



# Samsung Galaxy S21 Battery Replacement

Use this guide to remove or replace the battery...

Written By: Alex Diaz-Kokaisl



# INTRODUCTION

Use this guide to remove or replace the battery in your Samsung Galaxy S21.

**For your safety, discharge the 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. If your battery is swollen, [take appropriate precautions](#).

Although it's not necessary to remove the interconnect cables to replace the battery, we advise doing so. It makes the battery removal and reassembly much easier.

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



## TOOLS:

Phillips #00 Screwdriver (1)  
iFixit Opening Picks (Set of 6) (1)  
iOpener (1)  
Suction Handle (1)  
Spudger (1)  
Isopropyl Alcohol (90% or Greater) (1)  
Coffee Filters or a lint-free cloth (1)



## PARTS:

Galaxy S21 Battery Adhesive (1)  
Galaxy S21 Battery (1)  
Tesa 61395 Tape (1)

## Step 1 — Heat the bottom edge



**⚠ Completely 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, internal battery, and plastic back cover are both susceptible to heat damage.

## Step 2 — Separate the bottom adhesive



- Apply a suction cup to the back of the phone, as close to the center of the bottom edge as possible.
- Pull up on the suction cup with strong, steady force to create a gap between the back cover and the frame.
  - ⓘ Depending on the age of your phone, this may be difficult. If you're having trouble, apply more heat to the edge and try again.
- Insert an opening pick into the gap.
  - ⚠ Only insert the pick up to 5 mm, as you may damage internal components if you go further.

## Step 3 — Slice the bottom adhesive



- Slide the pick back and forth along the bottom edge to slice through the adhesive.
- Leave the pick in to prevent the adhesive from resealing.

## Step 4 — Heat the left edge



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

## Step 5 — Separate the left adhesive



- Apply a suction cup to the back of the phone, as close to the center of the left edge as possible.
- Pull up on the suction cup with strong, steady force to create a gap between the back cover and the frame.
- Insert an opening pick into the gap.

⚠ Only insert the pick up to 5 mm, as you may damage internal components if you go further.



## Step 6



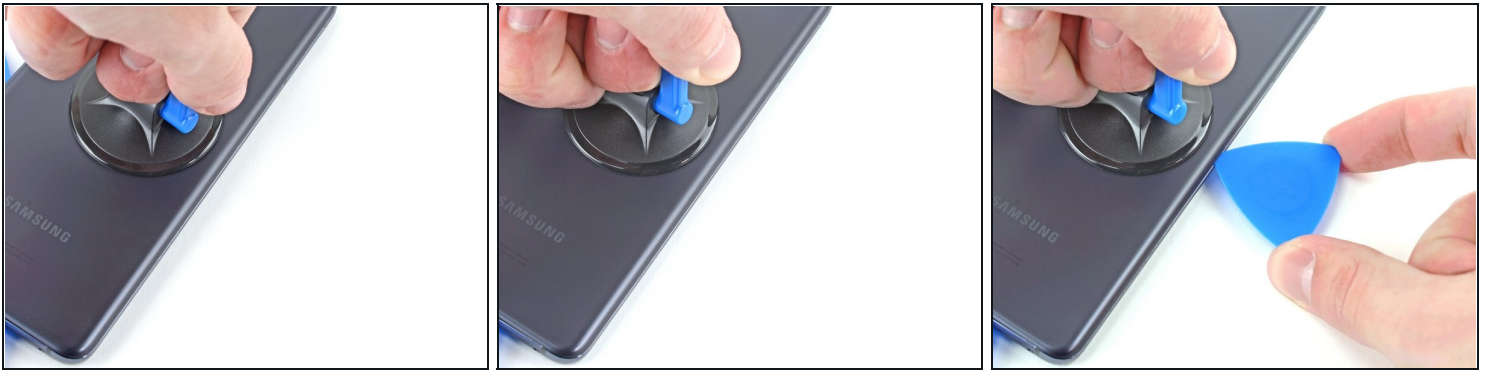
- Slide an opening pick along the left edge towards the bottom left corner to cut the adhesive.  
**⚠ Don't cut past where the camera shell meets the back cover, as you risk cracking the plastic.**
- Leave the pick in to prevent the adhesive from resealing.

## Step 7 — Heat the right edge



- Apply a heated iOpener to the back cover's right edge for two minutes.

## Step 8 — Separate the right adhesive



- Apply a suction cup to the back of the phone, as close to the center of the right edge as possible.
- Pull up on the suction cup with strong, steady force to create a gap between the back cover and the frame.
- Insert an opening pick into the gap.

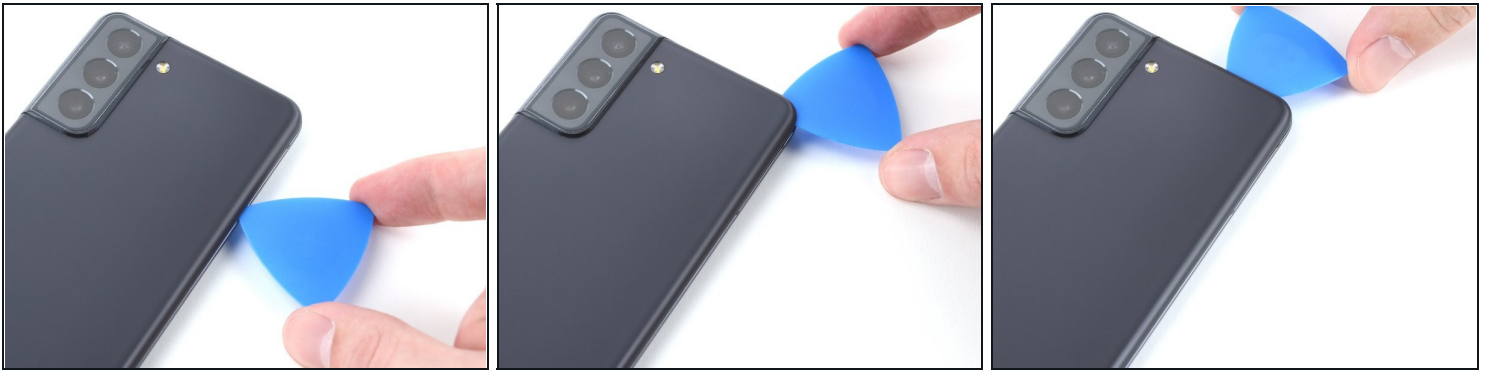
⚠ Only insert the pick up to 3 mm, as you may damage the secondary interconnect cable, which runs parallel to the right edge.

## Step 9



- Slide an opening pick back and forth along the back cover's right edge to cut the adhesive.
- Leave the pick in to prevent the adhesive from resealing.

## Step 10 — Separate the corner adhesive



- Rotate the right-edge opening pick around the top-right corner of the phone.  
**⚠ Only insert the pick up to 5 mm, as you may damage internal components if you go further.**
- ⓘ This procedure can be applied to each corner, except the top-left where the rear-facing camera is located.

## Step 11 — Reposition the opening picks



- Slide the top-most opening pick as close to the camera shell as possible.
- Repeat for the left-edge pick.

## Step 12 — Heat the camera shell



- Heat an iOpener and apply it to the camera shell for two minutes.

## Step 13 — Separate the camera shell adhesive



- Rotate the back cover counterclockwise to create a gap between the camera shell and the frame.  
**⚠ Only insert the pick up to 5 mm to avoid scratching the camera.**
  - Insert an opening pick in the gap.
- ⓘ If this method doesn't work, move to the next step for an alternative method; otherwise, skip the next step.



## Step 14 — Separate the camera shell adhesive (alternate method)



- Gently slide the two picks toward the camera shell so they are under the corners of the back cover adjacent to the camera shell.
- Move the picks back and forth along the bridge between the back cover and the camera shell until you create a gap between the camera shell and the frame.

⚠ Be careful with this method, as you risk cracking the plastic back cover.

## Step 15



- Slide an opening pick between the camera shell and the frame to cut the adhesive.
- ⓘ There's a significant amount of adhesive securing the frame to the camera shell, so multiple rounds of heating may be needed.

## Step 16



- There's additional adhesive to the right of the camera that you need to cut through.

⚠ There's a plate on the back cover surrounding the phone's flash that the pick can get stuck on:

- Angle the pick downward to avoid any damage.

## Step 17



- Line up the opening pick's tip with your phone's flash
- Insert the pick slowly, making sure to avoid the flash's plate.
  - ⚠ The plate's resistance can feel similar to adhesive. Angle the pick downward to keep the pick from sliding into the plate.
- Slice the adhesive to the right of the camera.

## Step 18 — Remove the back cover



- Remove the back cover.
  - ① If your back cover is still sticking to the frame, slide the pick around the edges of the phone until the back cover completely separates.
- ★ 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. Use some high concentration (over 90%) isopropyl alcohol to wipe away any adhesive residue.
  - If you're using Samsung custom-cut adhesives, [follow this guide](#).
  - If you're using double-sided tape, [follow this guide](#).

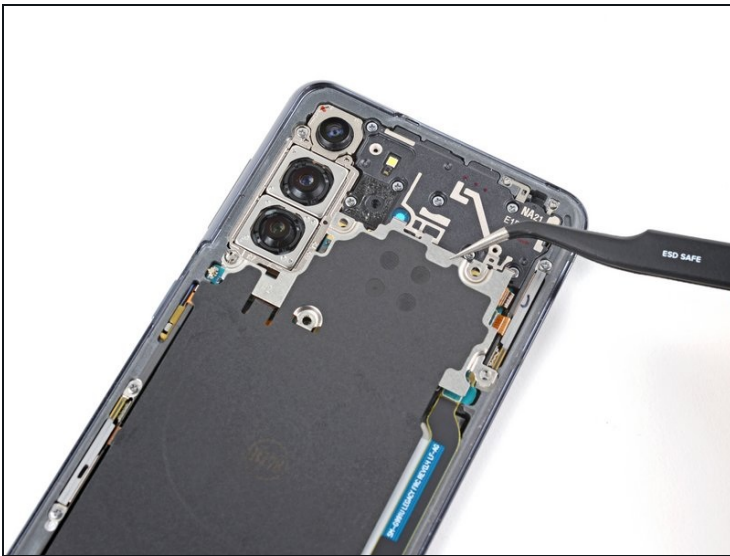


## Step 19 — Unfasten the motherboard bracket



- Use a Phillips screwdriver to remove the five 4 mm-long screws securing the motherboard bracket to the frame.
- ① Throughout this repair, [keep track of each screw](#), and make sure it goes back exactly where it came from.

## Step 20 — Unclip the motherboard bracket

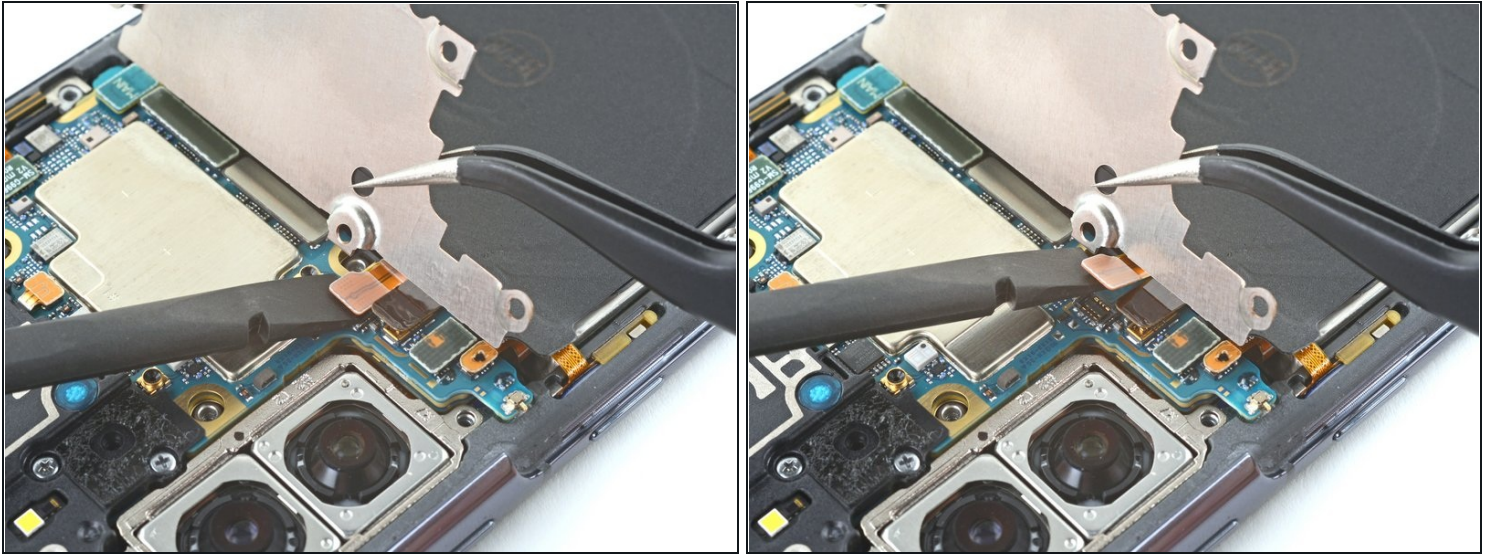


- Use a pair of [tweezers](#) to gently pull up and unclip the motherboard bracket from the frame.

⚠ Do not completely remove the bracket yet, as it's still attached to the wireless charging coil.

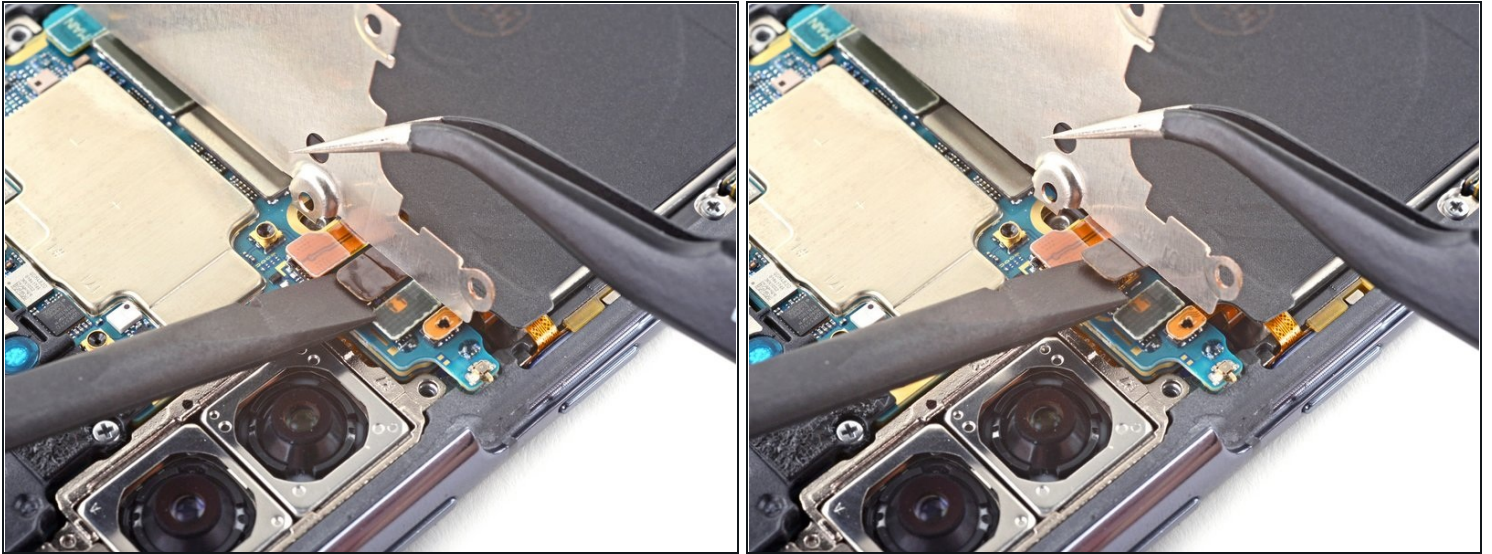


## Step 21 — Disconnect the battery



- While using tweezers, or your fingers, to hold the motherboard bracket out of the way, use a spudger to pry up the battery press connector.  
**⚠ Take care to pry only under the edge of the connector to prevent damaging the socket itself and surrounding components.**
- ☑ 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 22 — Disconnect the wireless charging coil



- While still holding the motherboard bracket out of the way, use a spudger to pry up and disconnect the wireless charging coil's press connector.

## Step 23 — Remove the wireless charging coil



- ① The wireless charging coil is secured to the phone with light adhesive.
- Use your fingers to gently peel the wireless charging coil away from the phone.
- ☑ During reassembly, refasten the motherboard bracket screws first to properly align the charging coil into place, then firmly press the rest of the coil down to adhere it.



## Step 24 — Unfasten the loudspeaker



- Use a Phillips screwdriver to remove the six 4 mm screws securing the loudspeaker to the frame.

## Step 25 — Remove the loudspeaker



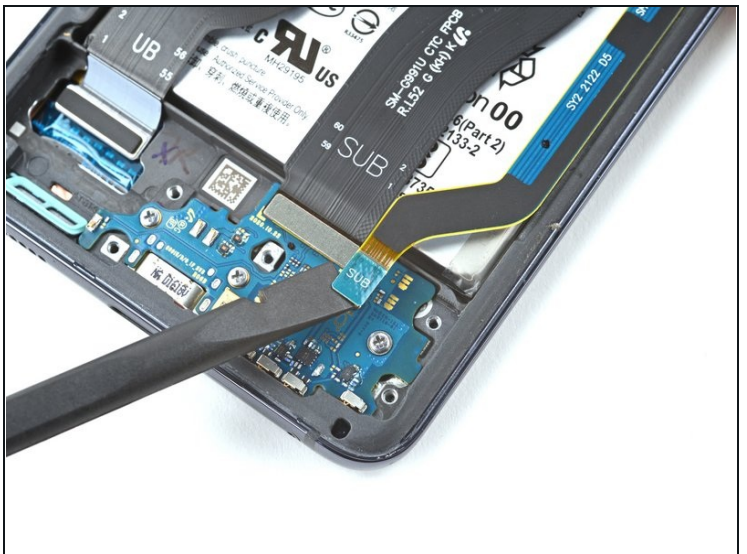
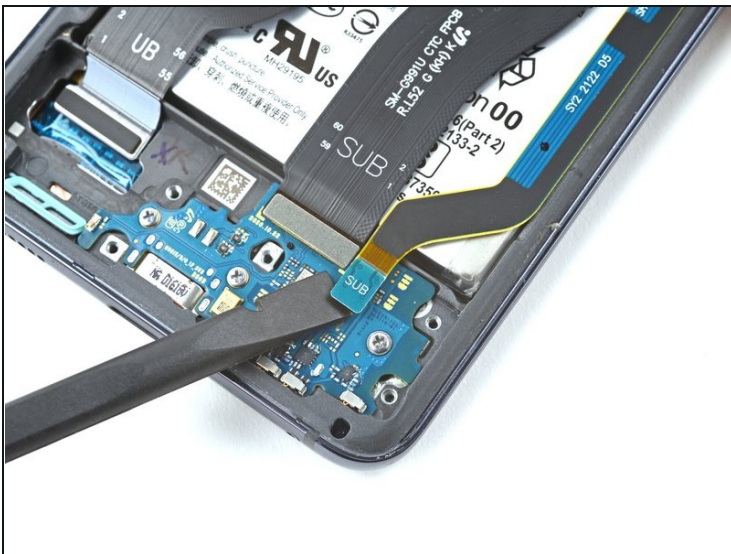
- Insert the point of a spudger into the notch in the top-left corner of the loudspeaker and pry up to release the clips holding it in place.
- Remove the loudspeaker.

## Step 26 — Disconnect the primary interconnect cable



- Use the flat end of a spudger to pry up and disconnect the primary interconnect cable's press connector.

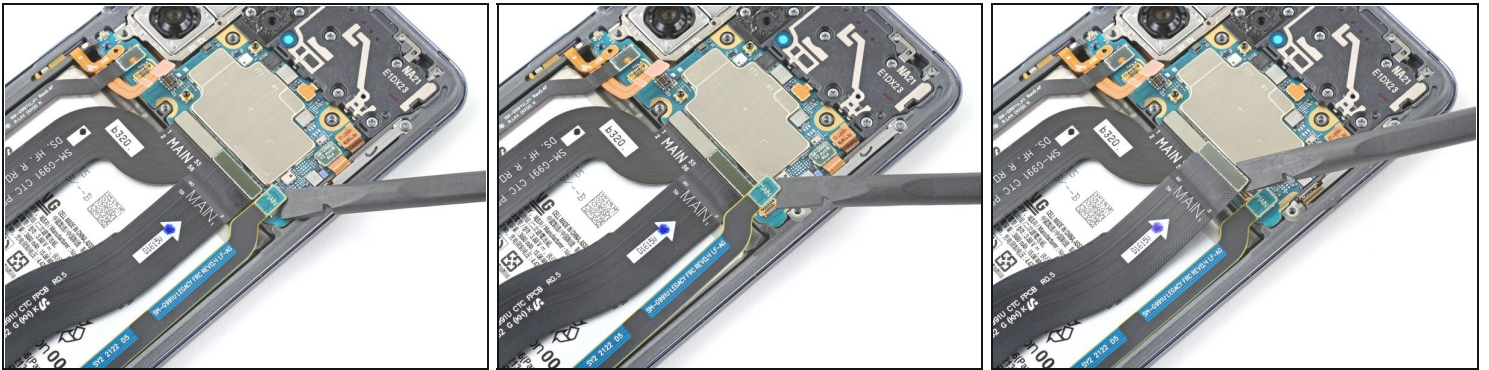
## Step 27 — Disconnect the secondary interconnect cable



- Use the flat end of a spudger to pry up and disconnect the secondary interconnect cable's press connector.

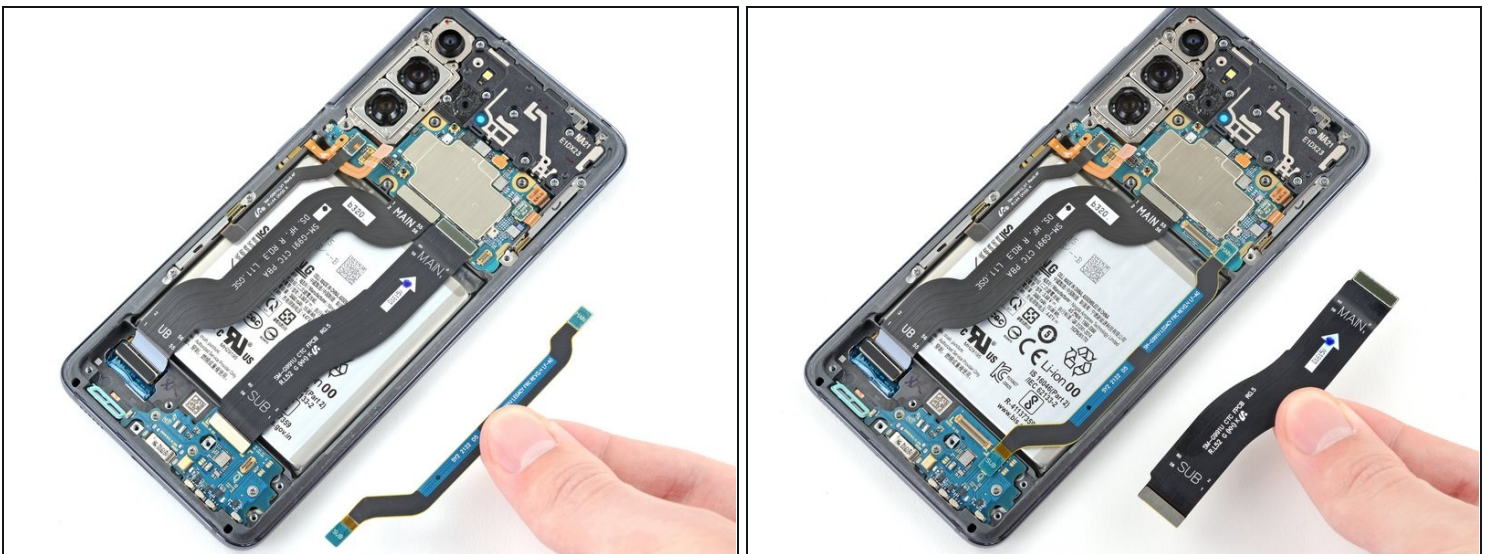


## Step 28 — Disconnect the secondary/primary interconnect cables



- Use the flat end of a spudger to pry up on the secondary interconnect cable's press connector.
- Repeat for the primary interconnect cable's press connector.

## Step 29 — Remove the secondary/primary interconnect cables



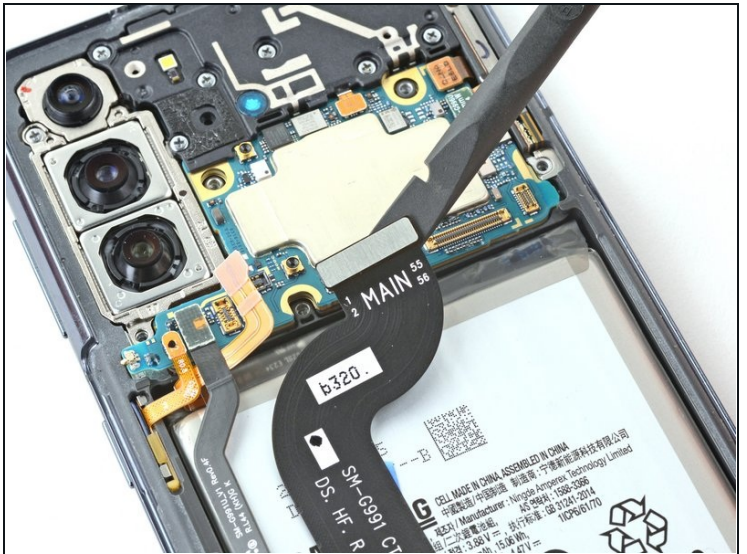
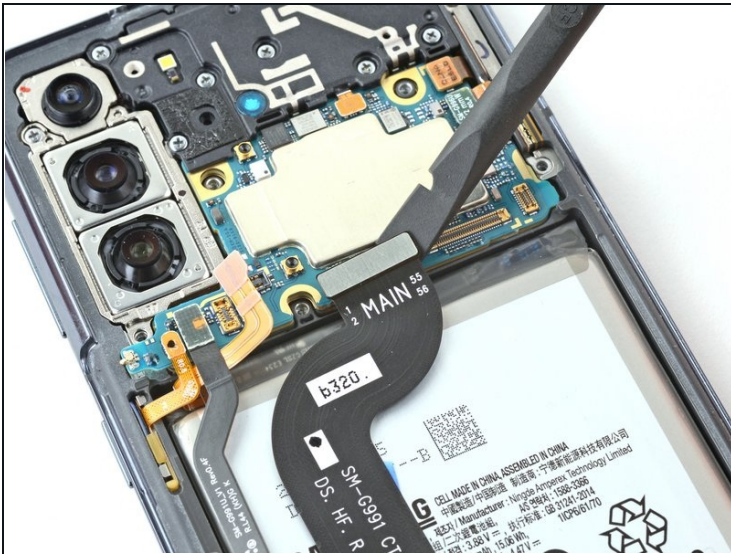
- Use [tweezers](#), or your fingers, to remove the secondary and primary interconnect cables.

## Step 30 — Disconnect the display cable



- Use a spudger to pry up and disconnect the display cable's bottom press connector.

## Step 31



- Use a spudger to pry up and disconnect the display cable's top press connector.

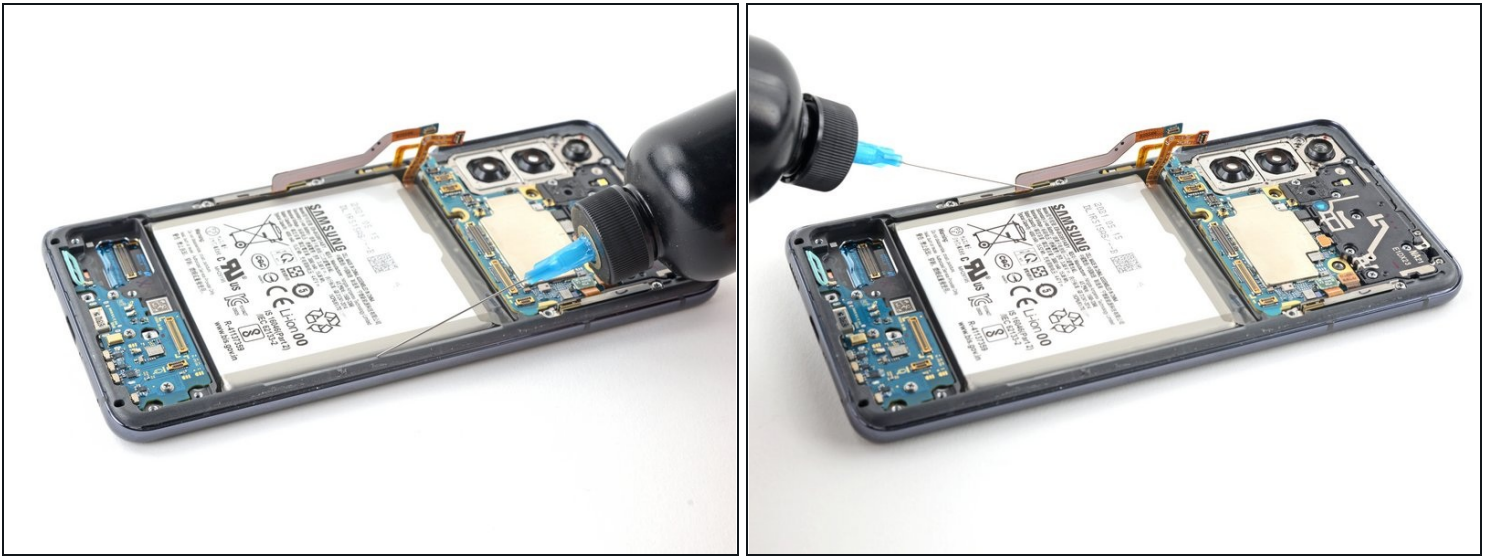


## Step 32 — Remove the display cable



- Use tweezers, or your fingers, to remove the display cable.

### Step 33 — Apply isopropyl alcohol



**⚠ Take care not to puncture or bend the battery during the removal procedure—a punctured or bent battery may leak dangerous chemicals or cause a thermal event. In case you're struggling to pull up the battery, apply more isopropyl alcohol and try again.**

- Apply a few drops of high concentration (over 90%) isopropyl alcohol to the gaps surrounding the battery's perimeter.
- ① Only apply a few drops initially and apply more if necessary; too much isopropyl alcohol might overflow onto the motherboard and daughterboard.



### Step 34 — Insert an opening pick



- Apply a suction cup to the battery, as close to the center of the right edge as possible.
- Insert an opening pick into the edge with the widest gap between the frame and the battery.
- Rotate the opening pick to insert its long edge into the gap.

### Step 35 — Separate the battery's adhesive



- Pull up on the suction cup with strong, steady force and pry up with the opening pick to separate the battery from the frame.
- ① If you're struggling to pull up the battery with your suction handle, apply a few more drops of isopropyl alcohol.

## Step 36 — Remove the battery



- Remove the battery, making sure to peel off any remaining adhesive.

**⚠ Do not reinstall a damaged or deformed battery, as doing so is a potential safety hazard.**

- ☑ Secure the new battery with pre-cut adhesive or double-sided adhesive tape. In order to position it correctly, apply the new adhesive into the device at the places where the old adhesive was located, not directly onto the battery. Press the new battery firmly into place.
- ☑ During reassembly, temporarily reconnect the battery to the motherboard to help align it correctly. Disconnect the battery after it's seated.
- ☑ If there's any alcohol remaining, use a lint-free cloth or allow it to dry off before installing 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.