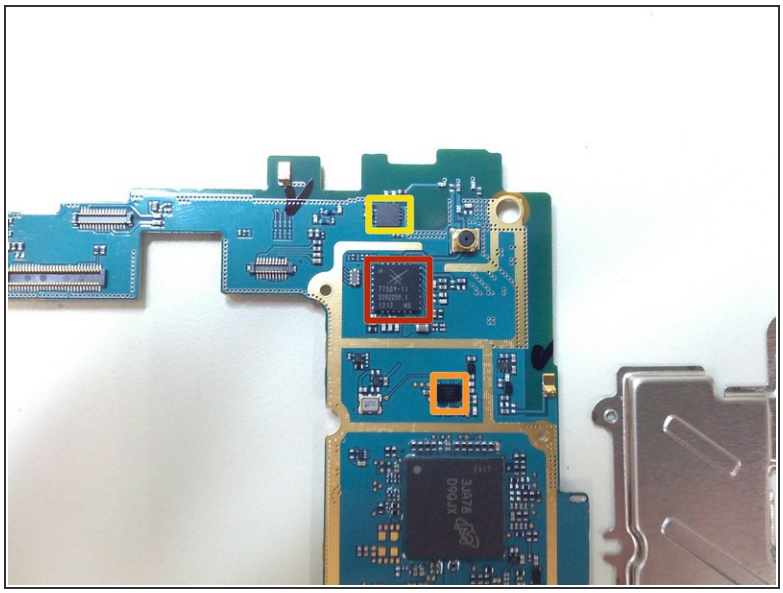
- Unlike the Tab 2 teardown, the motherboard on the Tab 3 isn't that easy to remove compared to its predecessor.
- Using a Makerbot wedge (as my plastic opening tool), gently go around the corners of the screen to unsnap the side body from the main body of the device

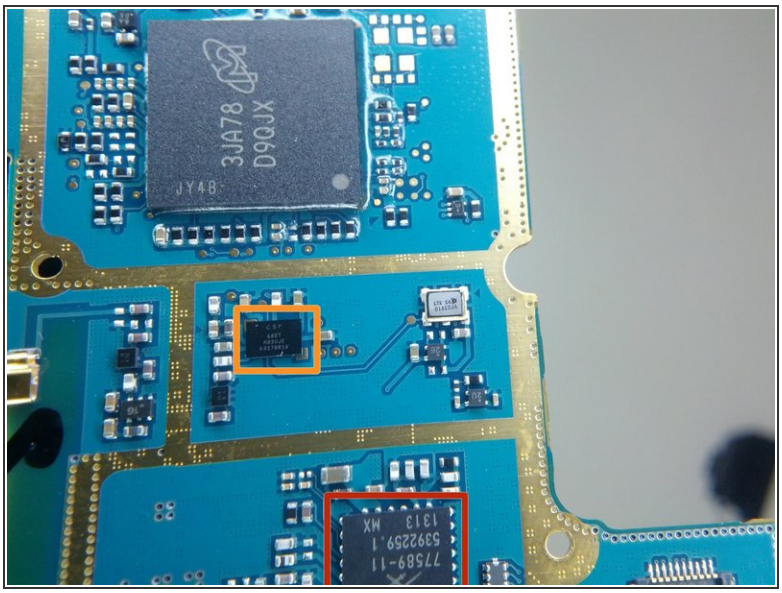
Step 6

- Unscrew the motherboard (shape doesn't look much different from its predecessor) and remove it from the main body (LCD's body). With the motherboard free, we get a look at all the chips onboard
  - Marvell Avastar 88W8787 WLAN/Bluetooth/FM Single-Chip SoC
  - Samsung KLMAG2WE4A-A002 16GB NAND flash & eMMC
  - Power Manager 88PM812 (1205-004832), Marvell part 812-00D0E-319AP
  - Unknown 09529 P47A1G CSSP AL3VX 1320 SG
  - DDR2 SDRAM MT42L256M32D2LG-18, Micron part 3JA78 D9QJX, possibly 1 GB
    - Marvell's PXA986 SoC (with dual ARM Core Cortex A9, GPU, Modem Processor, & DSP) possibly seats underneath this part just like its predecessor's design

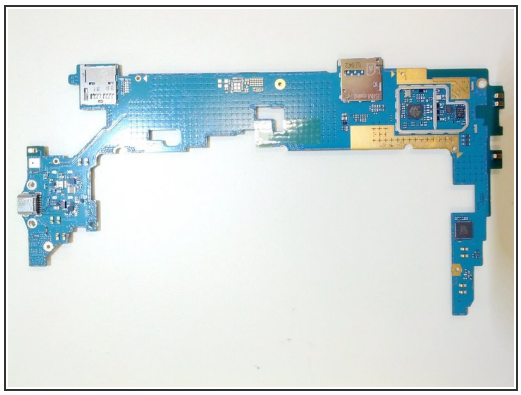
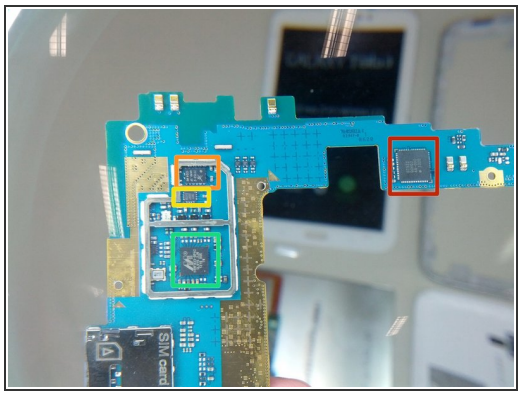
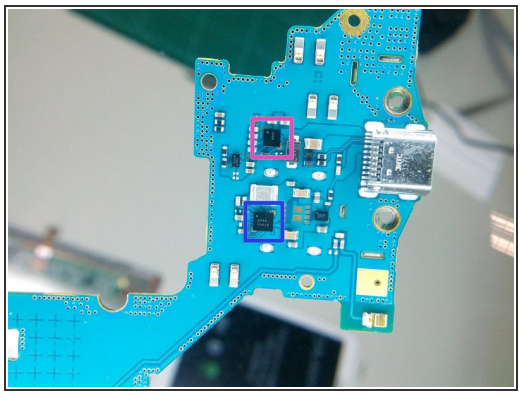
Step 7





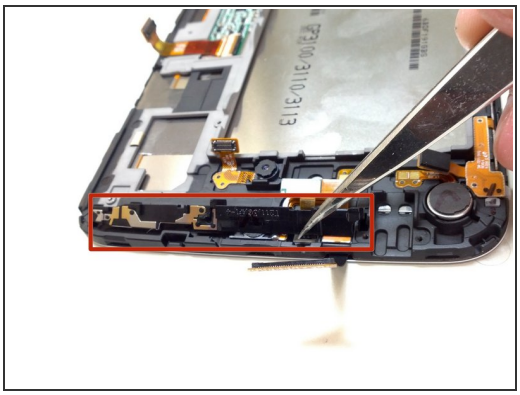
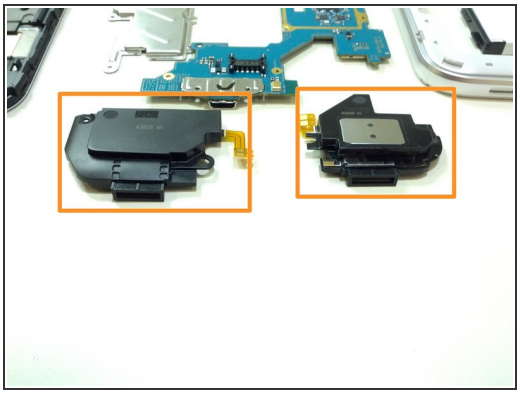
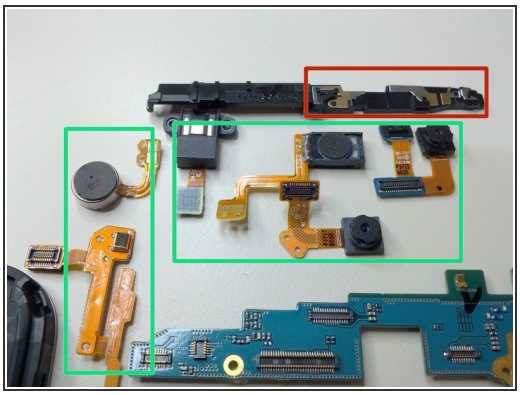
- More parts unveil
  - Skywork's Front End Module, 77589-11
  - GPS-Glonass RECEIVER, CSRG05TA03, 60ST A03UJE K317BR18
  - Unknown part ASP01 AD152 1314

Step 8

- Charging IC SMB358SET-1939Y
- C-touch controller (1205-004830) BT532 Q0HQ3 4N-000 1320
- Skyworks Amplifier Module SKY77752
- Skyworks 0.1–3.0 GHz DP5T Switch, SKY13397
- Marvell's 3G Modem (part of the PXA986 platform solution) 88RF833
- USB commutator TSU6721

Step 9

- It's time to take off the rest of the peripherals

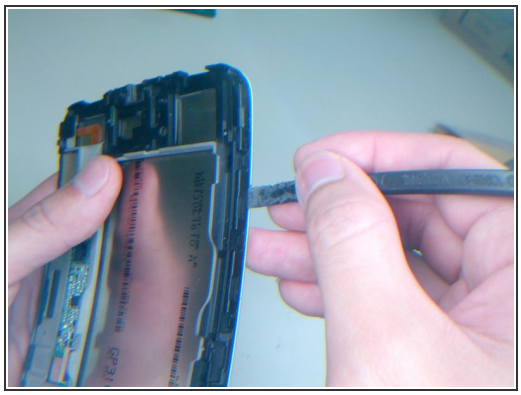
- These parts are usually glued down to the enclosure, carefully strip it upwards with a good set of tweezers or sharp nails.

- First stop, the 3G and GSM antenna

- Next, these tiny speaker boxes

- Then the side buttons, earphones jack, vibrator motor, earpiece speakers, back camera, front camera + IR + proximity sensor, noise cancellation mic+side buttons,

Step 10


- Here's some photos that I have missed out. My apologies to the chaps on the comments section below for being a little late for my reply :)

Taking out the digitizer was actually an easy feat. Preferably, use a heating element to quicken the opening process. Take note, it is glued around the sides

- Now if you are lacking an iOpener tool from iFixit or a heat gun, you can improvise! Just fill a huge water proof plastic bag with boiling hot water; rest it on top of the screen for 2 minutes. [Credit goes to Felix Last for his advice]

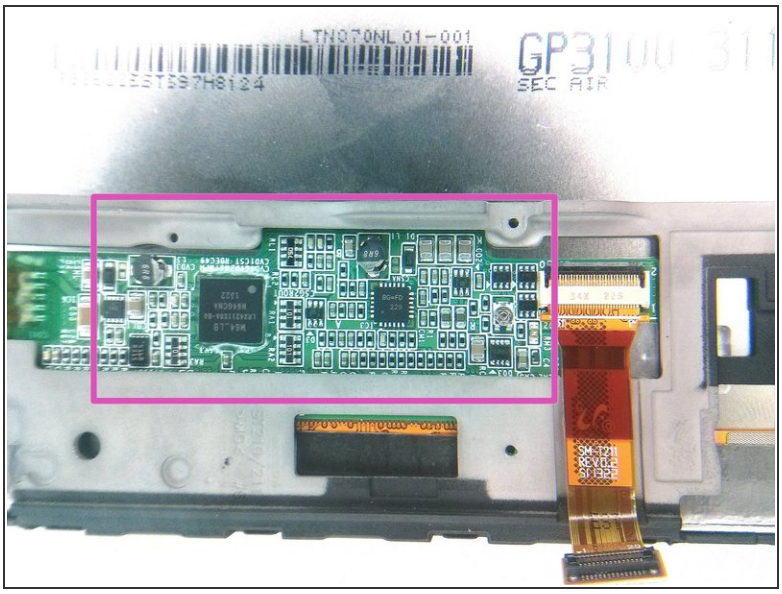
My first attempt was without using a heating element (Big Mistake!), I used my finger nail to try to make an opening. Unless you have an already damaged screen, I would avoid doing so.

- Shift the bag slightly to reveal the weakest point on the touch panel (usually at the middle) and with the help of a spudger, attempt to slot in gently for an opening. Just like the previous steps, go around it gently and once all the glue edges are up, lightly lift it up

Take note of the position of the home button

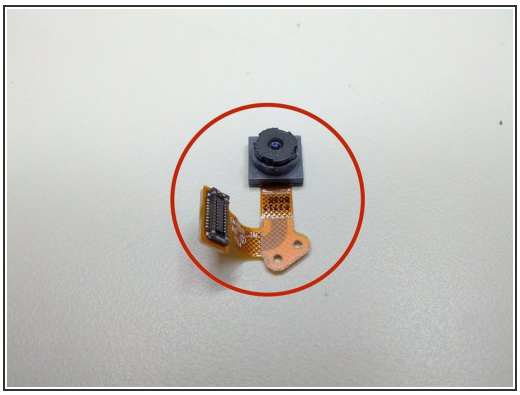
- Last I check on "this site", there are good load of shipments available for order from China

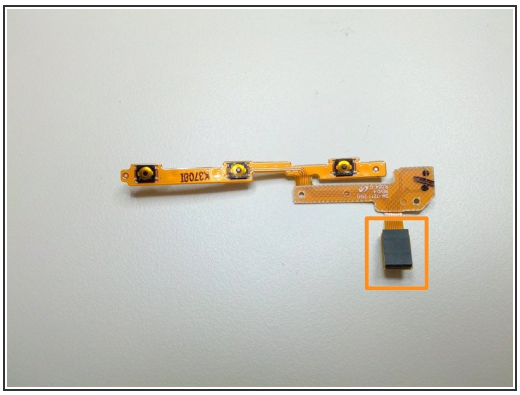
Step 11

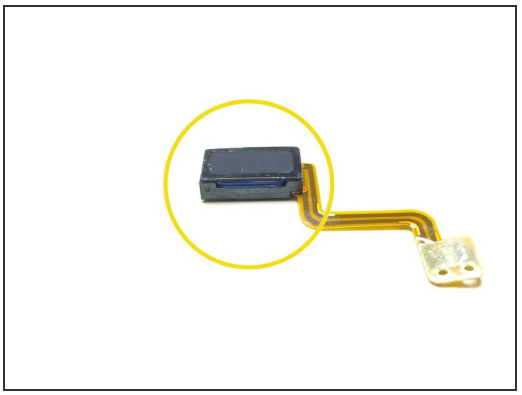


- The battery reveals to be a 3.7 V, 4000 mAh type. Manufactured by Samsung SDI Vietnam
- Display Controller Board. The LCD panel ID: LTN070NL01 registered on Samsung's Product Selection Guide . It seems that the entire LCD is replaceable (without the LRX4211 controller chip); according to this site, they do have stock for it.

Step 12

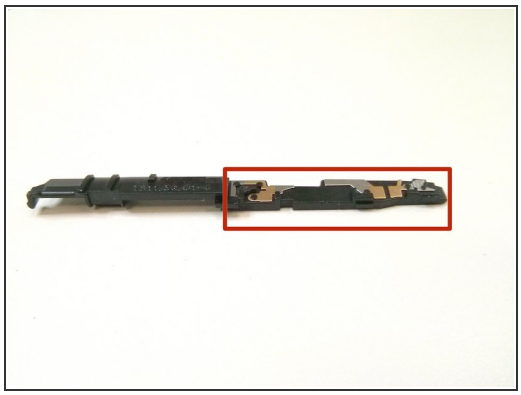
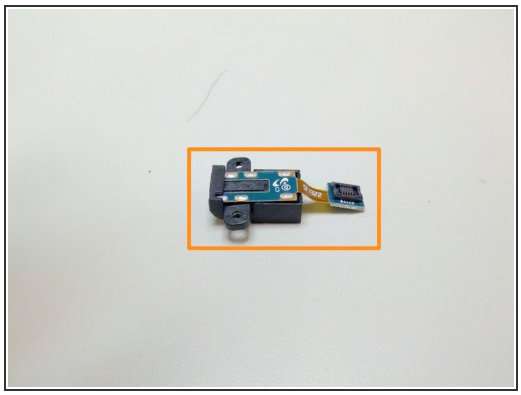
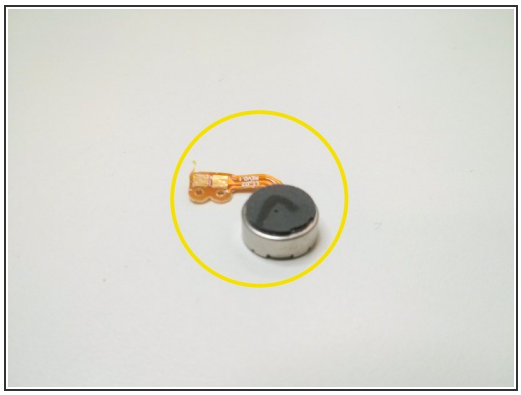






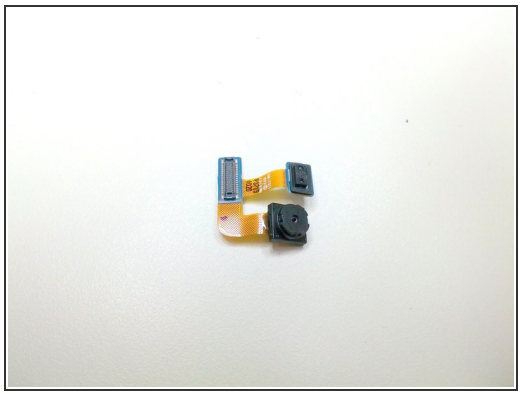
- Rear camera from unknown manufacturer
- MEMS noise cancellation microphone and side buttons on flex pcb. Microphone and connector on underside. Unknown manufacturer
- Earpiece from unknown manufacturer

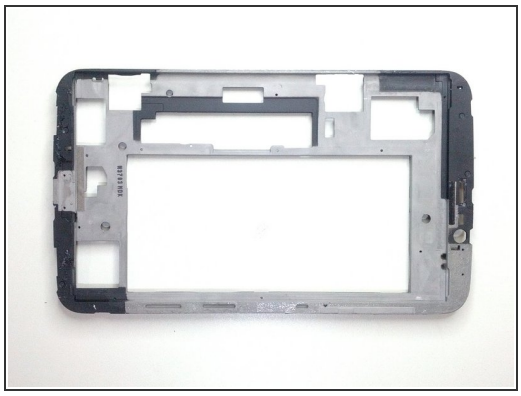
Step 13

- Sheet Metal and Plastic Carrier Antenna, unknown manufacturer
- Headphones jack
- Vibrating motor

Step 14





- Front camera, with proximity and light sensor part
- Chassis of the main body (front and back photographed)

Step 15

- The Samsung Galaxy Tab 3 7.0 is an easy device to disassemble. Absolutely no hassle, just a lot of glue you have to really take note of (in case you may use too much force)

That's it, leave more comments below if you would like to have more additional details of the specific part you are interested in.

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