



# Samsung Galaxy S21 Ultra Screen and Battery Assembly Replacement

Follow this guide to replace the screen and...

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# INTRODUCTION

Follow this guide to replace the screen and battery assembly on your Samsung Galaxy S21 Ultra with a genuine Samsung part.

**This guide is written for the genuine Samsung screen and battery assembly.** The assembly consists of the screen, battery, and frame together in one part. Be sure you have the right part before you begin the repair.

Before you begin, refer to the [Samsung Self-Repair document](#) for safety information.

If your battery is swollen, [take appropriate precautions](#). Before disassembling your device, **completely discharge the battery**. This reduces the risk of a dangerous thermal event if the battery is accidentally damaged during the repair.

Note: Retaining water resistance after the repair will depend on how well you reapply the adhesive, but your device will lose its IP (Ingress Protection) rating.



## TOOLS:

[SIM Card Eject Tool](#) (1)  
[iOpener](#) (1)  
[Suction Handle](#) (1)  
[iFixit Opening Picks \(Set of 6\)](#) (1)  
[Heat Gun](#) (1)  
[Isopropyl Alcohol \(90% or Greater\)](#) (1)  
[Microfiber Cleaning Cloths](#) (1)  
[Tweezers](#) (1)  
[Spudger](#) (1)  
[Phillips #00 Screwdriver](#) (1)



## PARTS:

[Samsung Galaxy S21 Ultra \(USA\) Screen and Battery - Genuine](#) (1)

## Step 1 — Remove the SIM card tray



- Insert a SIM eject tool, bit, or straightened paper clip into the SIM card tray hole on the top edge of the phone.
  - Press the SIM eject tool into the SIM card tray hole to eject the SIM card tray.
  - Remove the SIM card tray.
- i** If you accidentally inserted the SIM eject tool into a microphone hole, don't worry! [You most likely didn't damage the microphone.](#)

## Step 2 — Heat the back cover



- i** Unplug and power off your phone before you begin.
- [Prepare an iOpener](#) and apply it to the back cover for at least three minutes to loosen the adhesive underneath.
- i** 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 3 — Insert an opening pick



- Secure a suction handle to the bottom edge of the back cover, as close to the edge as possible.
  - ① If the back cover 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 cover.
- Lift the back cover with the suction handle to create a small gap between the back cover and the frame.
  - ① If you have trouble creating a gap, apply more heat to further soften the adhesive. Follow the [iOpener](#) instructions to avoid overheating.
- Insert an opening pick into the gap you created.
- Slide the opening pick to the bottom left corner to slice the adhesive.
- Leave the opening pick in place to prevent the adhesive from resealing.

## Step 4 — Slice the adhesive



- Insert a second opening pick at the bottom edge of your phone.
- Slide the opening pick to the bottom right corner to slice the adhesive.
- Leave the opening picks in place to prevent the adhesive from resealing.

## Step 5



**i** If the adhesive becomes hard to cut, it has most likely cooled down. [Use your iOpener](#) for two to three minutes to reheat it.

- Insert a third opening pick at the bottom right corner of your phone.
- Slide the opening pick along the right edge of your phone to slice the adhesive.
- Leave the opening pick in the top right corner to prevent the adhesive from resealing.

## Step 6



**!** When you slice near the camera assembly, insert only the tip of the opening pick (~ 4-5 mm) to avoid damaging or smearing the camera.

- Insert a fourth opening pick underneath the top right corner of your phone.
- Slide the opening pick along the top edge to slice the adhesive.
- Leave the opening pick in the top left corner to prevent the adhesive from resealing.



## Step 7



- Insert a fifth opening pick underneath the top left corner.
  - Slide the opening pick along the left edge of the back cover to slice the remaining adhesive.
- ⚠ When you slice near the power button, insert only the tip of the opening pick (~ 3-4 mm) to avoid damaging the power and volume button flex cable.**

## Step 8 — Remove the back cover



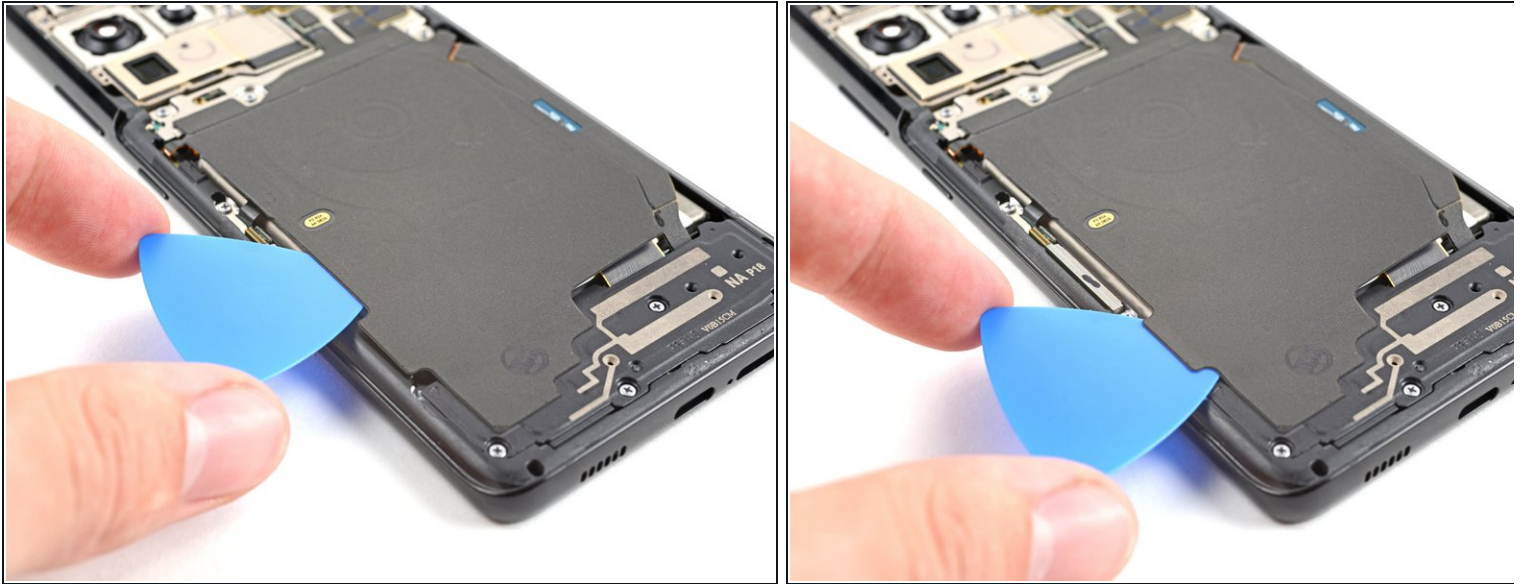
- Remove the back cover.

### ★ 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 9 — Slice the adhesive



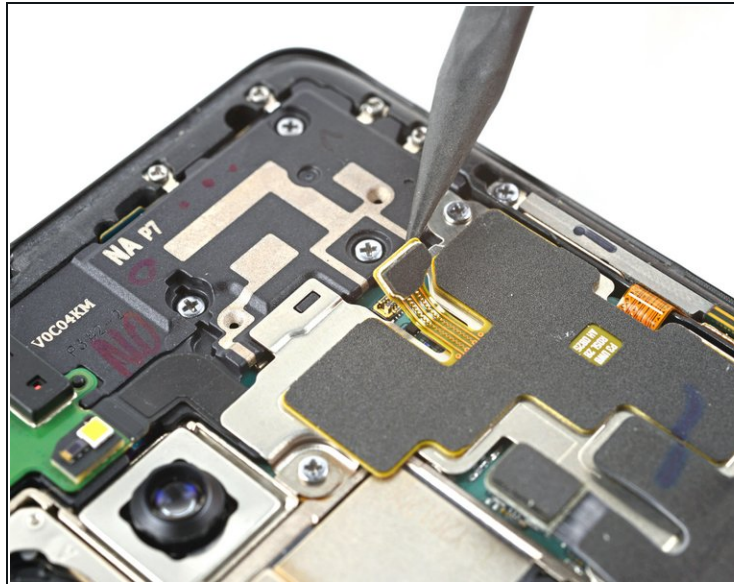
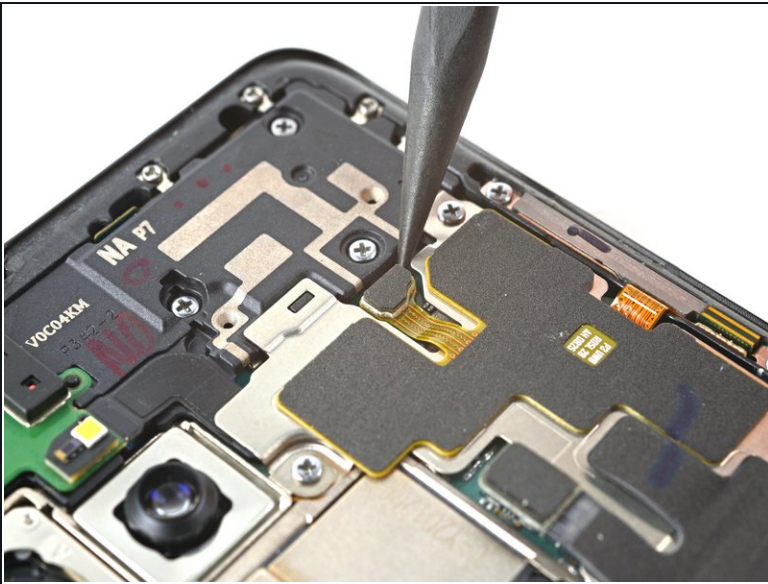
- Insert an opening pick underneath the left bottom end of the NFC antenna and charging coil assembly.
- Carefully slide the opening pick along the bottom left edge of the assembly to separate it from the battery.

## Step 10 — Disconnect the charging coil



- Use a spudger to disconnect the charging coil by prying the connector straight up from its socket.

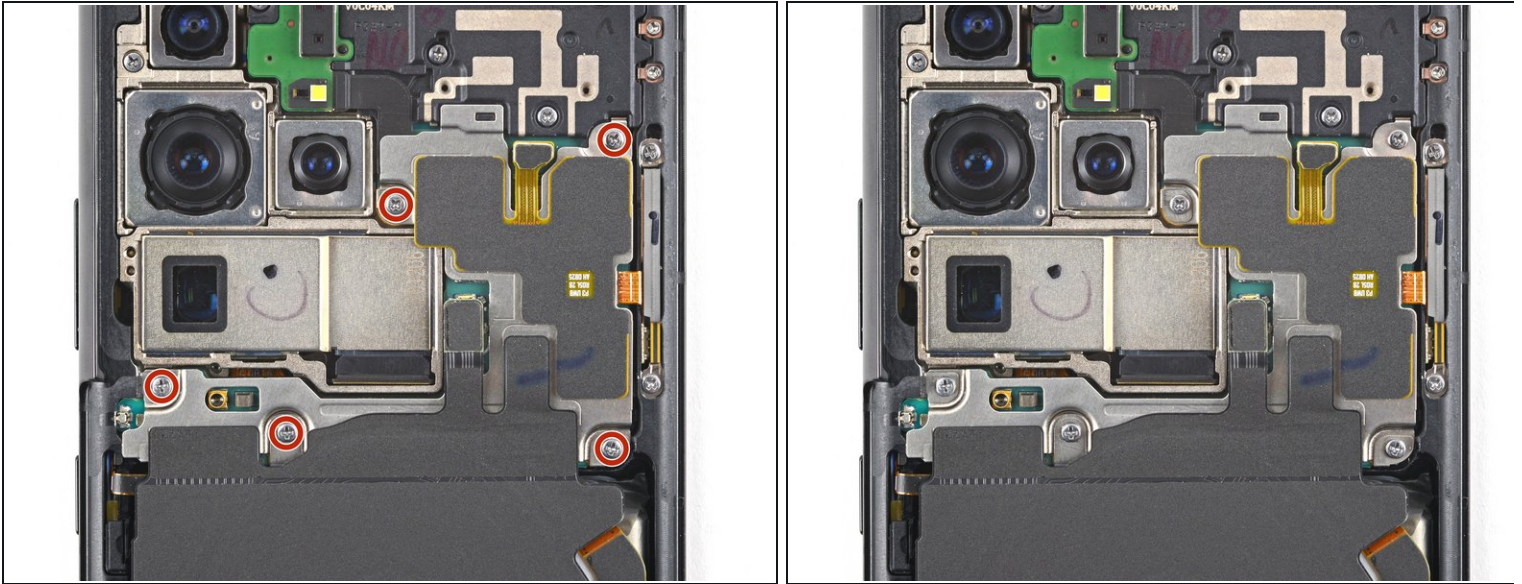
## Step 11 — Disconnect the NFC antenna



- Use a spudger to disconnect the NFC antenna by prying the connector straight up from its socket.



## Step 12 — Unfasten the NFC antenna & charging coil assembly



- Use a Phillips screwdriver to remove the five 3.9 mm-long screws securing the NFC antenna and charging coil assembly.
- ☑ If you're reassembling with the Samsung Self-Repair kit, be sure to replace the screws with new ones labeled **#3427**.

## Step 13 — Unfasten the loudspeaker



- Use a Phillips screwdriver to remove the four 3.9 mm-long screws securing the loudspeaker assembly.
- ☑ If you're reassembling with the Samsung Self-Repair kit, be sure to replace the screws with new ones labeled **#3427**.

## Step 14 — Disconnect the loudspeaker



- Insert the tip of a spudger between the frame and the upper-left notch in the loudspeaker.
- Pry up with the spudger to release the loudspeaker from its plastic clips.

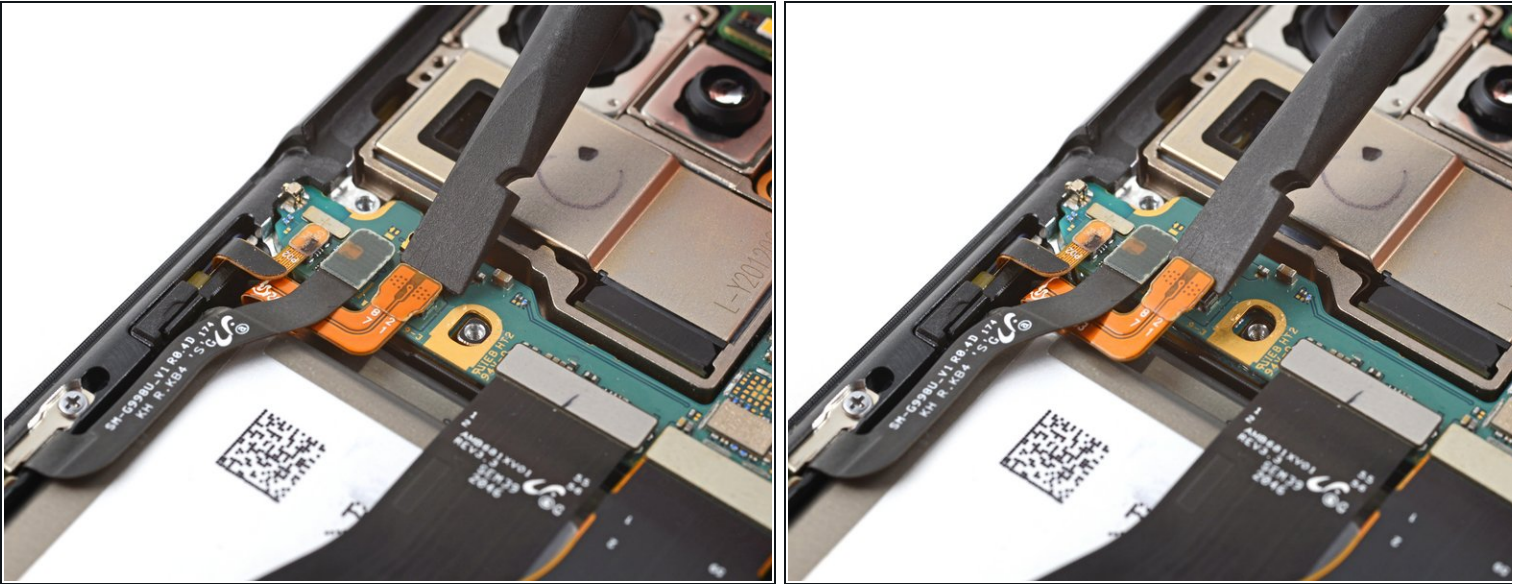
## Step 15 — Remove the NFC antenna & charging coil assembly



- Use a pair of tweezers or your fingers to carefully remove the NFC antenna, charging coil, and loudspeaker assembly.
- ☑ Set the assembly aside. You'll reuse it during reassembly.



## Step 16 — Disconnect the battery



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

## Step 17 — Disconnect the interconnect cables



- Use a spudger to pry up and disconnect the primary and secondary interconnect cables' press connectors on the motherboard.



## Step 18 — Remove the secondary interconnect cable



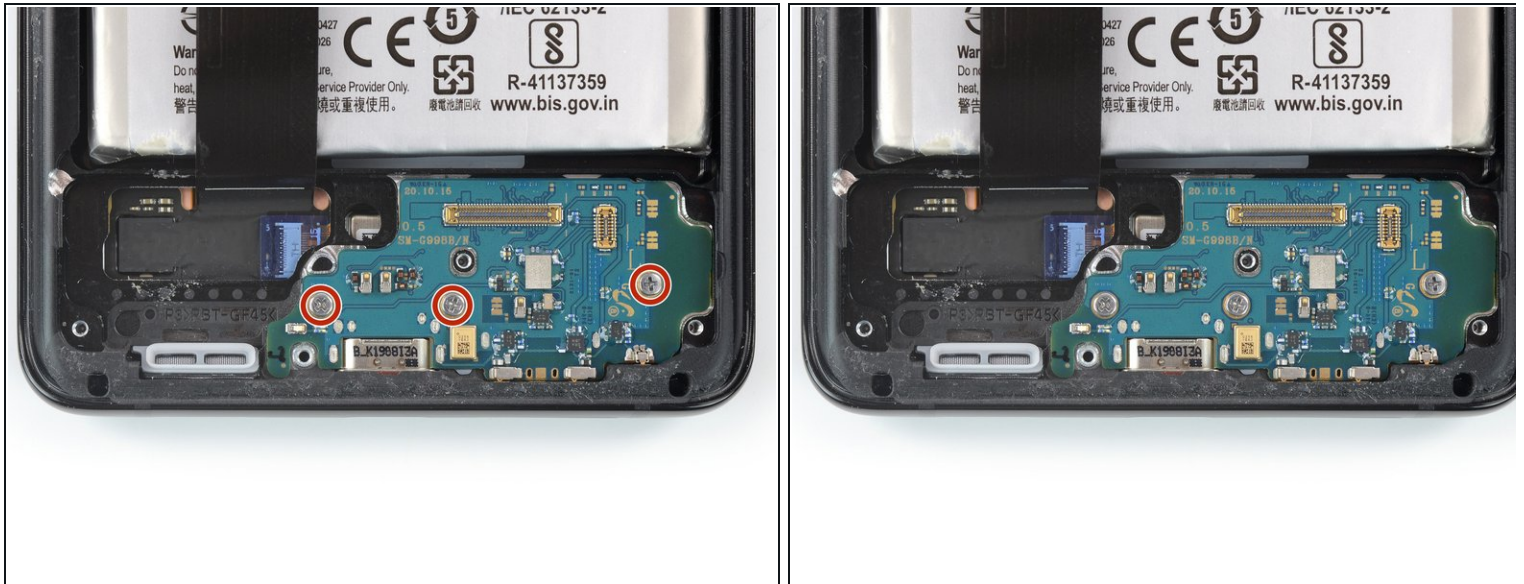
- Use a spudger to disconnect the secondary interconnect cable from the daughterboard by prying its bottom connector straight up from its socket.
  - Use your fingers or a pair of tweezers to carefully remove the secondary interconnect cable.
- ☒ Set the cable aside. You'll reuse it during reassembly.

## Step 19 — Remove the primary interconnect cable



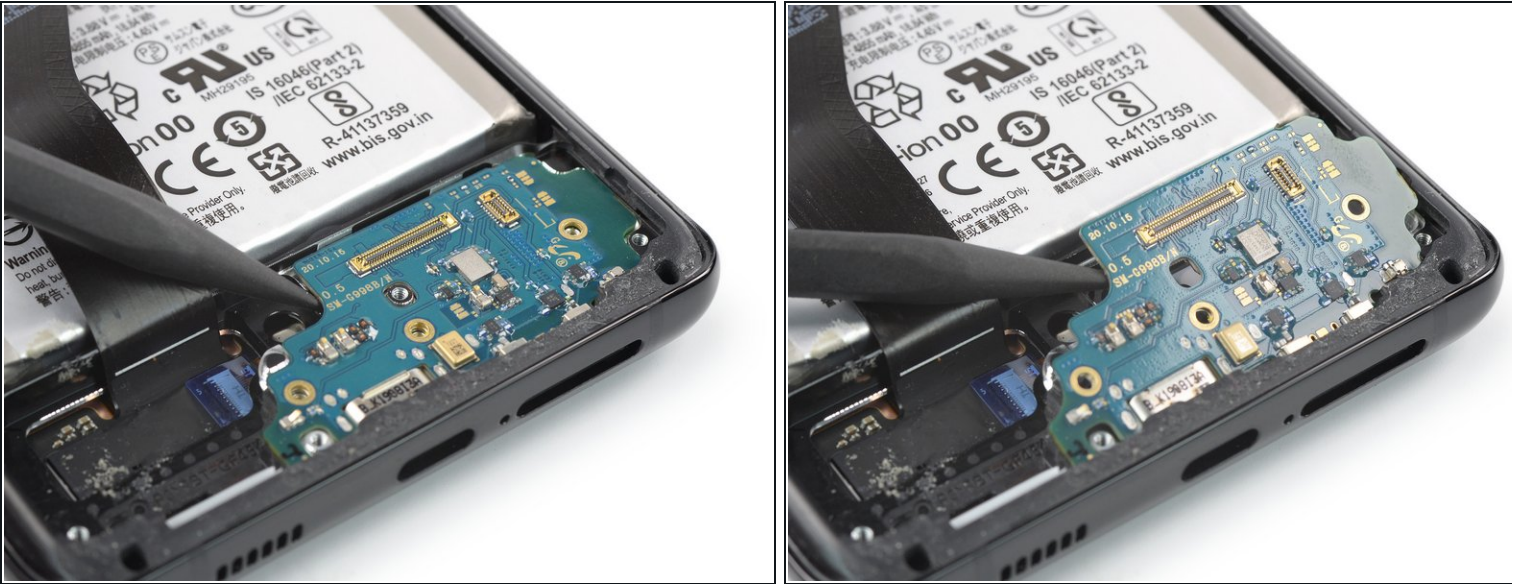
- Use a spudger to disconnect the primary interconnect cable from the daughterboard by prying its bottom connector straight up from its socket.
  - Use your fingers or a pair of tweezers to carefully remove the primary interconnect cable.
- ☒ Set the cable aside. You'll reuse it during reassembly.

## Step 20 — Unfasten the charging board



- Use a Phillips screwdriver to remove the three 3.4 mm-long screws securing the charging board.
- ☑ If you're reassembling with the Samsung Self-Repair kit, be sure to replace the screws with new ones labeled **#3428**.

## Step 21 — Pry up the charging board



- Insert the pointed end of a spudger underneath the left edge of the charging board next to the main flex cable connector.
- Use your spudger to pry up the charging board.

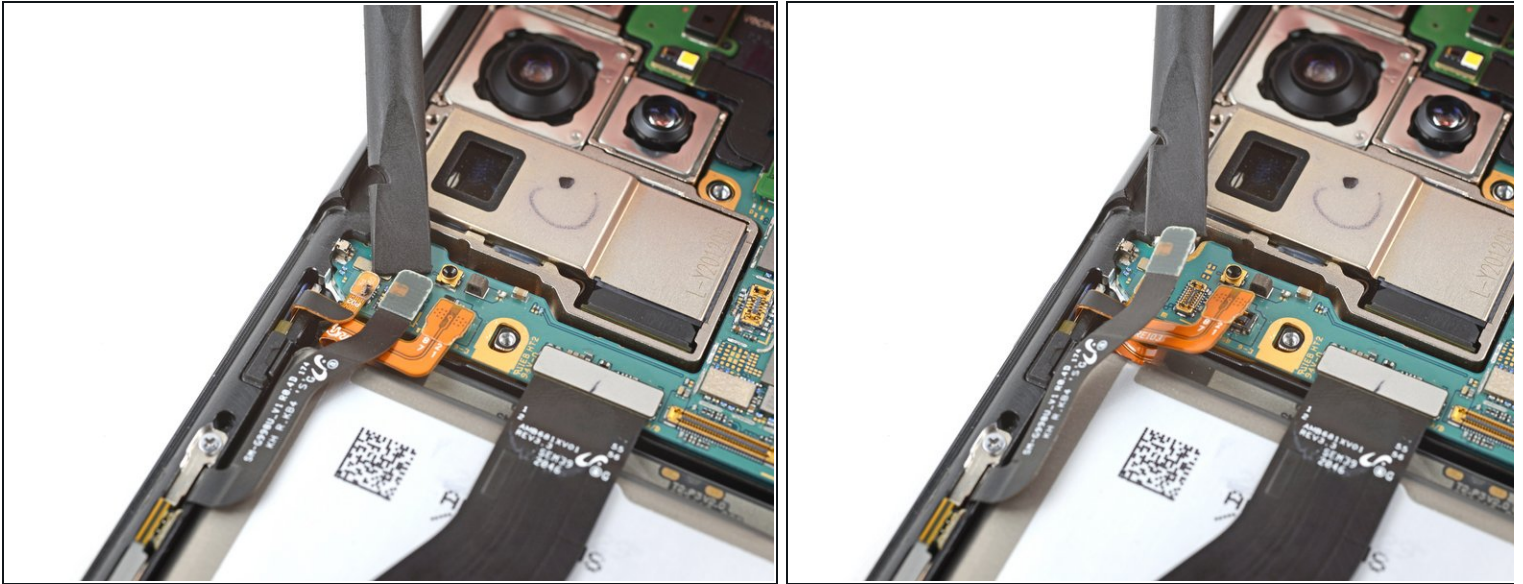
## Step 22 — Remove the charging board



- Use a pair of blunt tweezers or your fingers to remove the charging board. Start by lifting its top edge up and then carefully slide the USB-C connector out of its recess.

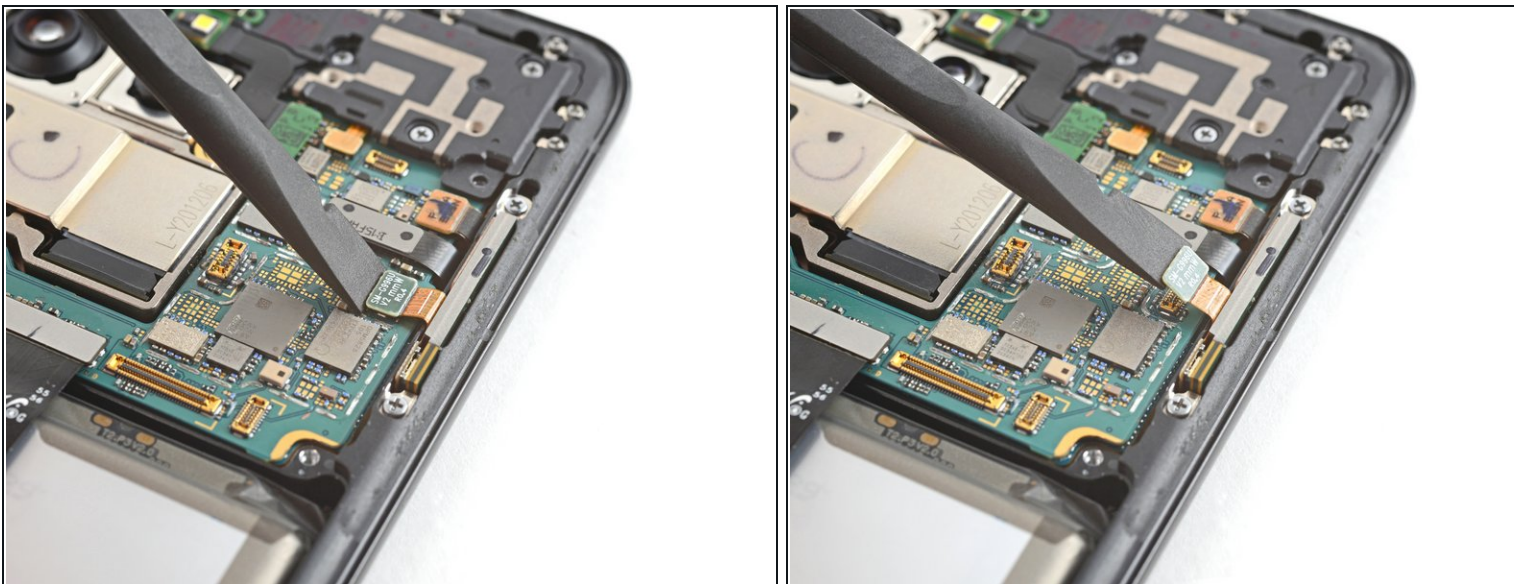


### Step 23 — Disconnect the left 5G mmWave antenna



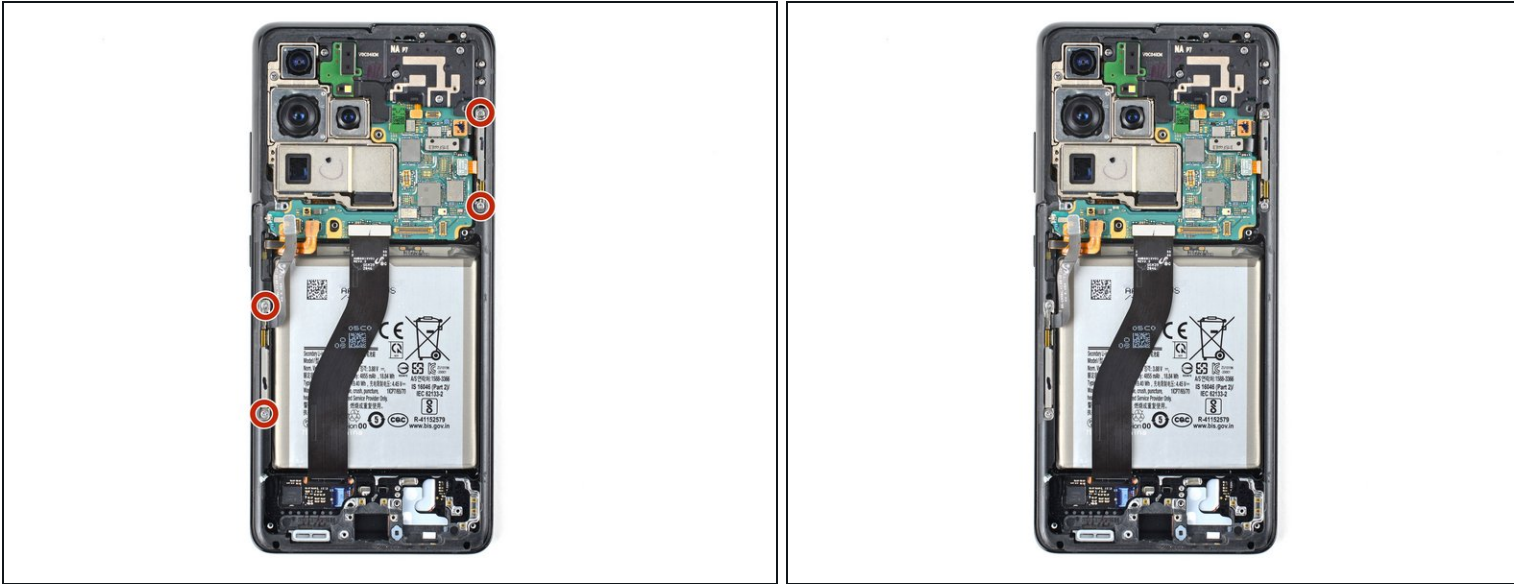
- Use a spudger to pry up and disconnect the left 5G mmWave antenna's press connector.

### Step 24 — Disconnect the right 5G mmWave antenna



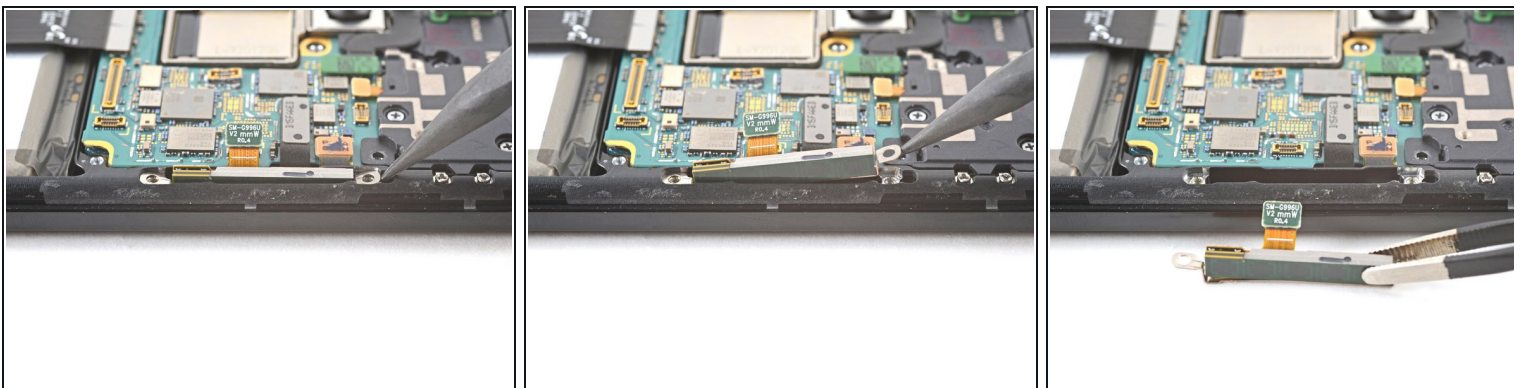
- Use a spudger to pry up and disconnect the right 5G mmWave antenna's press connector.

## Step 25 — Unfasten the 5G mmWave antennas



- Use a Phillips screwdriver to remove the four 3.4 mm-long screws securing the 5G mmWave antennas.
- ☑ If you're reassembling with the Samsung Self-Repair kit, be sure to replace the screws with new ones labeled **#3428**.

## Step 26 — Remove the right 5G mmWave antenna



- Use the point of a spudger to pry up on the right 5G mmWave antenna bracket's bottom screw tab.
- Use tweezers, or your fingers, to remove the right 5G mmWave antenna.
- ☑ Set the antenna aside. You'll reuse it during reassembly.



## Step 27 — Remove the left 5G mmWave antenna



- Use the point of a spudger to pry up on the left 5G mmWave antenna bracket's bottom screw tab.
  - Use tweezers, or your fingers, to remove the left 5G mmWave antenna.
- ☒ Set the antenna aside. You'll reuse it during reassembly.

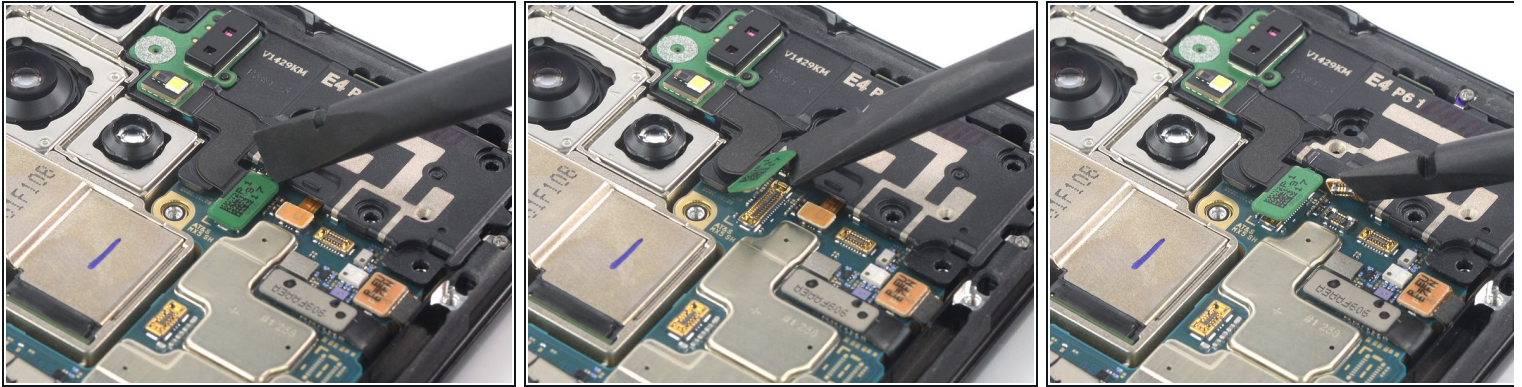
## Step 28 — Unfasten the earpiece and laser AF module assembly



- Use a Phillips screwdriver to remove the four 3.9 mm-long screws securing the earpiece speaker and laser AF module assembly.
- ☒ If you're reassembling with the Samsung Self-Repair kit, be sure to replace the screws with new ones labeled **#3427**.

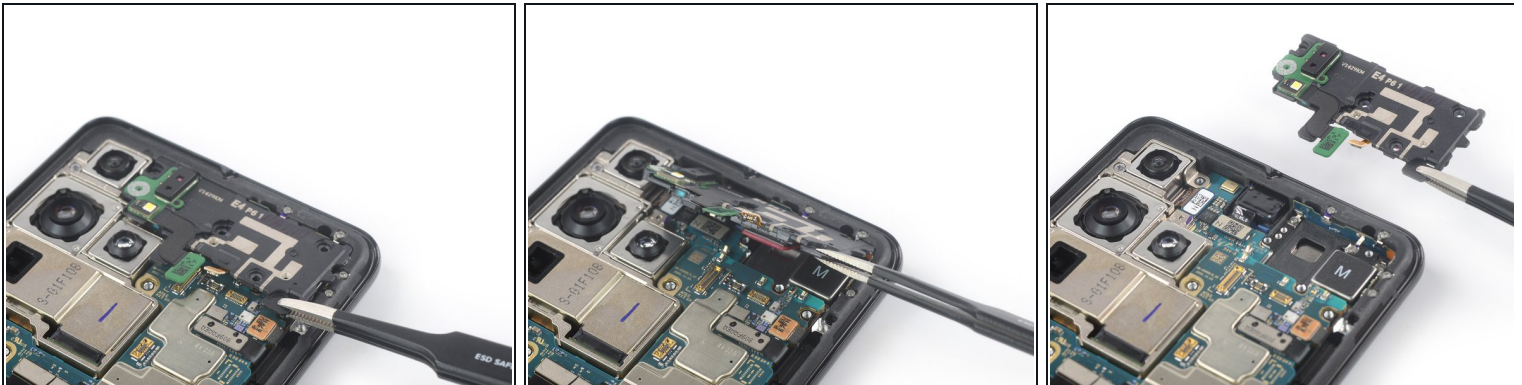


## Step 29 — Disconnect the laser AF module and earpiece speaker



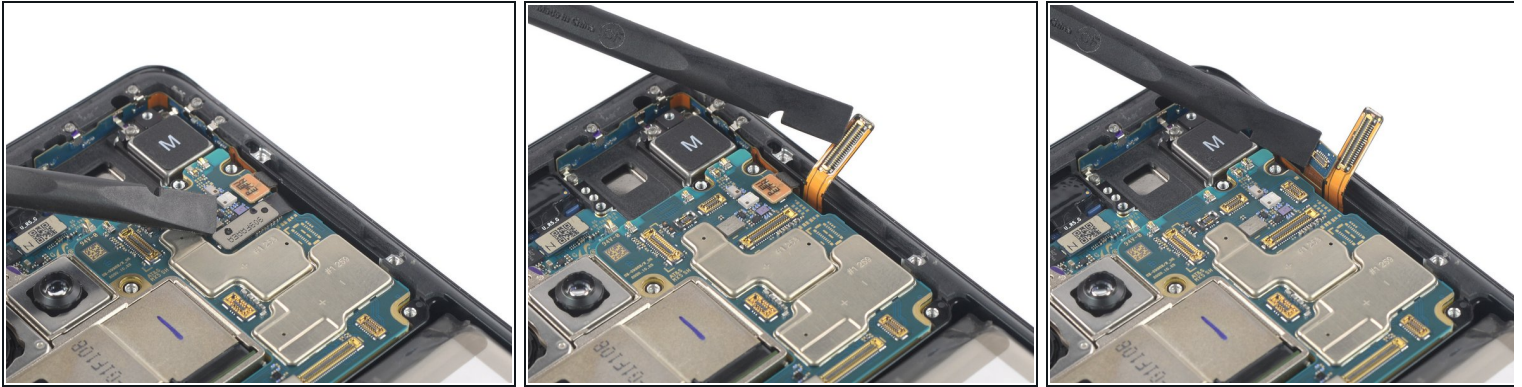
- Use a spudger to disconnect the laser AF module and earpiece speaker flex cables by prying the connectors straight up from their socket.

## Step 30 — Remove the earpiece speaker and laser AF module assembly



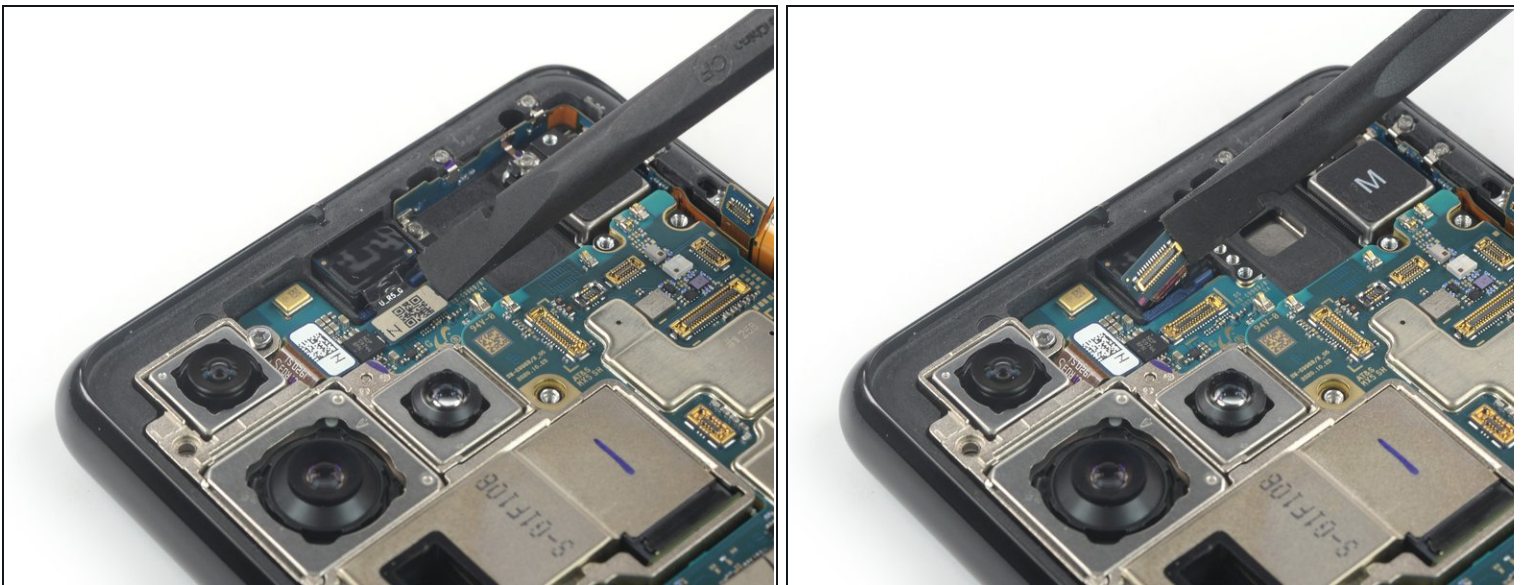
- Grab the bottom right corner of the earpiece speaker and laser AF module assembly with a pair of blunt nose tweezers and carefully lift it upwards.
- Remove the earpiece speaker and laser AF module assembly.
- ☑ Set the module aside. You'll reuse it during reassembly.

## Step 31 — Disconnect the in-display fingerprint and antenna flex cables



- Use a spudger to disconnect the in-display fingerprint and antenna flex cables by prying the connectors straight up from their socket.
  - Carefully bend both connectors to the side to free the motherboard.
- ⚠ Do not fold the cables sharply and only bend them to avoid cable damage.

## Step 32 — Disconnect the front facing camera



- Use a spudger to disconnect the front facing camera cable by prying the connector straight up from its socket.

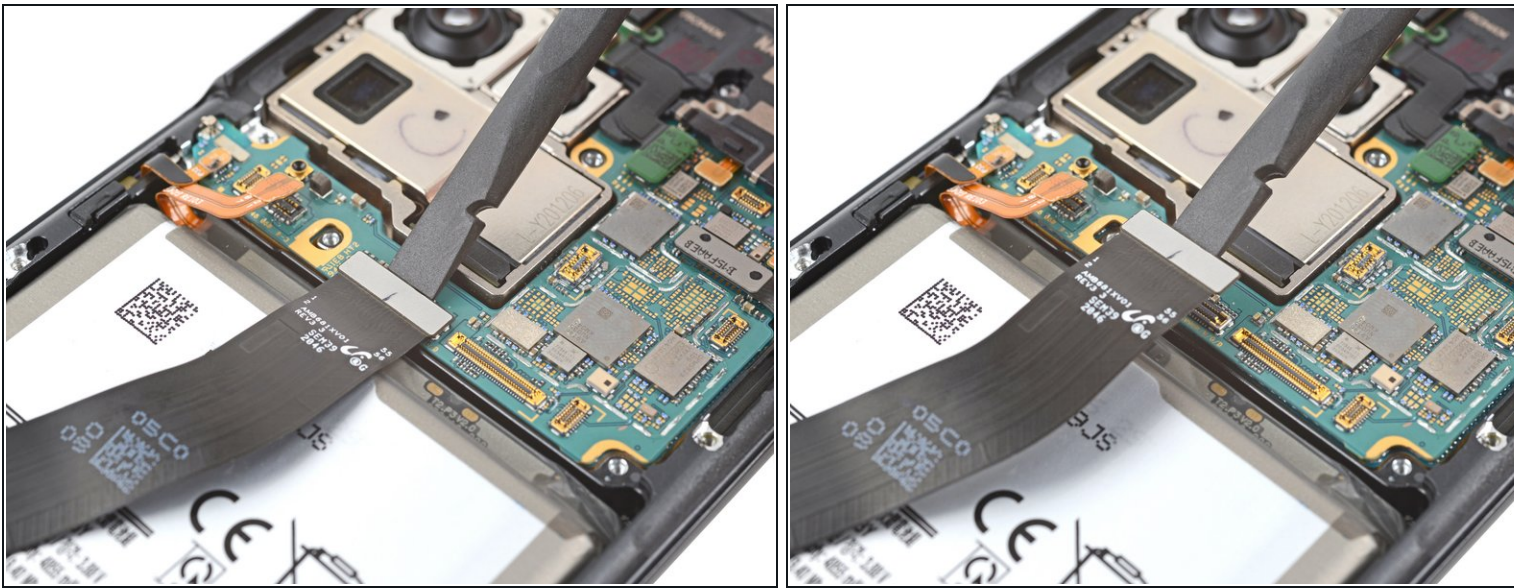


### Step 33 — Disconnect the power button



- Use a spudger to disconnect the power button flex cable by prying the connector straight up from its socket.
- Carefully bend the connector to the side to free the motherboard.

### Step 34 — Disconnect the display cable



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

## Step 35 — Reposition the display cable



- Use tweezers, or your fingers, to bend the display cable away from the device.

## Step 36 — Unfasten the camera module



- Use a Phillips screwdriver to remove the 3.9 mm-long screw securing the camera module.

 If you're reassembling with the Samsung Self-Repair kit, be sure to replace the screw with a new one labeled **#3427**.

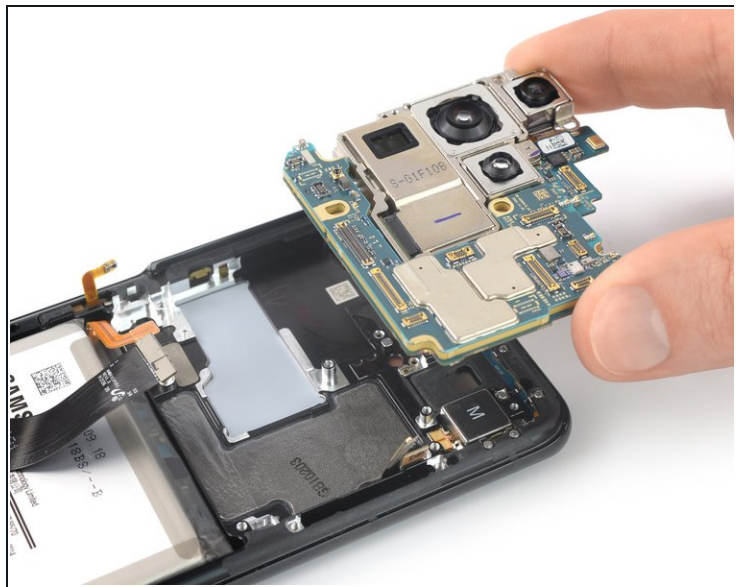
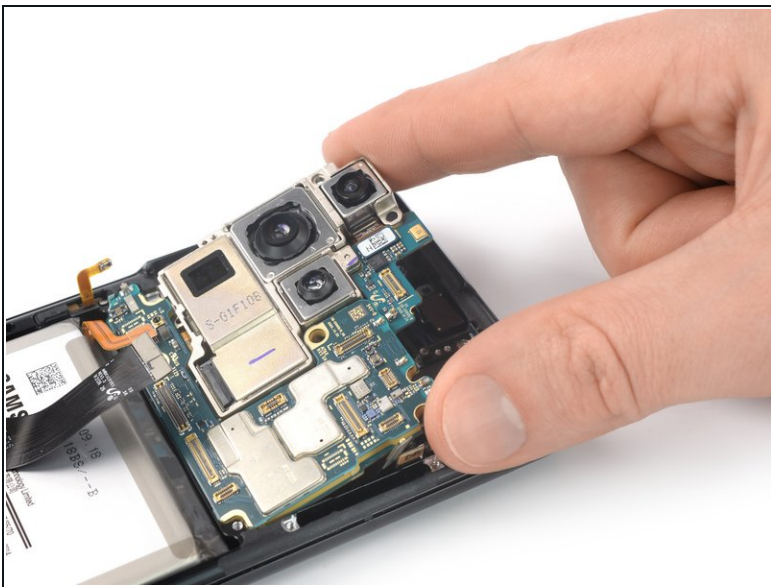


### Step 37 — Pry up the motherboard



- Insert an spudger underneath the top edge of the motherboard next to the vibration motor.
- Twist the spudger to pry up and loosen the motherboard.

### Step 38 — Remove the motherboard



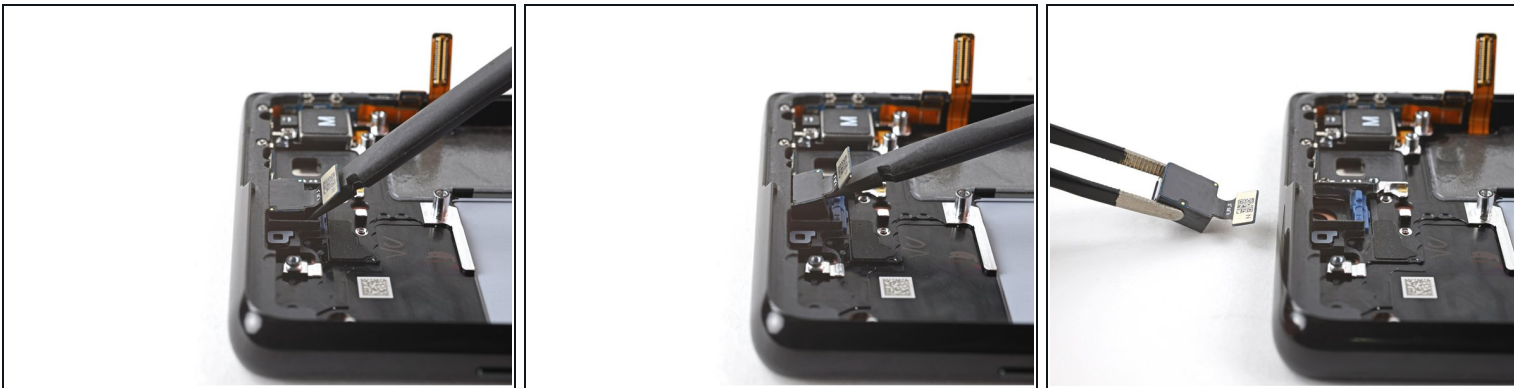
- Carefully remove the motherboard.
- ⚠️ Avoid any abrupt movements during the removal and make sure none of the flex cables are entangled in the motherboard to avoid tearing them.

## Step 39 — Heat the front camera



- Apply a heated iOpener to the front camera for 90 seconds.

## Step 40 — Remove the front camera



- Insert a spudger into the gap between the frame and the front camera.
- Pry up with the spudger to separate the front camera from the frame.
  - ⓘ If you're having trouble separating the front camera from the frame, apply more heat.
- Use tweezers, or your fingers, to remove the front camera.
- ★ Set the camera aside. You'll reuse it during reassembly.

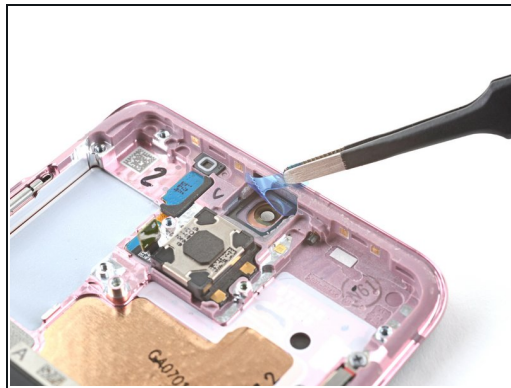
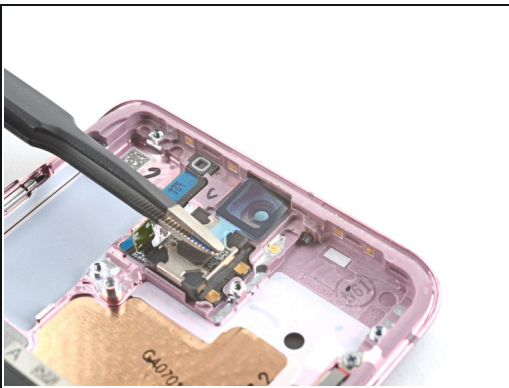


## Step 41 — Only the screen and battery assembly remains



- You're now left with the screen and battery assembly.
- ☑ 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.

## Step 42 — Front camera reassembly instructions



- ☑ During reassembly, follow these instructions to reinstall your front camera:
  - Peel off the front camera adhesive from its liner and apply the sticky end to the frame.
  - Use tweezers, or your fingers, to pull on the tab and expose the top layer of adhesive.
  - Insert the front camera and apply pressure to adhere it to the frame.

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**To reassemble your device, follow the instructions in reverse order** and perform the opposite actions, e.g., "reattach" instead of "removing." Skip steps that use heating and prying, and pay close attention to the bullets as you work through the steps.

After you've completed the repair, download the Samsung Members App from the Galaxy Store or the Play Store, and [follow the Samsung Self-Repair document](#) (beginning page 10) to make sure your device is fully functional.

Download the [Self Repair Assistant](#) on your device and [follow the Samsung Self-Repair document](#) (beginning page 11) to perform a battery cycle reset.

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

Repair didn't go as planned? Try some [basic troubleshooting](#), or ask our [Answers community](#) for help.