



Google Pixel XL Motherboard Replacement

Remove and replace a broken or malfunctioning motherboard for the Google Pixel XL.

Written By: Arthur Shi



INTRODUCTION

This repair guide was authored by the iFixit staff and hasn't been endorsed by Google. Learn more about our repair guides [here](#).

If you're having issues with the overall functionality of your phone and are unable to diagnose the root cause, consider replacing the motherboard of your device.

The Pixel XL's unreinforced display panel is fragile and is attached to the frame with strong adhesive, making repairs difficult. There is a considerable chance of breaking the display, especially if it already has micro-fractures. Be sure to apply plenty of heat and be extremely careful during the prying stage.



TOOLS:

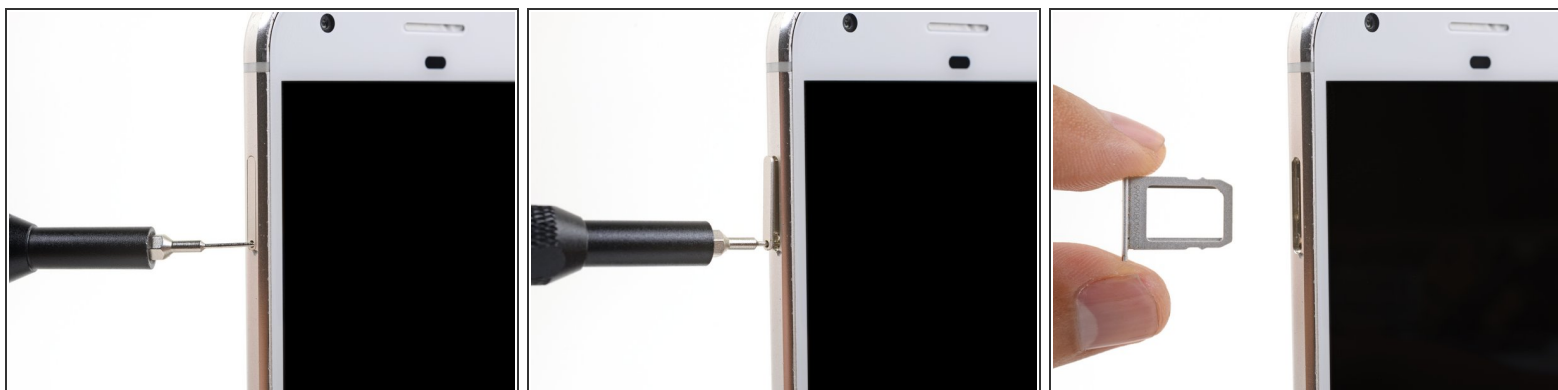
- [iFixit Opening Picks \(Set of 6\)](#) (1)
- [Suction Handle](#) (1)
- [T5 Torx Screwdriver](#) (1)
- [SIM Card Eject Tool](#) (1)
- [iOpener](#) (1)
- [Spudger](#) (1)



PARTS:

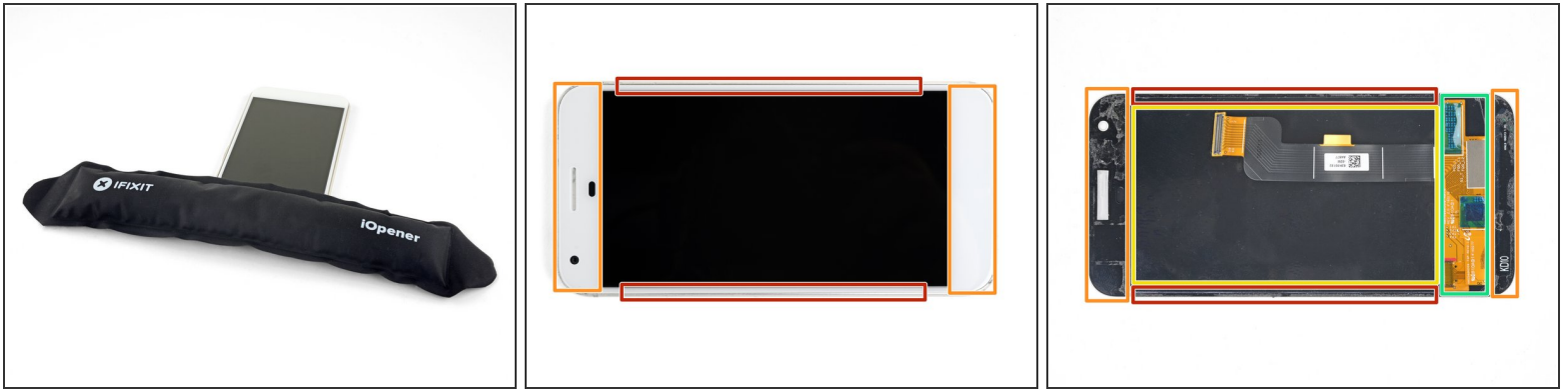
- [Google Pixel XL G-2PW2100 Motherboard](#) (1)
- [Google Pixel XL Display Adhesive](#) (1)

Step 1 — SIM Card Tray



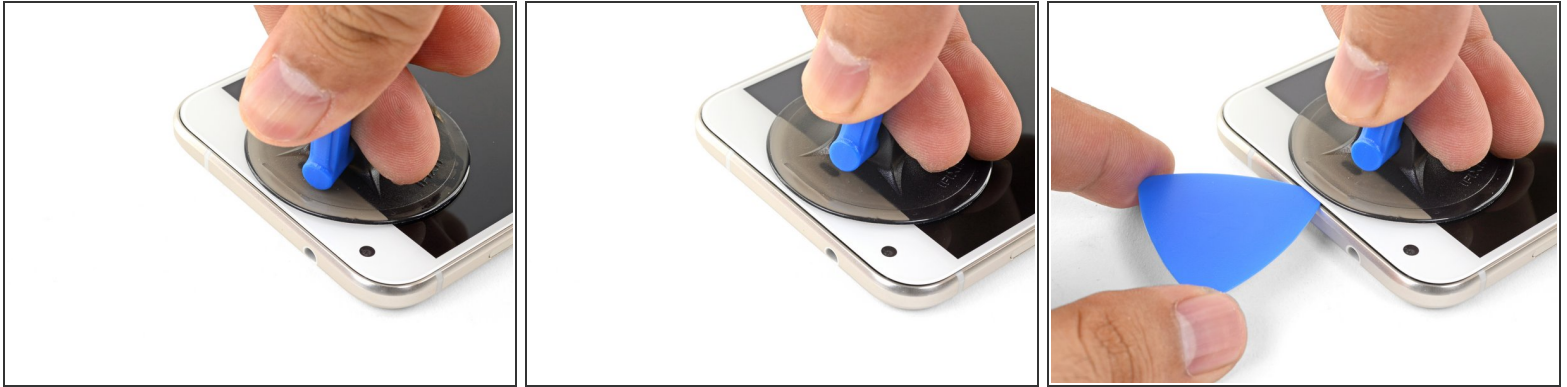
- Insert a SIM eject tool, SIM eject bit, or a paperclip into the small hole on the left edge of the phone, near the top.
- Press to eject the tray.

Step 2 — Display Assembly



- [Heat an iOpener](#) and apply it to the **top edge** of the display 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.
- Take note of the following regions before you begin prying:
 - Thin adhesive lined against the display panel
 - Thick adhesive
 - The OLED display panel, which is very prone to damage
 - The display cable, which can be damaged during prying

Step 3



- Once the edge is warm to the touch, apply a suction cup close to the edge.
- Lift on the suction cup, and insert an opening pick into the gap.

⚠ Do not insert the pick more than 13 mm (0.5 inches), or you will damage the display assembly.

- If you have trouble creating a gap, reheat the edge and try again.
- i** You can also try to use a playing card instead of an opening pick to help make the initial entry.

Step 4



- Slide the opening clip across the top edge to slice through the adhesive.

⚠ Be sure not to cut deeper than 13 mm (0.5 inches) or you will damage the display.

⚠ There's a mesh covering the earpiece speaker on the top edge of the screen. If you don't have a replacement mesh, take care not to damage or lose this component.

- Leave an opening pick in the edge to prevent the adhesive from resealing.

Step 5



- Heat an iOpener and apply it to the right edge of the phone for two minutes.
 - Insert an opening pick near the top edge of the phone, where you have already sliced the adhesive.
 - Slowly guide the pick around the right corner.
 - Carefully slide the pick down the right edge of the phone to slice through the adhesive.
- ⚠ Do not insert the pick more than 1 mm (1/32") along the edge, or you will damage the display assembly.**
- Repeat the step for the left edge of the phone.

Step 6



- Heat the bottom edge with an iOpener for two minutes.
- Insert a pick near the right edge where you have already loosened the adhesive.
- Carefully guide the pick around the corner.
- Slide the pick along the bottom edge to slice through the adhesive.

⚠ Do not slice deeper than 8.5 mm (1/3") or you will damage the display cable.

Step 7

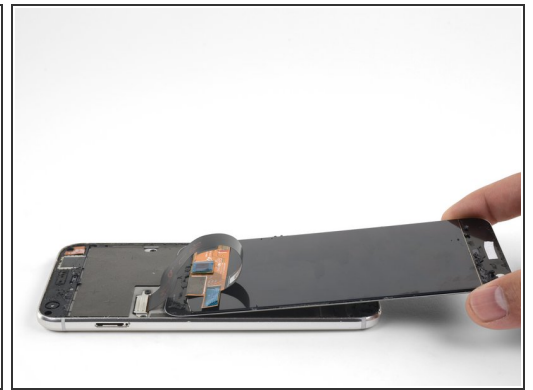
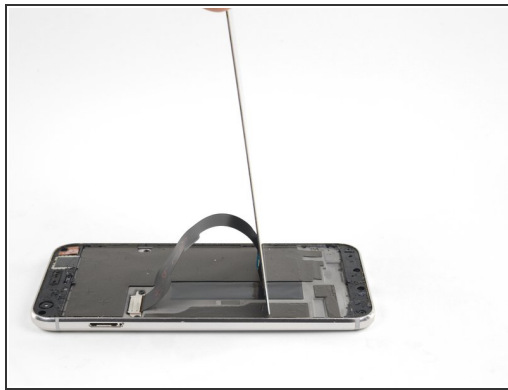


- Once you have sliced around the perimeter of the phone, carefully lift the display assembly up slightly by the right corners.

⚠ Do not attempt to remove the display assembly. It is still attached by a flex cable.

- Use an opening pick to slice through any remaining adhesive.

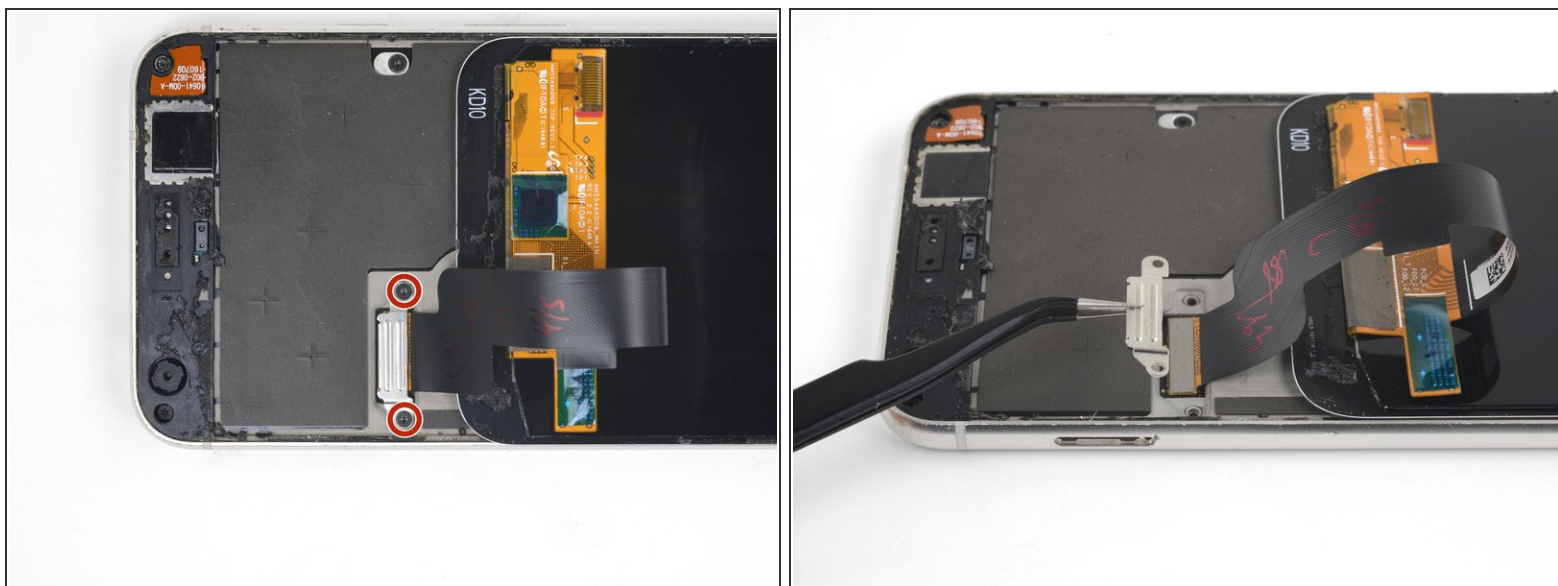
Step 8



- Lift the display assembly from the top end and swing it around such that it rests upside down on the frame.

⚠ Be careful not to strain the flex cable when you swing the assembly around.

Step 9



- Remove the two 4 mm T5 screws securing the display cable bracket.
- ⓘ Throughout this repair, [keep track of each screw](#) and make sure it goes back exactly where it came from.
- Remove the display cable bracket.

Step 10



- Use the point of a spudger to pry up and disconnect the display cable from its connector.
- ⓘ 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.

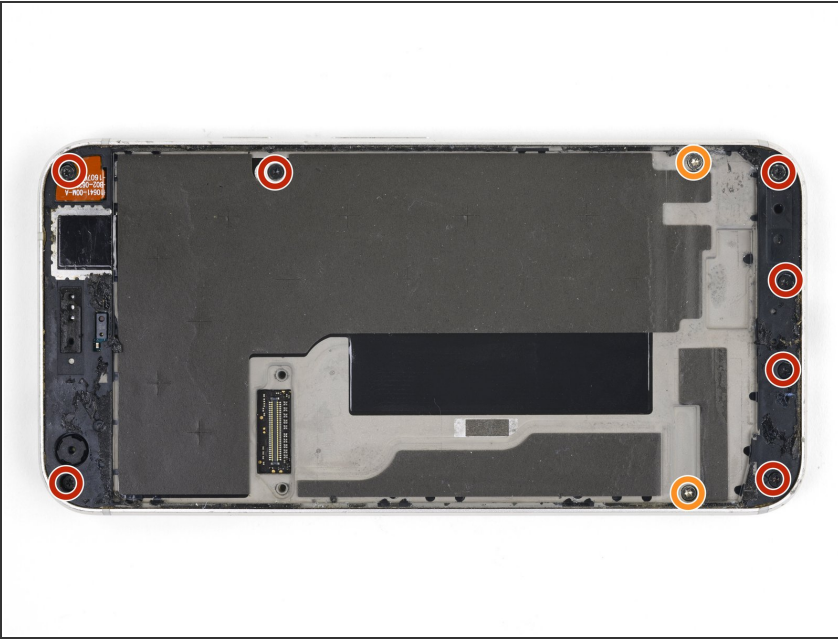
Step 11



- Remove the display assembly.

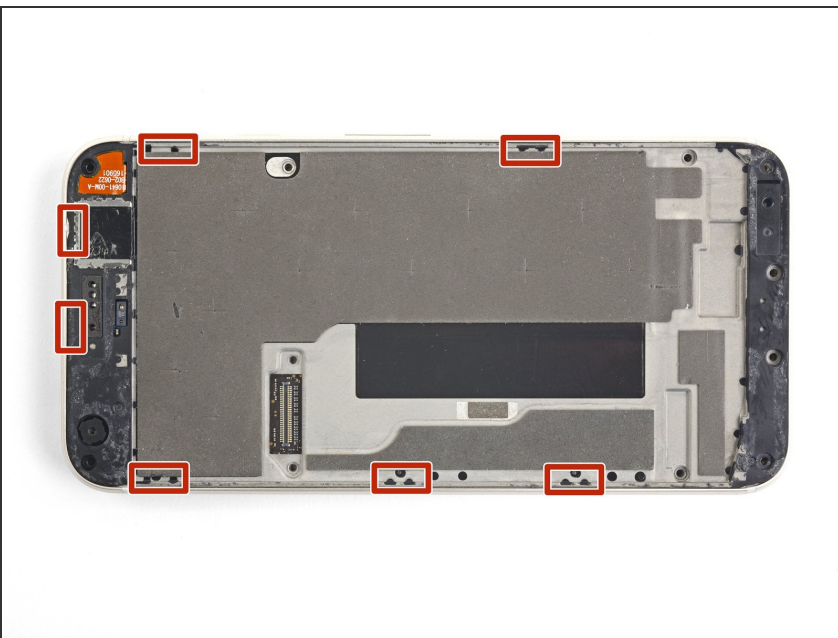
- ✦ **For comprehensive instructions on how to reinstall the Pixel XL display, [follow this guide](#).**
- ✦ If your replacement display did not come with a speaker grille, use tweezers to [gently peel the adhesive grille](#) from your old display, and transfer it to the replacement.
- ✦ Before installing a new display, be sure to remove all traces of adhesive from the frame. Use a spudger or an opening tool to scrape it off, and use high-concentration isopropyl alcohol to remove any residue.
- ✦ If you are reinstalling the same display assembly, be sure to remove all adhesive residue from the panel and the frame before applying new adhesive.
- ✦ Be sure to turn on your phone and test your repair before installing new adhesive and resealing the phone.
- ✦ During the boot-up process after reassembly, the screen will go through a calibration sequence. Do not touch the screen during this process, as it could result in improper touch calibration and create touch issues.

Step 12 — Google Pixel XL Opening Procedure



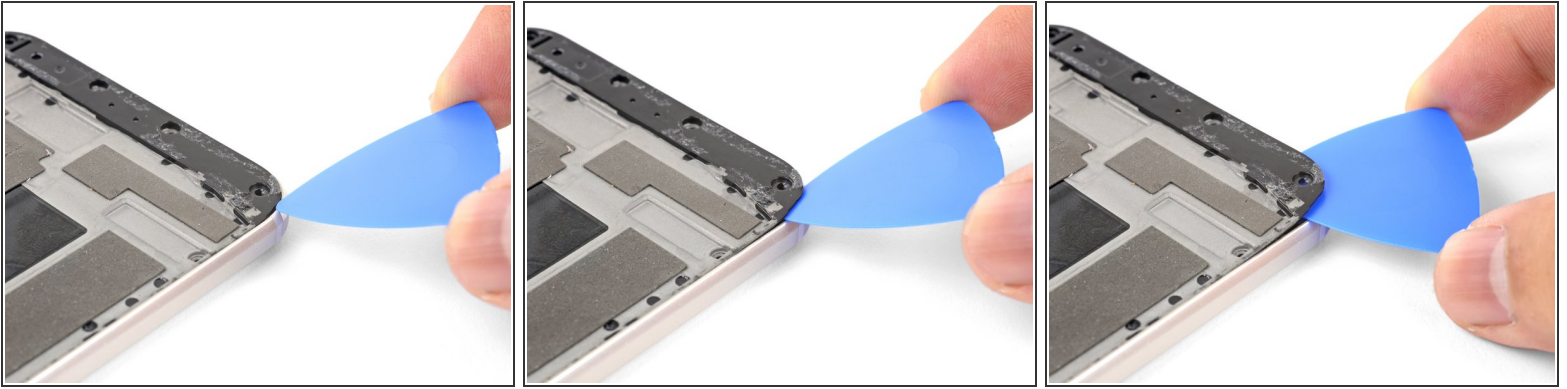
- Remove the following screws that secure the midframe to the back:
 - Seven black 4 mm T5 screws
 - Two silver 3 mm T5 screws

Step 13



- The midframe is held tightly in place by plastic clips which push into the edge of the back case.

Step 14



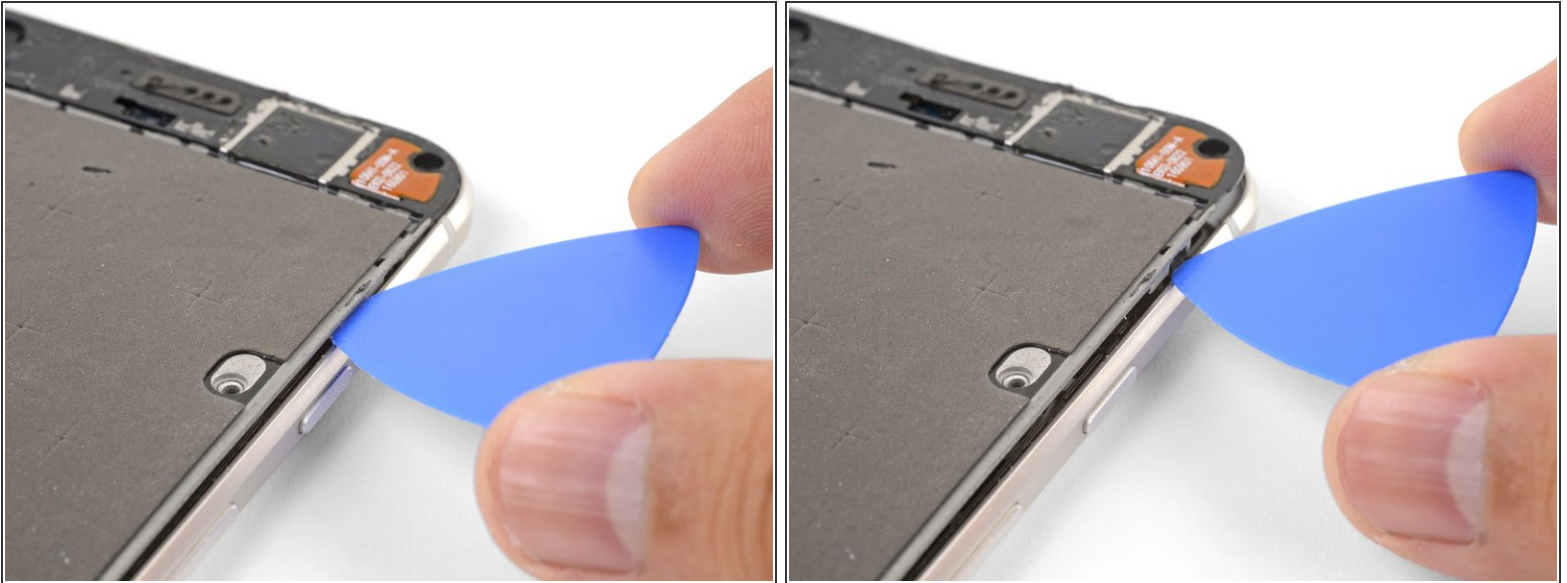
- Find the small notch in the bottom left corner of the frame and insert an opening pick.
- Slide the opening pick along the bottom edge of the phone towards the bottom right corner and leave it there.

Step 15



- Insert a separate opening pick into the right edge of the phone, near the bottom.
- Slowly push the pick upwards along the seam until the first clip pops free.
- ❗ Due to the tight tolerances, this may be difficult, requiring a substantial amount of force. If you are having trouble, try [inserting and sliding a playing card](#).
- Once you've released the clip, leave the opening pick in place to prevent the midframe from resealing.

Step 16



- Insert an opening pick into the right edge of the phone and slide it upwards towards the top right clip.
 - ⓘ You do not need to insert the pick more than 2 mm into the edge. If you insert the pick all the way in, you may risk damaging flex cables.
- Slowly slide the pick past the clip to disengage it from the frame.
 - ⓘ At this point, the right edge of the midframe should be free from the case. If it isn't, slide an opening clip up and down along the right edge.

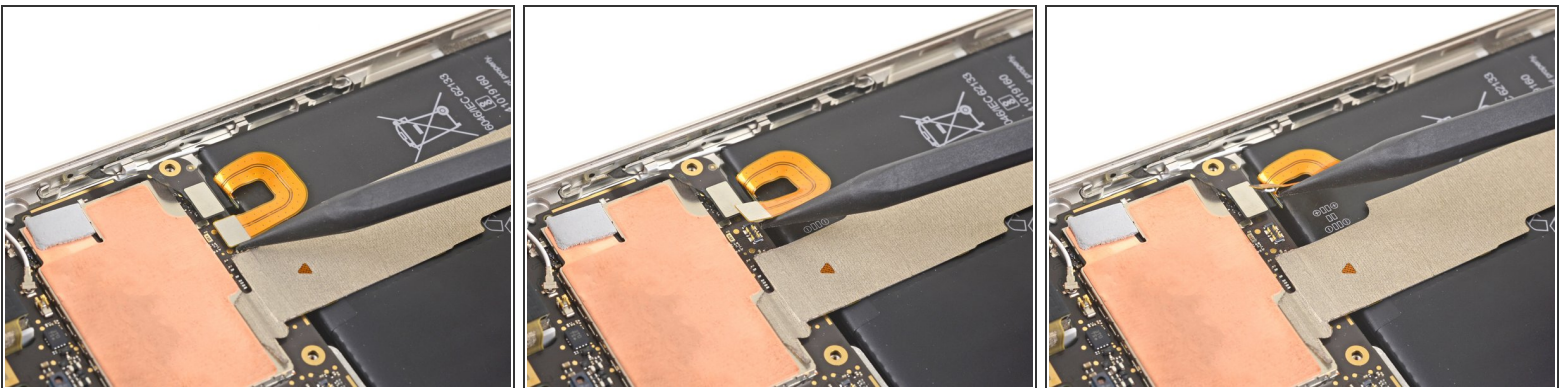
Step 17



- Grasp the right edge of the midframe by the corners and slowly hinge the edge up.
- When the left edge feels loose, stop hinging and lift the midframe upwards.
- Remove the midframe.

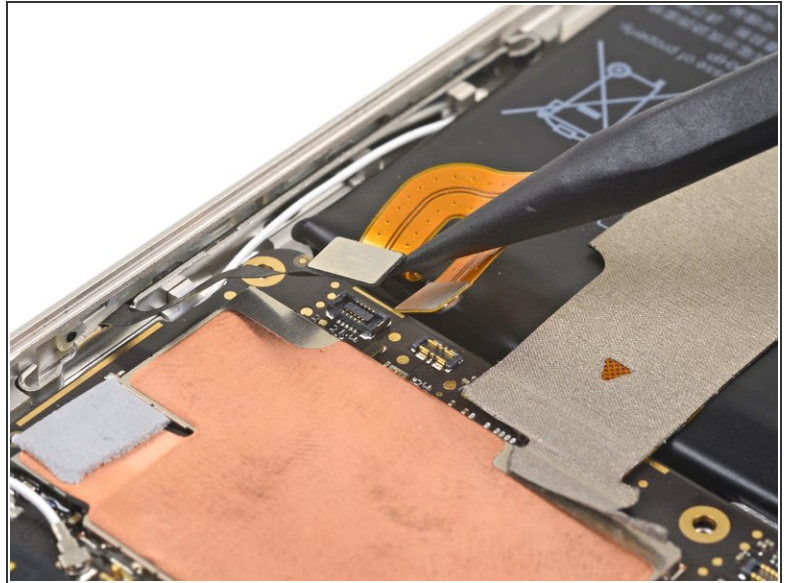
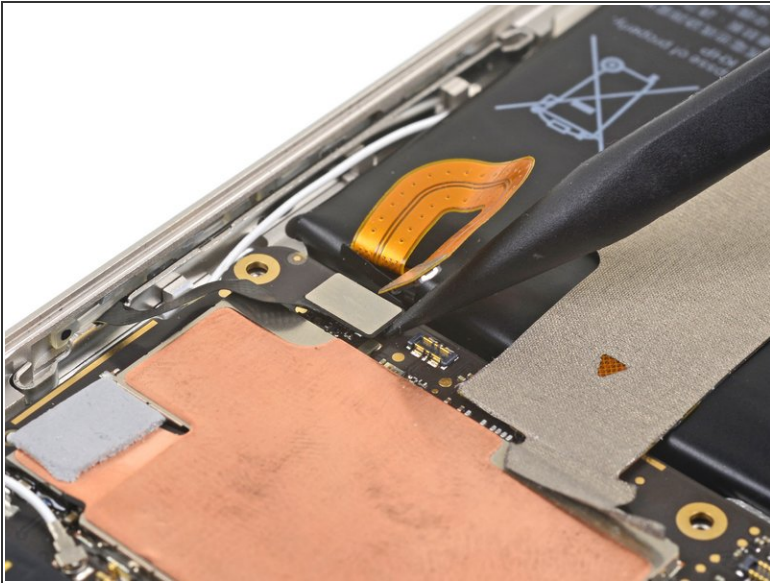
✦ To reinstall the midframe, align it to the case, then [squeeze around the perimeter](#) until all the clips snap back into position. When properly done, the midframe should lie flat.

Step 18 — Motherboard



- Use the point of a spudger to pry up and disconnect the battery connector.
- Bend the battery flex cable slightly so that it will not accidentally touch the motherboard.

Step 19



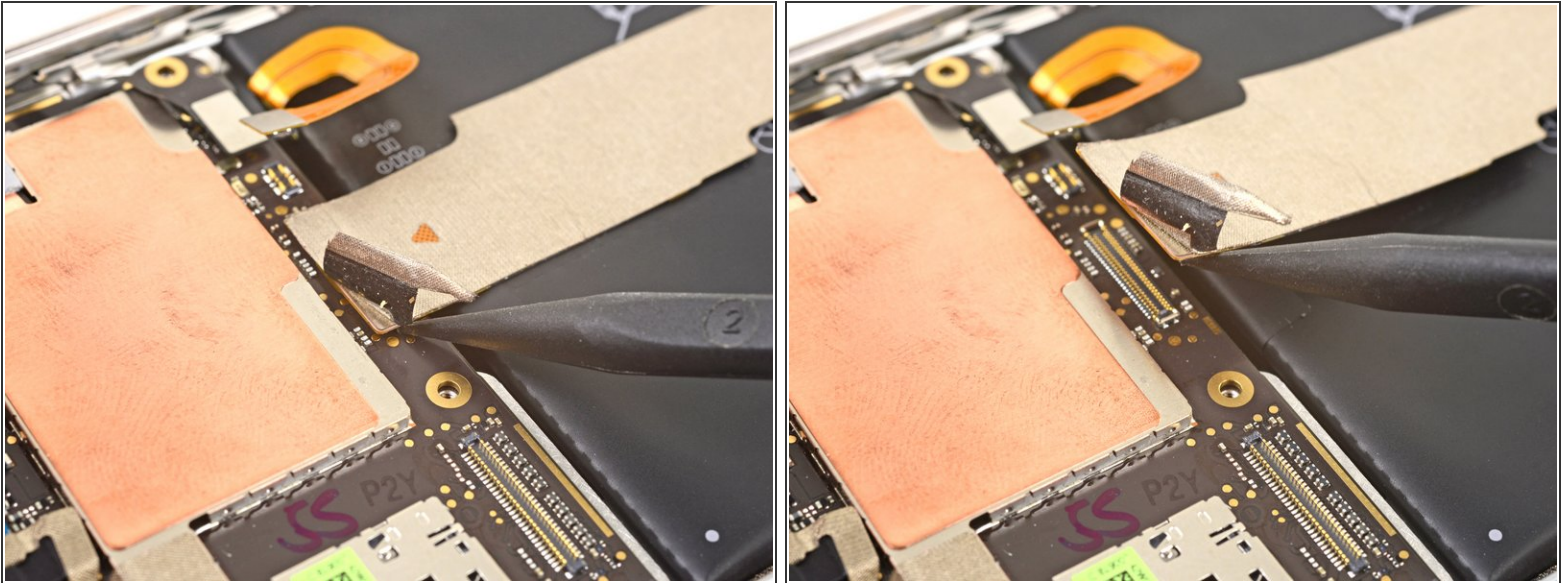
- Use the point of a spudger to pry up and disconnect the button strip connector.
- ⓘ If the button strip's metal clip falls out during the repair, [align the clip](#) and push it back into its groove.

Step 20



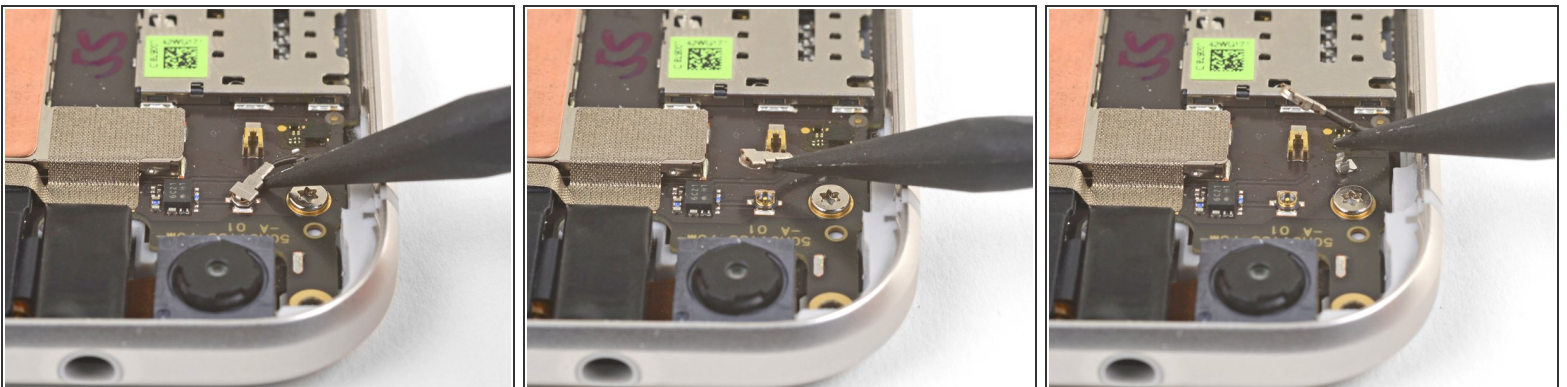
- Use tweezers to peel up the tape at the top of the interconnect cable.

Step 21



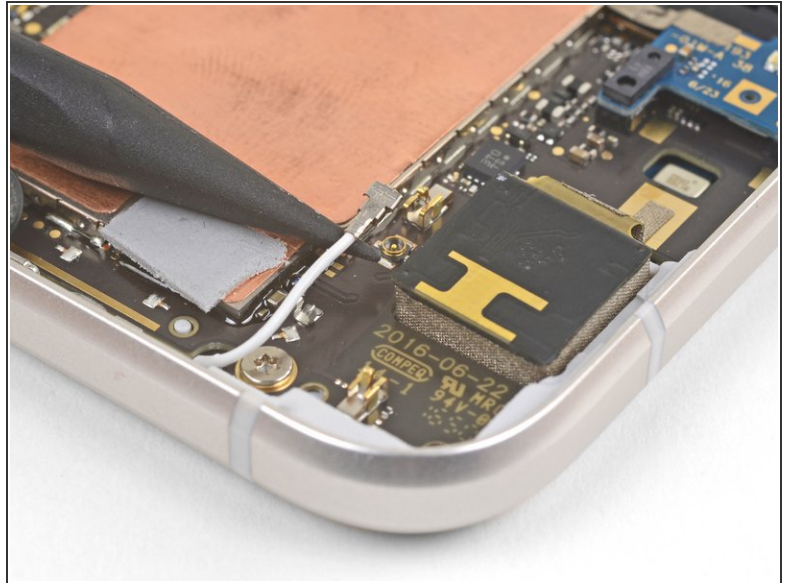
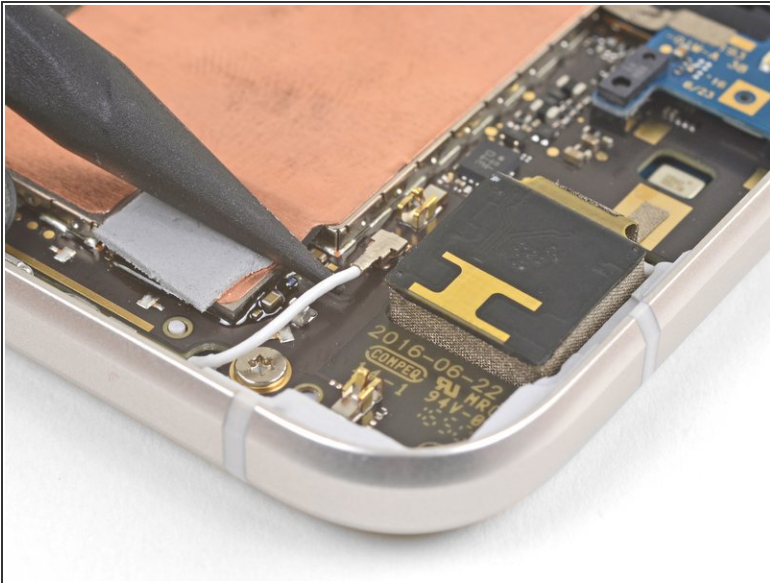
- Use the point of a spudger to pry up and disconnect the interconnect cable from the motherboard.

Step 22



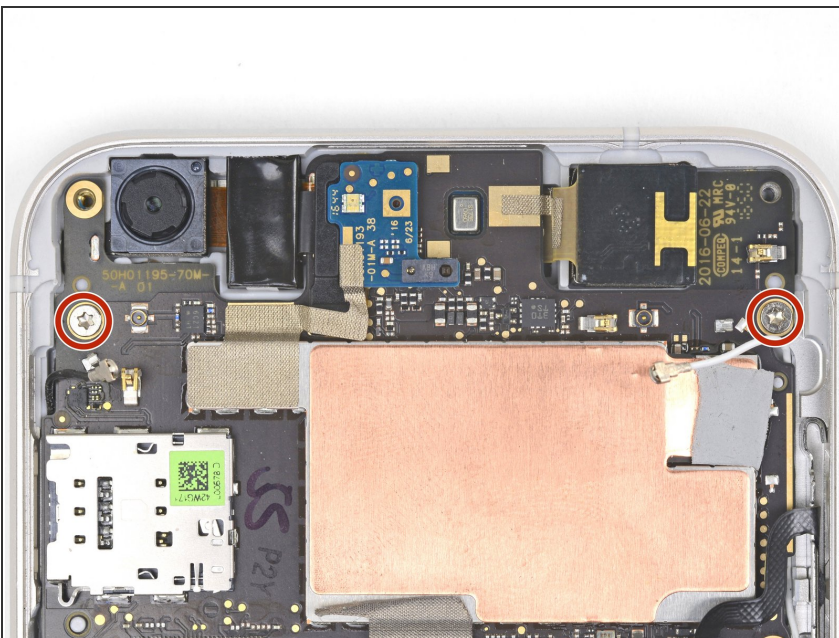
- Use the point of a spudger to disconnect the black antenna cable from the motherboard, near the front facing camera module.
- Route the antenna cable out of its retaining clip.

Step 23



- Use the point of a spudger to pry up and disconnect the white antenna cable from the motherboard, near the rear facing camera module.
- Route the antenna cable out of its retaining clip.

Step 24



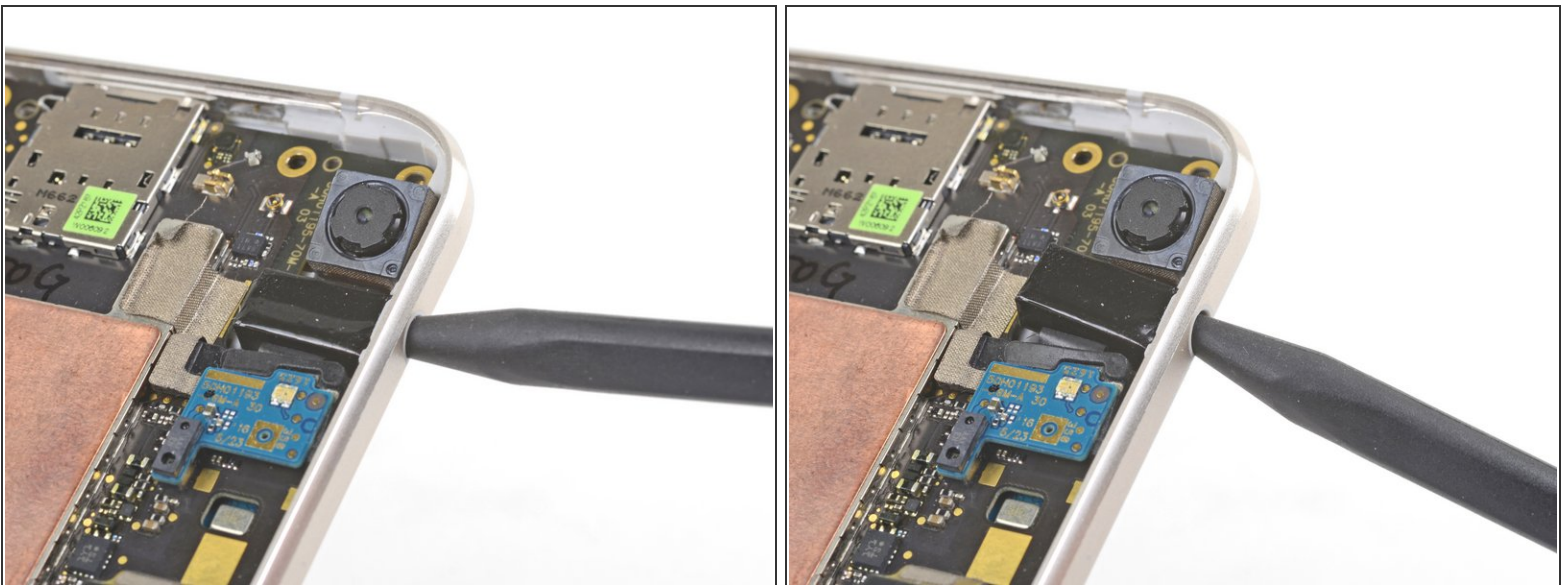
- Remove the two 3 mm T5 screws securing the motherboard to the frame.
- ☑ During reinstallation, be sure that both camera modules and the headphone jack module are seated properly in their sockets before screwing down the motherboard.

Step 25



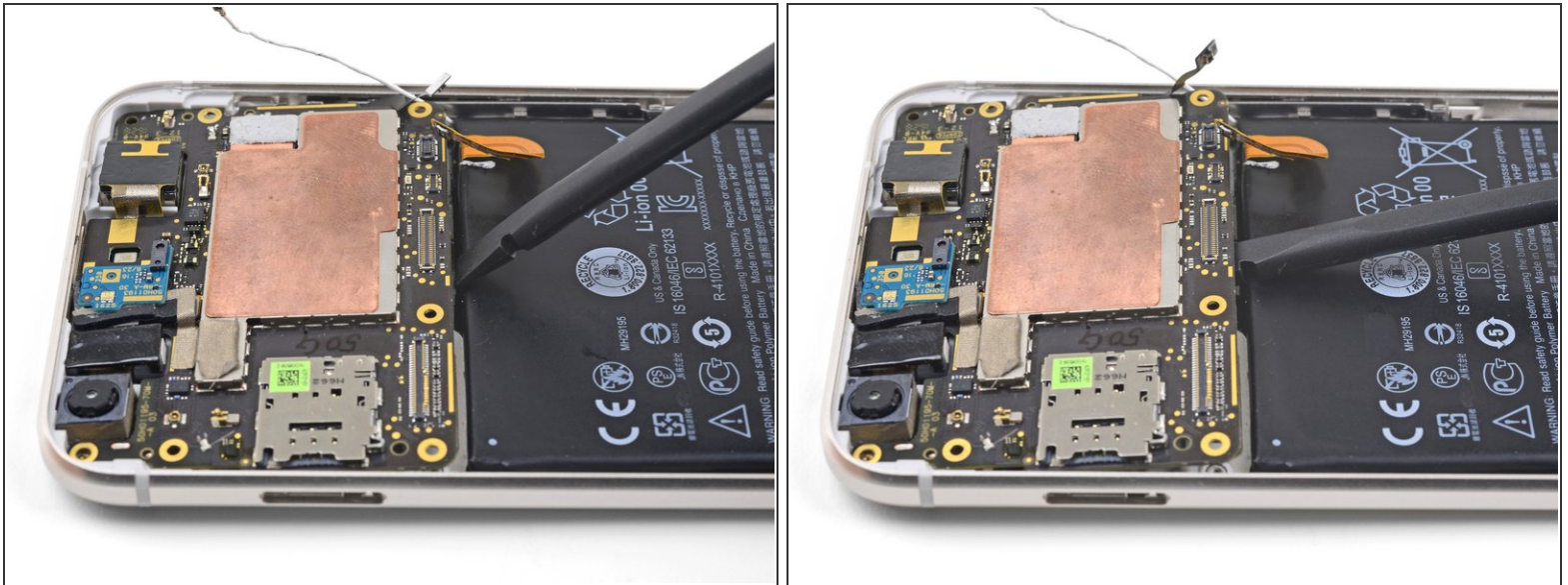
- Use the point of a spudger to pry up and loosen the front facing camera module from its socket.

Step 26



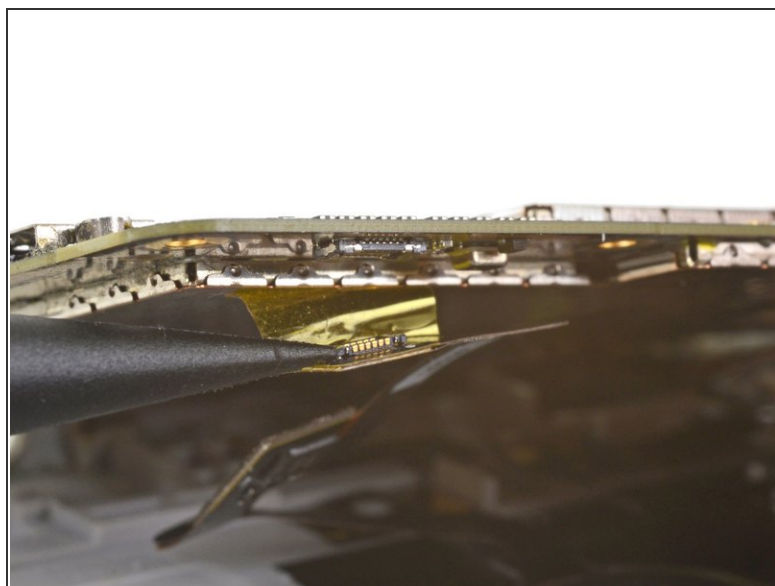
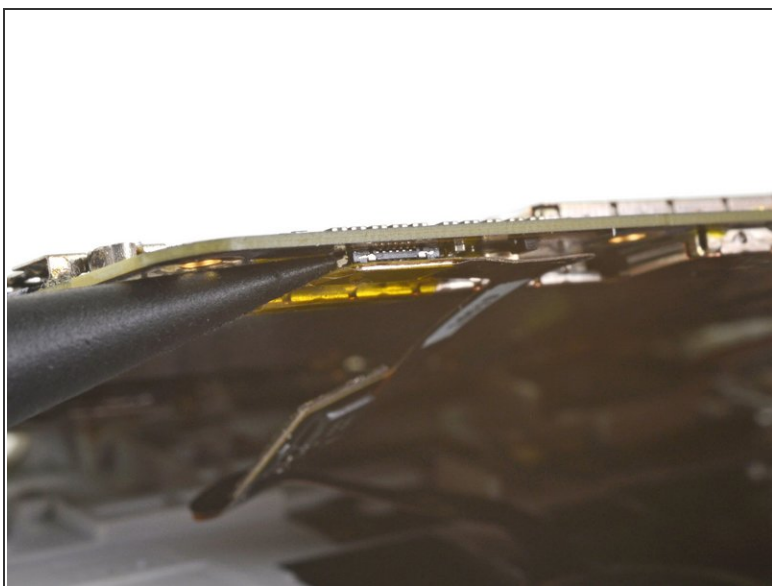
- Insert the point of a spudger into the headphone jack port and pry upwards to loosen the port from its socket.

Step 27



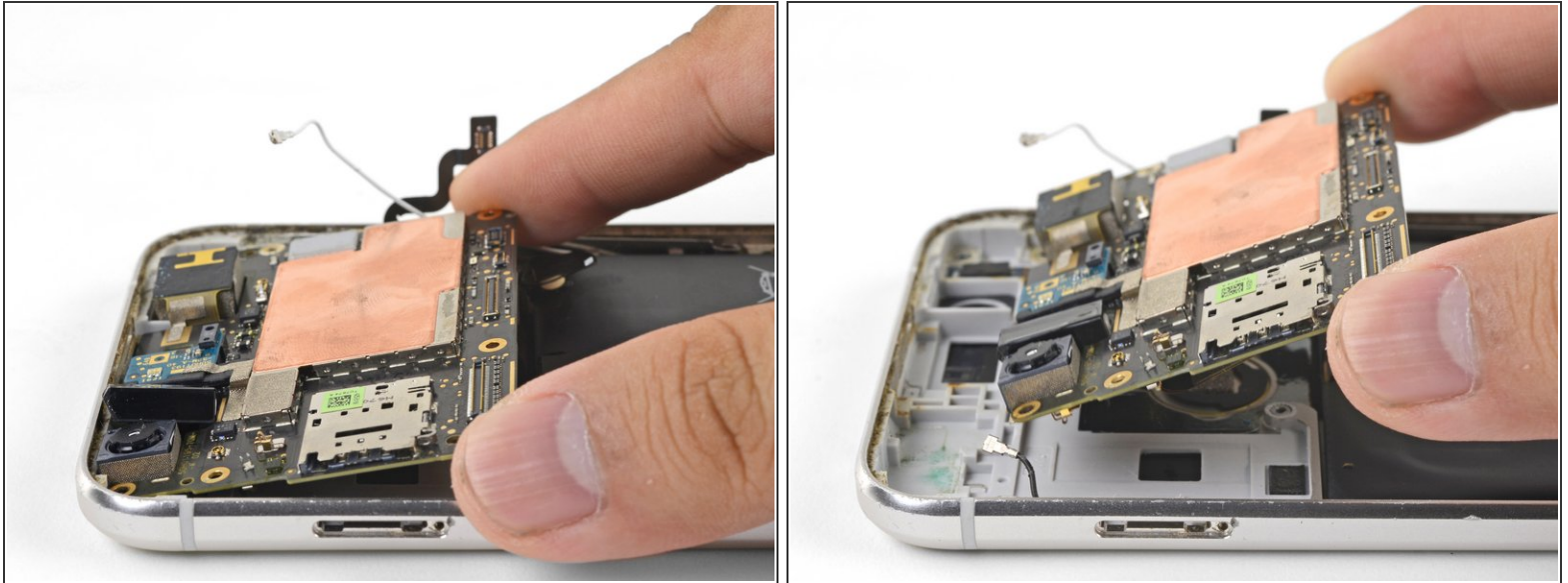
- ⓘ Be sure that you have ejected the SIM card tray before performing this step.
- Use the flat end of a spudger to pry the bottom edge of the motherboard up slightly, loosening it from its recess.
- ⚠ Do not try to remove the motherboard yet. It is still connected by a flex cable.

Step 28



- Locate the fingerprint sensor cable attached to the underside of the motherboard, near the bottom edge.
- Use the point of a spudger to pry and release the fingerprint sensor cable from its socket.
- Peel the cable away from the motherboard.

Step 29



- Hold the motherboard by the corners and maneuver it out of its recess, being careful not to snag any cables.
- ✦ During reinstallation, be sure to route both antenna cables [underneath the motherboard edges](#), [and direct them through the cable notches](#).
- ✦ The fingerprint sensor connector can be tricky to reconnect during reinstallation.
 - [Bend the fingerprint sensor cable slightly](#) so that it bows upward near the connector.
 - [Stand the motherboard up](#) and position it such that the connector rests against the socket.
 - [Use your finger to carefully align the connector and press it into the socket](#). **Do not use excessive force!** If done correctly, the socket should hold the connector securely.
- ❗ If you are having a difficult time, [follow this guide](#), which removes the fingerprint sensor from its indentation before attaching it to 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 XL Answers community](#) for troubleshooting help.