



# Samsung Galaxy S20 Plus Battery Replacement

This guide shows how to remove and replace the...

Written By: Tarun Thiruma



## INTRODUCTION

This guide shows how to remove and replace the battery for the Samsung Galaxy S20 Plus.

The battery is held in place with strong adhesive. High concentration (over 90%) isopropyl alcohol is necessary to loosen and release this adhesive.

**If your battery is swollen, [take appropriate precautions](#) and do not heat your phone.**

**For your safety, discharge your battery below 25% before disassembling your phone.** This reduces the risk of a dangerous thermal event if the battery is accidentally damaged during the repair.

You'll need replacement adhesive in order to complete this repair.



### TOOLS:

- [iOpener](#) (1)
- [Suction Handle](#) (1)
- [iFixit Opening Picks \(Set of 6\)](#) (1)
- [Phillips #00 Screwdriver](#) (1)
- [Tweezers](#) (1)
- [Spudger](#) (1)
- [Isopropyl Alcohol](#) (1)





### PARTS:

- [Galaxy S20 Plus Replacement Battery](#) (1)
- [Galaxy S20 Plus Battery Adhesive](#) (1)

## Step 1 — Heat the bottom edge



 **Unplug and power off your phone before you begin.**

- [Heat an iOpener](#) and apply it to the **back cover's bottom edge** for two minutes.
-  A hair dryer, heat gun, or hot plate may also be used, but be careful not to overheat the phone—the display and internal battery are both susceptible to heat damage.

## Step 2 — Separate the bottom edge adhesive



- Apply a suction cup to the back of the phone, as close to the center of the bottom edge as possible.
    - ① If your display is badly cracked, covering it with a layer of clear packing tape may allow the suction cup to adhere. Alternatively, very strong tape may be used instead of the suction cup. If all else fails, you can superglue the suction cup to the broken glass.
  - Pull on the suction cup with strong, steady force to create a gap between the back cover and the frame.
  - Insert the point of an opening pick into the gap.
    - ① Due to tight tolerances, this may take multiple attempts of reheating with the iOpener and separating with the suction cup before you get it right.
    - ① If you are having trouble creating a gap, apply more heat to the edge and try again.
- ⚠ Do not apply excessive force with the pick, or you risk cracking the back cover glass.**

### Step 3



- Slide the pick back and forth along the bottom edge to slice through the adhesive.

**⚠ Do not attempt to cut the adhesive near the corners of the phone where the glass is curved or you risk cracking the glass panel.**

- Leave your opening pick in the seam to prevent the adhesive from resealing.

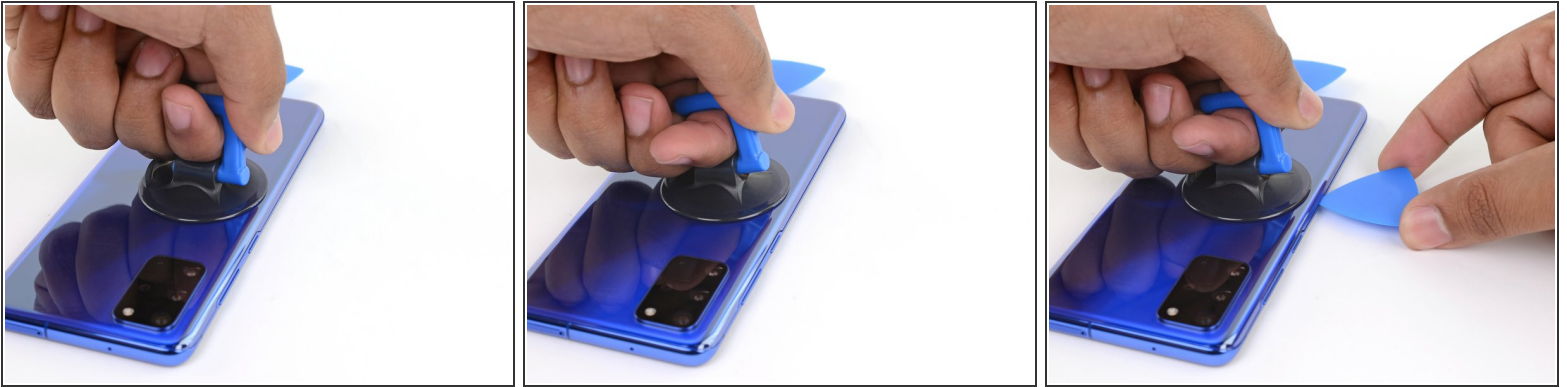
### Step 4 — Heat the left edge



- Apply a heated iOpener to the left edge of the back cover for two minutes.



## Step 5 — Separate the left edge adhesive



- Apply a suction cup to the back of the phone, as close to the center of the left edge as possible.
- Pull on the suction cup with strong, steady force to create a gap between the back cover and the frame.
- Insert the point of an opening pick into the gap.
  - ⓘ As the glass on this edge is curved, you won't be able to insert this pick very far. As long as the very tip of the pick is underneath the glass's edge, you will be able to proceed.
  - ⓘ Due to tight tolerances, this may take multiple attempts.
  - ⓘ If you are having trouble creating a gap, apply more heat to the edge and try again.
- You can try also applying a few drops of high concentration (over 90%) isopropyl alcohol into the seam to help loosen the adhesive.

**⚠ Do not apply excessive force with the pick, or you risk cracking the back cover glass.**

## Step 6



- Once the pick is underneath the glass's edge, tilt it downward and insert it further to fully separate the back cover's adhesive.

## Step 7



- Slide the pick all along the left edge of the phone to separate the back cover's adhesive.  
**⚠ Take care when sliding across the ridge in the frame surrounding the volume and power buttons—the cutout in the glass may make it more prone to cracking.**
- Leave your pick under the left edge of the glass to prevent the adhesive from resealing.

## Step 8 — Heat the right edge



- Apply a heated iOpener to the right edge of the back cover for two minutes.
- ⓘ A hair dryer, heat gun, or hot plate may also be used, but be careful not to overheat the phone—the display and internal battery are both susceptible to heat damage.

## Step 9 — Separate the right edge adhesive



- Apply a suction cup to the back of the phone, as close to the center of the right edge as possible.
- Pull on the suction cup with strong, steady force to create a gap between the back cover and the frame.
- Insert the point of an opening pick into the gap.
- ⓘ Like with the previous edge, you will need to tilt the opening pick downward to fully insert it underneath the back cover.



## Step 10



- Slide the pick all along the right edge of the phone to separate the back cover's adhesive.
- Leave your pick under the right edge of the glass near the top of the device to prevent the adhesive from resealing.
- ❗ As you do this, the back cover may release one or both of the other picks and allow them to fall free. If this occurs, set the pick(s) aside as the bottom edge shouldn't reseal from this point onward.

## Step 11 — Heat the top edge



- Apply a heated iOpener to the top edge of the back cover for two minutes.

## Step 12 — Separate the top edge adhesive



**⚠** The glass near the corners of the back cover is curved and very susceptible to cracking. Be gentle during this step to prevent damaging your back cover.

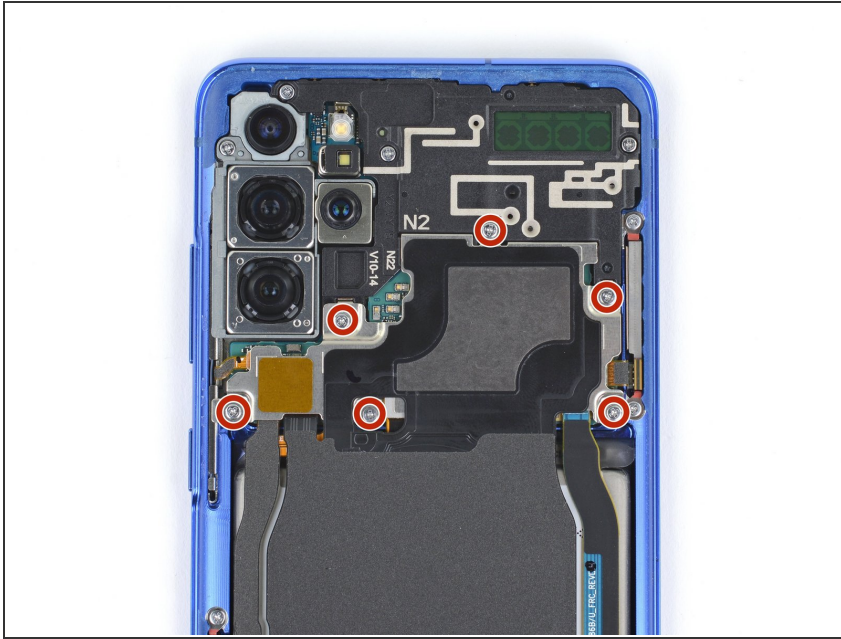
- Gradually slide the pick from the right edge of the device around the top right corner.
  - Continue slicing along the top edge all the way around to the left edge to fully separate the back cover adhesive.
- i** If the slicing becomes difficult at any point, stop and reapply heat before continuing.

## Step 13 — Remove the back cover



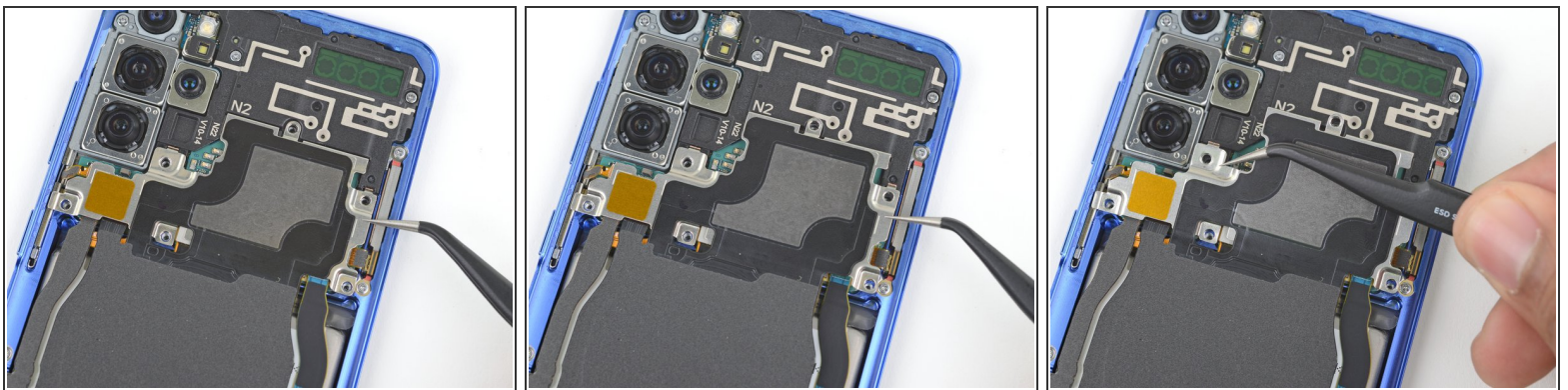
- Lift the back cover slowly. Use opening picks to slice any remaining adhesive.
  - Remove the back cover.
- ✦ During reassembly:
- This is a good point to power on your phone and test all functions before sealing it up. Be sure to power your phone back down completely before you continue working.
  - Remove any adhesive chunks with a pair of tweezers or your fingers. Apply heat if you're having trouble separating the adhesive.
  - If you're using Samsung custom-cut adhesives, [follow this guide](#).
  - If you're using double-sided tape, [follow this guide](#).

## Step 14 — Unfasten the motherboard bracket



- Use a Phillips #00 screwdriver to remove the six 4 mm-long screws securing the motherboard bracket.
- ⓘ Throughout this repair, [keep track of each screw](#) and make sure it goes back exactly where it came from.

## Step 15 — Unclip the motherboard bracket

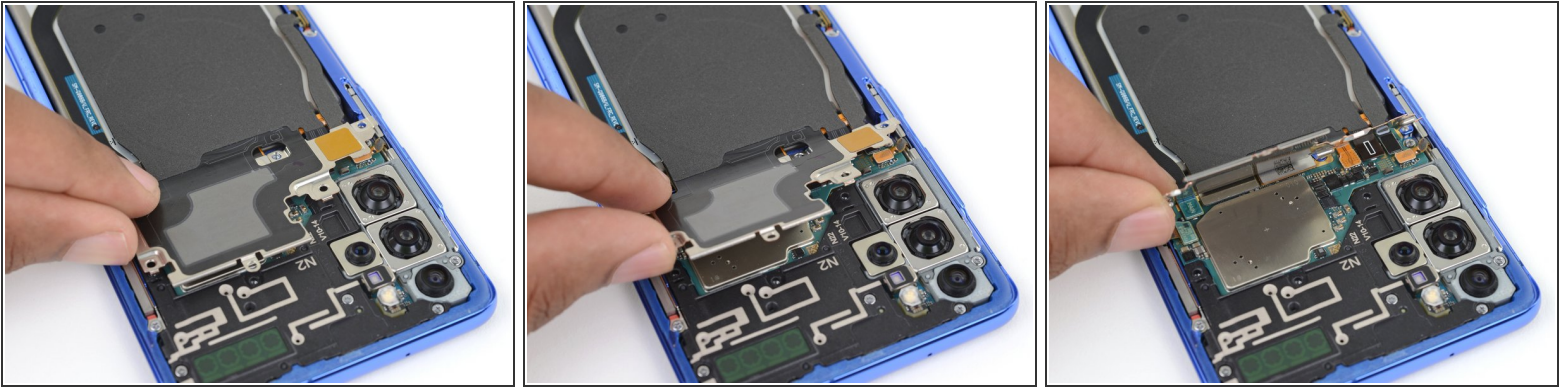


- Use a pair of tweezers to gently pull up and unclip the motherboard bracket from the plastic midframe.

**⚠ Do not completely remove the bracket yet, as its still attached to the wireless charging coil.**



## Step 16



- Gently tilt up the motherboard bracket so the orange battery connector is accessible.

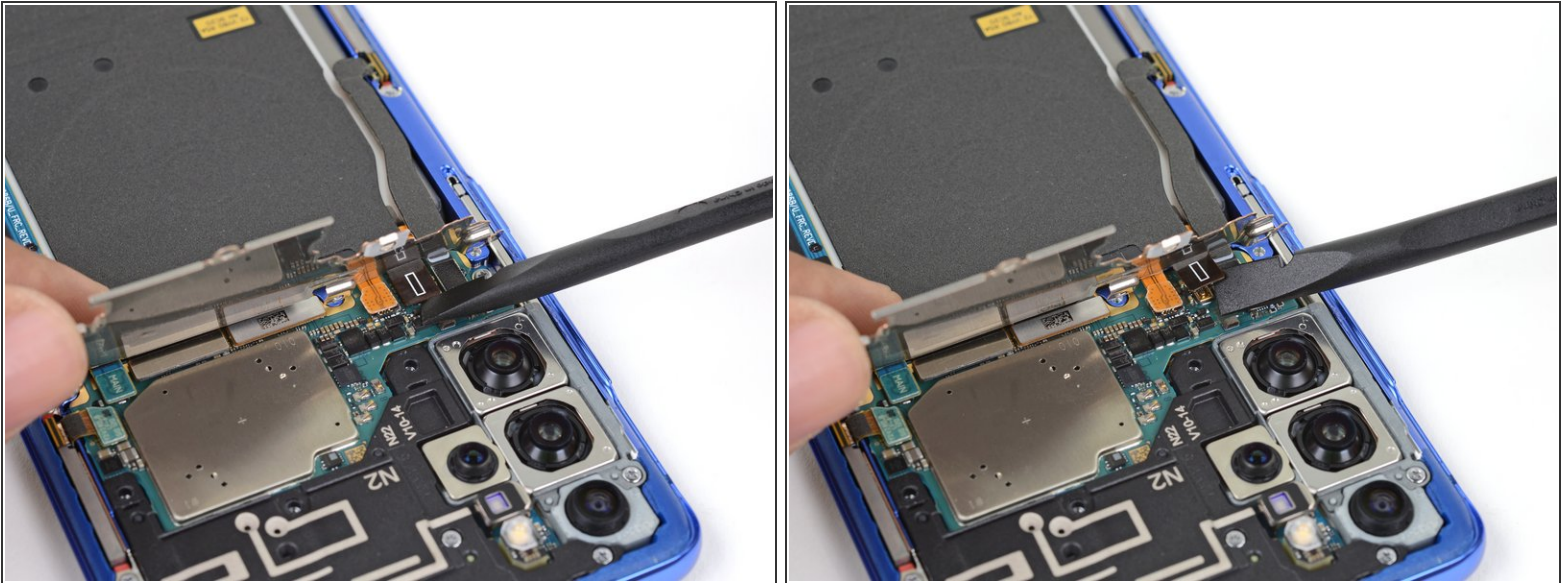
## Step 17 — Disconnect the battery



- Use a spudger to pry up and disconnect the battery connector.

**⚠ When you disconnect connectors like these, be careful not to dislodge the small surface-mounted components surrounding the socket.**

## Step 18 — Disconnect the wireless charging coil



- Use a spudger to pry up and disconnect the wireless charging coil connector.

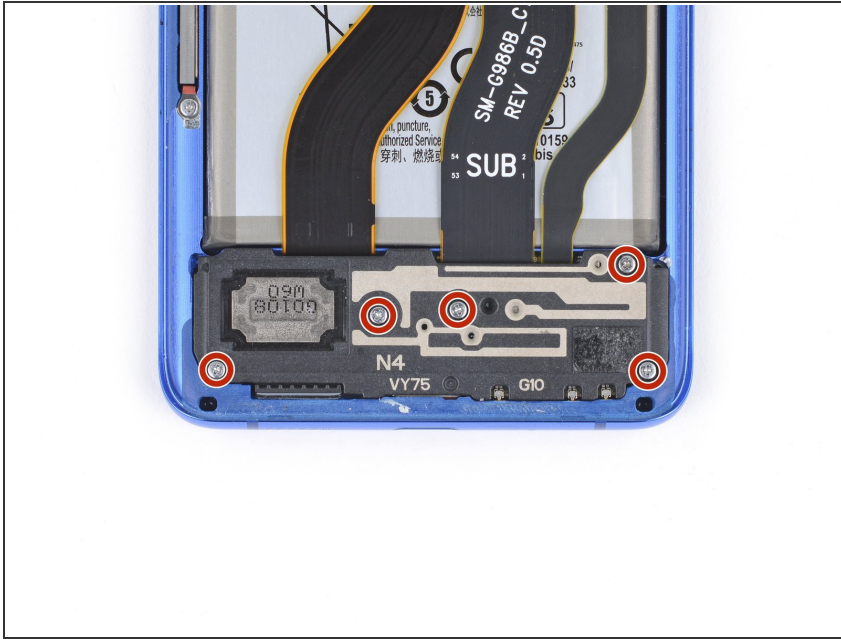
## Step 19 — Remove the wireless charging coil



- Use a pair of tweezers to gently peel the wireless charging coil away from the device.
  - Remove the wireless charging coil.
- ✦ During reassembly, first reconnect the charging coil and battery connectors and refasten the motherboard bracket screws to properly align everything into place, then firmly press the coil pad down to adhere it.



## Step 20 — Unfasten the lower midframe



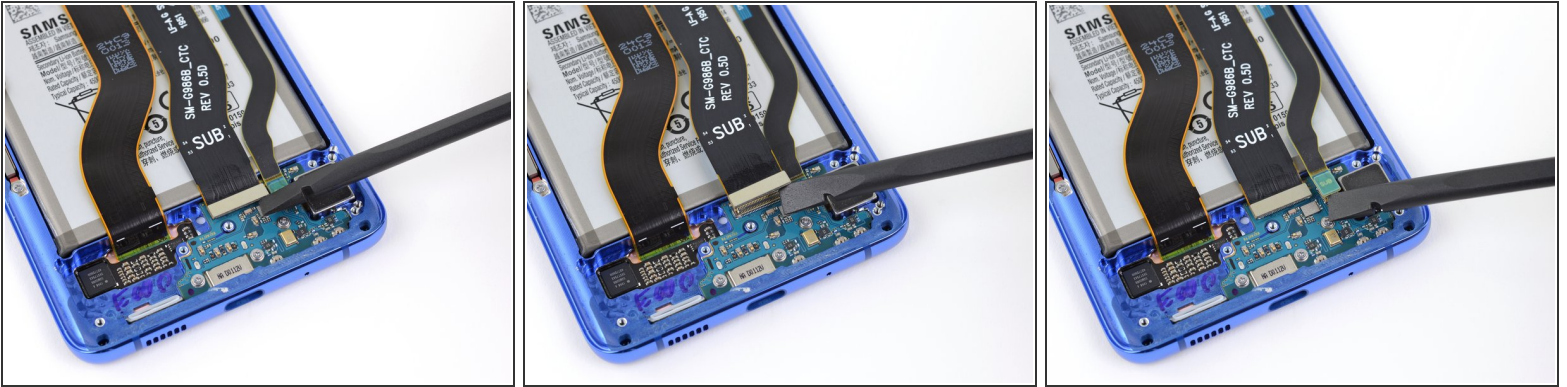
- Use a Phillips #00 screwdriver to remove the five 4 mm-long screws securing the loudspeaker and lower midframe.

## Step 21 — Remove the loudspeaker



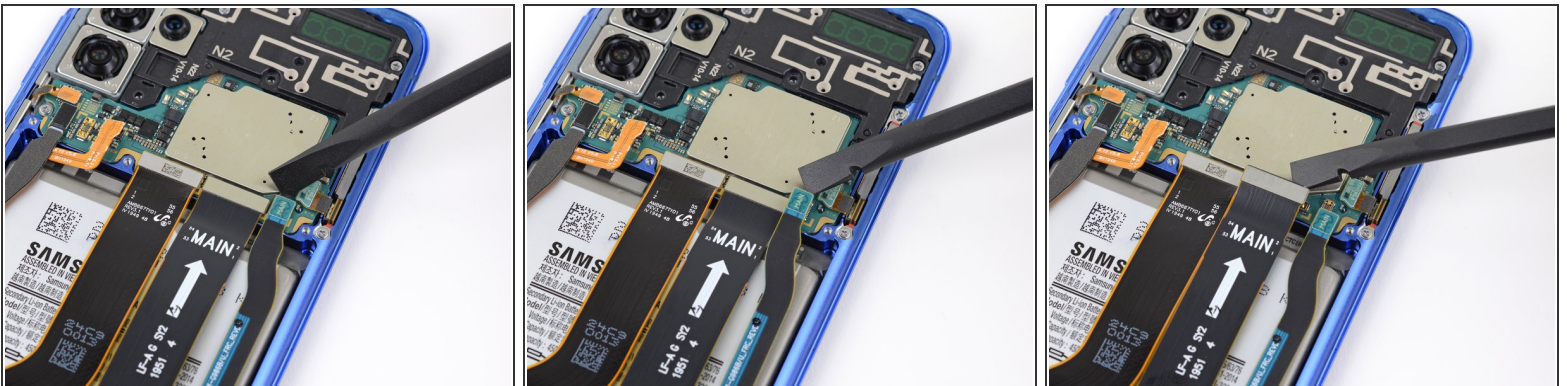
- Insert the point of a spudger or a pair of tweezers into the notch in the top left corner of the midframe and pry up to release the clips holding it in place.
- Remove the loudspeaker and lower midframe.

## Step 22 — Disconnect the daughterboard



- Use a spudger to pry up and disconnect the main and auxiliary flex cables from the daughterboard near the bottom of the device.
- ☑ To re-attach [press connectors](#) like this one, carefully align and press down on one side until it clicks into place, then repeat on the other side. Do not press down on the middle. If the connector is misaligned, the pins can bend, causing permanent damage.

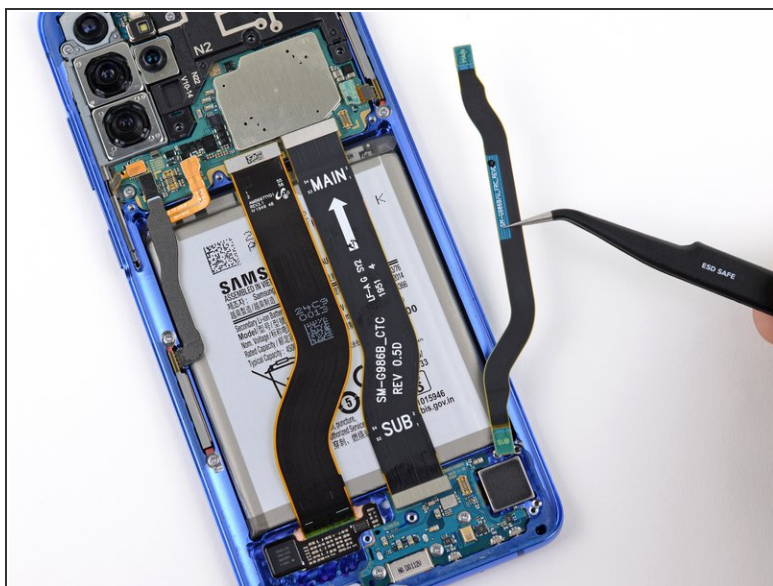
## Step 23 — Disconnect the main flex cables



- Use a spudger to pry up and disconnect the main and auxiliary flex cables from the motherboard.



## Step 24 — Remove the main flex cables



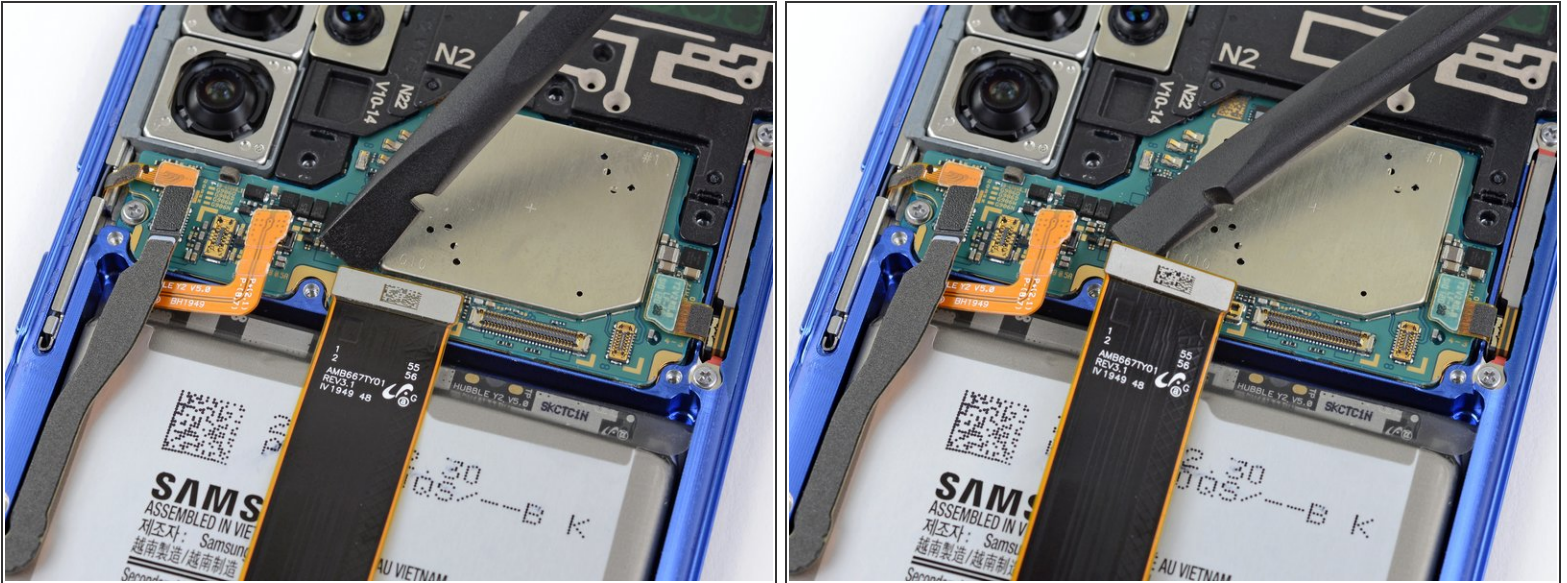
- Gently peel up and remove the main and auxiliary flex cables.

## Step 25 — Disconnect the left 5G antenna



- Pry up and disconnect the left 5G antenna cable from the motherboard.

## Step 26 — Disconnect the main display cable



- Use a spudger to pry up and disconnect the main display flex cable from the motherboard.

## Step 27 — Reposition the display and 5G cables



- Gently peel up and bend the display and left 5G antenna flex cables out of the way of the motherboard and battery.



## Step 28 — Apply isopropyl alcohol



- Apply high concentration (over 90%) isopropyl alcohol to the gaps in between the frame and the edges of the battery.
- ⓘ The battery is held in place with a large amount of adhesive, so a significant amount of alcohol may be necessary.
- Tilt the device as you apply the alcohol help it penetrate the adhesive underneath the battery.
- After you apply the alcohol, continue tilting the phone in all directions for two to three minutes to help the alcohol penetrate further.

## Step 29 — Lift the battery from its adhesive



- Apply a suction handle to the center of the battery.
- Brace the top and bottom of the device against your work surface with one hand and firmly pull up on the suction handle with the other.
- ❗ The battery will not budge the first time you do this. Repeat the process (add alcohol, wait 2-3 minutes, and pull with the suction handle) five or six times to gradually release the adhesive.
- When the battery begins to lift from the device, proceed to the next step.



## Step 30 — Pry up the battery



**⚠ Caution:** do not proceed with this step until the battery is lifted enough to easily insert an opening pick underneath the battery. If the battery is still firmly glued into place, you risk piercing the battery with your pick and causing a dangerous thermal event.

- Insert an opening pick underneath the bottom edge of the battery and twist to loosen the battery adhesive.

## Step 31 — Remove the battery



- Remove the battery.
  - Peel up and/or scrape away any remaining battery adhesive before cleaning the battery well surface with isopropyl alcohol and a lint free cloth.
- ☑ During reassembly, if your new battery doesn't come with pre-applied adhesive, apply some to the well. Then, firmly press the new battery into place.

**⚠ Caution:** Do not reuse the battery after it has been removed, as doing so is a potential safety hazard. Replace it with a new battery.

Compare your new replacement part to the original part—you may need to transfer remaining components or remove adhesive backings from the new part before installing.

**To reassemble your device, follow the above steps in reverse order.**

Follow [this guide](#) to perform a battery cycle reset, and [calibrate your newly-installed battery](#).

Take your e-waste to an [R2 or e-Stewards certified recycler](#).

Repair didn't go as planned? Check out our [Answers community](#) for troubleshooting help.