Samsung Galaxy S21 USB-C Charging Port and Daughterboard Replacement

Use this guide to replace the USB-C charging...

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INTRODUCTION

Use this guide to replace the USB-C charging port and daughterboard in your Samsung Galaxy S21.

Before you begin, refer to the Samsung Self-Repair document for safety information.

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)
- iFixit Opening Picks (Set of 6) (1)
- iOpener (1)
- Suction Handle (1)
- Spudger (1)
- Phillips #00 Screwdriver (1)

PARTS:

- Samsung Galaxy S21 G5 (USA) USB-C Charge Port - 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 bottom 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.

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 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 3 — 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 4 — 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 5 — Heat the left edge

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

Step 6 — 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 7



- 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 8 — Heat the right edge

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

Step 9 — 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 10



- 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 11 — Separate the corner adhesive

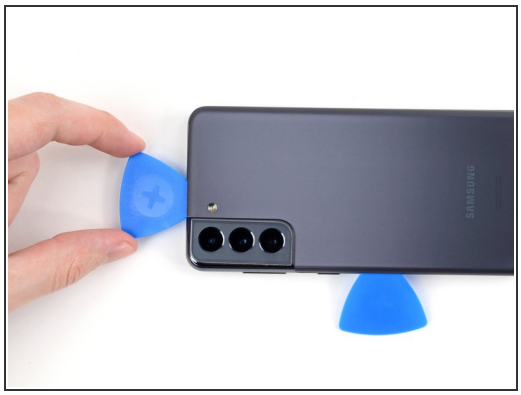


- Rotate the right-edge opening pick around the top-right corner of the phone.

⚠ 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 12 — 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 13 — Heat the camera shell


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

As you wait for the adhesive to loosen, note the following:

- 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 14 — 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 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



- 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 17 — Remove the back cover

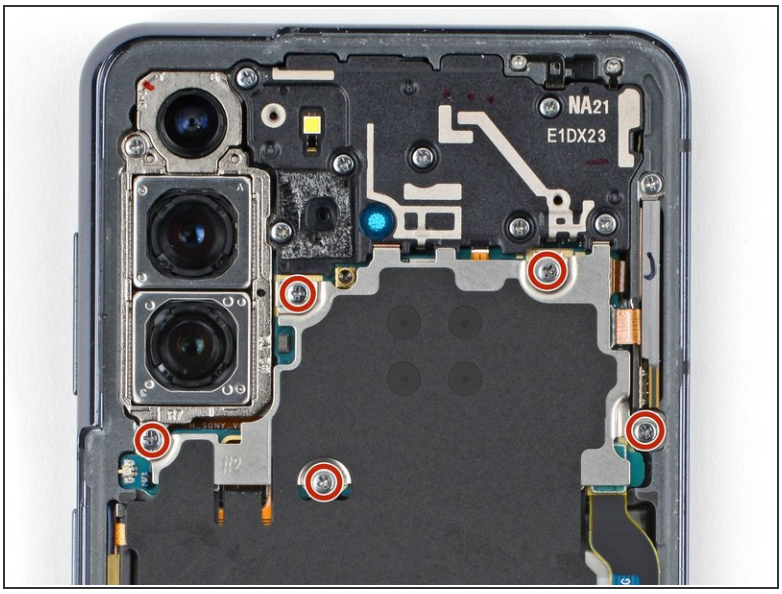
- Remove the back cover.

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. 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.

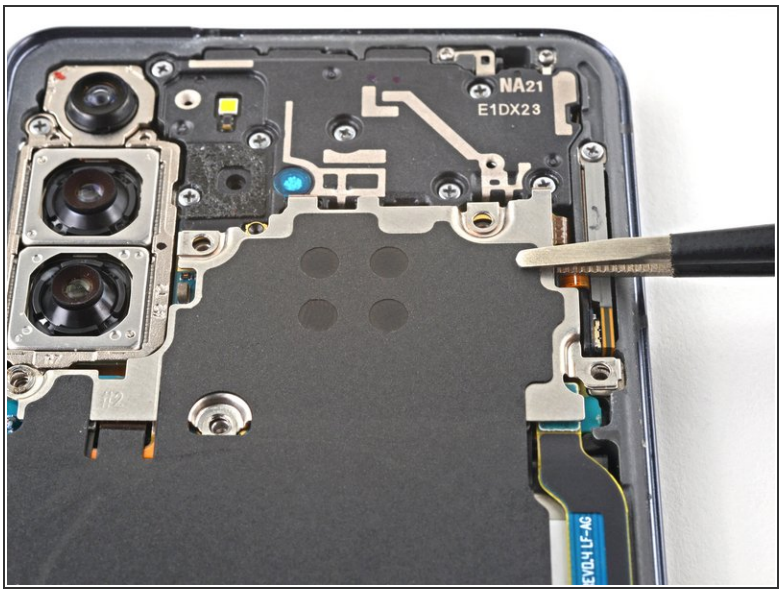
Step 18 — Unfasten the motherboard bracket

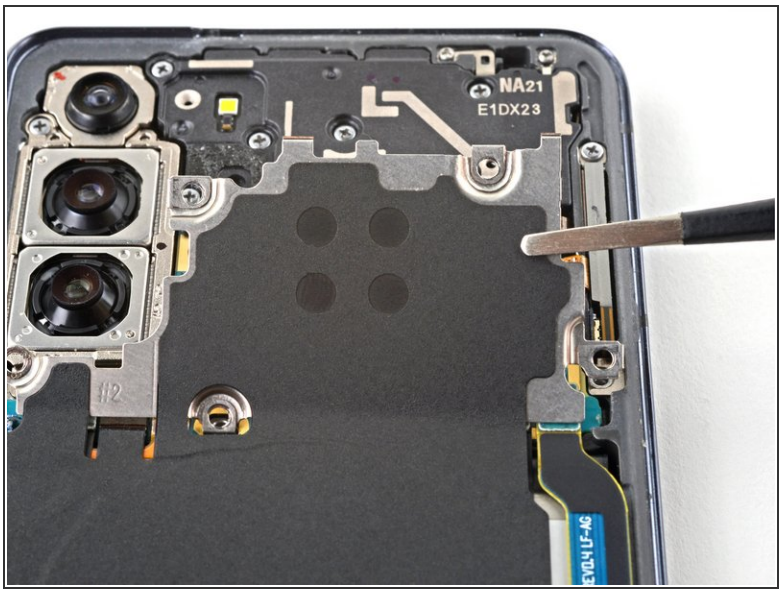


- Use a Phillips screwdriver to remove the five 4 mm-long screws securing the motherboard bracket to the frame.

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

Step 19 — Unclip the motherboard bracket

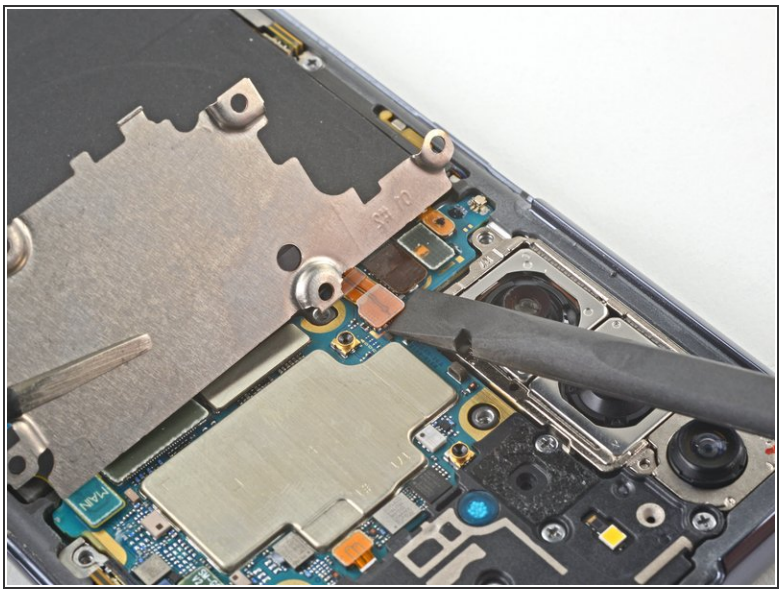


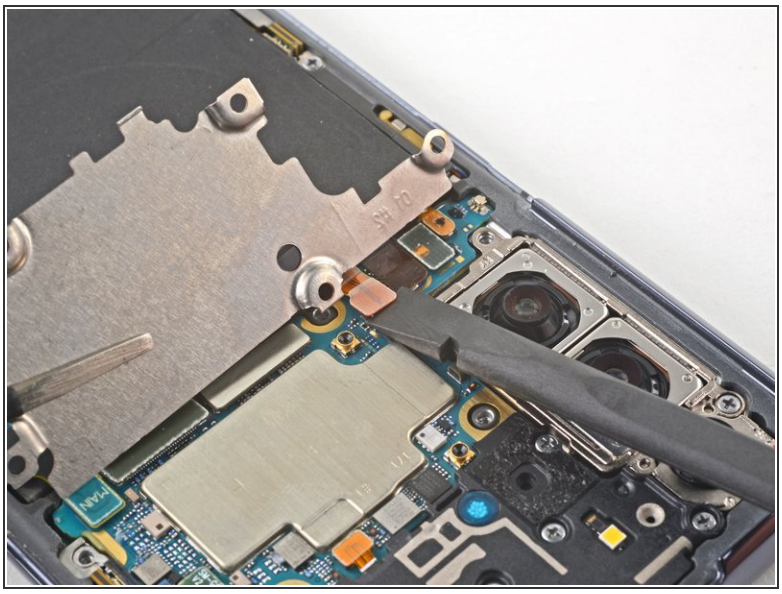


- Use a pair of tweezers to gently pull up and unclip the motherboard bracket from the frame.

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

Step 20 — Disconnect the battery



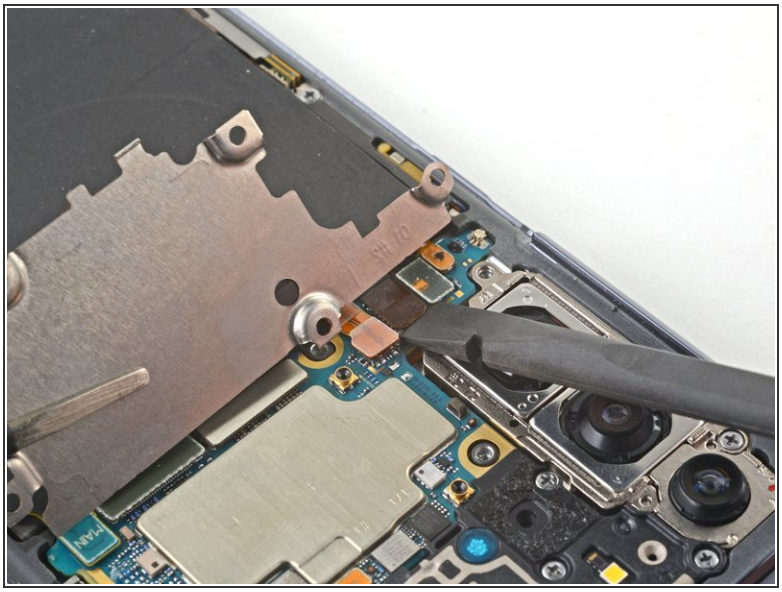


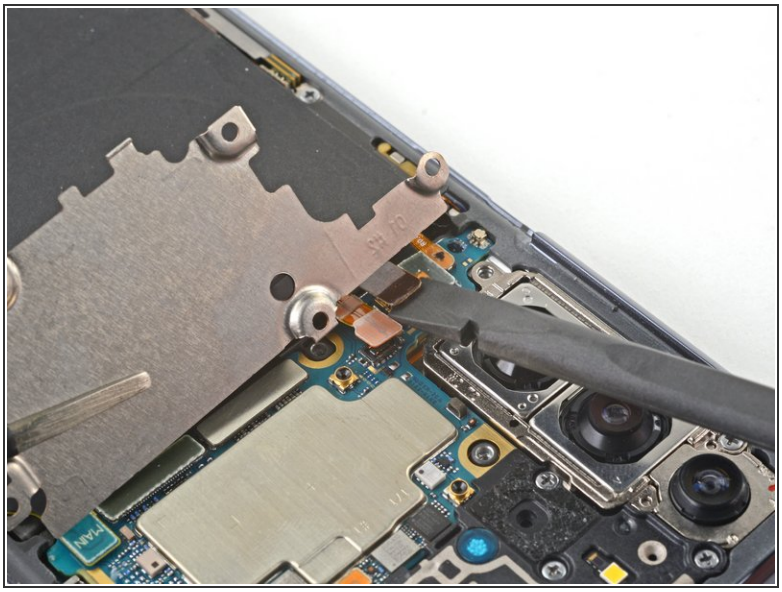
- While using tweezers, or your fingers, to hold the motherboard bracket out of the way, use a spudger to pry up the battery press connector.

⚠ 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.

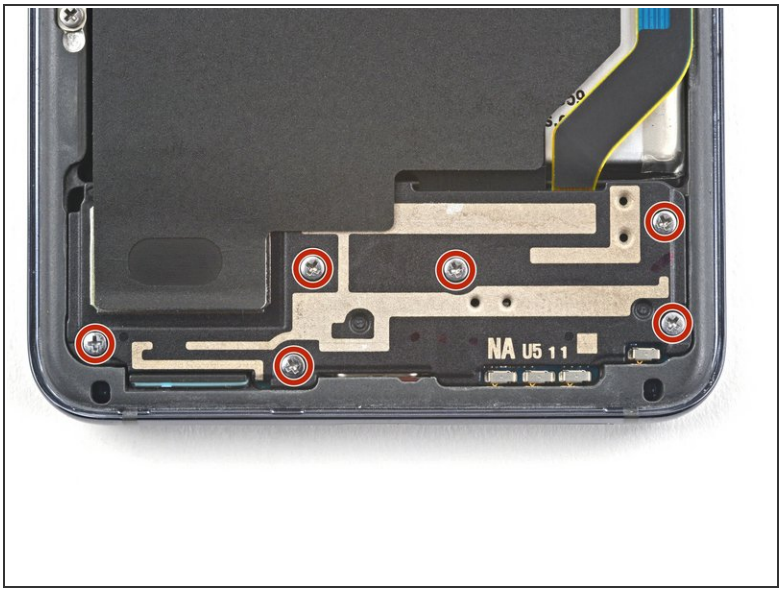
Step 21 — Disconnect the wireless charging coil

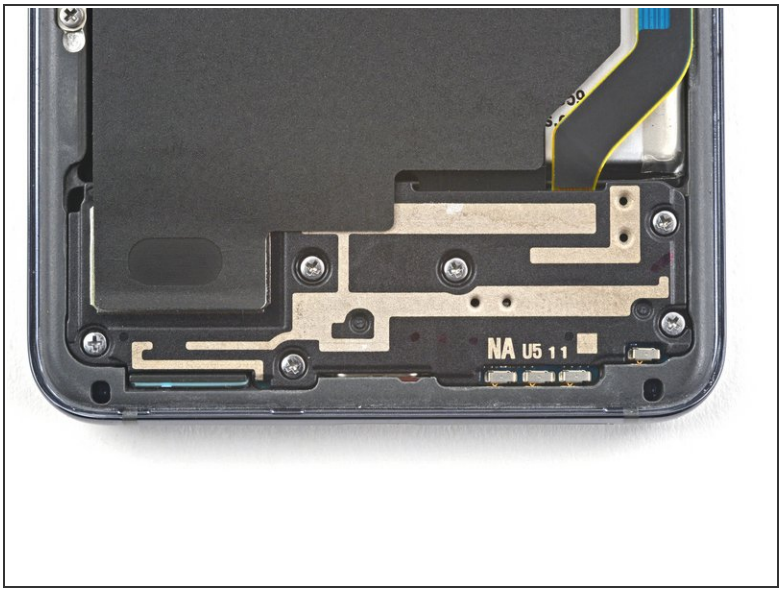




- While holding the motherboard bracket out of the way, use a spudger to pry up and disconnect the wireless charging coil's press connector.

Step 22 — Unfasten the loudspeaker





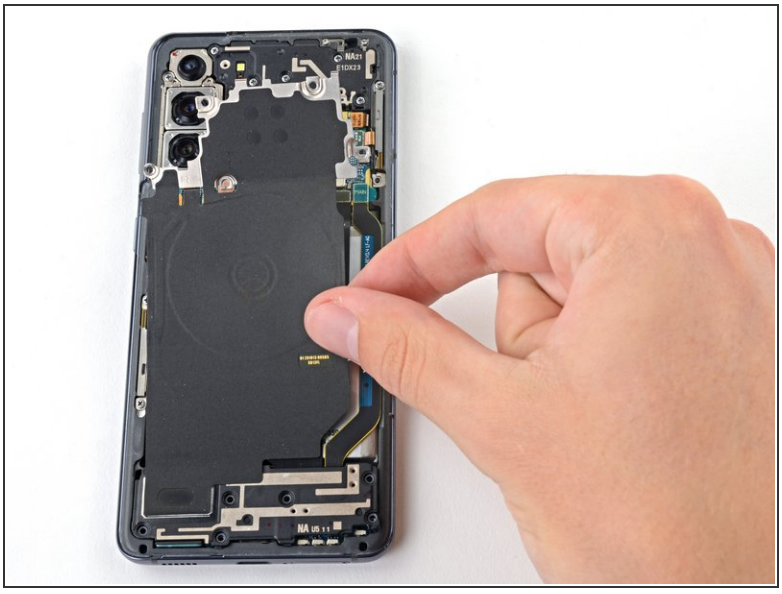
- Use a Phillips screwdriver to remove the six 4 mm-long screws securing the loudspeaker to the frame.

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

Step 23 — Disconnect 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.

Step 24 — Remove the wireless charging coil

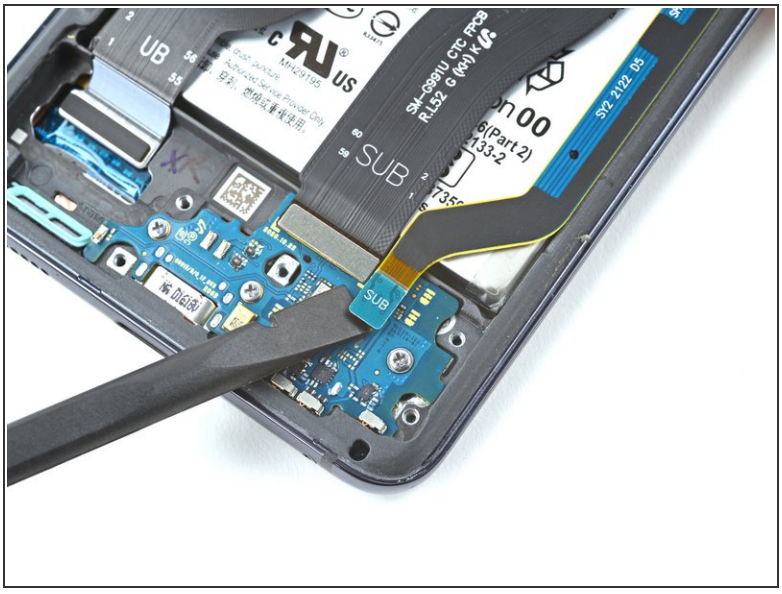


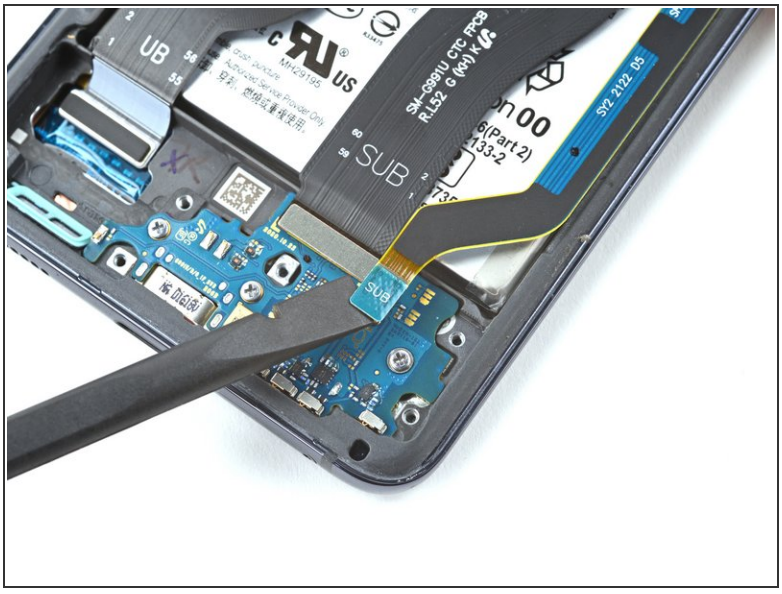
- Remove the wireless charging coil.

Step 25 — Disconnect the primary interconnect cable

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

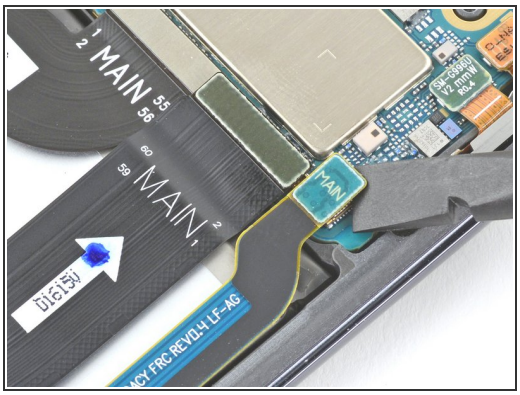
Step 26 — Disconnect the secondary interconnect cable

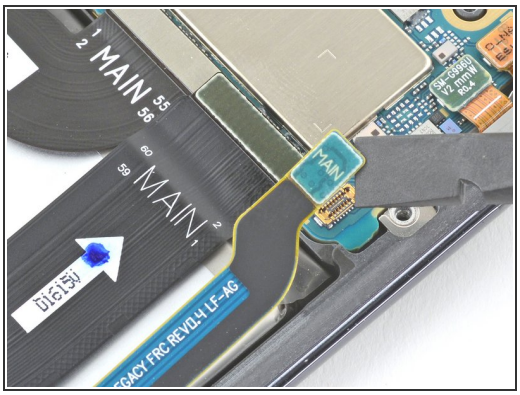


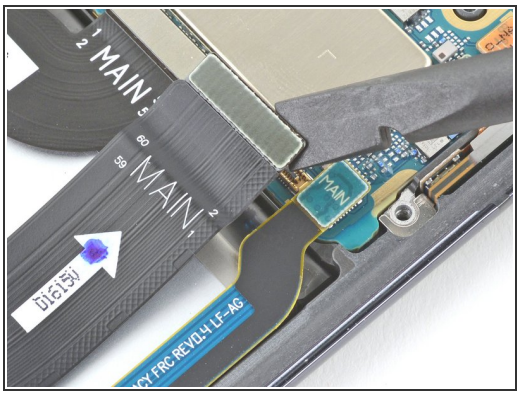


- Use the flat end of a spudger to pry up and disconnect the secondary interconnect cable's press connector.

Step 27 — Disconnect the secondary/primary interconnect cables







- Use a spudger to pry up and disconnect the secondary interconnect cable's press connector.
- Repeat for the main interconnect cable's press connector.

Step 28 — Remove the secondary/primary interconnect cables

- Use tweezers or your fingers to remove both cables.

Set the cables aside. You'll reuse them during reassembly.

Step 29 — Unfasten the daughterboard

- Use a Phillips screwdriver to remove the three 3.5 mm-long screws securing the daughterboard to the frame.

If you're reassembling with the Samsung Self-Repair kit, be sure to replace the screws with new ones labeled **#3428**.

Step 30 — Remove the daughterboard



- Use the point of a spudger to pry up the daughterboard.
- Use your fingers to pull the daughterboard up and away from the bottom of the phone and remove it.

ⓘ If you feel any resistance, the USB-C port could still be caught in its groove. Gently wiggle the daughterboard while pulling until it completely separates from the phone.

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 9) to make sure your device is fully functional.

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.