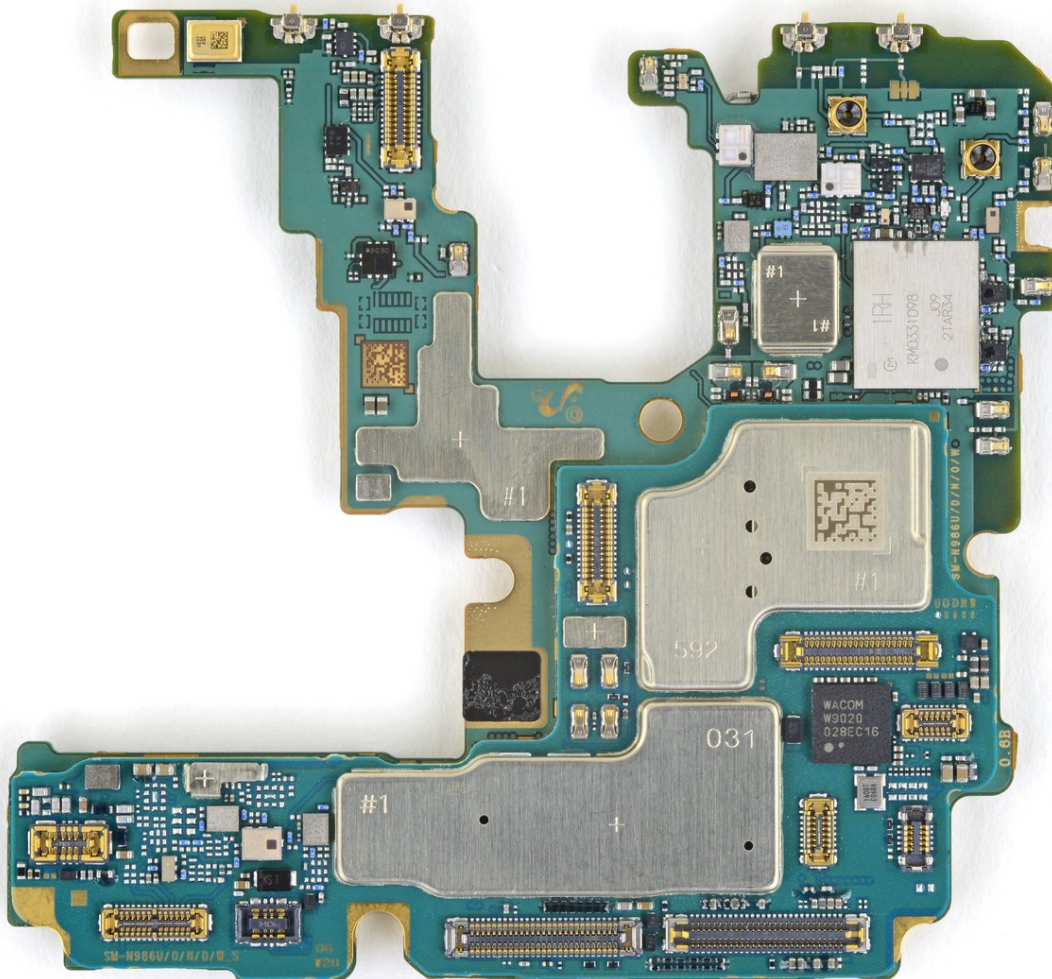




Samsung Galaxy Note20 Ultra Motherboard Replacement

Use this guide to remove or replace the...

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INTRODUCTION

Use this guide to remove or replace the motherboard on your Samsung Galaxy Note20 Ultra.

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](#).

TOOLS:

[SIM Card Eject Tool](#) (1)

[iOpener](#) (1)

[Suction Handle](#) (1)

[iFixit Opening Picks \(Set of 6\)](#) (1)

[Spudger](#) (1)


[Tweezers](#) (1)

[Phillips #00 Screwdriver](#) (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 firmly to eject the 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 rear cover



- ⚠️ Completely power off your phone before you begin disassembly.
- [Heat an iOpener](#) and apply it to the left side of the rear cover for one minute.
- ⚠️ A hair dryer, heat gun, or hot plate may also be used, but be careful not to overheat the phone—the screen and internal battery are susceptible to heat damage.

Step 3 — Insert an opening pick



- Apply a suction cup to the heated edge of the rear cover, as close to the edge as possible.
 - ⓘ If your back glass 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 panel.
- Pull up on the suction cup with strong, steady force to create a gap between the rear cover and the frame.
 - ⓘ Depending on the age of your phone, this may be difficult. If you are having trouble, apply more heat to the edge and try again.
- Insert an opening pick into the gap.
 - ⚠ Don't insert the opening pick more than 5 mm into the phone or you risk damaging the internal components.

Step 4 — Begin to cut the adhesive



- Slide the opening pick along the left edge towards the bottom left corner to cut through the adhesive.
- Leave the pick inserted in the bottom left corner to prevent the adhesive from re-sealing.

Step 5 — Cut along the perimeter of the rear cover



⚠ While cutting through the adhesive, don't insert the opening pick more than 5 mm into the phone or you risk damaging the internal components.

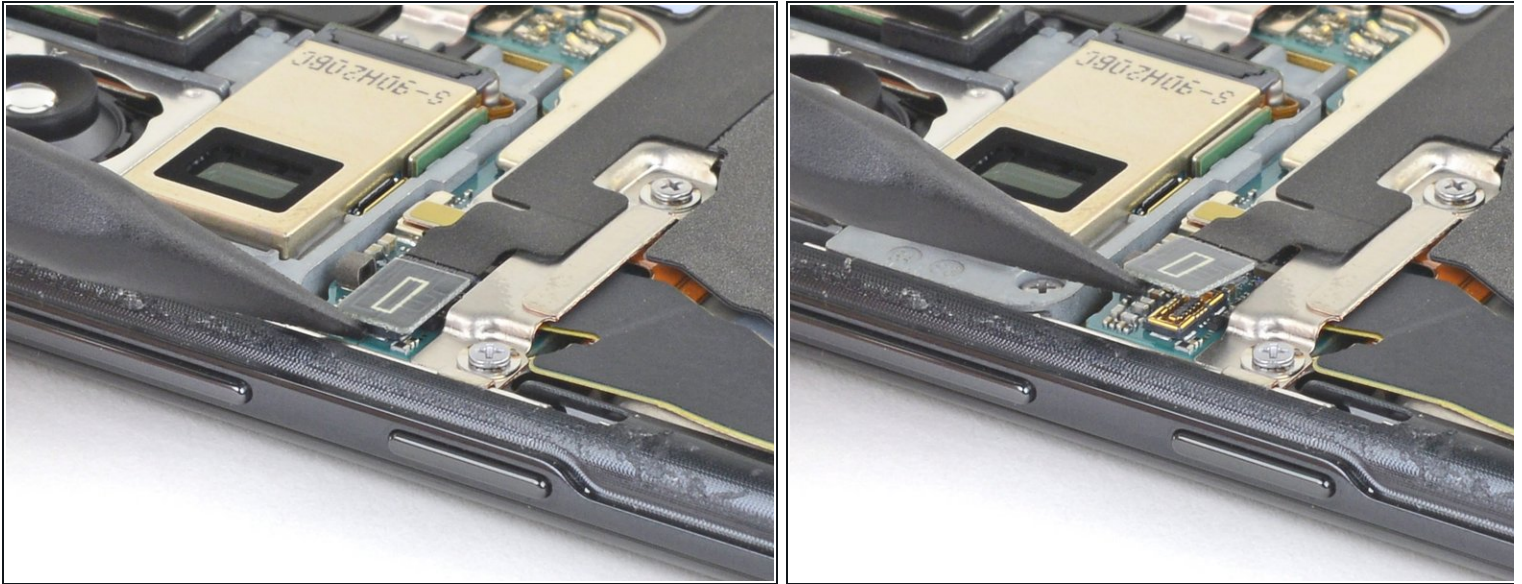
- Repeat the process of heating and cutting the adhesive along the three remaining sides of the rear cover.
- ① You can insert each new opening pick in the gaps created by the opening picks left in each corner.
- As you proceed, leave an opening pick in each corner to prevent the adhesive from re-sealing.
- Slide an opening pick back and forth around the entire perimeter of the phone to release any missed adhesive. Reheat any stubborn adhesive.

Step 6 — Remove the rear cover



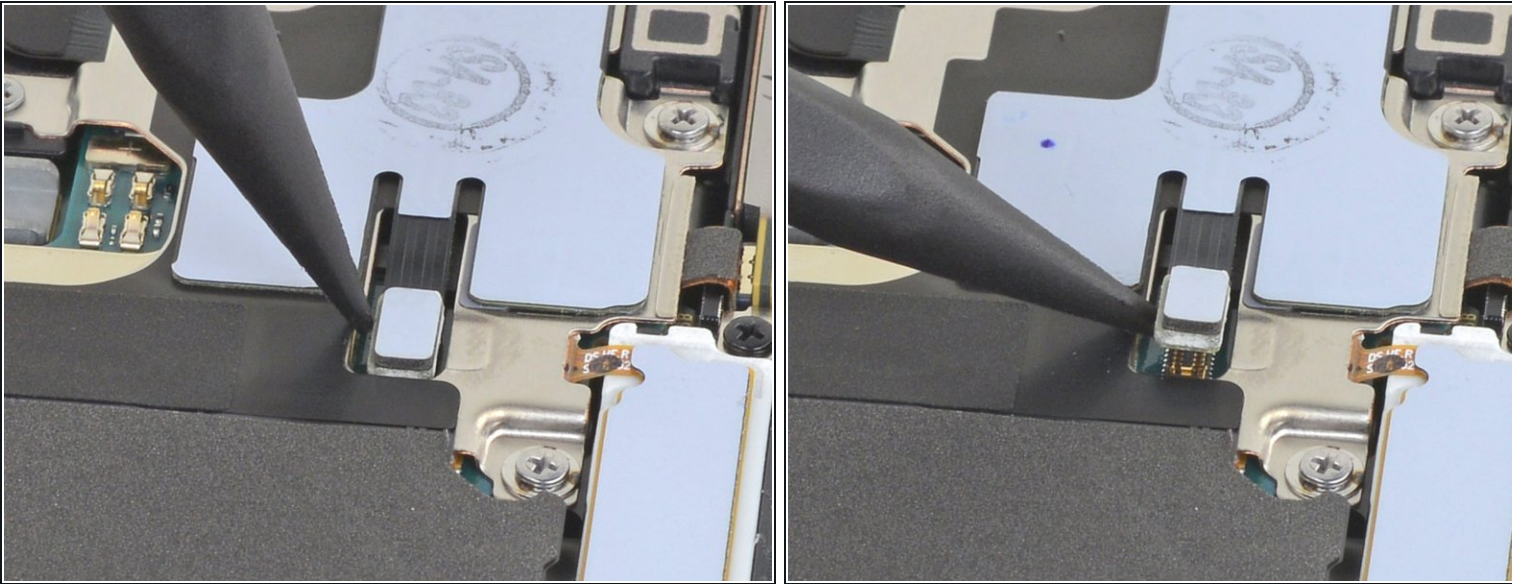
- Lift the rear cover straight up to remove it.

Step 7 — Disconnect the wireless charging coil



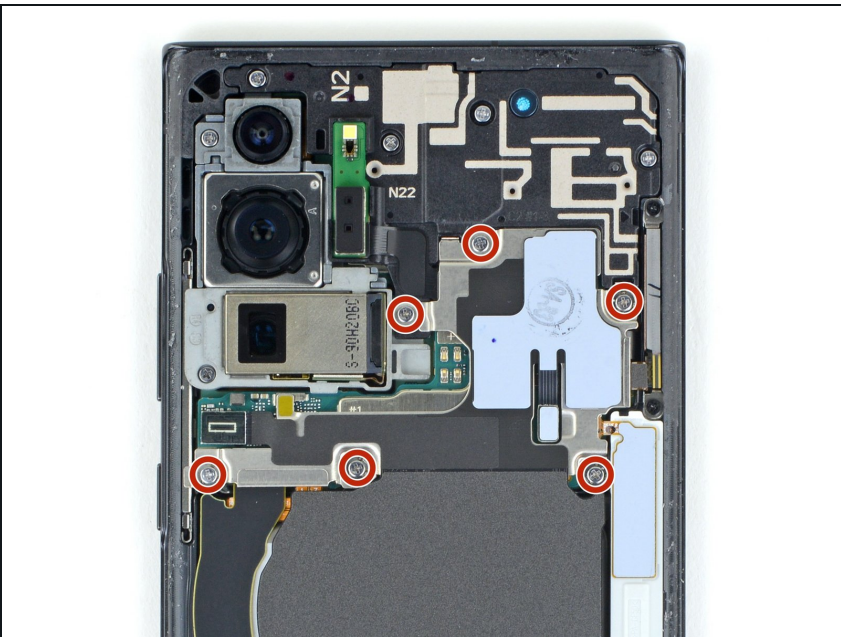
- Use the pointed end of a spudger to pry up and disconnect the wireless charging coil press connector.
 - ⚠ Take care to pry only under the edge of the connector to prevent damaging the socket itself and surrounding components.
- ☑ To re-attach [press connectors](#) like this one, carefully align and 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 8 — Disconnect the white press connector



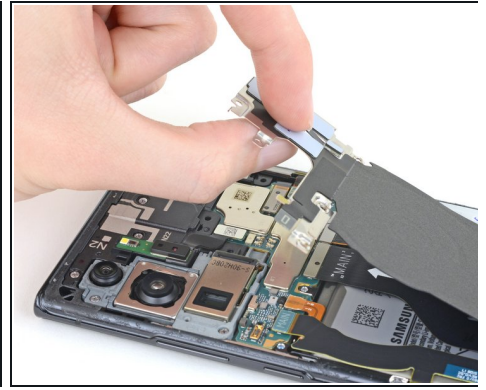
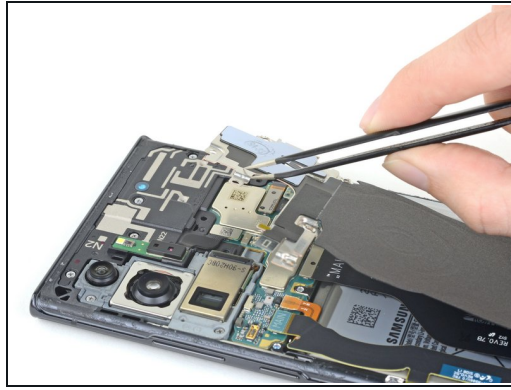
- Use the pointed end of a spudger to pry up and disconnect the white press connector located in the bottom right of the motherboard shield.

Step 9 — Remove the motherboard shield screws



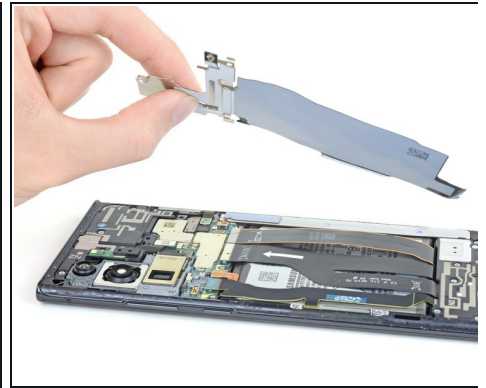
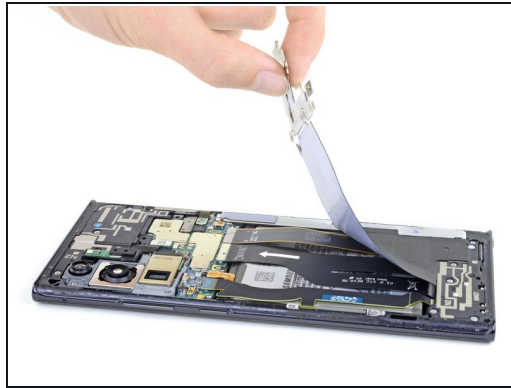
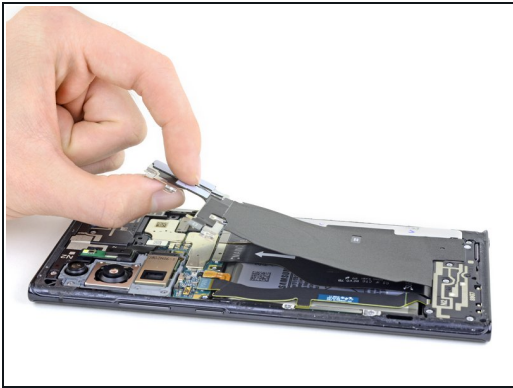
- Use a Phillips screwdriver to remove the six 4.0 mm screws securing the motherboard shield.
 - ⓘ If these screws have not been removed before, they may be difficult to remove as they have threadlocker on their threads.
 - ⓘ Throughout this repair, [keep track of each screw](#) and make sure it goes back exactly where it came from.

Step 10 — Remove the wireless charging coil



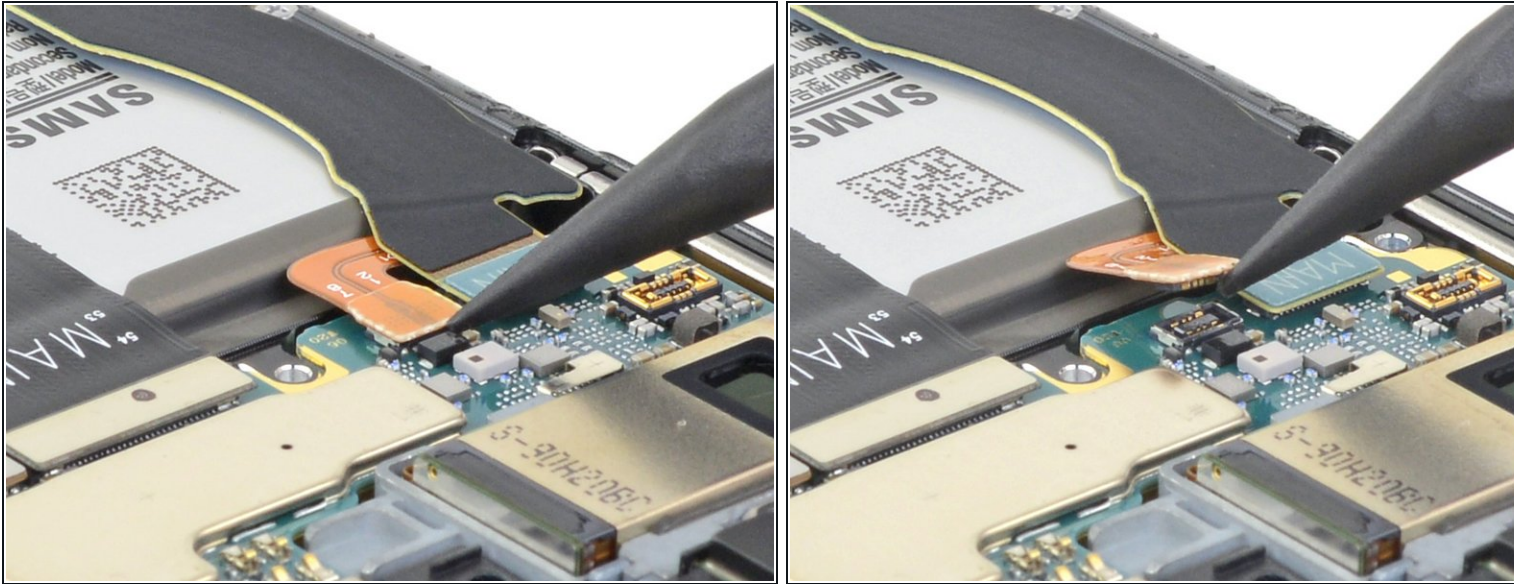
- Use a pair of tweezers to lift up the motherboard shield.
- ⚠ Be careful when handling the motherboard shield because its edges are thin and sharp.
- Use your fingers to grip the motherboard shield.

Step 11



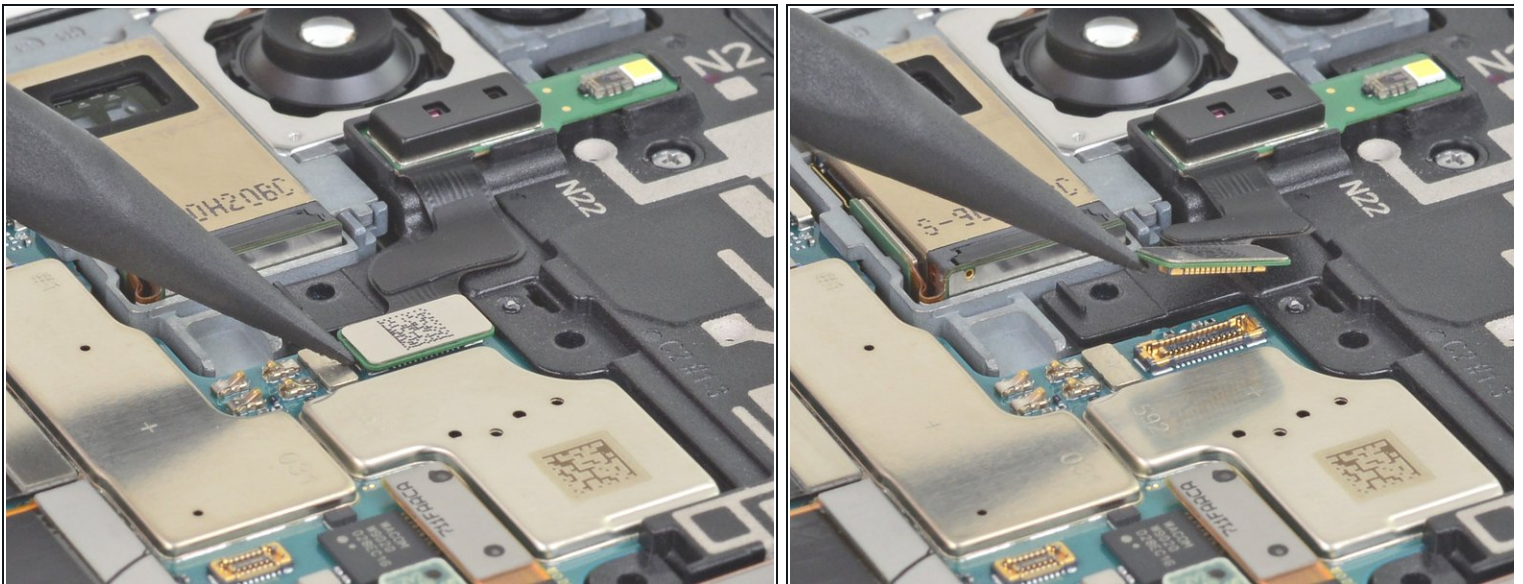
- Peel the wireless charging coil up and away from the device to remove it.
- ⓘ The wireless charging coil is secured to the device with light adhesive.

Step 12 — Disconnect the battery



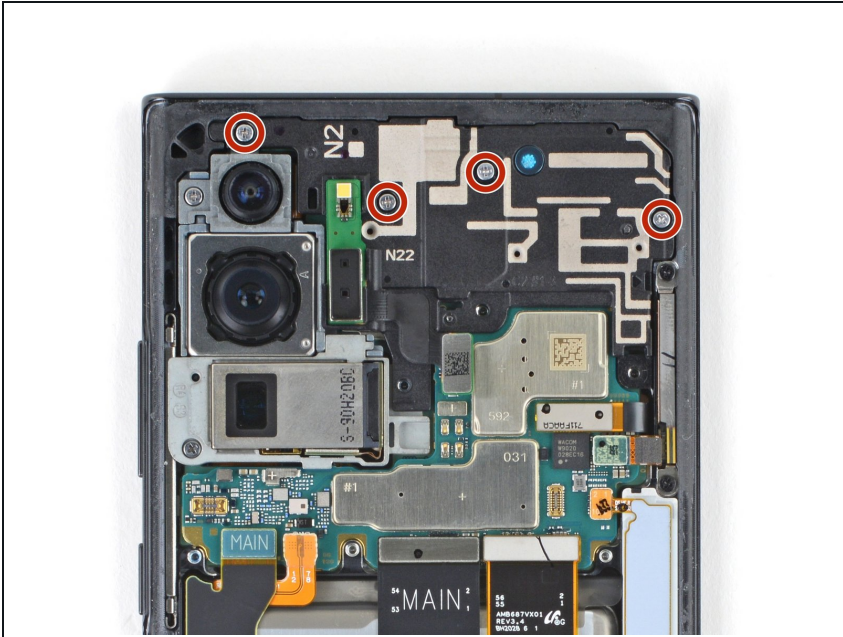
- Use the pointed end of a spudger to pry up the battery press connector to safely disconnect the battery before continuing repairs.

Step 13 — Disconnect the laser AF sensor



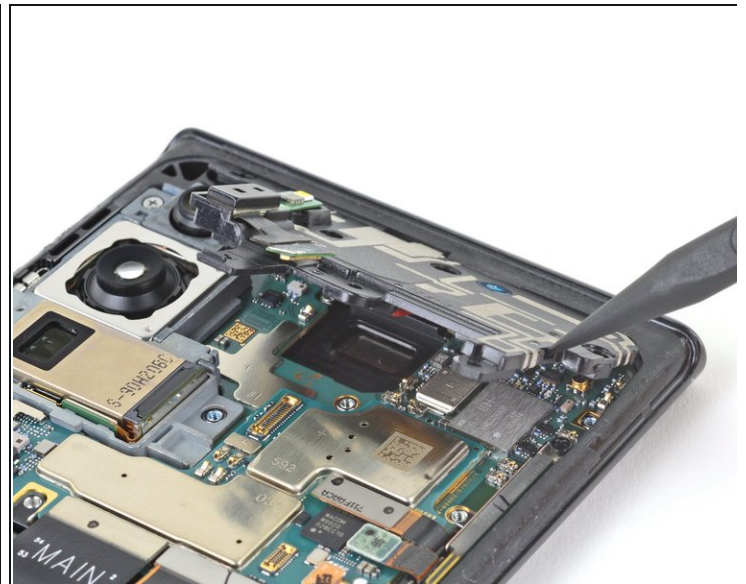
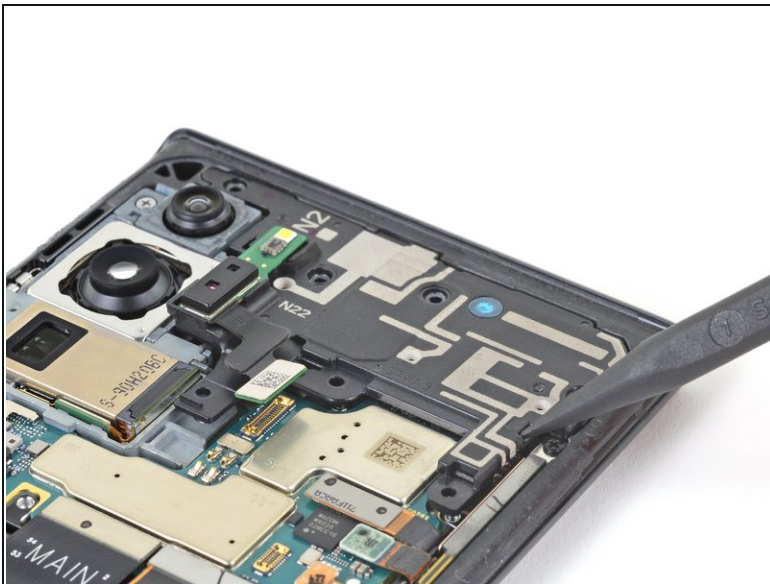
- Use the pointed end of a spudger to pry up the laser AF sensor press connector.

Step 14 — Remove the earpiece speaker screws



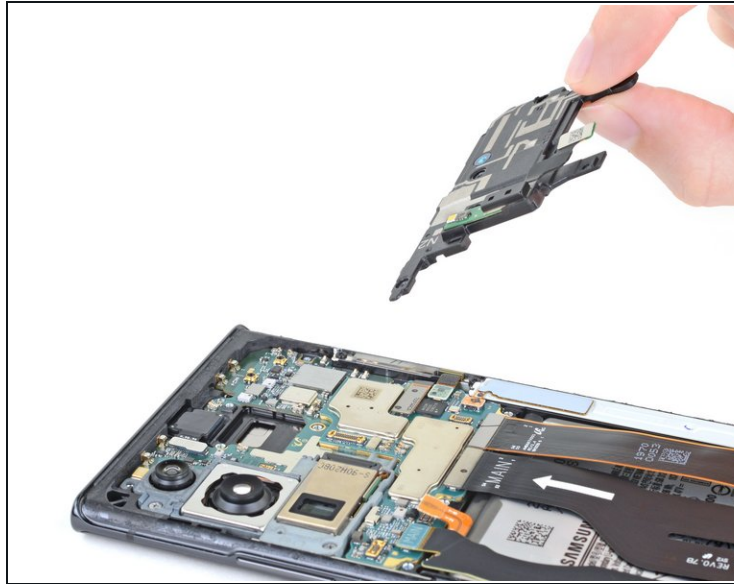
- Use a Phillips screwdriver to remove the four 4.0 mm screws securing the earpiece speaker.

Step 15 — Remove the earpiece speaker



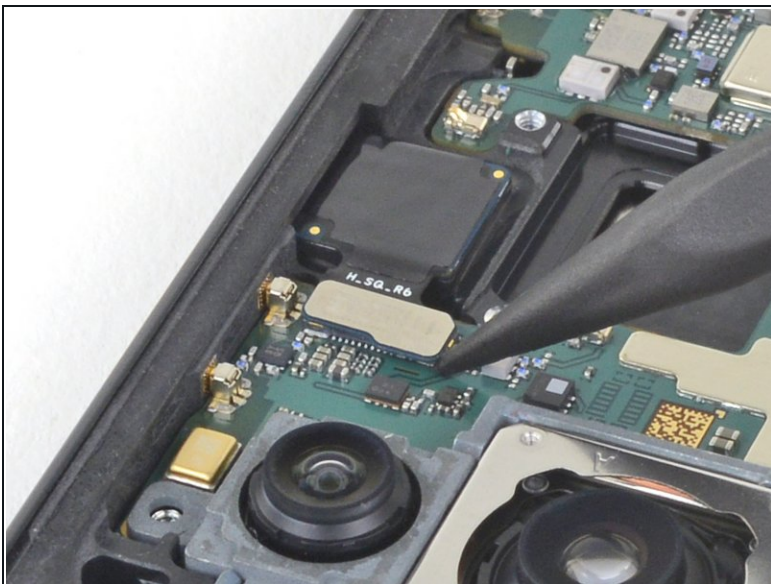
- Insert the pointed end of a spudger into the hole marked by a small triangle on the right side of the earpiece speaker.
- Use the spudger to pry up and loosen the earpiece speaker from the frame.
- ❗ The earpiece speaker clips to the frame along the top edge.

Step 16



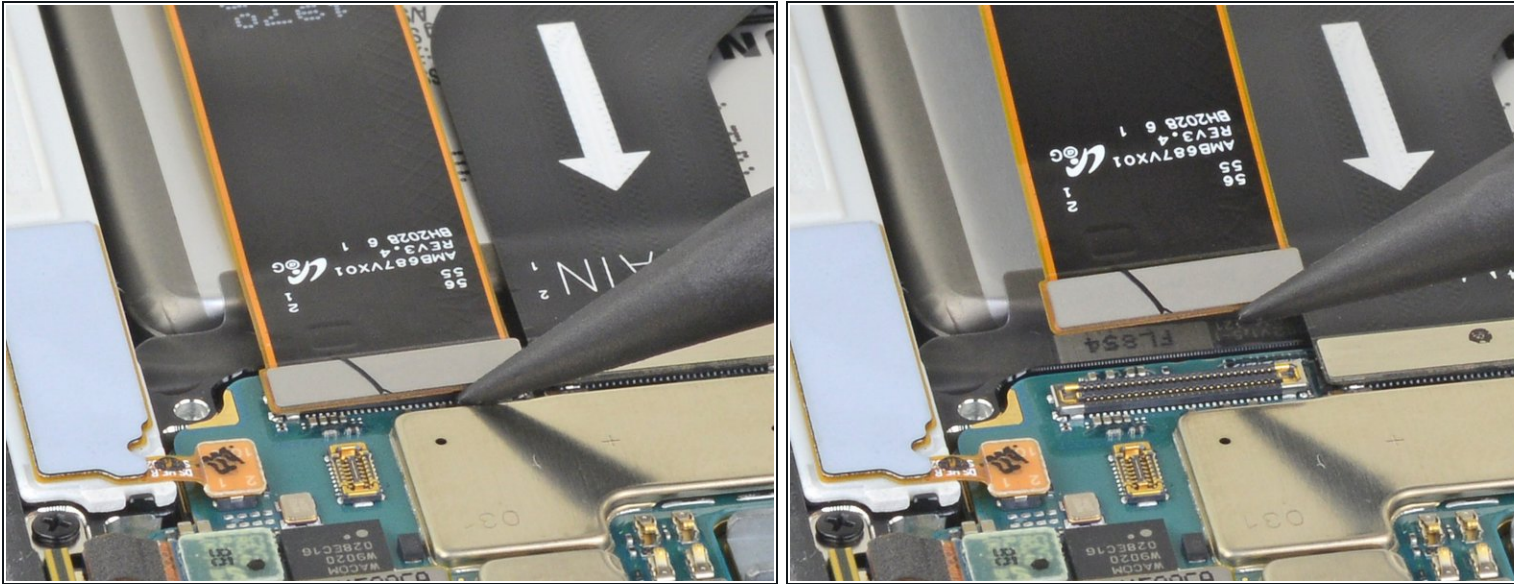
- Lift and remove the earpiece speaker.

Step 17 — Front-Facing Camera Cable Disconnection



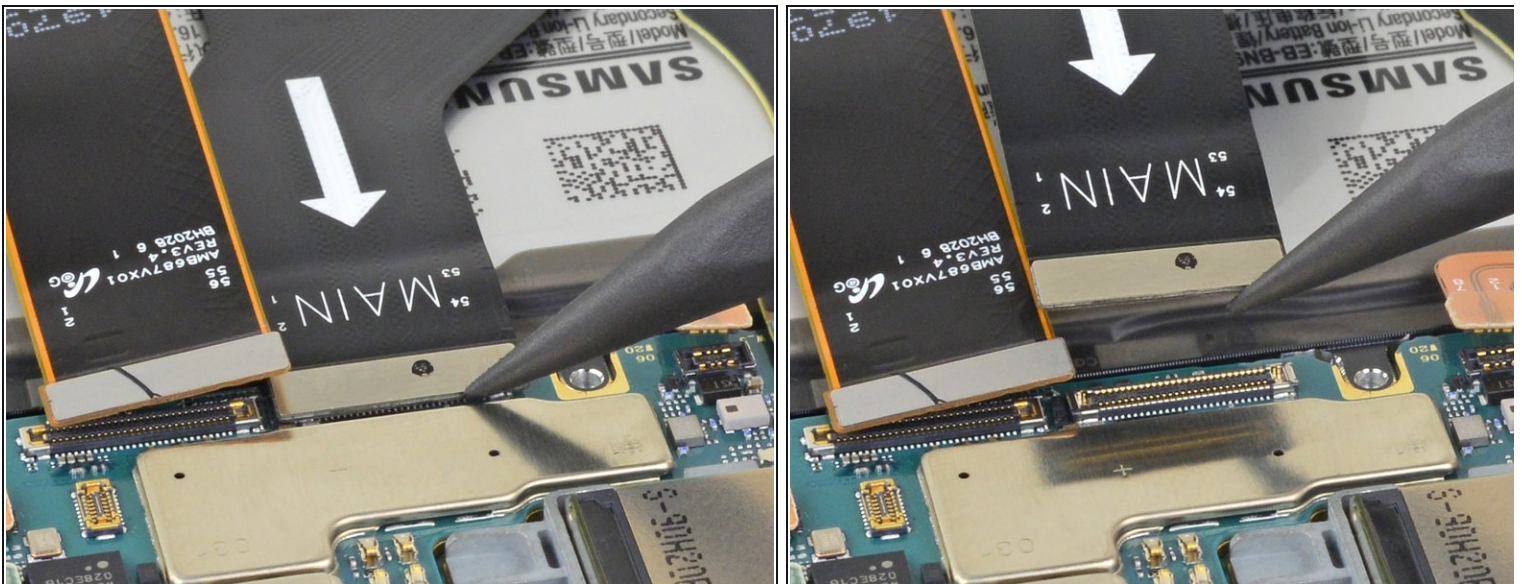
- Use the pointed end of a spudger to disconnect the front-facing camera cable from the motherboard.

Step 18 — Disconnect the display cable



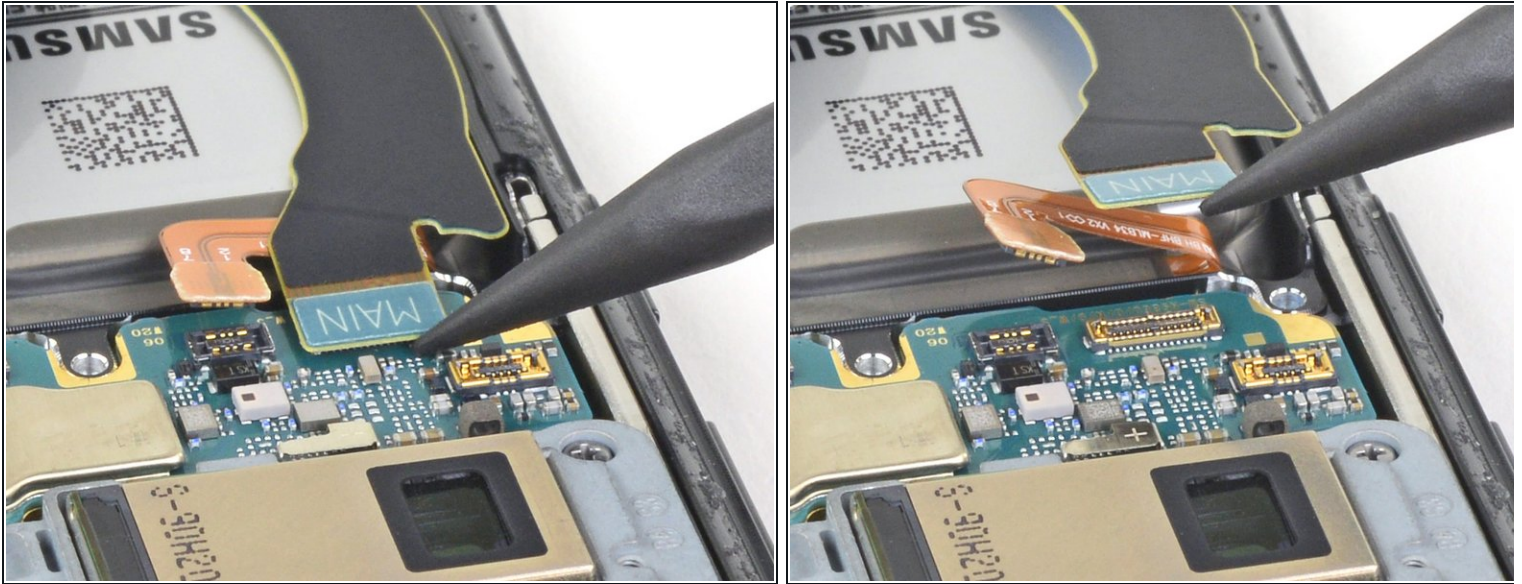
- Use the pointed end of a spudger to disconnect the display cable from the motherboard.

Step 19 — Disconnect the interconnect cables



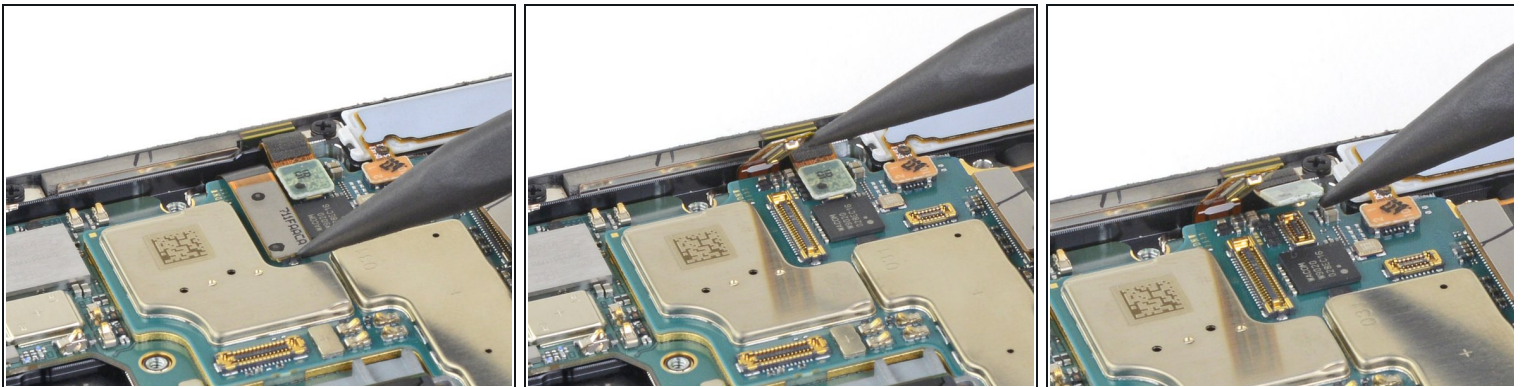
- Use the pointed end of a spudger to disconnect the main interconnect cable from the motherboard.

Step 20



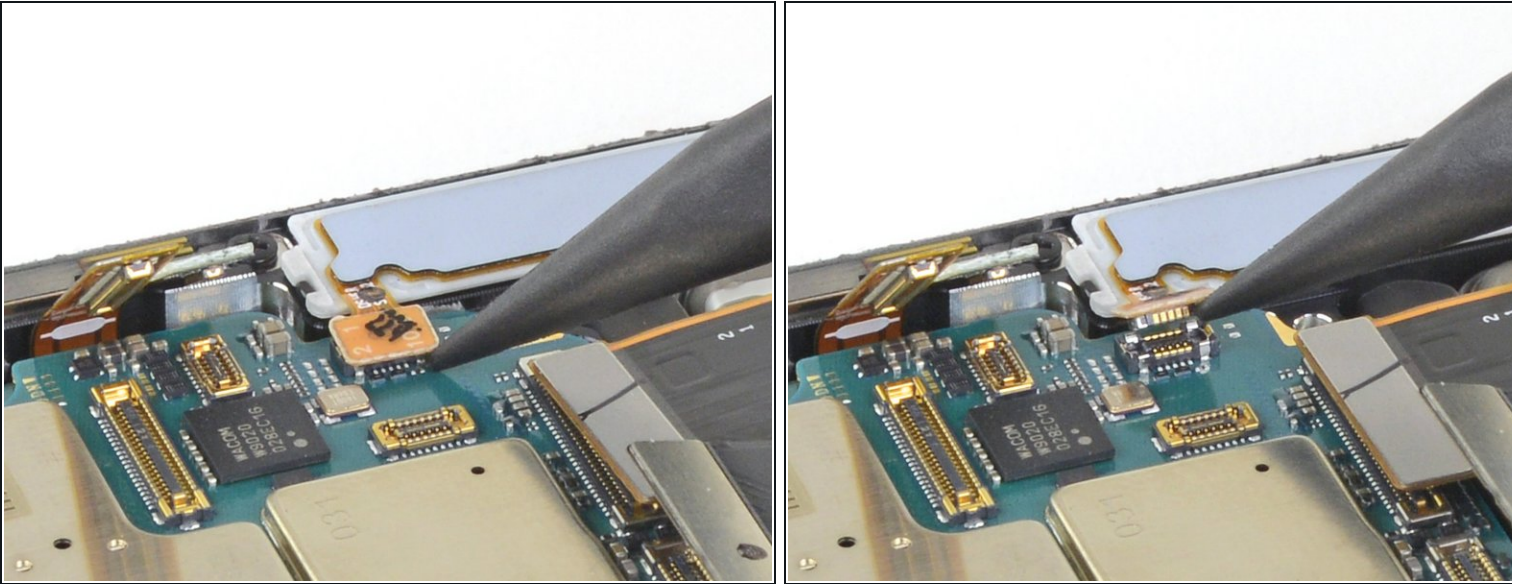
- Use the pointed end of a spudger to disconnect the secondary interconnect cable from the motherboard.

Step 21 — Disconnect the remaining cables



- Use the pointed end of a spudger to disconnect the touch layer cable from the motherboard.
- Use the pointed end of a spudger to disconnect the green press connector from the motherboard.

Step 22



- Use the pointed end of a spudger to disconnect the S-Pen press connector from the motherboard.

Step 23 — Remove the motherboard screws



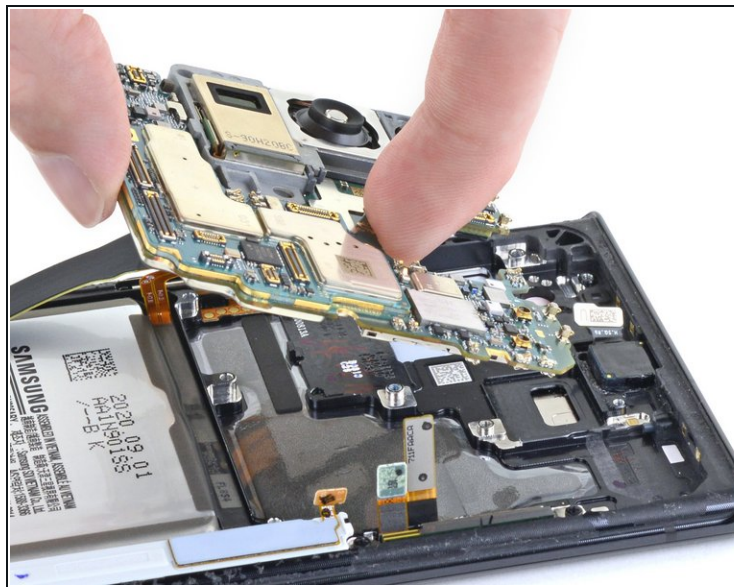
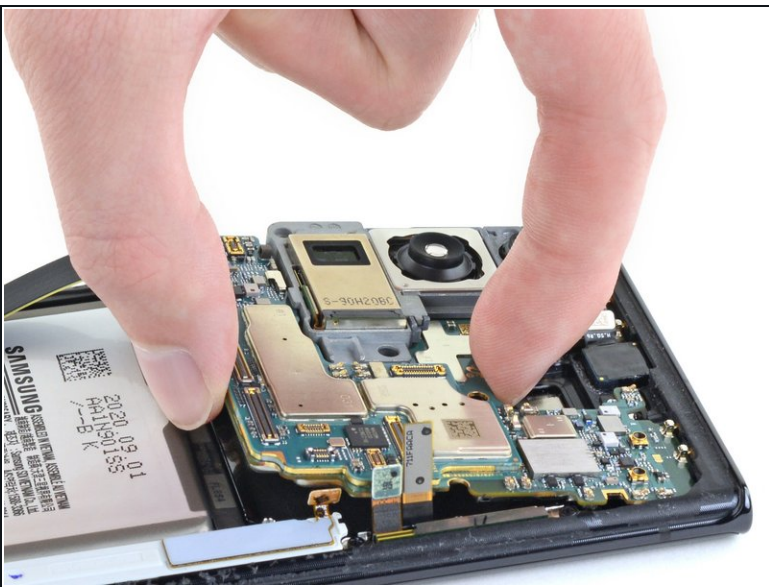
- Use a Phillips screwdriver to remove the two 4.0 mm screws securing the motherboard to the frame.

Step 24 — Loosen the motherboard



- Insert the flat end of a spudger under the bottom edge of the motherboard.
- Pry up to loosen the motherboard from the frame.

Step 25 — Remove the motherboard



- Lift the motherboard out of the phone.
- ⚠ Be careful not to damage the disconnected press connectors and their cables while removing the motherboard.

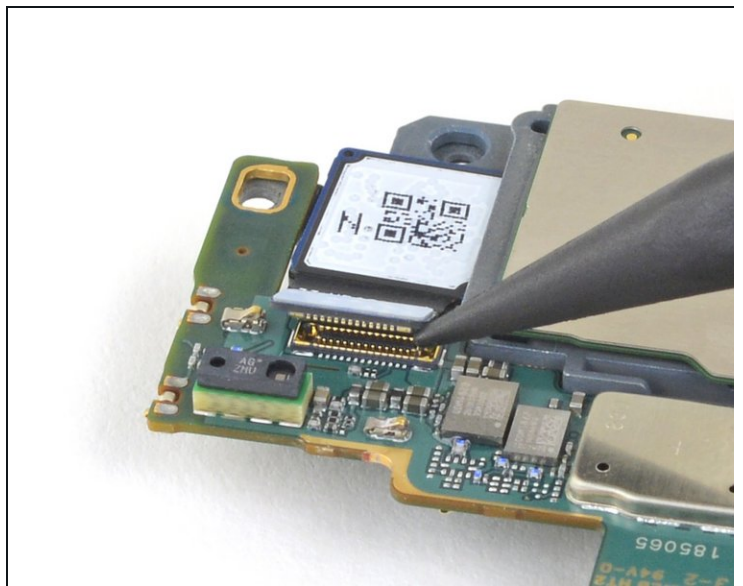
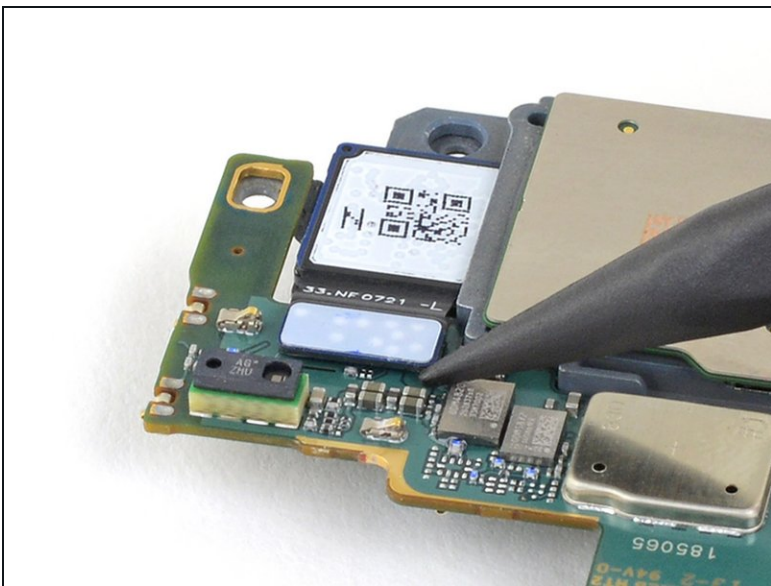
Step 26 — Check cables during reassembly



★ When you reinstall the motherboard, make sure that no cables get trapped under the board as you lower it into place. Check these seven locations carefully:

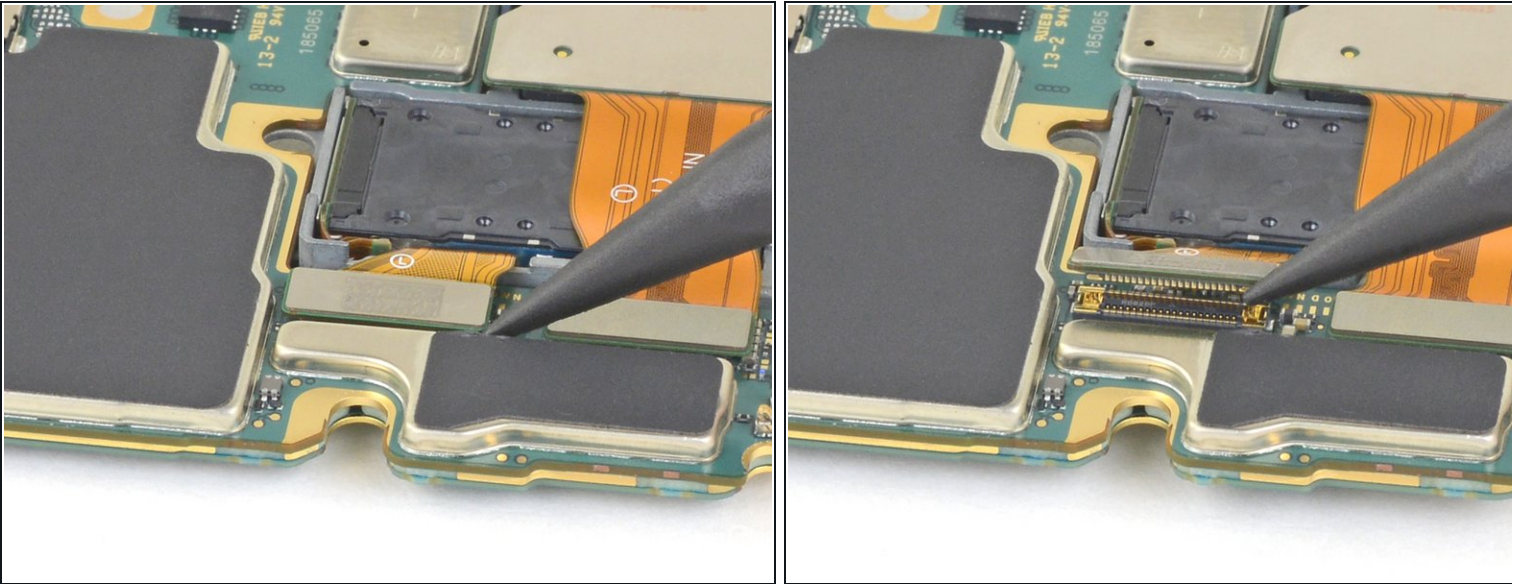
- Secondary interconnect cable
- Battery cable
- Main interconnect cable
- Display cable
- S-Pen cable
- Touch layer cable and green press connector
- Front-facing camera cable

Step 27 — Disconnect the camera press connectors



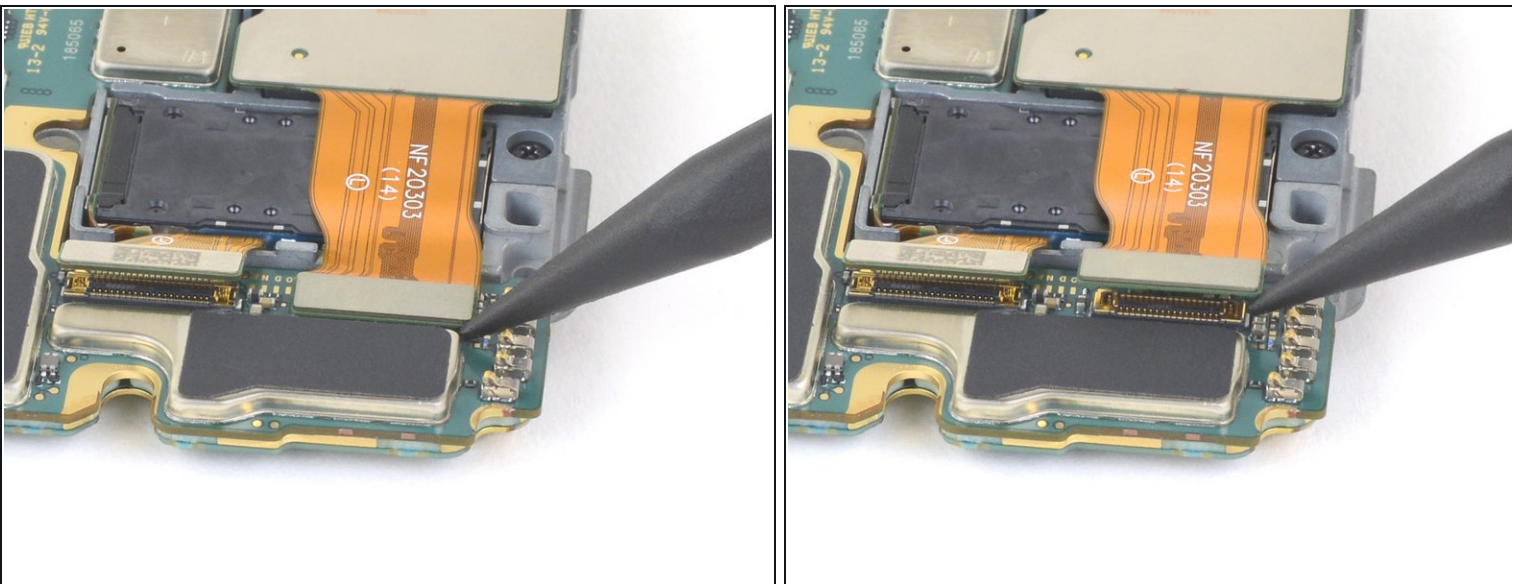
- Use the pointed end of a spudger to disconnect the ultra wide camera from the motherboard.

Step 28



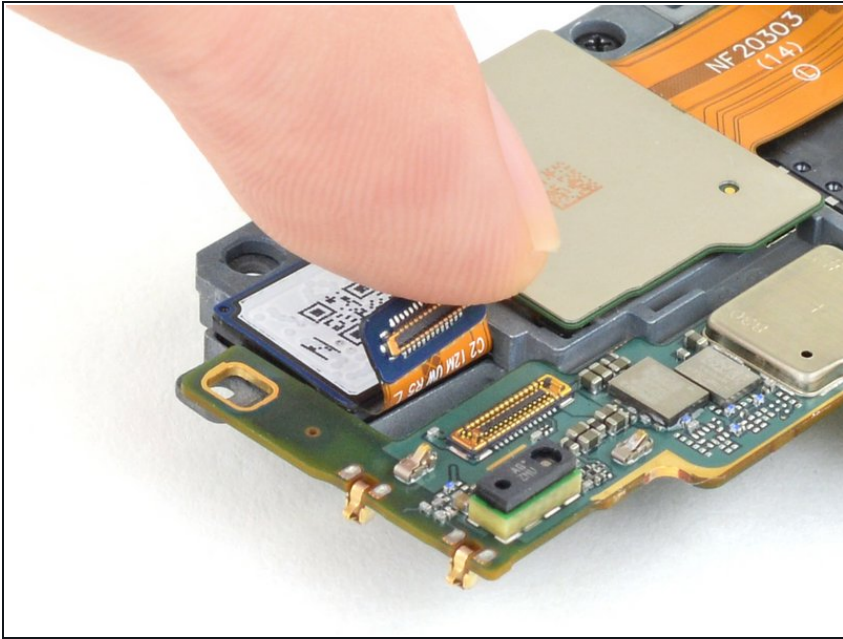
- Use the pointed end of a spudger to disconnect the telephoto camera from the motherboard.

Step 29



- Use the pointed end of a spudger to disconnect the wide-angle camera from the motherboard.

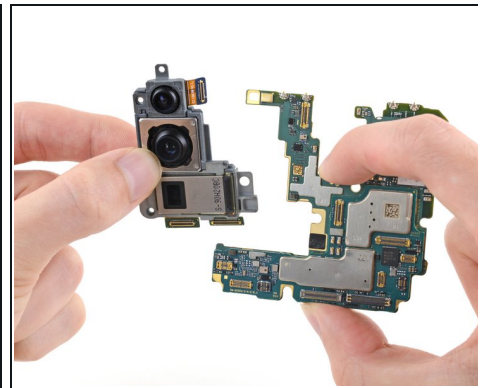
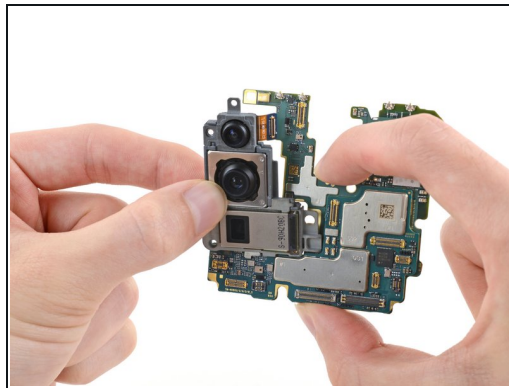
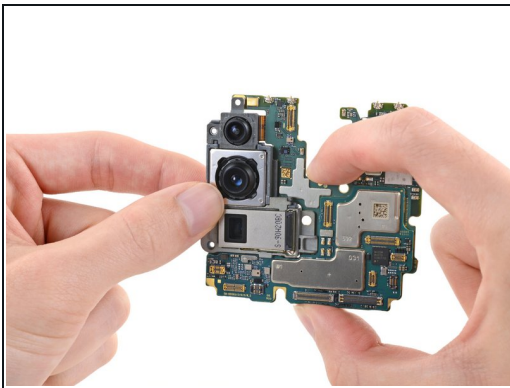
Step 30 — Move the ribbon cable



- Bend the ultra wide camera ribbon cable away from the motherboard so that the rear camera assembly can be removed.

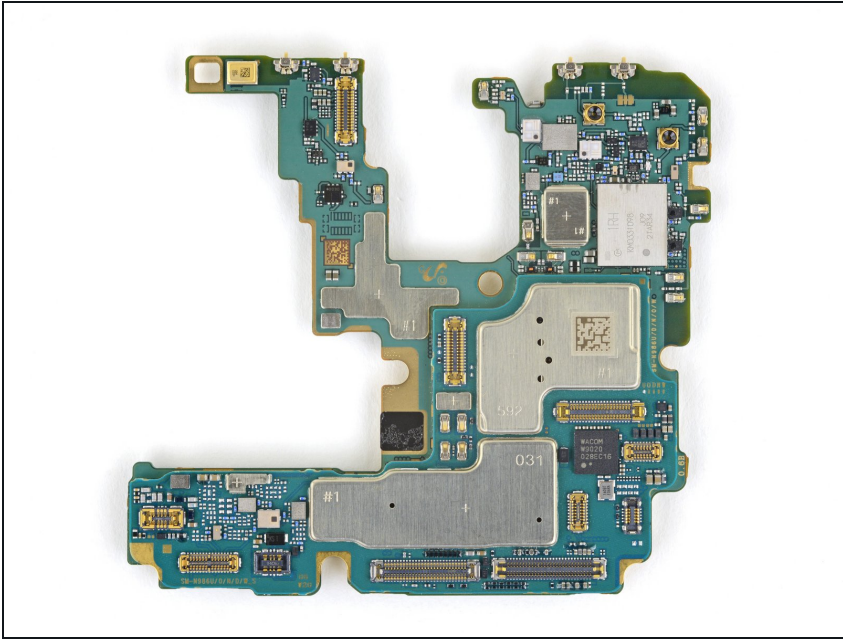
⚠ Don't bend the ribbon cable more than 90 degrees to avoid damaging it.

Step 31 — Remove the rear camera assembly



- ⓘ The rear camera assembly is secured to the motherboard with light adhesive to the right of the telephoto camera.
- Remove the rear camera assembly from the motherboard.
- ✦ During reassembly, [follow this guide](#) if you are using a pre-cut adhesive card to secure the new rear camera assembly to the motherboard.

Step 32 — Only the motherboard remains



- Only the motherboard remains.

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 these instructions in reverse order.

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 [Samsung Galaxy Note20 Ultra Answers community](#) for help.