



# Samsung Freeform 4 Teardown

This is the teardown for the Samsung Freeform 4. This teardown should not be used for repairing the device.

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## TOOLS:

- [Essential Electronics Toolkit](#) (1)
  - [Soldering Iron](#) (1)
  - [Heat Gun](#) (1)
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## Step 1 — Samsung Freeform 4 Teardown



- Here stands the Samsung Freeform 4. This phone has a full QWERTY keyboard, 2MP camera, and even a built in web browser!
- This phone tips the scales at just 3.35 ounces! It comes in at 4.35" tall, 2.39" wide, and 0.43" thick!
- Has a Single core, 480 MHz, ARM11 processor.

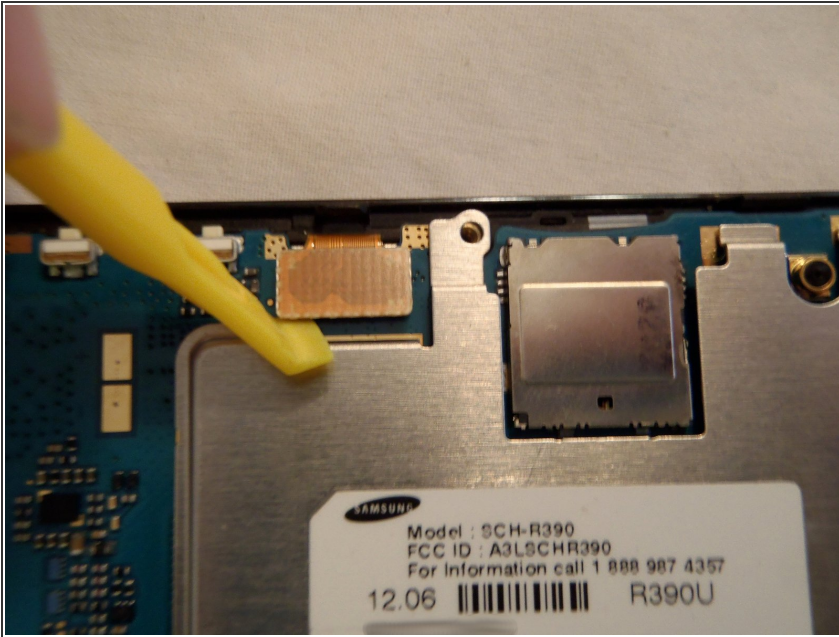
## Step 2



- This phone packs in a 1000mAh 3.7v LiPo battery, for a 6.5 hour talk time and 288 hour standby time.
- That means this phone can go almost two weeks without charging!



## Step 3



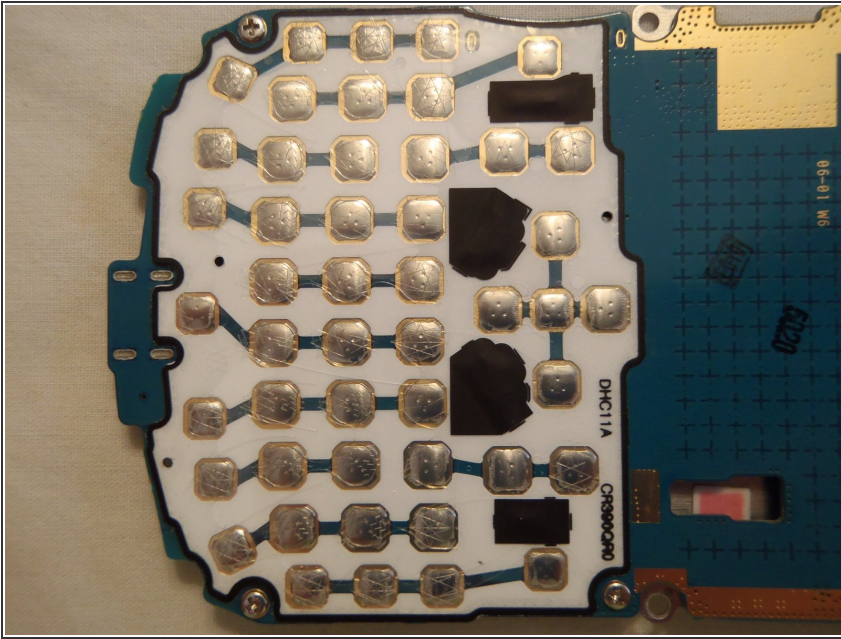
- After further tearing down, we can see that flex cables are used. This increases repairability, as flex cables are easier to replace than soldered cables.

## Step 4



- 2MP Camera
- Vibrator Motor
- Earpiece Speaker
- MicroSD Card Reader
- Liquid Damage Indicator (Normally white, but red when touches liquid)
- Headphone Jack

## Step 5



- This is the otherside of the motherboard.
- The motherboard has contact points underneath a film. When you press a key, it presses that contact point which completes the circuit and registers the "button push".

## Step 6



- Here is the other part we removed. The keypad is just set in by gravity, and is easily removed from the frame.
- Since there is nothing to corrode or damage, now is an excellent time to clean the keypad!

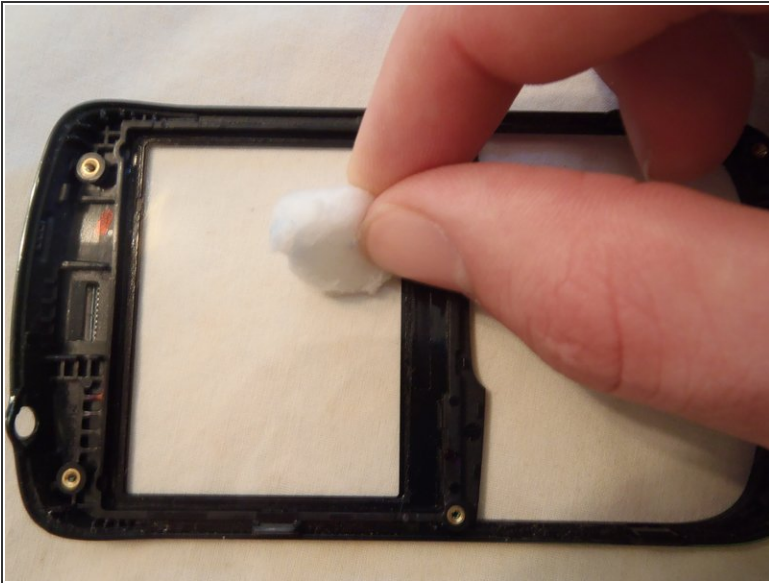
## Step 7



- The display is a mere 360x240 pixels, making for a 167 PPI display.
- The display has adhesive around it, attaching it to the frame.



## Step 8



- I am giving this phone a 5 on a scale of 1 to 10, with 10 being easiest to repair, and 1 the hardest.
  - Flex cable used for LCD
  - Rear panel easily removable, as well as battery.
  - Earpiece speaker removal requires soldering.
  - LCD is glued into the front bezel.
  - Volume buttons and SD card reader are soldered permanently fixed onto the motherboard.
  - QWERTY keypad is unrepairable, and liquid can easily get trapped inside, causing shorts and issues.
- The rear panel with the antennas and external speaker were accidentally left out of this pic. Also, the cotton ball was used just to clean up the plastic. It doesn't come with the phone :-)