Samsung Galaxy S20 Plus Motherboard Assembly Removal

Pre-req guide on removing the motherboard...

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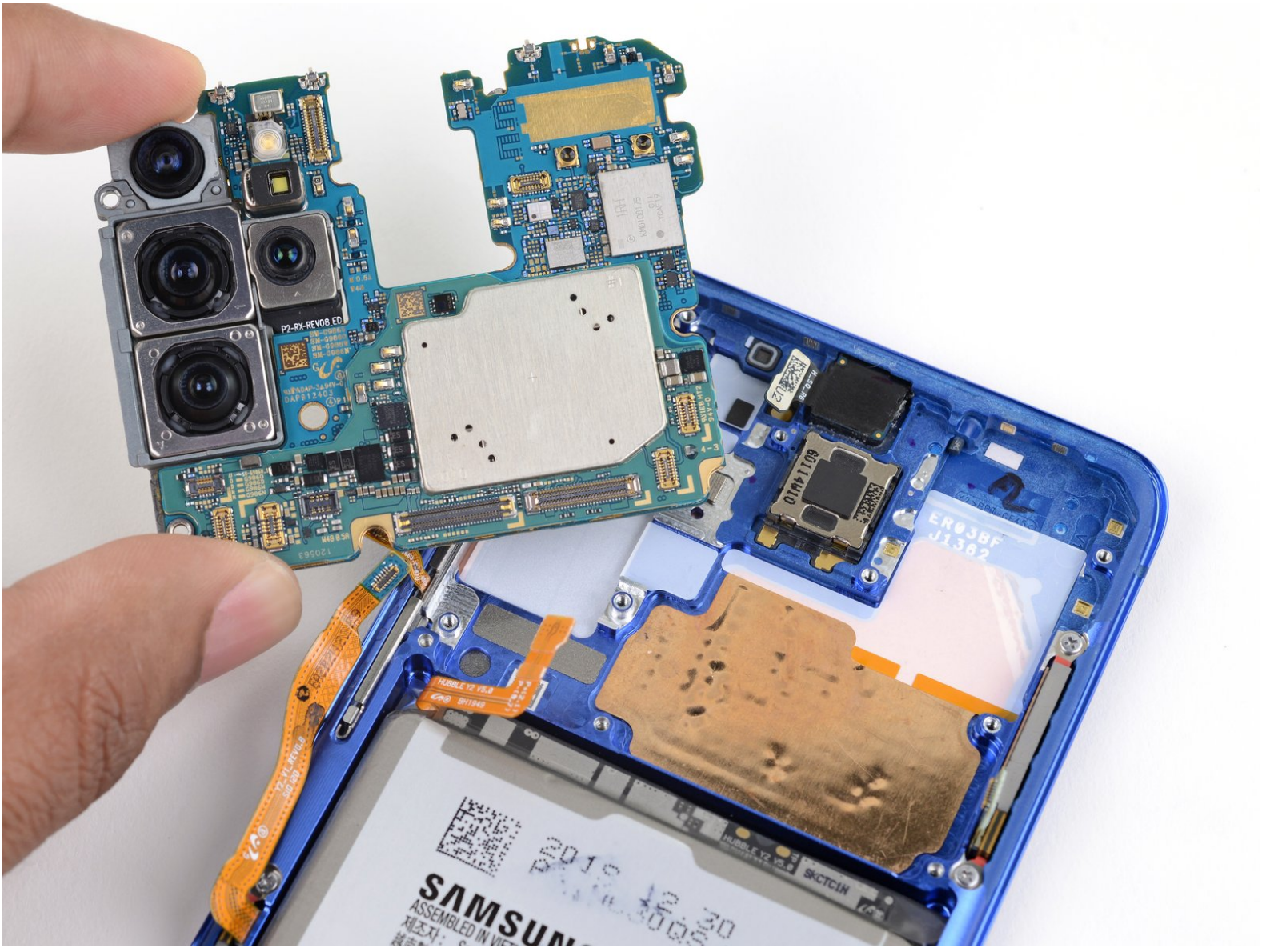


INTRODUCTION

Pre-req guide on removing the motherboard assembly, including the camera module, from the Galaxy S20 Plus.

TOOLS:

- SIM Card Eject Tool (1)
- iOpener (1)
- Suction Handle (1)
- iFixit Opening Picks (Set of 6) (1)
- Phillips #00 Screwdriver (1)
- Tweezers (1)
- Spudger (1)

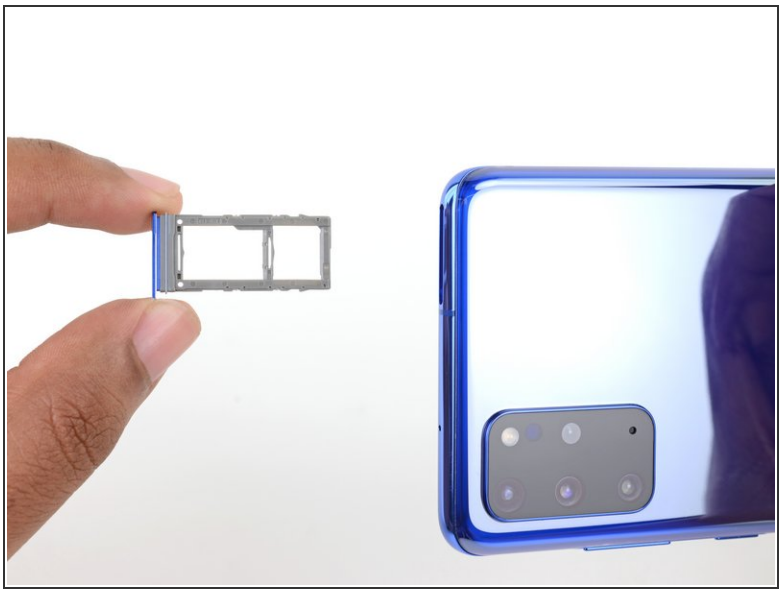
Step 1 — Eject the SIM tray

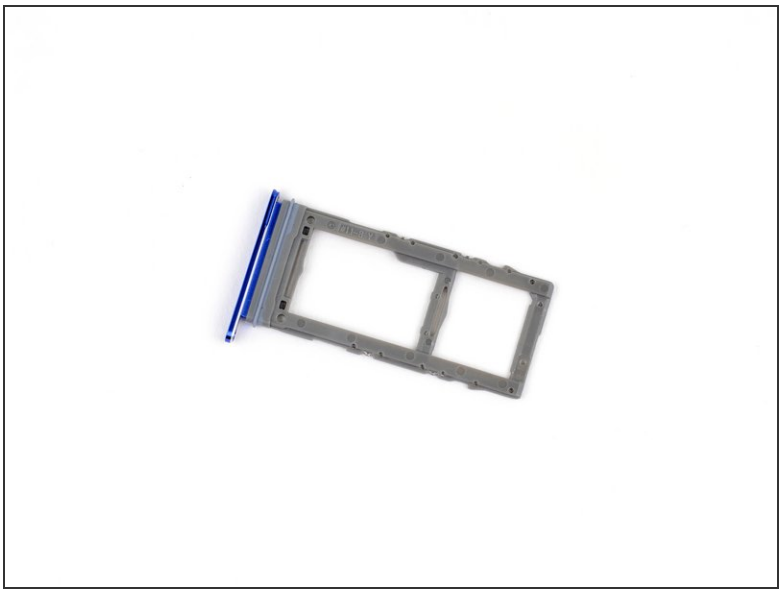
- Insert a SIM card eject tool, bit, or a straightened paperclip into the hole on the SIM tray, located at the top edge of the phone next to the plastic antenna band.

  If you inserted the tool into the other hole, don't worry—the microphone and the ingress gasket are mounted out of harm's way.

- Press in firmly to eject the tray.

Step 2 — Remove the SIM tray





- Remove the SIM card tray.

The SIM card will fall out of the tray easily.

When you reinsert the SIM card, ensure that it is in the proper orientation relative to the tray.

A thin rubber gasket around the SIM tray provides water and dust protection. If this gasket is damaged or missing, replace the gasket or the entire SIM tray to protect your phone's internal components.

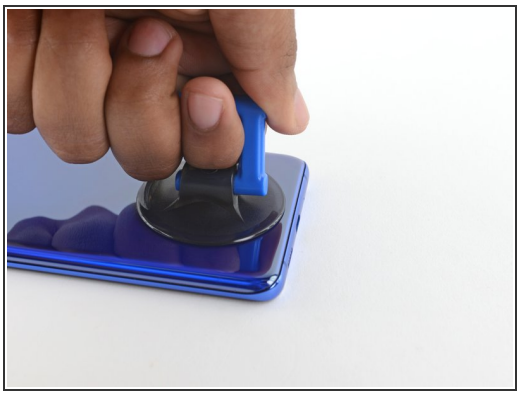
Step 3 — Heat the bottom edge

⚠ 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 4 — 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.

  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.

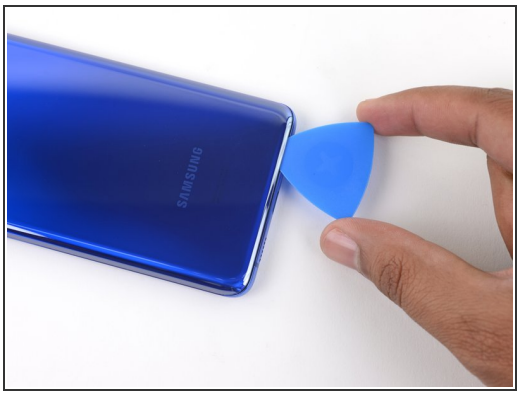
- Insert the point of an opening pick into the gap.

  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.

  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 5


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

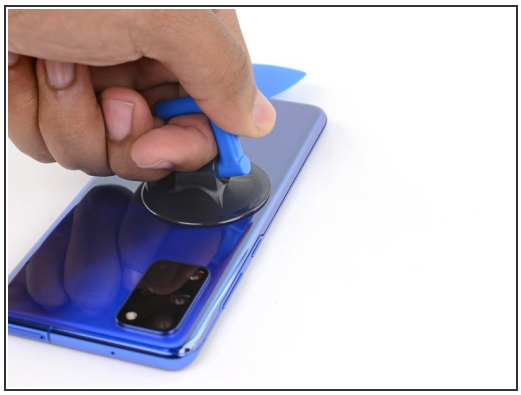
  ⚠ Do not attempt to cut the adhesive near the corners of the phone where the glass is curved or you risk cracking the glass panel.

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

Step 6 — Heat the left edge

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

Step 7 — 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.

(i) 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.

(i) Due to tight tolerances, this may take multiple attempts.

(i) 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 8


- 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 9



- 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 10 — 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 11 — 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 12



- 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 13 — Heat the top edge

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

Step 14 — Separate the top edge adhesive

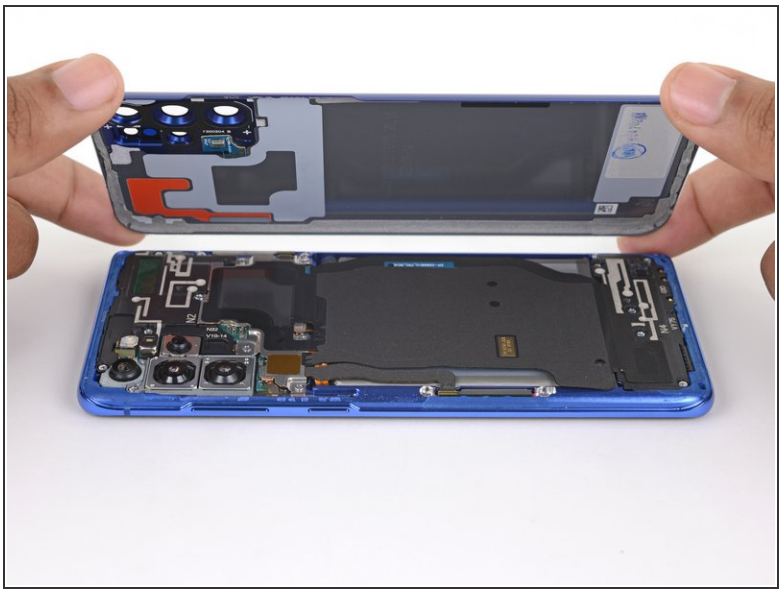


⚠ The glass near the corners of the back cover is curved and very susceptible to cracking. Be gentle during this step to prevent damaging your back cover.

- 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.

ⓘ If the slicing becomes difficult at any point, stop and reapply heat before continuing.

Step 15 — Remove the back cover

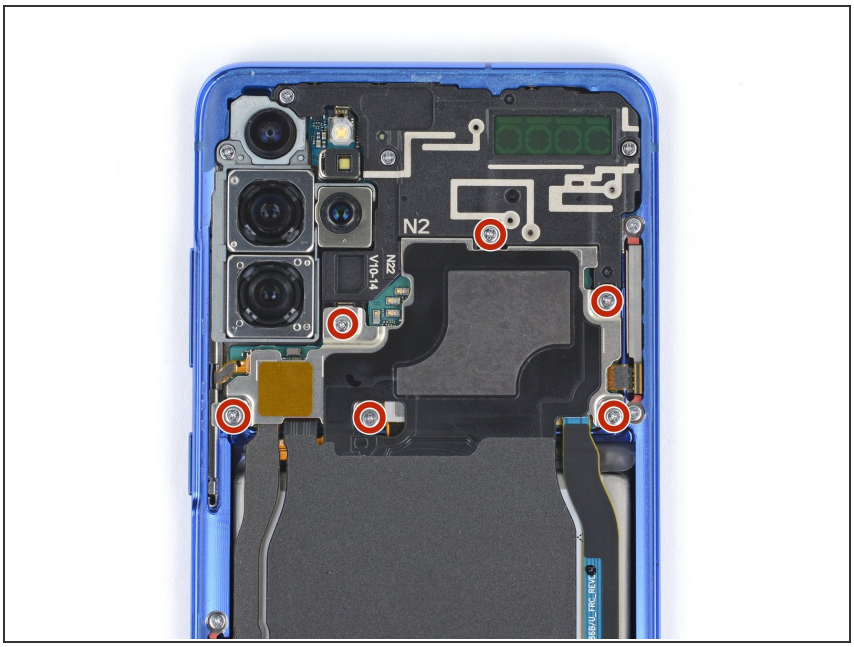


- Lift the back cover slowly. Use opening picks to slice any remaining adhesive.
- Remove the back cover.

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.

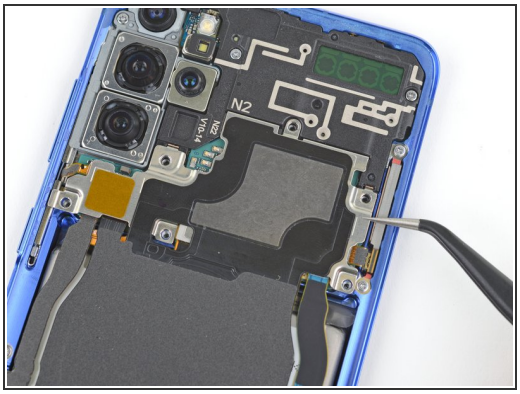
Step 16 — Unfasten the motherboard bracket

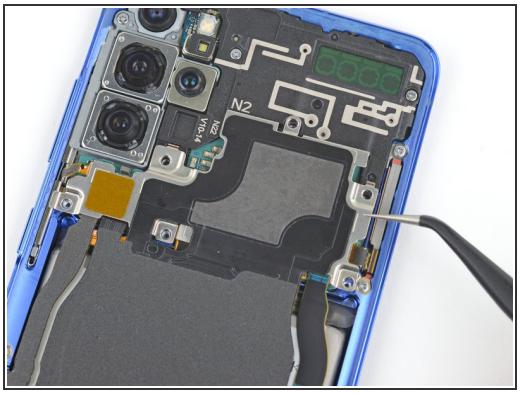


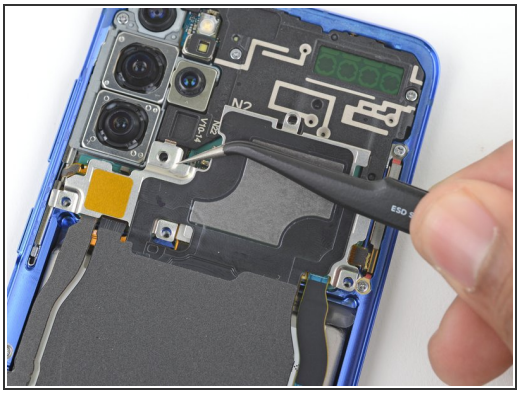
- Use a Phillips #00 screwdriver to remove the six 4 mm-long screws securing the motherboard bracket.

ⓘ Throughout this repair, keep track of each screw and make sure it goes back exactly where it came from.

Step 17 — Unclip the motherboard bracket





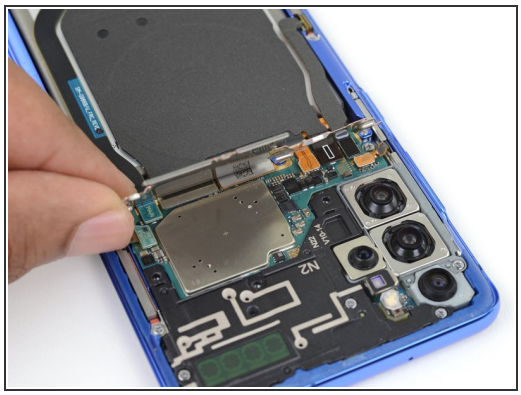


- Use a pair of tweezers to gently pull up and unclip the motherboard bracket from the plastic midframe.

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

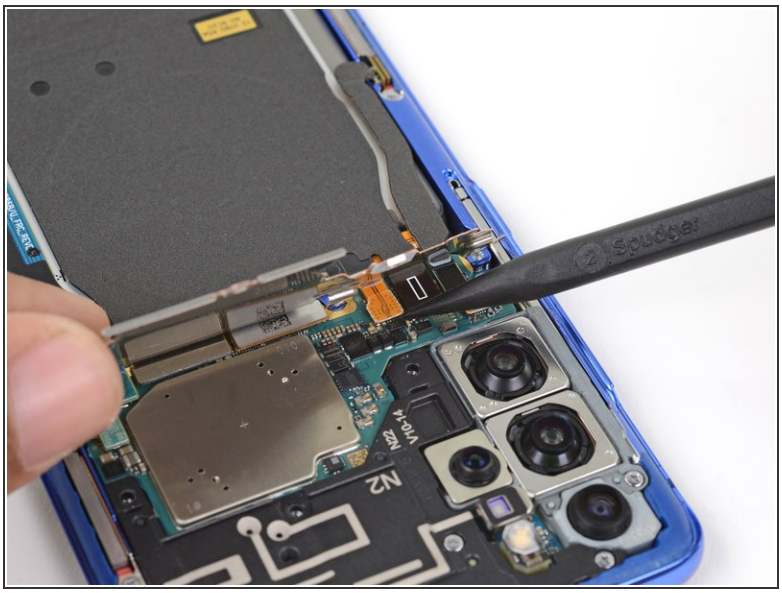
Step 18

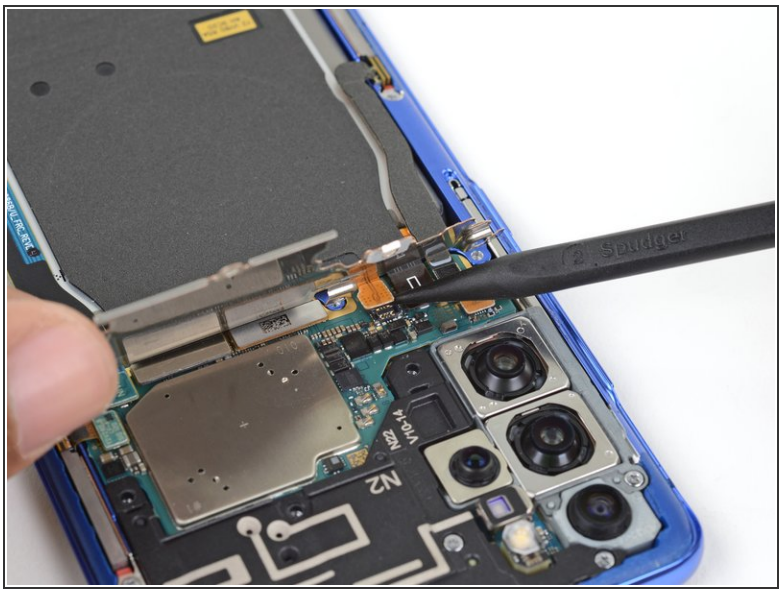




- Gently tilt up the motherboard bracket so the orange battery connector is accessible.

Step 19 — Disconnect the battery

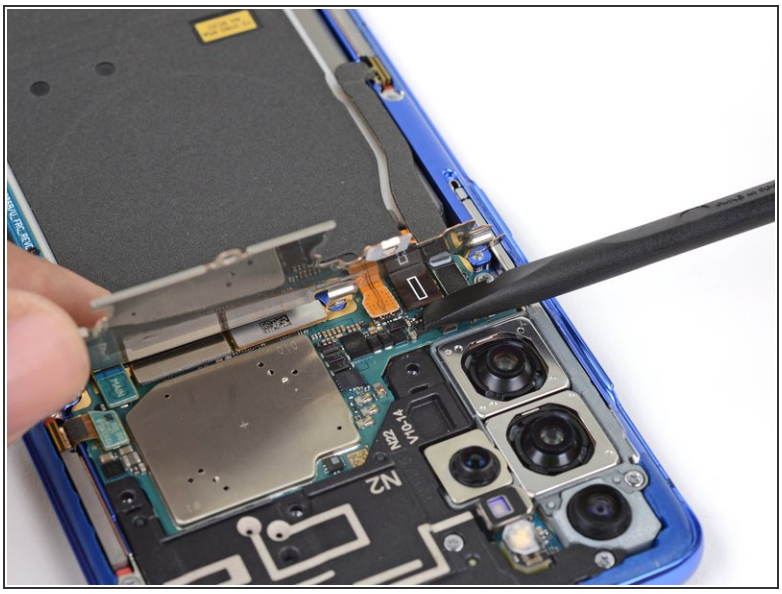
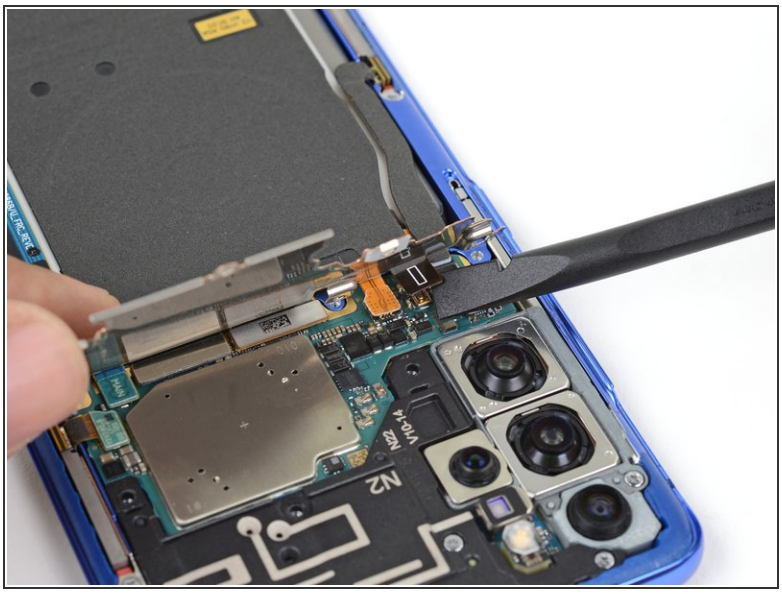




- Use a spudger to pry up and disconnect the battery connector.

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

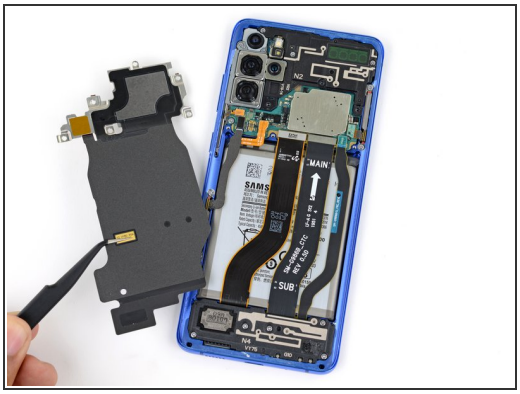
Step 20 — Disconnect the wireless charging coil

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

Step 21 — Remove the wireless charging coil

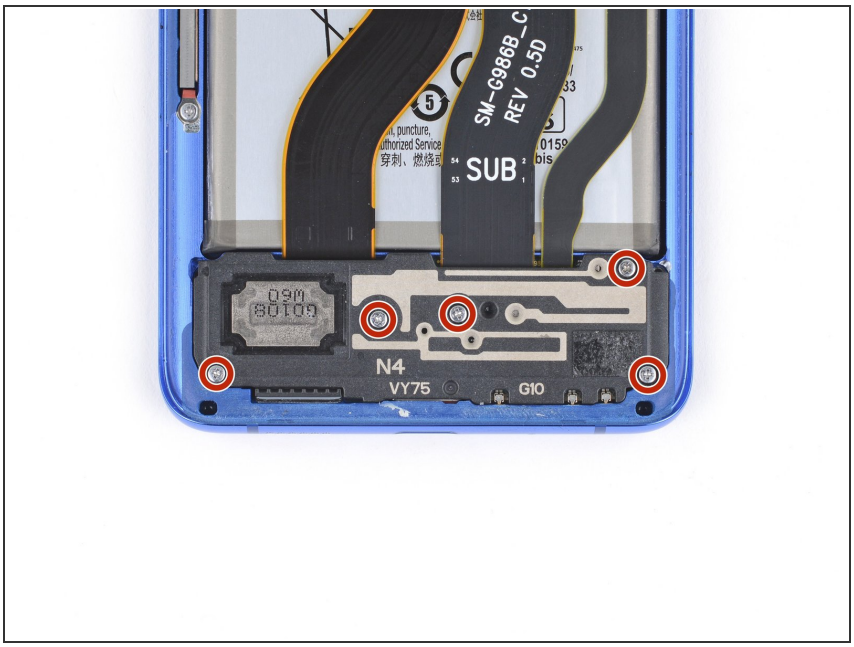




- Use a pair of tweezers to gently peel the wireless charging coil away from the device.
- Remove the wireless charging coil.

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 22 — Unfasten the lower midframe

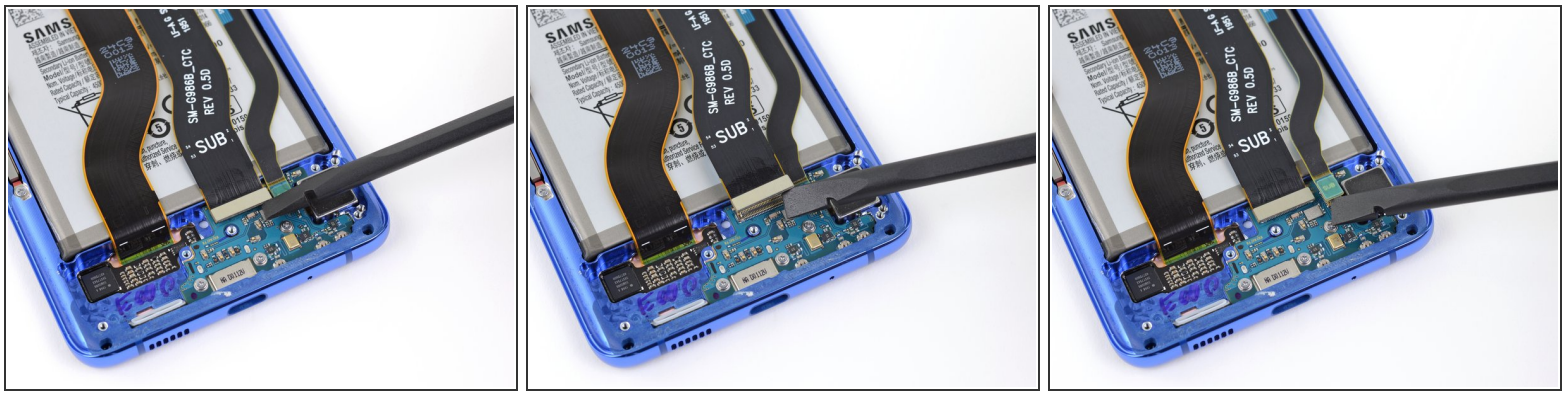


- Use a Phillips #00 screwdriver to remove the five 4 mm-long screws securing the loudspeaker and lower midframe.

Step 23 — 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.

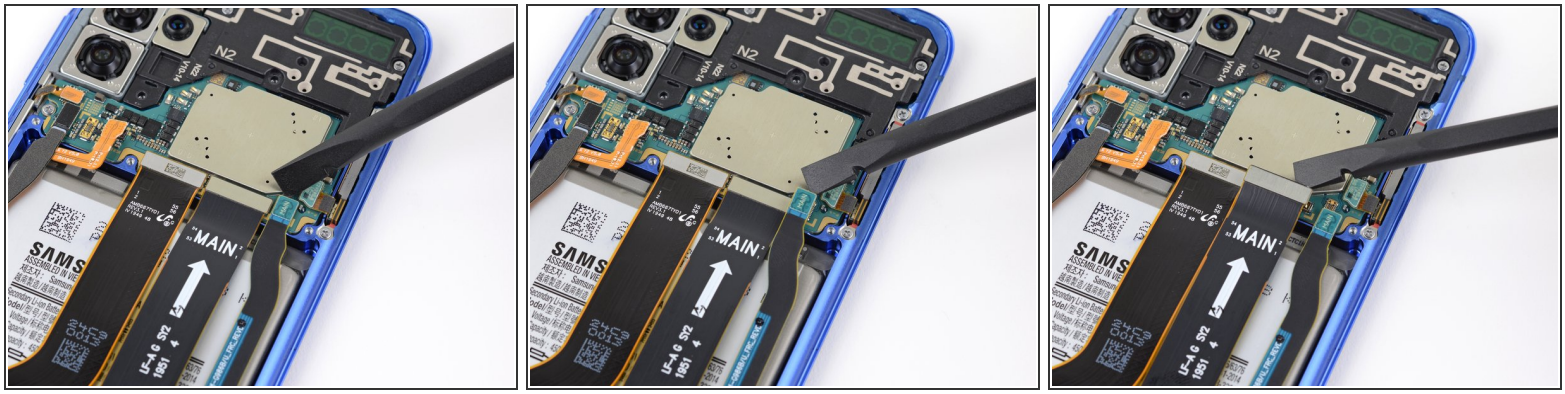
Step 24 — Disconnect the daughterboard



- Use a spudger to pry up and disconnect the main and auxiliary flex cables from the daughterboard near the bottom of the device.

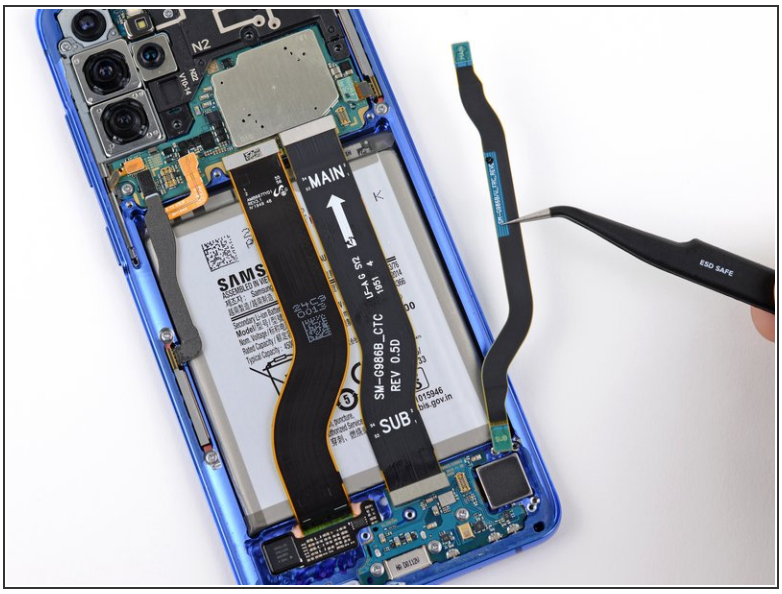
To re-attach press connectors like this one, carefully align and press down on one side until it clicks into place, then repeat on the other side. Do not press down on the middle. If the connector is misaligned, the pins can bend, causing permanent damage.

Step 25 — Disconnect the main flex cables



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

Step 26 — Remove the main flex cables



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

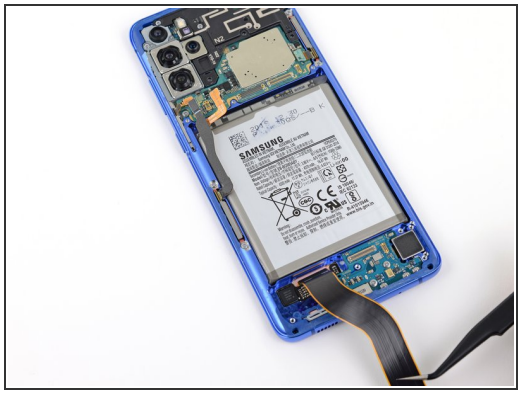
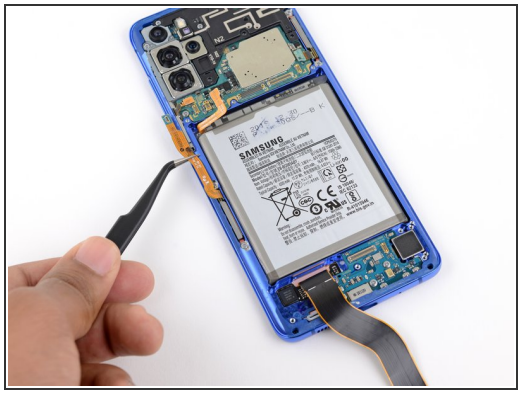
Step 27 — Disconnect the left 5G antenna

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

Step 28 — Disconnect the main display cable


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

Step 29 — Reposition the display and 5G cables

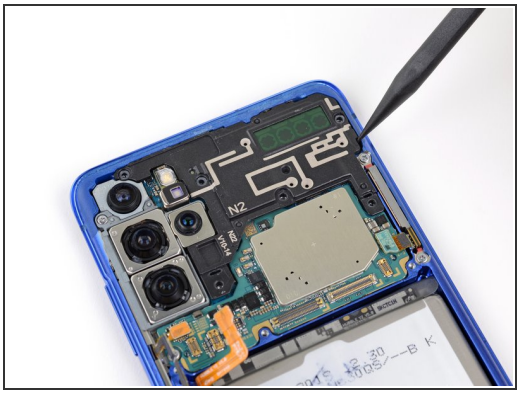




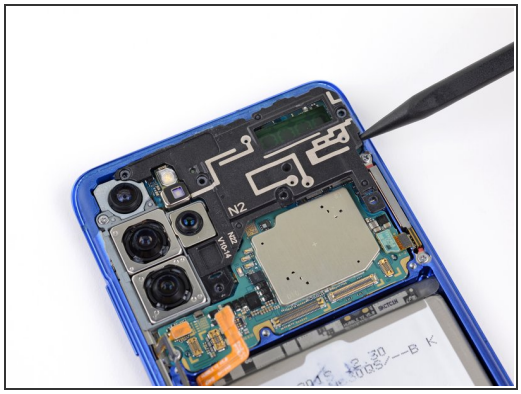
- Gently peel up and bend the display and left 5G antenna flex cables out of the way of the motherboard and battery.

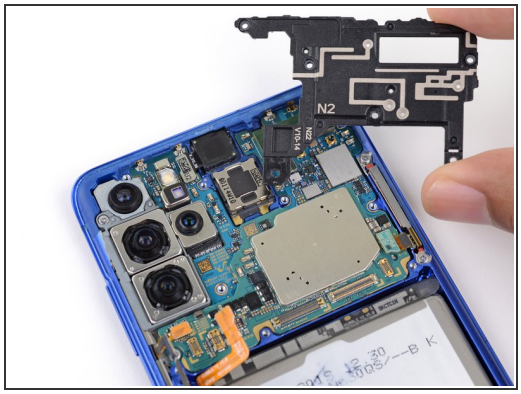
Step 30 — Unfasten the upper midframe

- Use a Phillips #00 screwdriver to remove the three 4 mm-long screws securing the upper midframe.

Step 31 — Remove the upper midframe



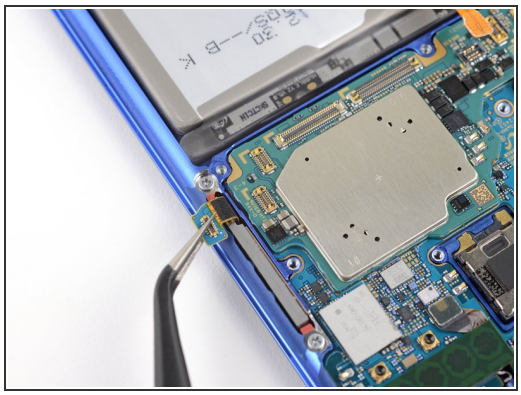




- Insert the point of a spudger into the notch on the right side of the upper midframe and pry up to release the clips holding it into place.
- Remove the upper midframe.

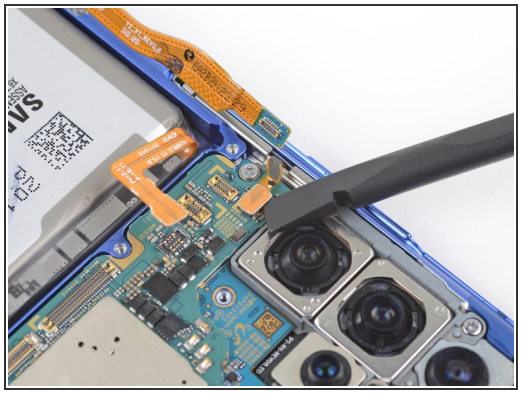
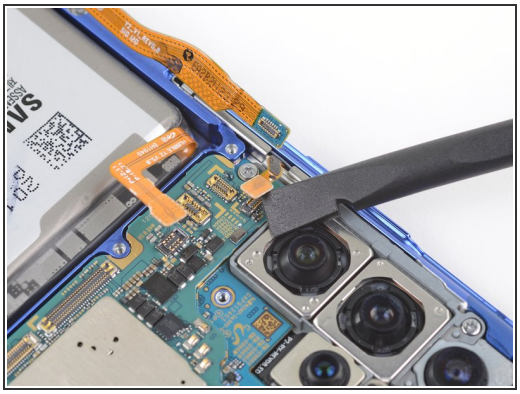
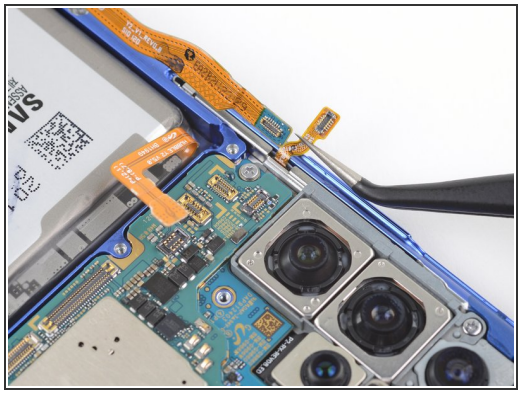
Step 32 — Disconnect the right 5G antenna





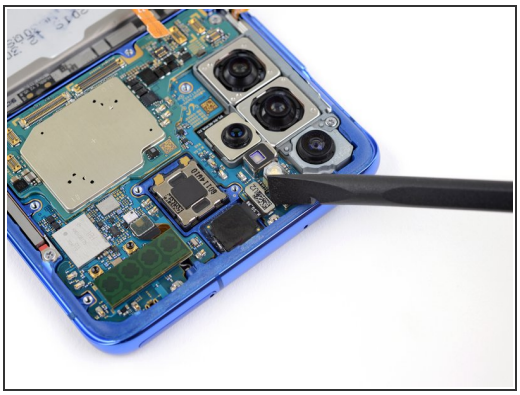
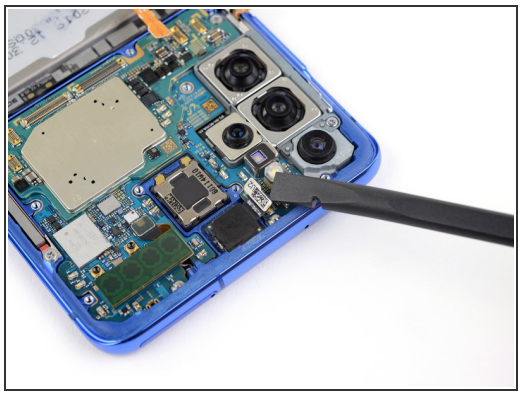
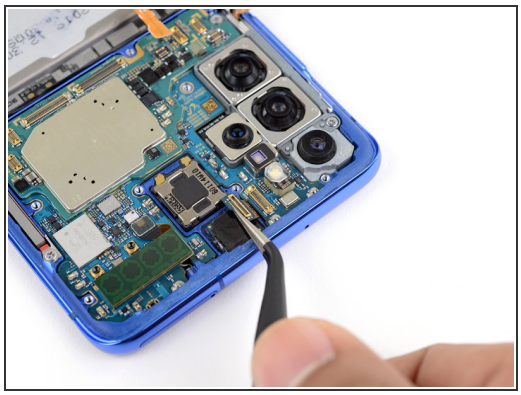
- Use a spudger to pry up and disconnect the right 5G antenna flex cable from the motherboard.
- Use a pair of tweezers to bend the cable out of the way of the motherboard.

Step 33 — Disconnect the side button cable

- Pry up and disconnect the side button flex cable from the motherboard.
- Bend the cable out of the way of the motherboard.

Step 34 — Disconnect the front facing camera

- Pry up and disconnect the front facing camera flex cable from the motherboard.
- Bend the cable out of the way of the motherboard.

Step 35 — Disconnect the upper 5G antenna


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

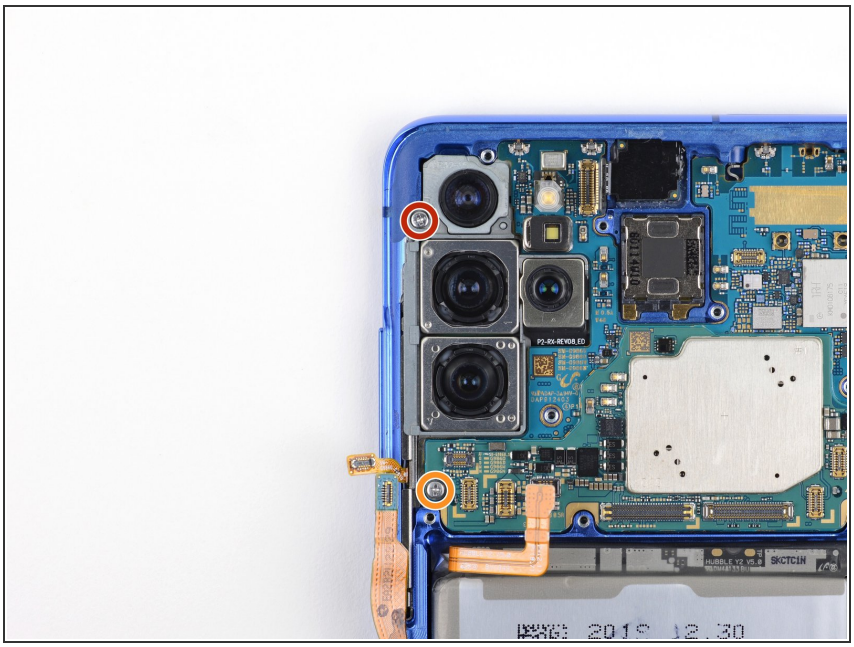
Step 36 — Remove the upper 5G antenna



- Use the flat end of a spudger to pry up the corner of the 5G millimeter wave antenna module.
  - The module is secured with a bit of adhesive, but should release easily.
- Remove the 5G antenna module.

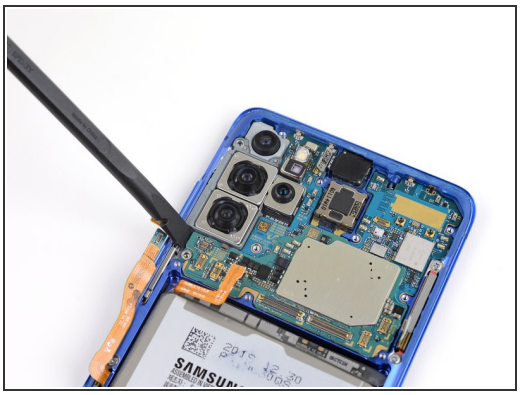
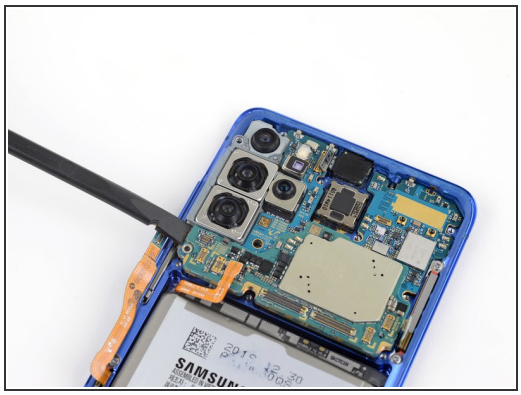
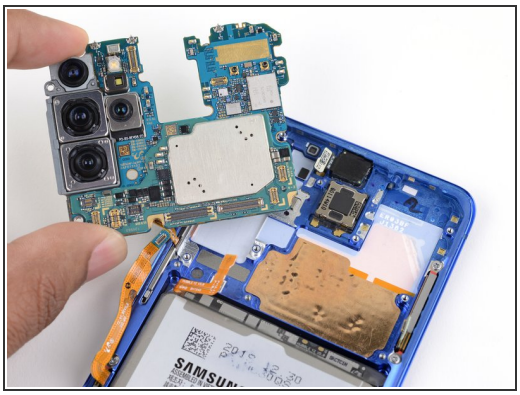
During reassembly, reconnect the 5G antenna connector first to properly align it into place, then firmly press the rest of the antenna module down to adhere it.

Step 37 — Unfasten the motherboard assembly



- Use a Phillips #00 screwdriver to remove the two screws securing the motherboard and camera assembly.
  - One 4 mm-long screw
  - One 3.4 mm-long screw

Step 38 — Remove the motherboard assembly

- Insert the flat end of a spudger into the bottom left corner of the motherboard assembly and pry up to release it from the phone body.
- Remove the motherboard assembly.

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