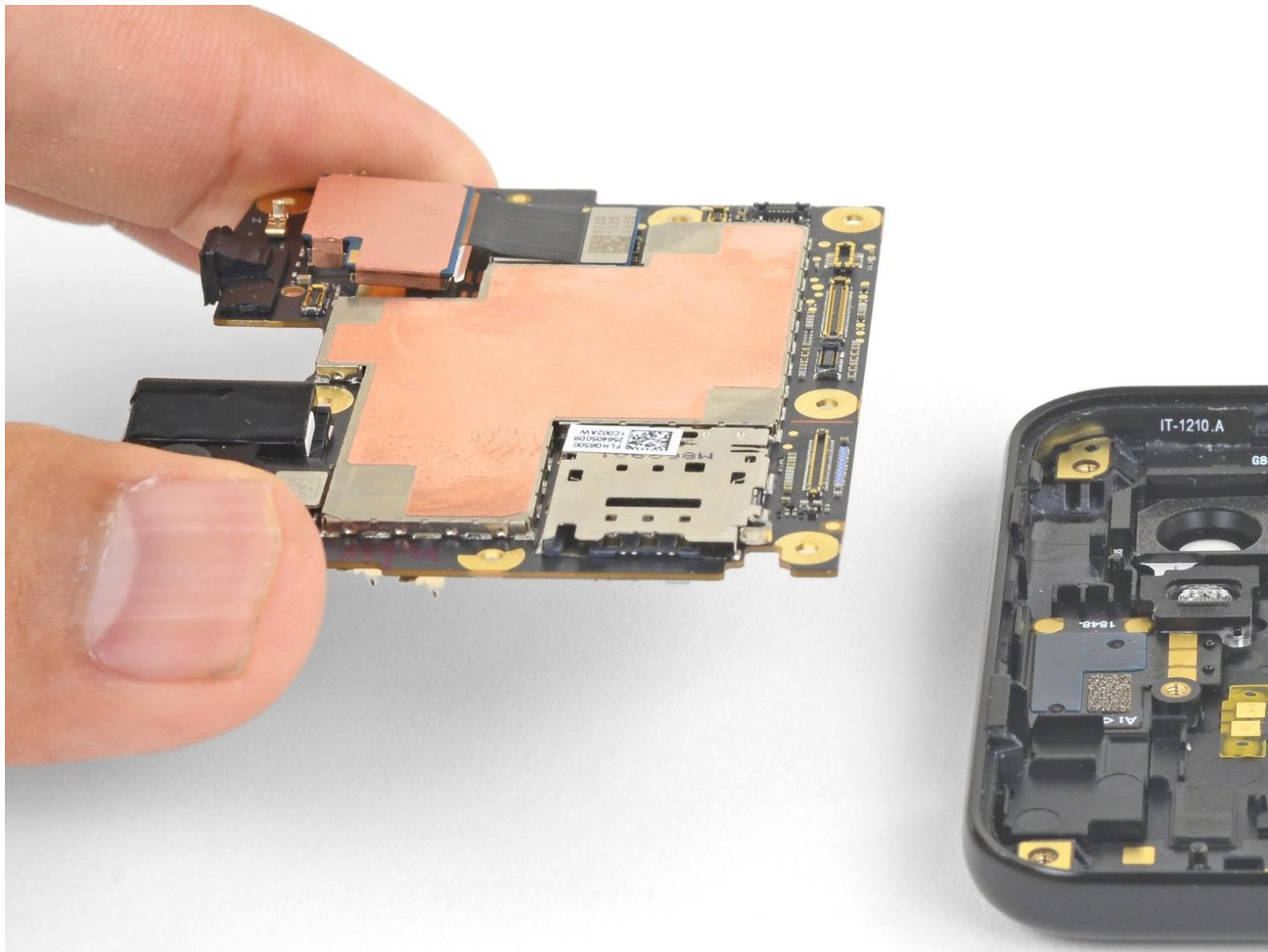




Google Pixel 3a Motherboard Replacement

This guide shows how to remove and replace the motherboard for a Pixel 3a.

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INTRODUCTION

Follow this guide to remove and replace the motherboard for the Pixel 3a.

The Pixel 3a's unreinforced display panel is fragile. If you are reusing the screen, be sure to pay special attention to the warnings in the opening procedure.

The trickiest part of the procedure is re-attaching the proximity sensor connector, which requires some patience and finesse.

TOOLS:

- [SIM Card Eject Tool](#) (1)
- [iOpener](#) (1)
- [Suction Handle](#) (1)
- [iFixit Opening Picks set of 6](#) (1)
- [Tweezers](#) (1)
- [Spudger](#) (1)
- [T3 Torx Screwdriver](#) (1)

Step 1 — SIM Card Tray



- Insert a SIM eject tool, SIM eject bit, or a paper clip into the SIM tray hole.
- Press to eject the tray.

Step 2 — Screen



- Take note of the two seams on the phone:
 - *Screen seam*: This seam separates the screen from the rest of the phone. This is where you should pry.
 - *Frame seam*: This is where the plastic frame meets the back cover. It is held in place by screws. **Do not pry at this seam.**
- Before you begin prying, note the following areas on the screen:
 - *Screen flex cable*: Do not pry deeper than instructed, or you risk damaging this cable.
 - *Adhesive perimeter*: Prying beyond the narrow perimeter without angling the pick will damage the LCD.

Step 3



- [Heat an iOpener](#) and apply it to the right edge of the display for a minute.
(i) You can choose to skip this step since the Pixel 3a's screen adhesive is not very strong. Heating it, however, will decrease the chance of cracking the screen.

Step 4



- Place a suction cup near the right edge of the screen.
- Pull on the suction cup with strong steady force.
- Insert the pick into the gap, **no more than 1 mm**.

Step 5



ⓘ This step shows how to insert the pick without damaging the LCD panel. Do this before you slice either long edges of the phone.

- With the pick 1 mm in the gap, pivot the pick upwards to a steep angle.
- At this angle, carefully push the pick into the gap about 1/4" (6 mm). The pick should slide in **below the OLED panel**.

⚠ Stop if you feel the point of the pick hitting a ridge. The pick may be pressing against the edge of the LCD panel. Angle the pick and try again.

Step 6



- Slide the pick along the right edge, slicing through the adhesive.

⚠ Do not insert the pick more than 1/4" (6 mm), or you may damage the screen's flex cable.

- Leave a pick in place to prevent the adhesive from resealing.

Step 7



ⓘ As you slice around the bottom edge of the phone, do not insert the pick more than 1/4" (6 mm).

- Slide the pick around the bottom right corner to slice through the adhesive.
- ⓘ If the corner feels hard to slice, apply a heated iOpener to the corner for a minute and try again.
- Continue slicing along the bottom edge of the phone and around the left corner.

Step 8



- Slice through the left edge of the phone, making sure to properly angle the pick below the LCD panel and insert it in no more than 1/4" (6 mm).
 - To angle the pick below the LCD panel, insert the point of the pick no more than 1 mm in, angle the pick upwards, and then slowly push the pick in 1/4".

Step 9



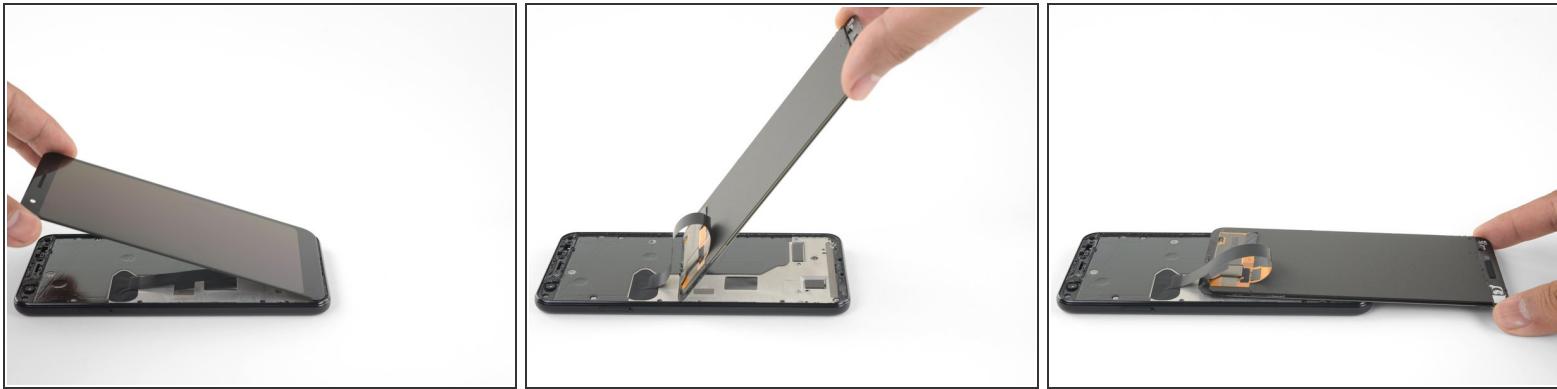
- Slice along the top edge while keeping the pick no more than 5/16" (8 mm) in.

Step 10



- With all of the edges cut, carefully hinge open the **right edge of the screen**.
- *(i)* Do not remove the screen. It is still attached to the phone by a flex cable near the left edge.
- Use an opening pick to carefully cut through any remaining adhesive.

Step 11



- With all of the adhesives cut, flip the attached screen glass side down and rest it on top of the phone. The screen flex cable should be loosely arched.

Step 12



- Carefully peel the black tape covering the screen connector bracket.
 - If it is in good condition, you can re-use this tape during reassembly. Otherwise, replace it with a piece of electrical tape.
- Remove the two 4.4 mm long T3 screws securing the screen connector bracket.
- Remove the screen connector bracket.

Step 13



- Use the point of a spudger to pry up and disconnect the screen flex cable.
- When you disconnect connectors like these, be careful not to dislodge the small surface-mounted components surrounding the socket.
- 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 14



- Remove the screen.
- Carefully compare your replacement screen with your original part. You may need to transfer additional components (such as the speaker mesh) to the new part.

To reinstall the screen:

- [Follow this guide](#) if you are using custom-cut adhesives.
- If you are using double-sided tape such as Tesa tape, [follow this guide](#).

Step 15 — Plastic Midframe



- Remove the fourteen T3 screws of the following lengths securing the plastic midframe:
 - Twelve 4.3 mm silver T3 screws
 - Two 4.3 mm black T3 screws

Step 16



(i) The midframe is still held in place by plastic clips.

- Insert an opening pick into frame seam at the bottom of the phone. This seam sits between the plastic midframe and the back cover.
- Slide the pick along the seam to release the clips holding the plastic midframe.

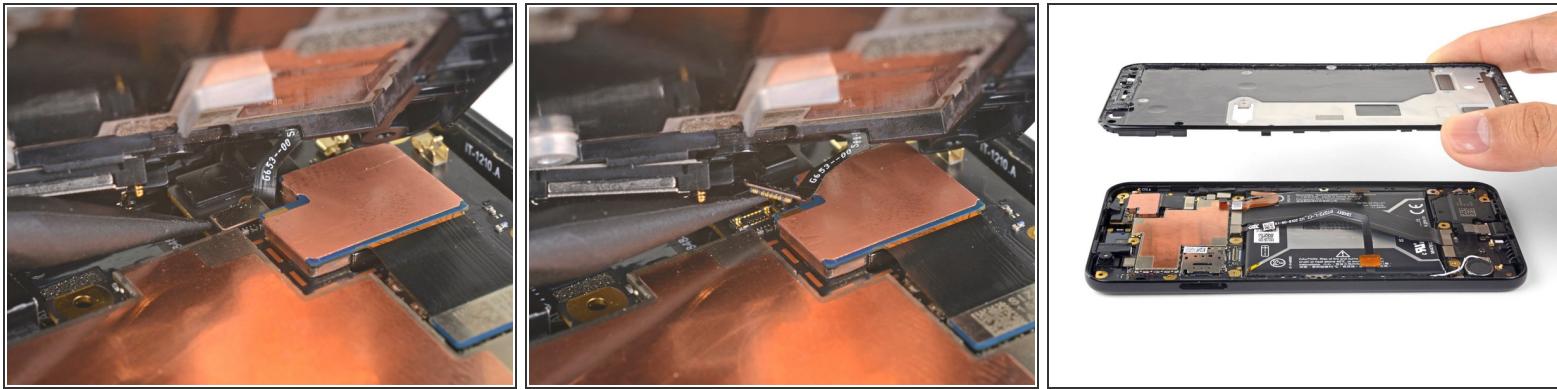
Step 17



- Slide the opening pick along the left and right edges of the phone to release the midframe clips.
- Lift the bottom edge of the plastic midframe up but **do not remove the midframe**. The midframe is still tethered to the phone by the fragile proximity sensor cable at the top edge.

 To reinstall the plastic midframe, align the midframe to the back cover, and squeeze the perimeter of the phone with your fingers to snap the clips back into position.

Step 18



- Use the point of a spudger to carefully pry up and disconnect the proximity sensor connector from the motherboard.
- Your proximity sensor connector may have automatically disconnected itself when you lifted the midframe.
- Remove the plastic midframe.

Step 19



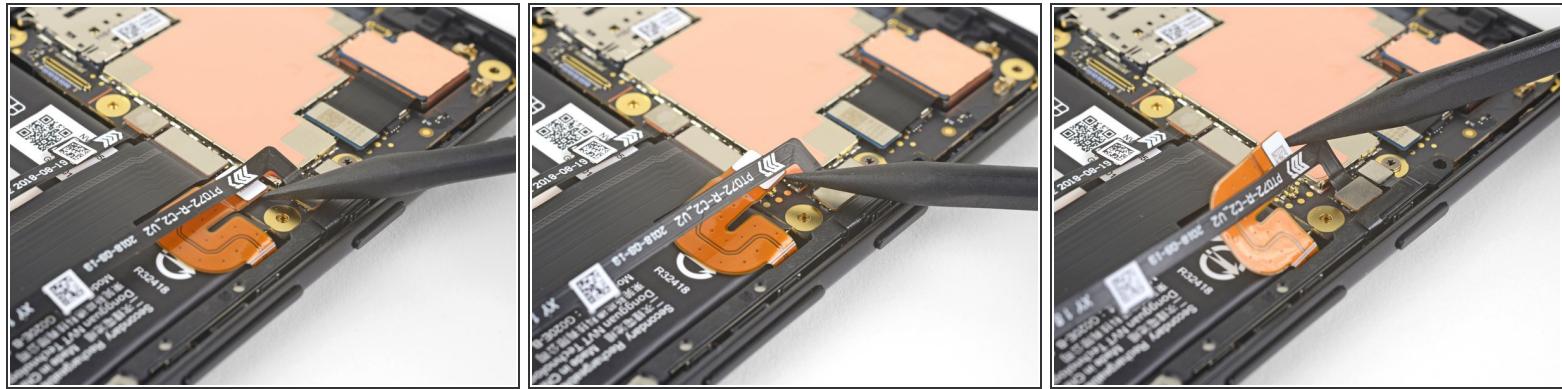
 This step shows how to reconnect the proximity sensor during re-assembly.

- Align the top edge of the plastic midframe with the phone.
- Use the point of a spudger to carefully align and push the proximity sensor connector onto the motherboard socket.
 - This takes a bit of patience and finesse. Once you have the connector in place, you can also use a finger to gently press the connector onto the socket.

 Alternatively, you can remove the proximity sensor from the midframe to reattach it to the motherboard first.

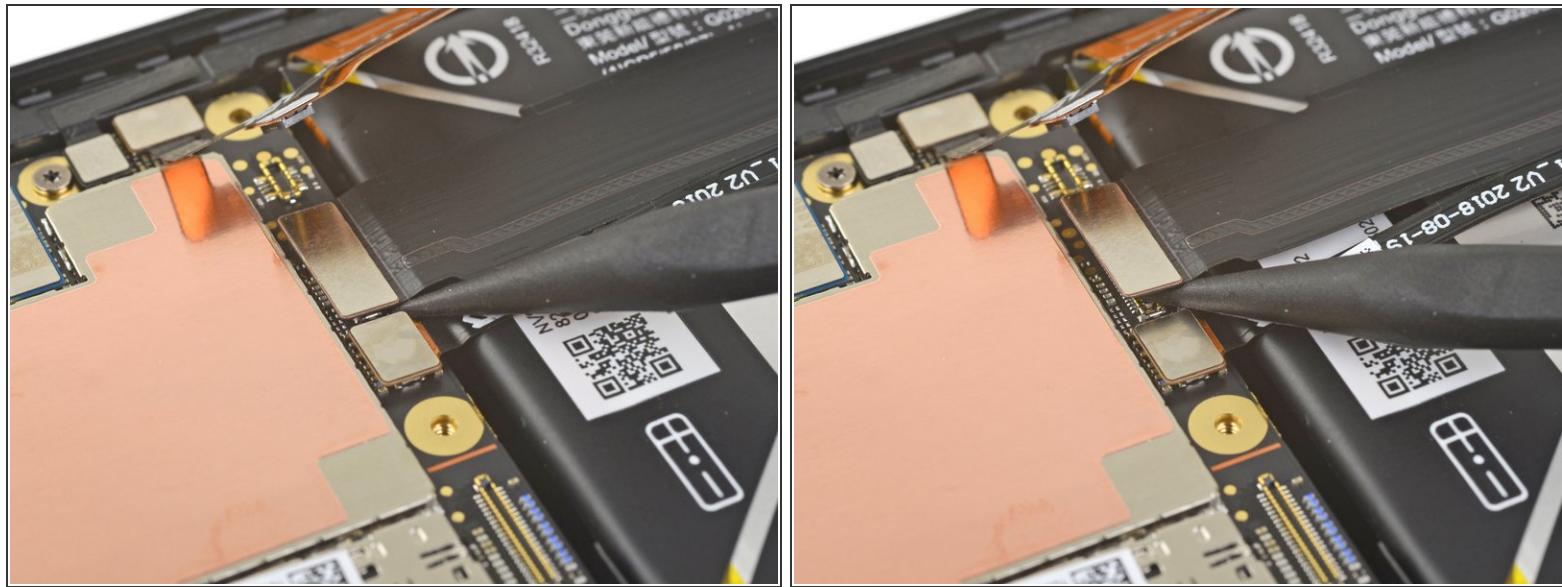
- Use the point of a spudger to carefully pry the proximity sensor out of its recess on the midframe. The sensor is lightly adhered to the midframe.
- Remove the sensor from the midframe. [Attach the sensor connector onto its motherboard socket.](#)
- [Thread the sensor cable through the midframe](#) and reposition the sensor in the recess. Press down with your finger to adhere the sensor back onto the midframe.

Step 20 — Google Pixel 3a Battery Disconnect



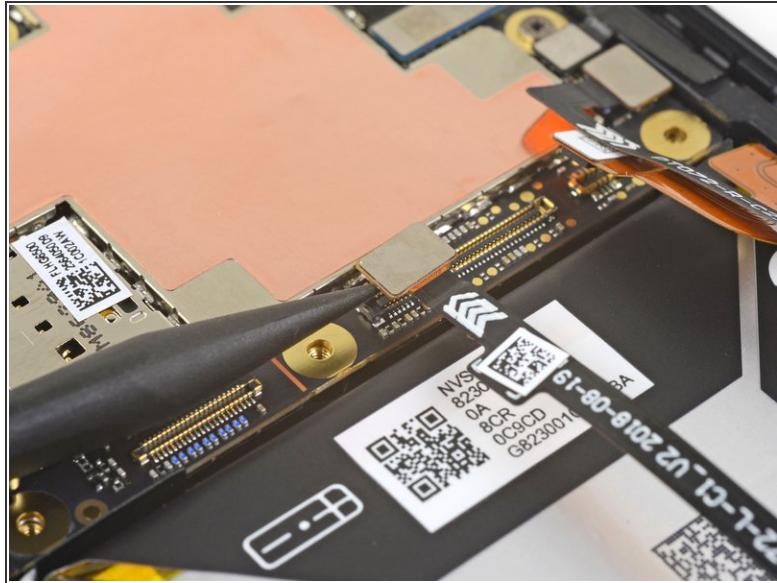
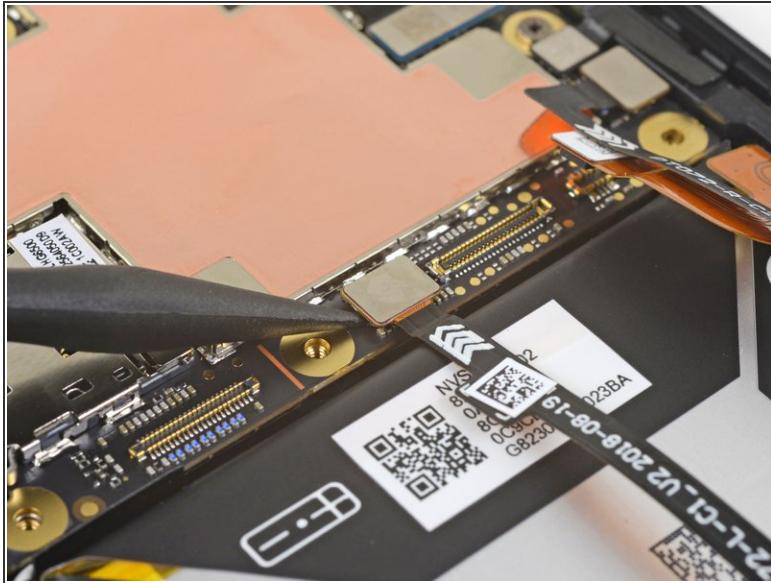
- Use the point of a spudger to pry up and disconnect the battery connector from its motherboard socket.
- Bend the battery flex cable slightly so that it will not accidentally make contact with the socket.

Step 21 — Motherboard



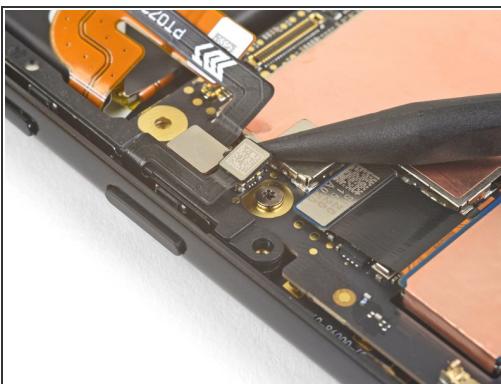
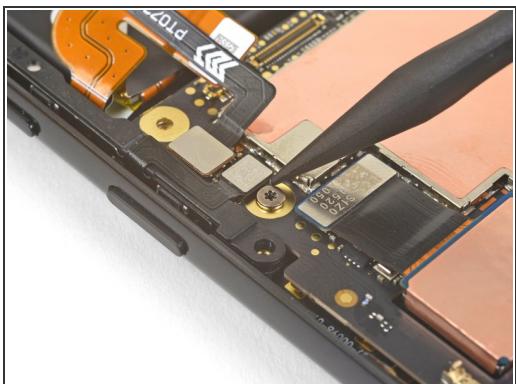
- Use the point of a spudger to pry up and disconnect the interconnect flex cable from its motherboard socket.

Step 22



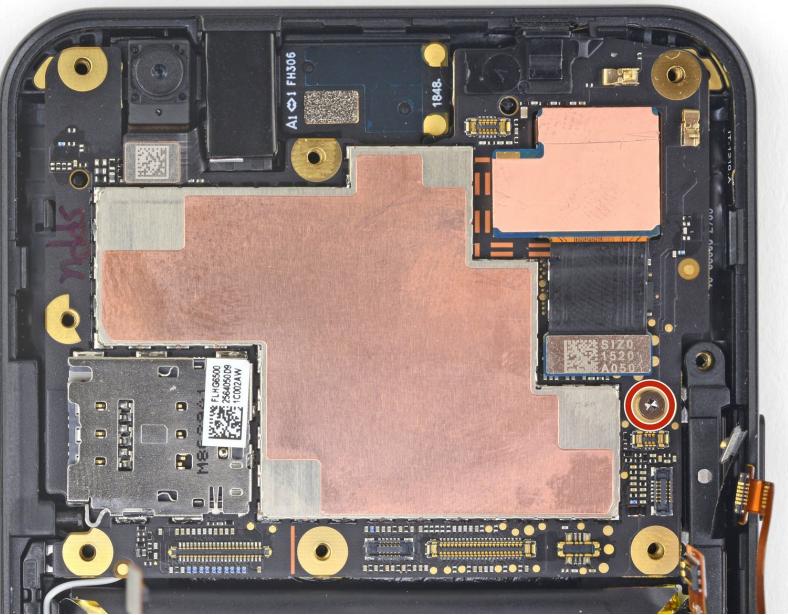
- Use the point of a spudger to pry up and disconnect the left squeeze sensor cable connector from its motherboard socket.

Step 23



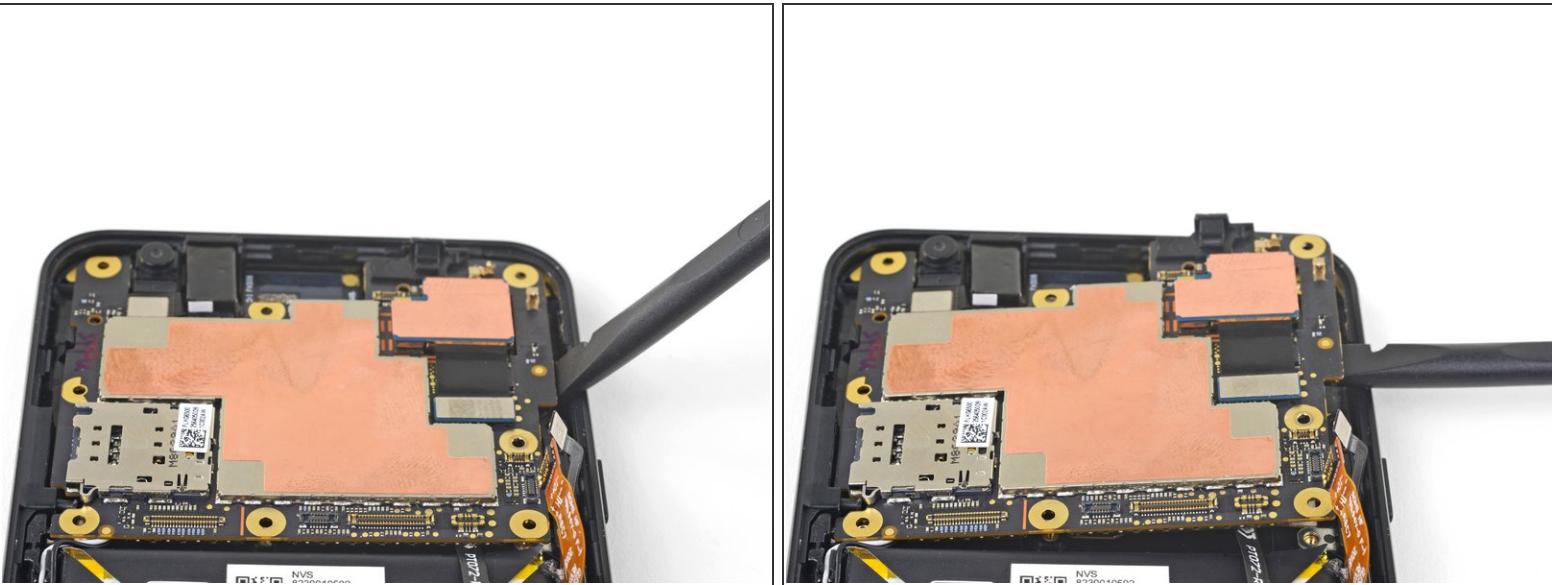
- Use the point of a spudger to pry up and disconnect the right buttons connector from its motherboard socket.
- Pry up the right squeeze sensor cable connector from its motherboard socket.

Step 24



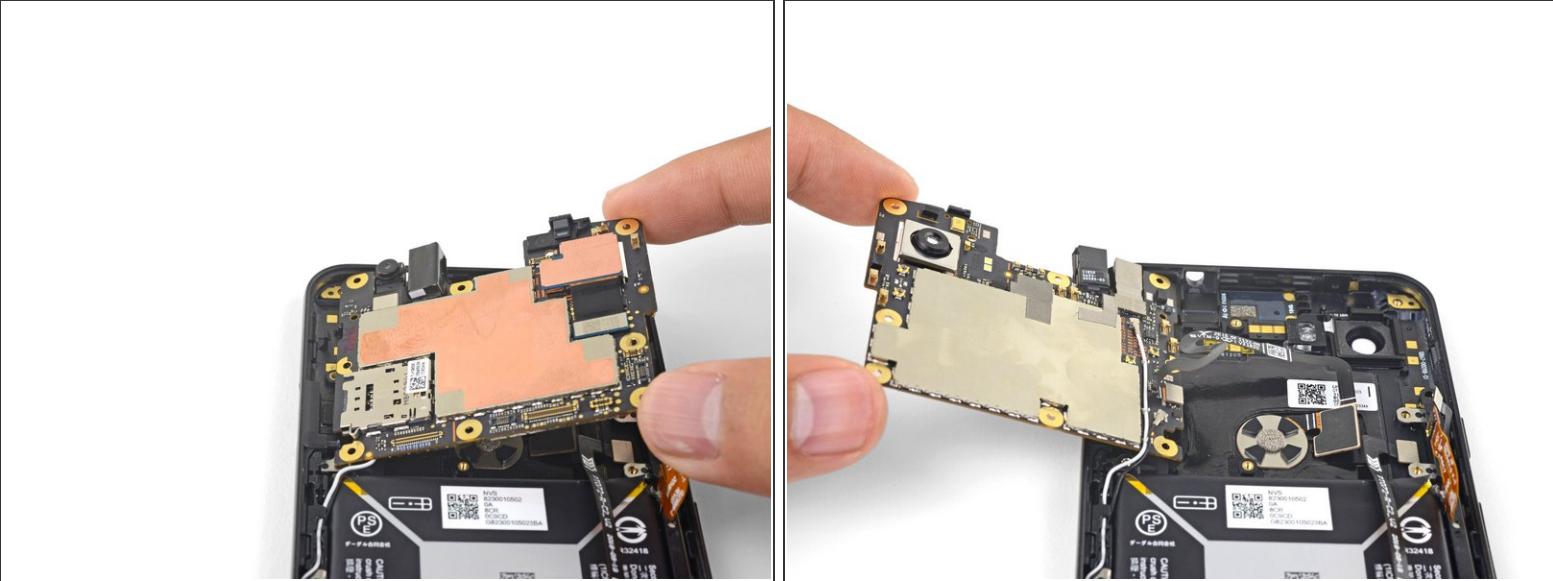
- Remove the single 2.7 mm T3 screw securing the motherboard near the right edge.

Step 25



- (i)* Make sure you have ejected the SIM tray before performing this step.
- Insert the flat end of a spudger underneath the right edge of the motherboard and pry upwards to loosen the board.

Step 26



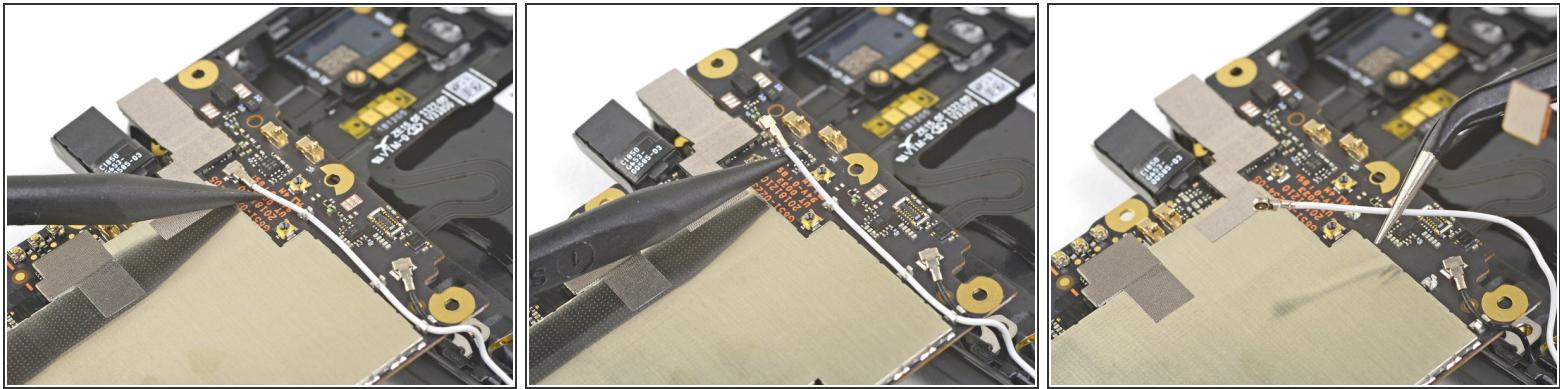
- Grasp the right edge of the motherboard and swing it left until it lays flat.
- *i* Do not remove the motherboard. It is still attached to the rest of the phone.

Step 27



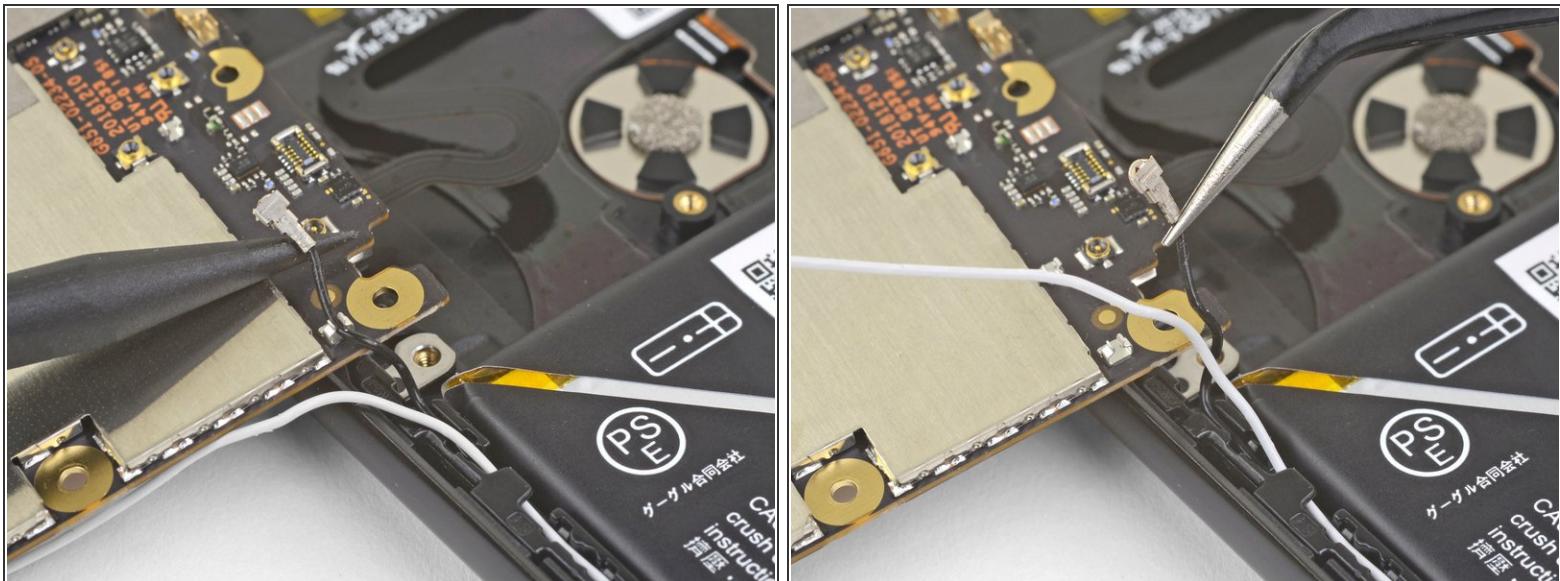
- Use the point of a spudger to pry up and disconnect the fingerprint sensor cable from its motherboard socket.

Step 28



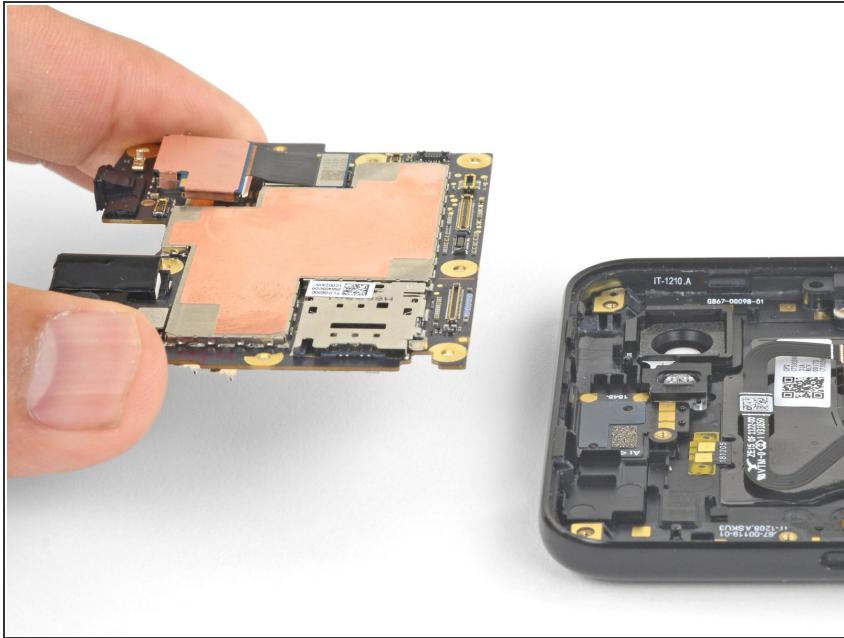
- ⓘ If you are only replacing the fingerprint sensor, you can choose to not fully remove the motherboard. If that is the case, skip the next three steps.
- Use the point of a spudger to pry up and disconnect the white antenna cable from its motherboard socket.
- Carefully de-route the cable out of its retaining clips.

Step 29



- Use the point of a spudger to pry up and disconnect the black antenna cable from its motherboard socket.
- De-route the cable from the retaining clip.

Step 30



- Remove the motherboard.

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? Check out our [Google Pixel 3a Answers community](#) for troubleshooting help.