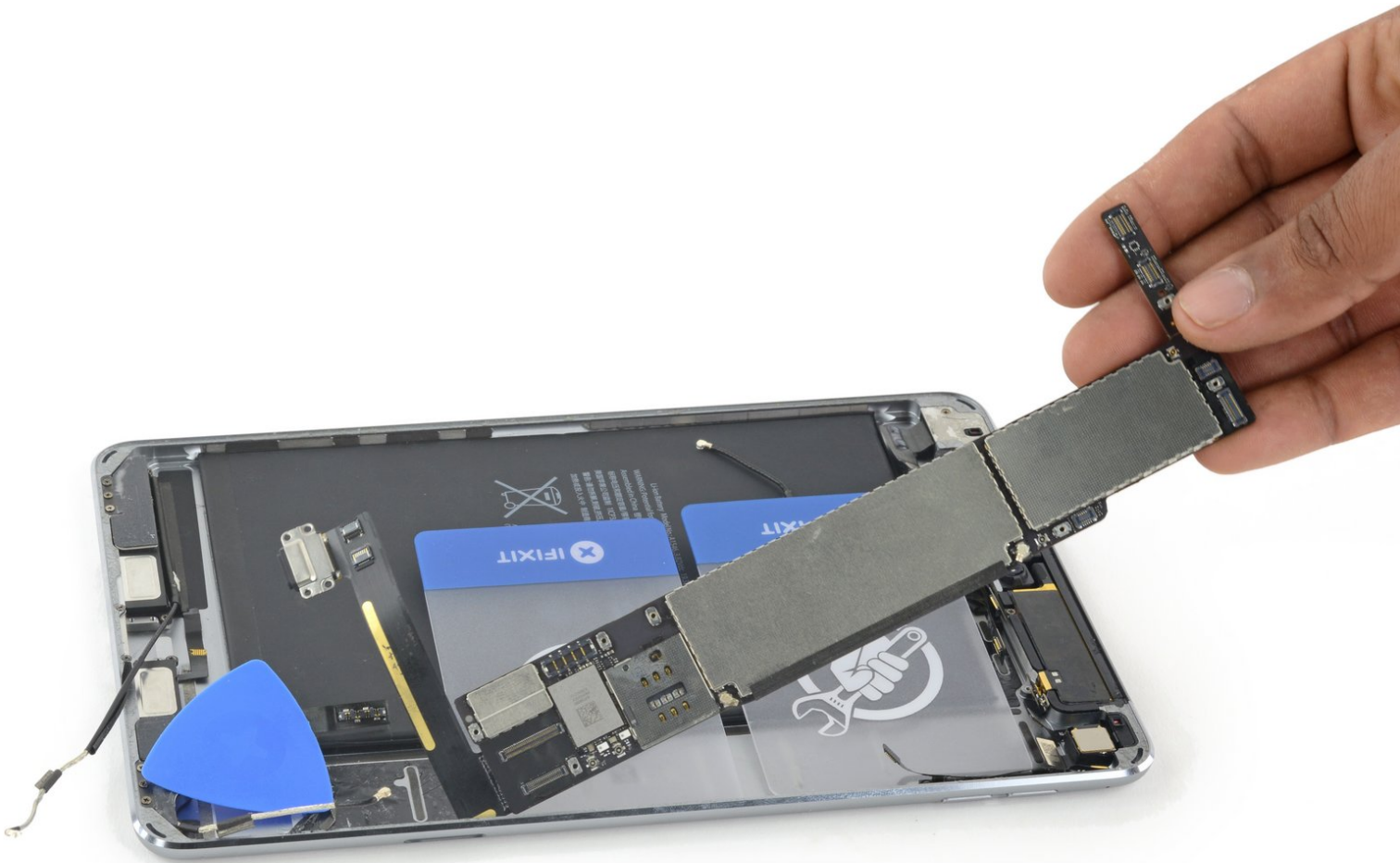




# iPad mini 4 LTE Logic Board Replacement

Replace the logic board in an iPad mini 4 LTE.

Written By: Evan Noronha



## INTRODUCTION

Follow the steps in this guide to remove or replace a faulty or water-damaged logic board in an iPad mini 4 LTE.

Note that if you replace your logic board without a paired home button, you will lose Touch ID functionality.

Parts of this guide were shot with a Wi-Fi model and as such the internals may look slightly different from the LTE model. The procedure is the same for both models except where noted.



### TOOLS:

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



### PARTS:

- [iPad mini 4 Lightning Connector](#) (1)

## Step 1 — Taping a Cracked Front Panel





- If your display glass is cracked, keep further breakage contained and prevent bodily harm during your repair by taping the glass.
- Lay overlapping strips of clear packing tape over the iPad's display until the whole face is covered. For particularly bad breaks, you may need to lay down two layers.
- ⓘ This will keep glass shards contained and provide structural integrity when prying and lifting the display.
- Do your best to follow the rest of the guide as described. However, once the glass is broken, it will likely continue to crack as you work, and you may need to use a metal prying tool to scoop the glass out.

**⚠ Protect your eyes!** This procedure **will** cause small pieces of glass to fly directly toward your face. **Do not attempt** without [safety glasses](#).

## Step 2 — iOpener Heating



-  We recommend that you clean your microwave before proceeding, as any nasty gunk on the bottom may end up stuck to the iOpener.
- Place the iOpener in the center of the microwave.
-  For carousel microwaves: Make sure the plate spins freely. If your iOpener gets stuck, it may overheat and burn.

## Step 3




- Heat the iOpener for **thirty seconds**.
- Throughout the repair procedure, as the iOpener cools, reheat it in the microwave for an additional thirty seconds at a time.

- ⚠ Be careful not to overheat the iOpener during the repair. Overheating may cause the iOpener to burst.
- ⚠ Never touch the iOpener if it appears swollen.
- ⚠ If the iOpener is still too hot in the middle to touch, continue using it while waiting for it to cool down some more before reheating. A properly heated iOpener should stay warm for up to 10 minutes.

## Step 4



- Remove the iOpener from the microwave, holding it by one of the two flat ends to avoid the hot center.

 The iOpener will be very hot, so be careful when handling it. Use an oven mitt if necessary.

## Step 5 — Opening Procedure




- Handling it by the tabs on either side, place the heated iOpener on the side of the iPad to the left of the home button assembly.
- Let the iOpener sit for about five minutes to soften the adhesive beneath the glass.

## Step 6

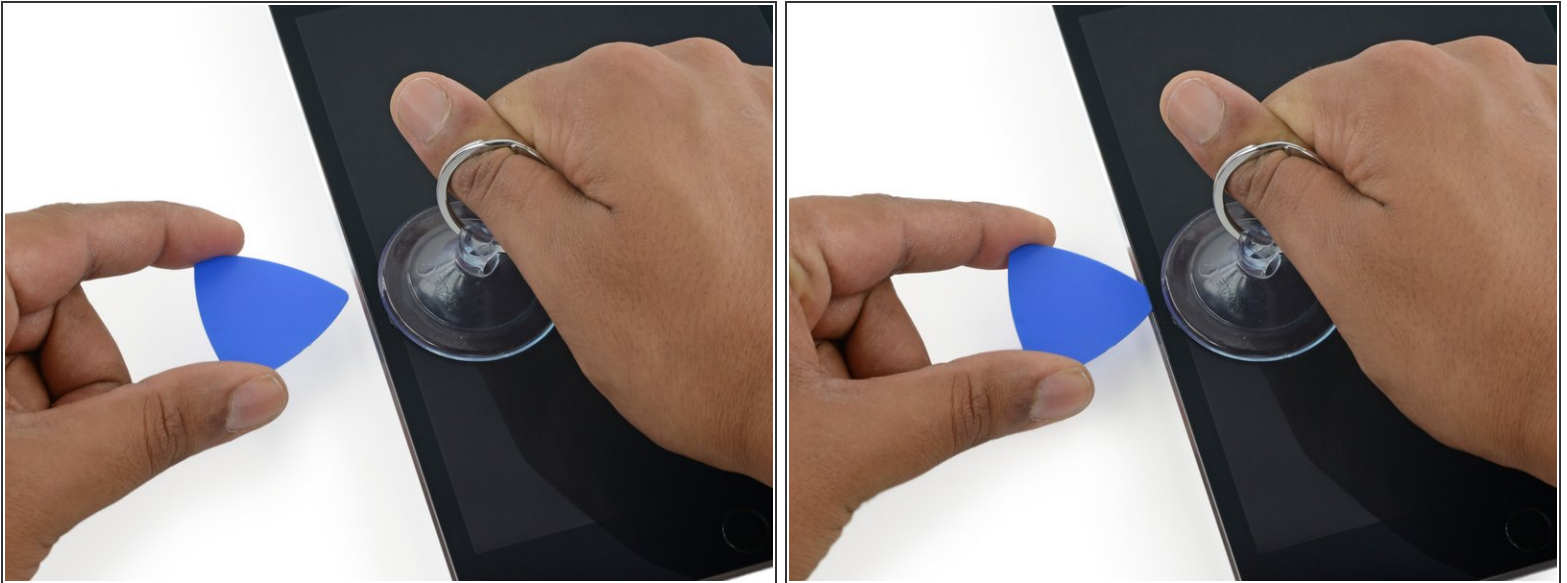



- Carefully place a suction cup halfway up the heated side.
- Be sure the cup is completely flat on the screen to get a tight seal.
- While holding the iPad down with one hand, pull up on the suction cup to slightly separate the front panel assembly from the rear case.

 Be careful to only lift the glass enough to insert an opening pick—any more and you risk cracking the glass.




## Step 7



- While holding the glass up with the suction cup, slide the point of an opening pick into the gap between the glass and body of the iPad.
-  Don't insert the opening pick any deeper than 2 mm into the side of the display. Inserting the pick deeper than 2 mm could damage the backlight assembly, LCD display, or touchscreen.

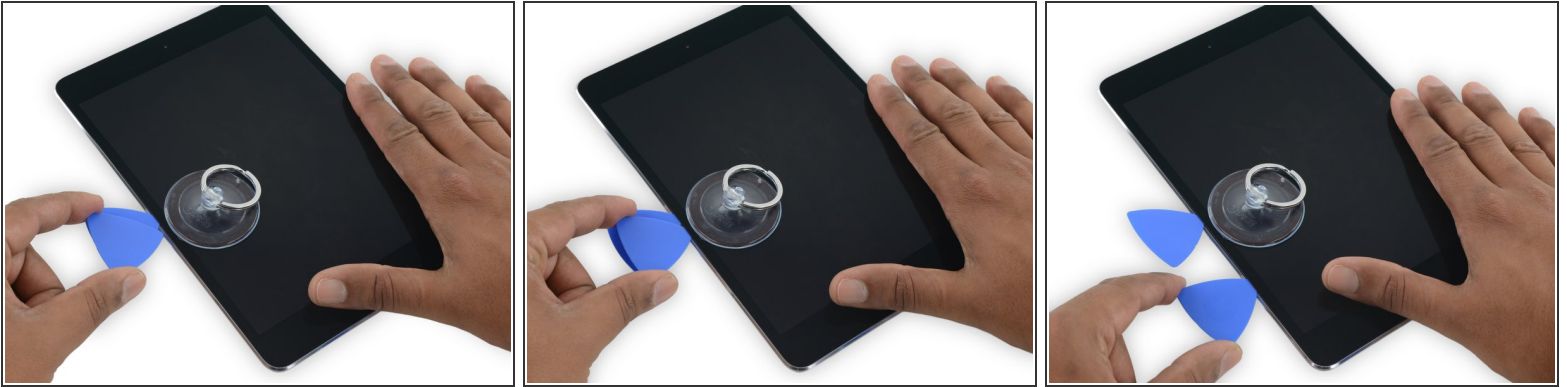
## Step 8




- Reheat and reapply the iOpener.
-  Be careful not to overheat the iOpener during the repair procedure. Always wait at least ten minutes before reheating the iOpener.
- Let it rest for a few minutes to reheat the left edge of the iPad.



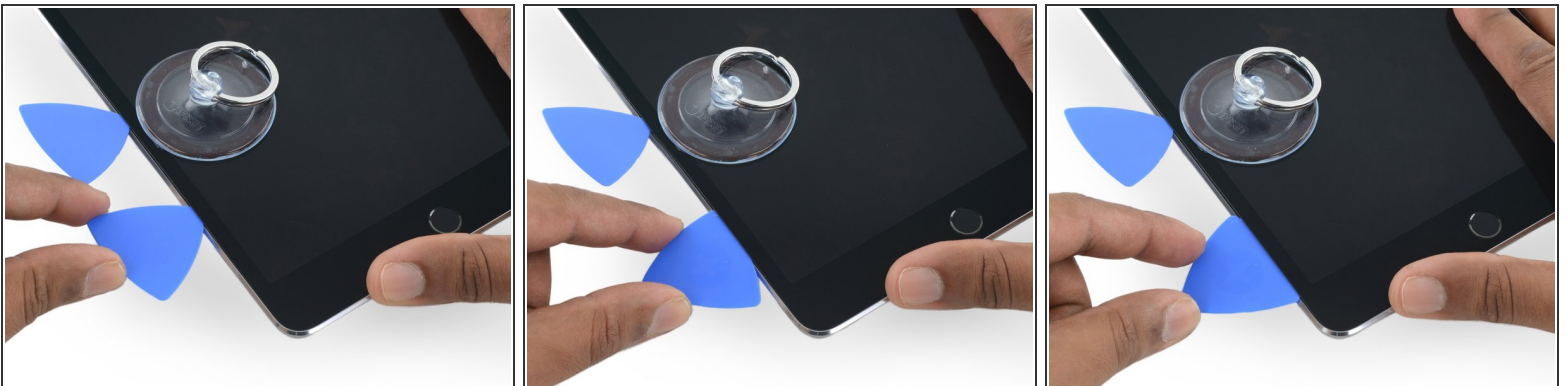
## Step 9



- Place a second opening pick alongside the first and slide the pick down along the edge of the iPad, releasing the adhesive as you go.

 Throughout the rest of the procedure, if you encounter significant resistance to sliding picks beneath the glass, stop and reheat the section you're working on. Applying too much pressure with the pick can crack the glass.

## Step 10



- Continue moving the opening pick down the side of the display to release the adhesive.
- If the opening pick gets stuck in the adhesive, "roll" the pick along the side of the iPad, continuing to release the adhesive.

## Step 11



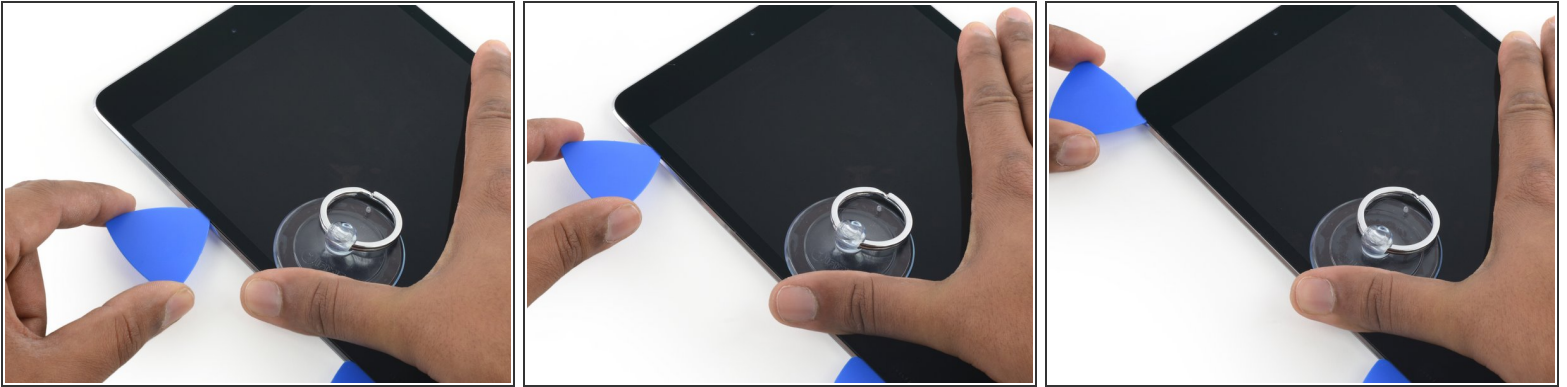
- Take the first pick you inserted and slide it up toward the top corner of the iPad.

## Step 12



- Reheat the iOpener and place it on the top edge of the iPad, over the front-facing camera.
- ⚠ Be careful not to overheat the iOpener during the repair procedure. Wait at least ten minutes before reheating the iOpener.
- If you have a flexible iOpener, you can bend it to heat both the upper left corner and the upper edge at the same time.


## Step 13



- Slide the opening pick around the top left corner of the iPad to separate the adhesive.

## Step 14



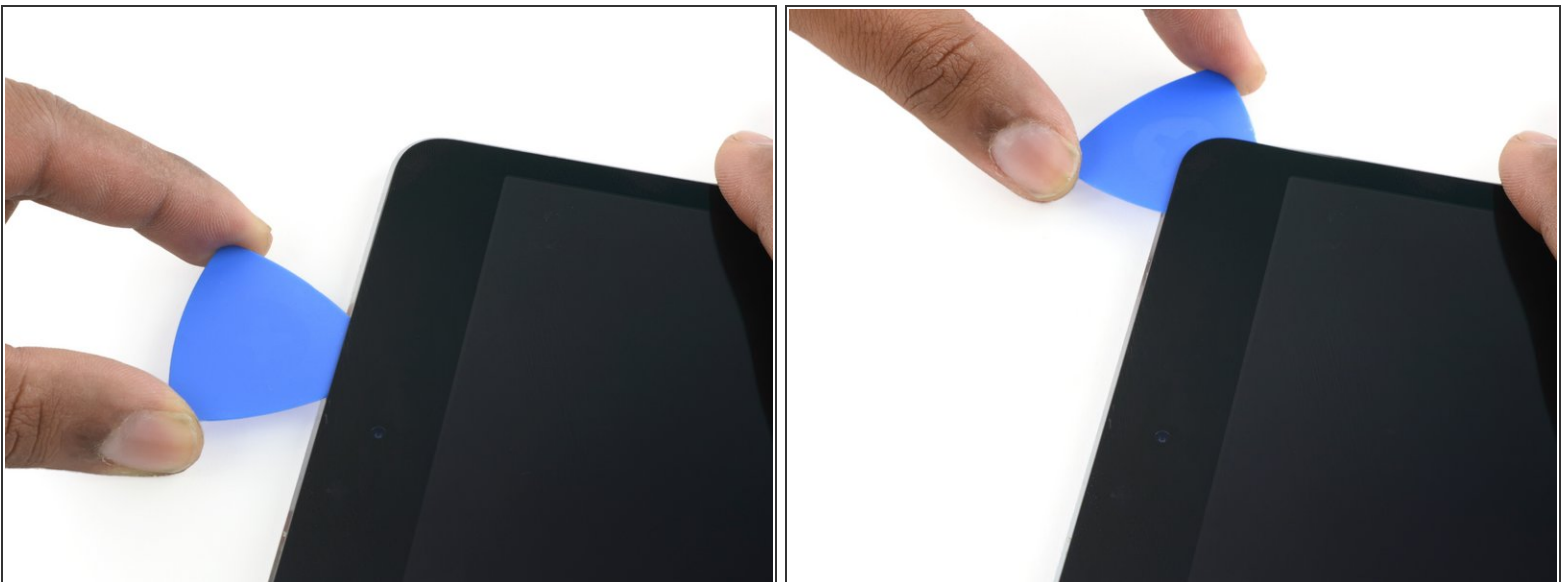
- Slide the opening pick along the top edge of the iPad, stopping just before you reach the camera.
  - As you reach the front-facing camera, pull the pick out slightly and continue sliding it across the top edge.
-  Avoid sliding the opening pick over the front-facing camera, as you may smear adhesive onto the lens or damage the camera. The following steps will detail how to best avoid disturbing the front-facing camera.

## Step 15



- Leave the opening pick in the iPad slightly past the front-facing camera.
- Take a second pick and insert it to the left of the camera, where the first pick just was. Slide it back to the corner to completely cut any remaining adhesive.
- Leave the second pick in place to prevent the corner adhesive from re-sealing as it cools.

## Step 16



- Insert the previous pick deeper into the iPad and slide it away from the camera toward the corner.



## Step 17



- Leave the three picks in the corners of the iPad to prevent re-adhering of the front panel adhesive.
- Reheat the iOpener and place it on the remaining long side of the iPad —along the volume and lock buttons.

## Step 18



- Insert a new opening pick and slide it down the right edge of the iPad, releasing the adhesive as you go.

## Step 19



- Continue sliding the opening pick down the right edge of the iPad, reheating the edge using an iOpener if necessary.

⚠ Be careful not to slice too deep near the [bottom right corner](#), or you risk damaging the display cable.

## Step 20



- Leave the opening picks in place and reheat the iOpener.
- ⚠ Remember not to overheat the iOpener—no more than once every ten minutes.
- Set the reheated iOpener on the home button end of the iPad and let it rest for a few minutes to soften the adhesive beneath the glass.



## Step 21



- Insert a new opening pick at the bottom right corner of the display, below the last opening pick you used to slice down the right edge.
- Rotate the new pick around the lower right corner of the device.

## Step 22



- Slide the pick from the bottom right corner along the lower edge of the device. Stop about half an inch shy of the home button.

## Step 23



- Insert a final opening pick at the lower left corner of the iPad, directly below the existing one.

## Step 24



- Slide the pick around the lower left edge of the iPad.

## Step 25



- Continue sliding the pick at the lower left edge of the display toward the center of the iPad, until it is roughly half an inch from the home button.

## Step 26



- Twist the two picks at the top edge of the iPad to break up the last of the adhesive holding the display assembly in place.
- Lift the display from the top edge to open the device.

## Step 27 — Battery Connector



**i** To avoid stressing any cables, hold the display assembly perpendicular to the body of the iPad until it is disconnected.

- Remove the four 1.2 mm Phillips screws over the battery/display connector bracket.

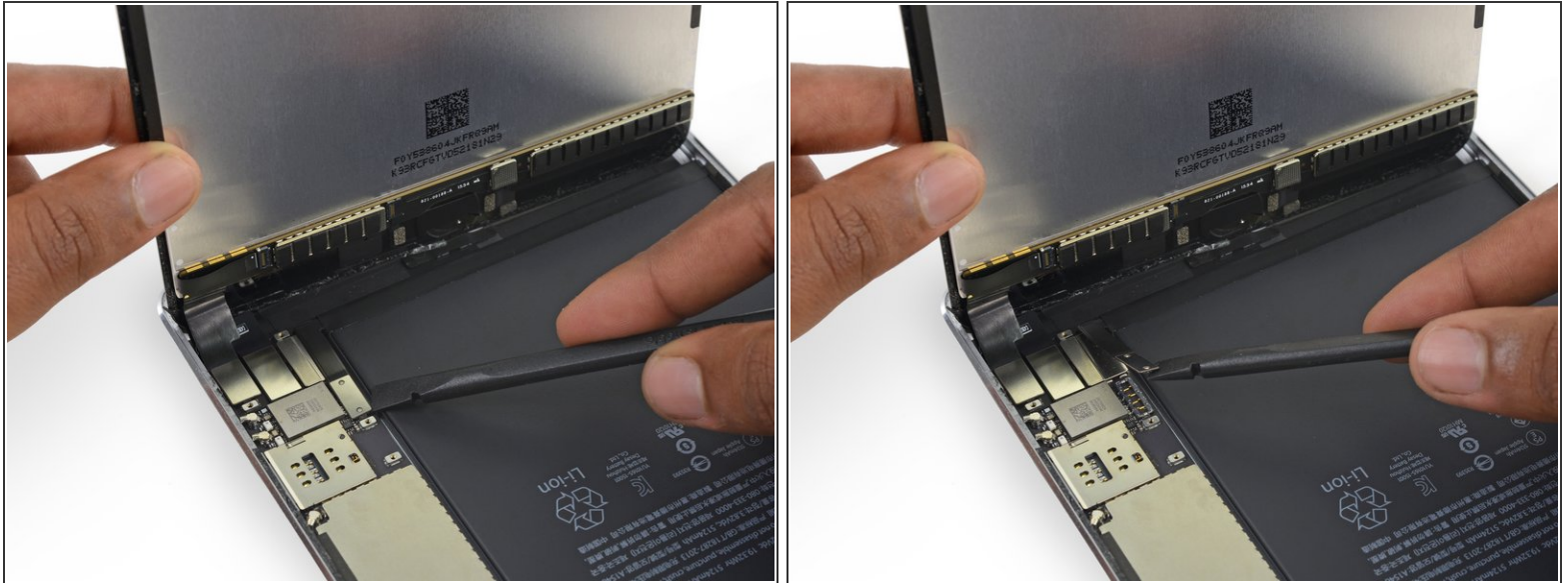
## Step 28



- Remove the battery/display cable bracket.



## Step 29



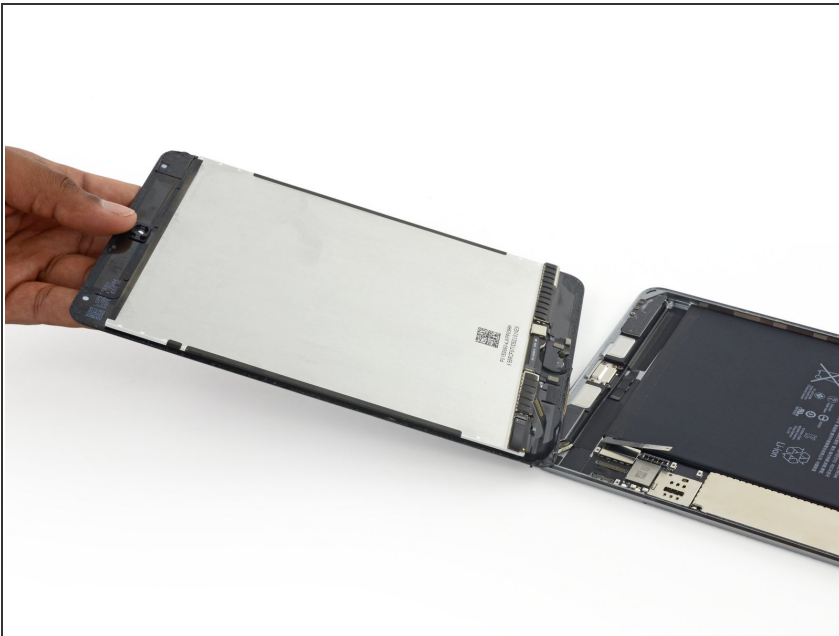
- ⚠ When disconnecting any press connectors from the logic board, be sure to lift the connector straight up to avoid ripping the socket off the board.
- Use the flat tip of a spudger to disconnect the battery connector from its socket on the logic board.
- ⓘ Bend the battery connector ribbon cable up slightly to prevent it from making contact and powering on the iPad.

## Step 30 — Display Assembly



- Use the pointed end of a spudger to disconnect the display data connector from its socket on the logic board.
  - Use the pointed end of a spudger to disconnect the digitizer cable connector from its socket on the logic board.
- ☒ When reconnecting these, press down from one end of the connector to the other. If you press in the middle of the connector, you may bend it, causing damage or a poor connection.

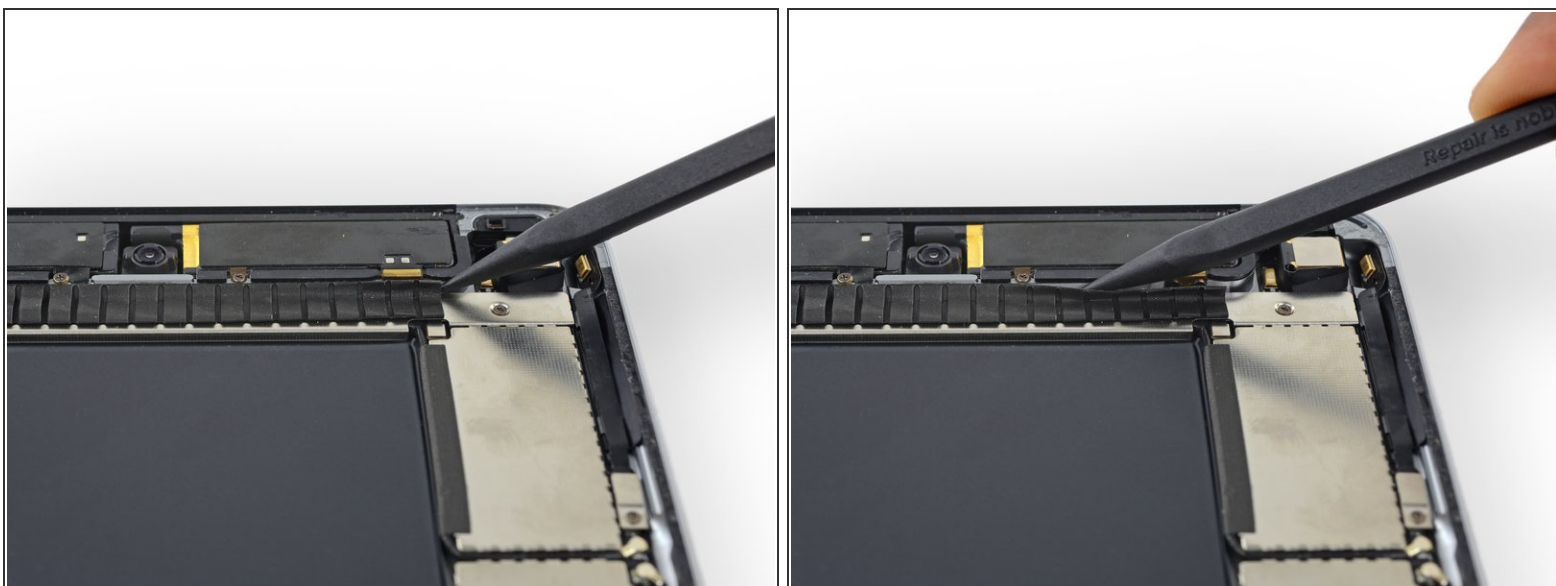
## Step 31



- Remove the display assembly.
- ☒ To reinstall your display assembly, you will need to replace the display adhesive. Use our [display adhesive application guide](#) to reapply your display adhesive and reseal your device.

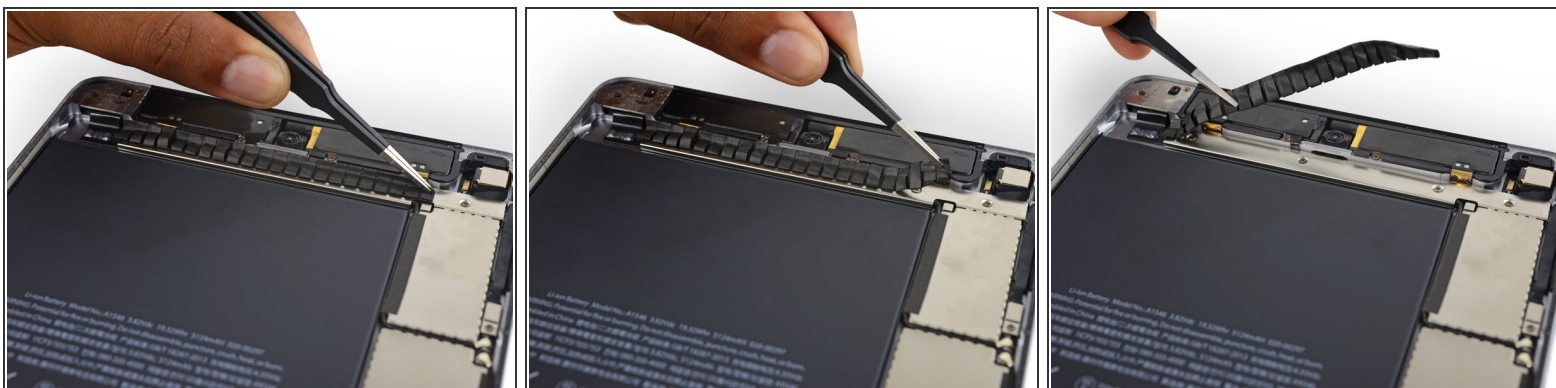


## Step 32 — Upper Component Bracket



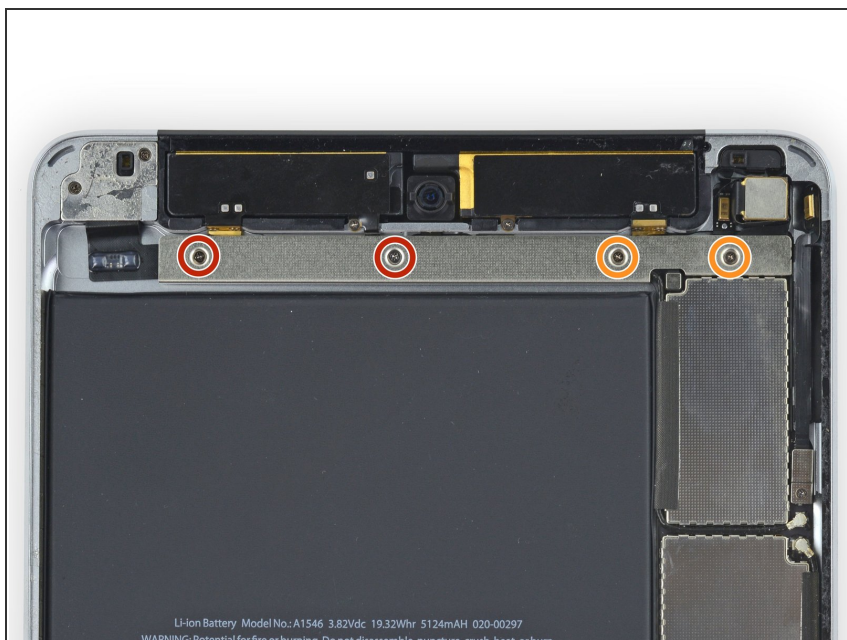
- Run the pointed end of a spudger between the looped tape and the plastic cellular antenna housing to make it easier to peel the tape up.

## Step 33



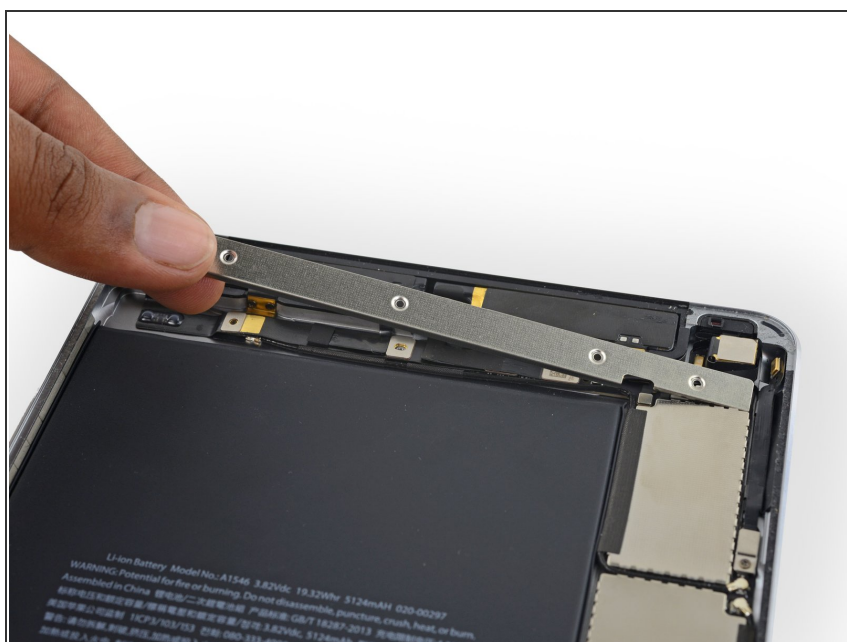
- Use tweezers to peel up the looped tape adhered over the upper component cable bracket.

## Step 34



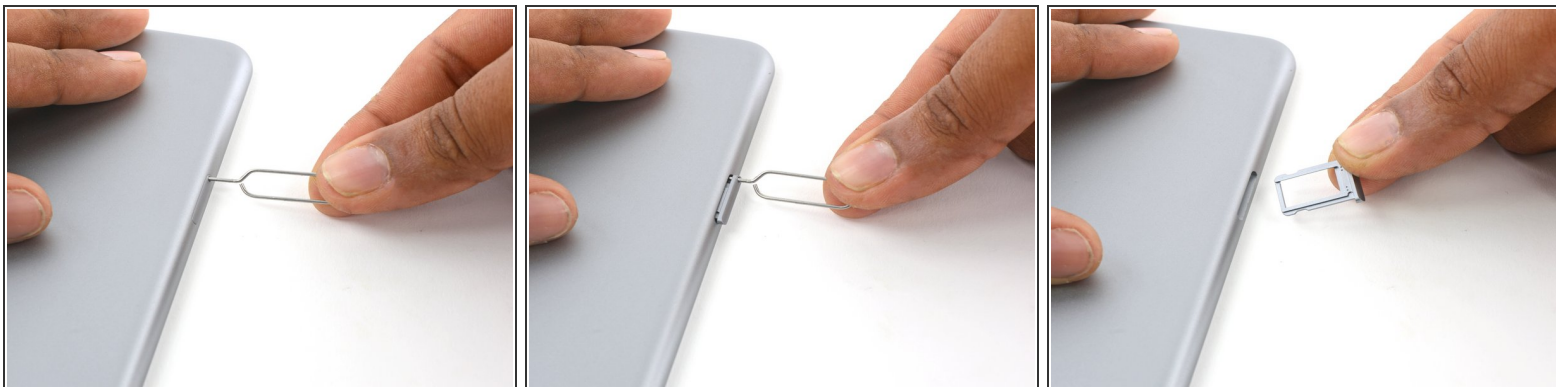
- Remove the following four Phillips screws holding the upper component bracket in place:
  - Two 2.1 mm screws
  - Two 1.2 mm screws

## Step 35



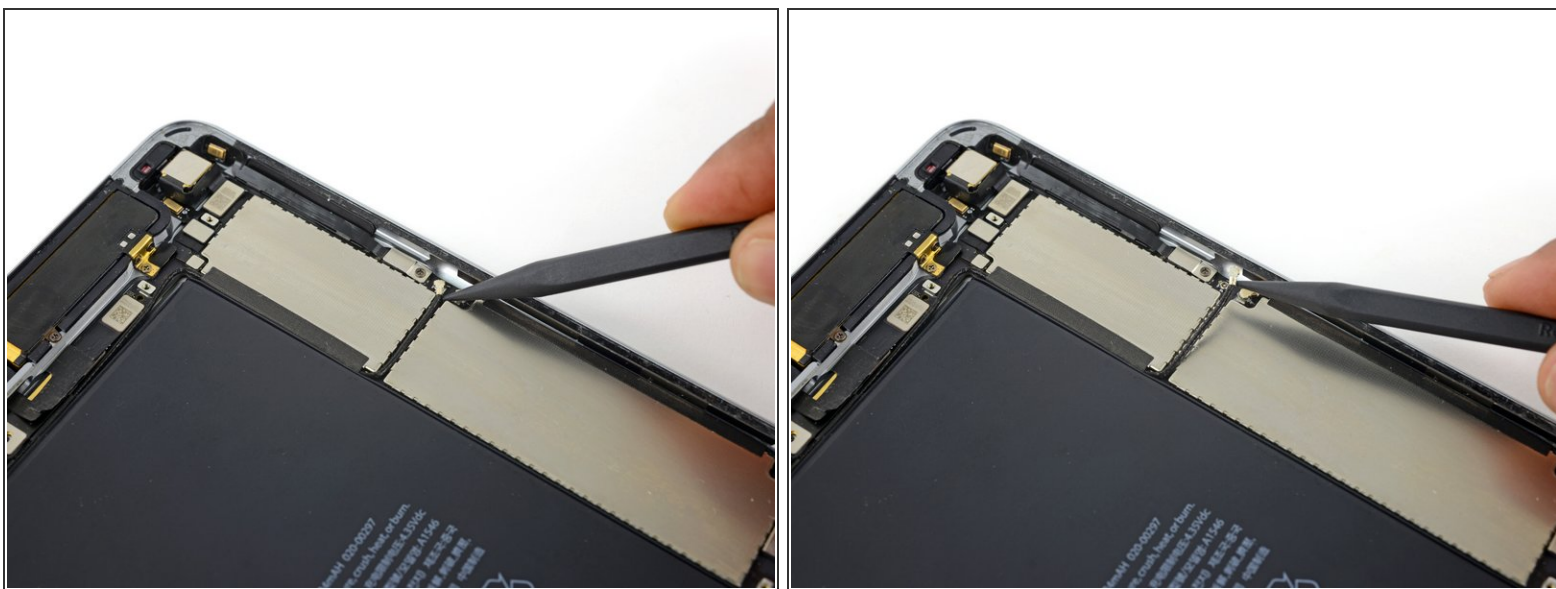
- Remove the upper component cable bracket.

## Step 36 — Logic Board



- Press a paper clip or SIM eject tool into the SIM eject hole.
- Remove the SIM card tray.

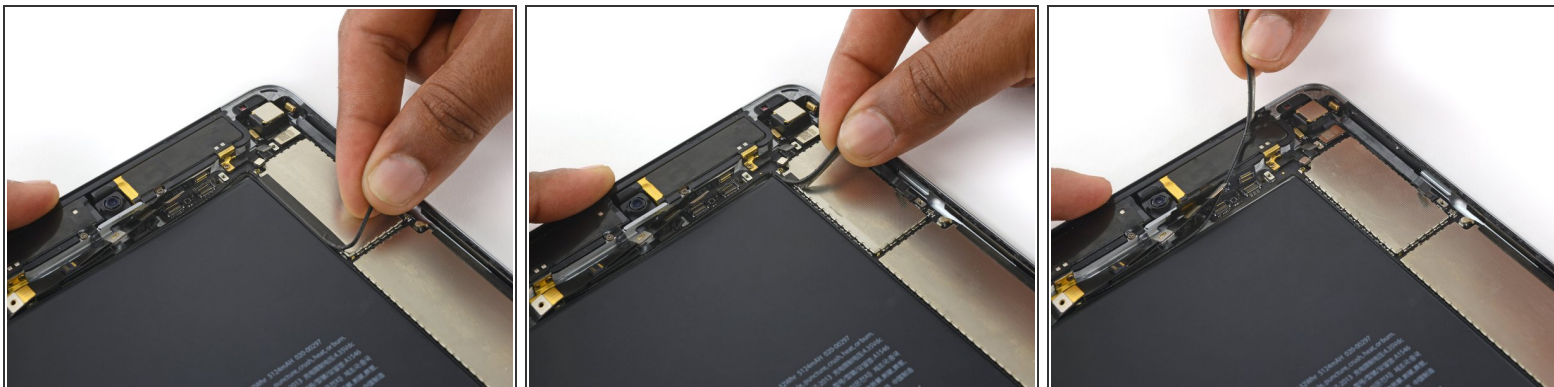
## Step 37



- Use a spudger to disconnect the upper antenna interconnect cable from its socket on the logic board.
- ⓘ Lift the cable connector straight up from the board, do not pry on the socket itself.



## Step 38



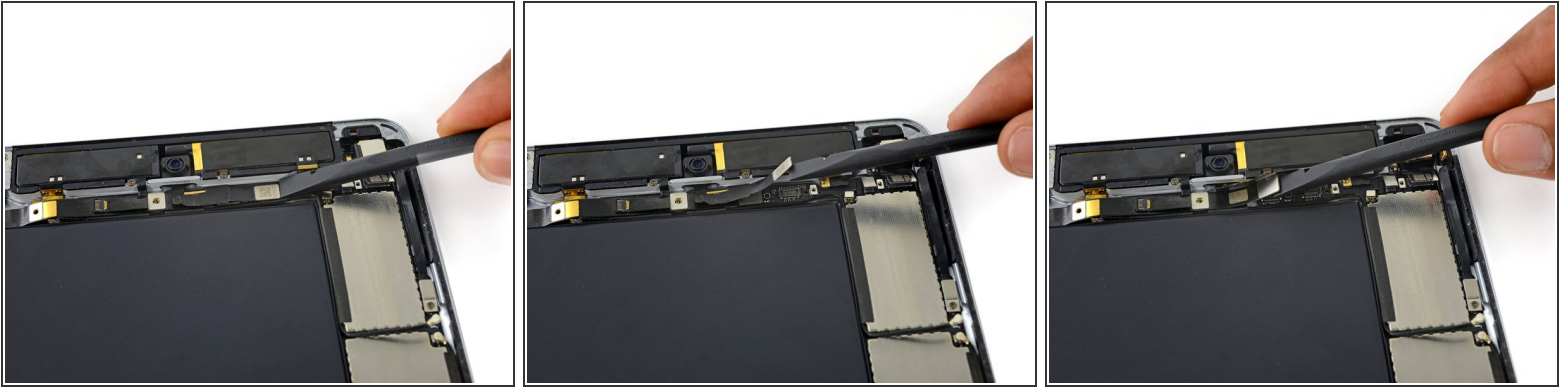
- Peel the upper antenna interconnect cable up off the logic board.

## Step 39



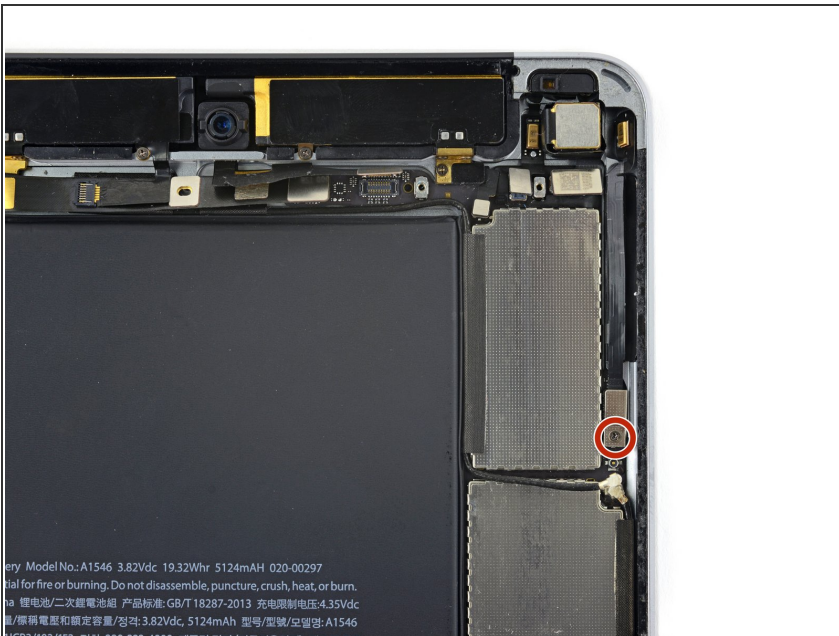
- Use the flat end of a spudger to lift the rear-facing camera cable connector from its socket on the logic board.
- Lift the sensor cable connector from its socket.
- Disconnect the right cellular antenna from the logic board.

## Step 40



- Use the flat end of a spudger to disconnect the front-facing camera press connector.
- Lift the Facetime camera ribbon cable out of the way and disconnect the headphone jack ribbon cable directly underneath it.

## Step 41



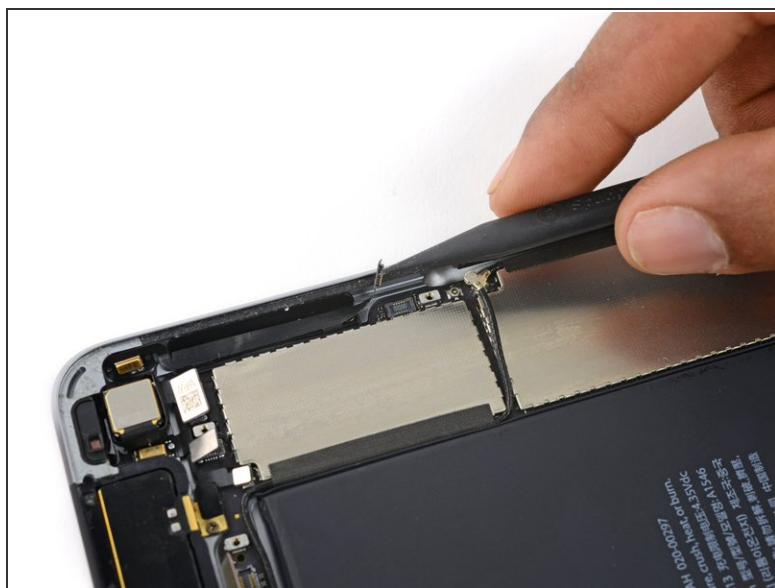
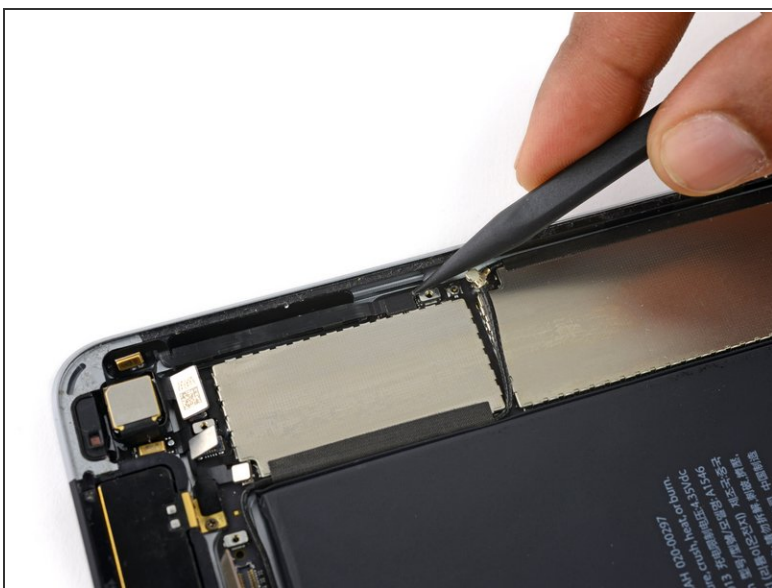
- Remove the 1.2 mm Phillips screw securing the volume control cable.

## Step 42



- Remove the volume control cable bracket.

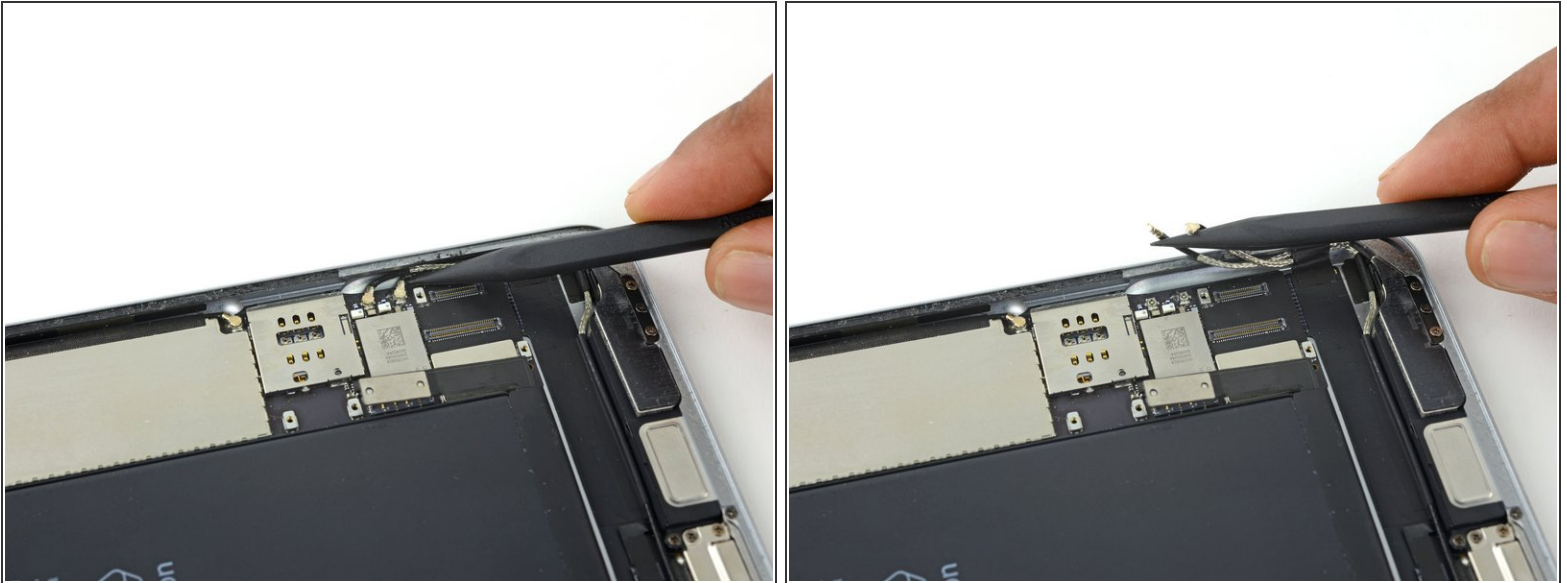
## Step 43



- Use the point of a spudger to lift the volume control cable connector from its socket on the logic board.
- Be careful to lift up only on the connector itself, not the socket on the logic board.



## Step 44



- Use the point of a spudger to disconnect the two lower antenna interconnect cable connectors.
  - ⓘ Lift the cables straight up from the board, do not pry on the sockets on the logic board.
- ☑ The longer cable will reconnect to the socket nearest the SIM card slot. The shorter cable connects to the socket nearest the display cable connectors.

## Step 45



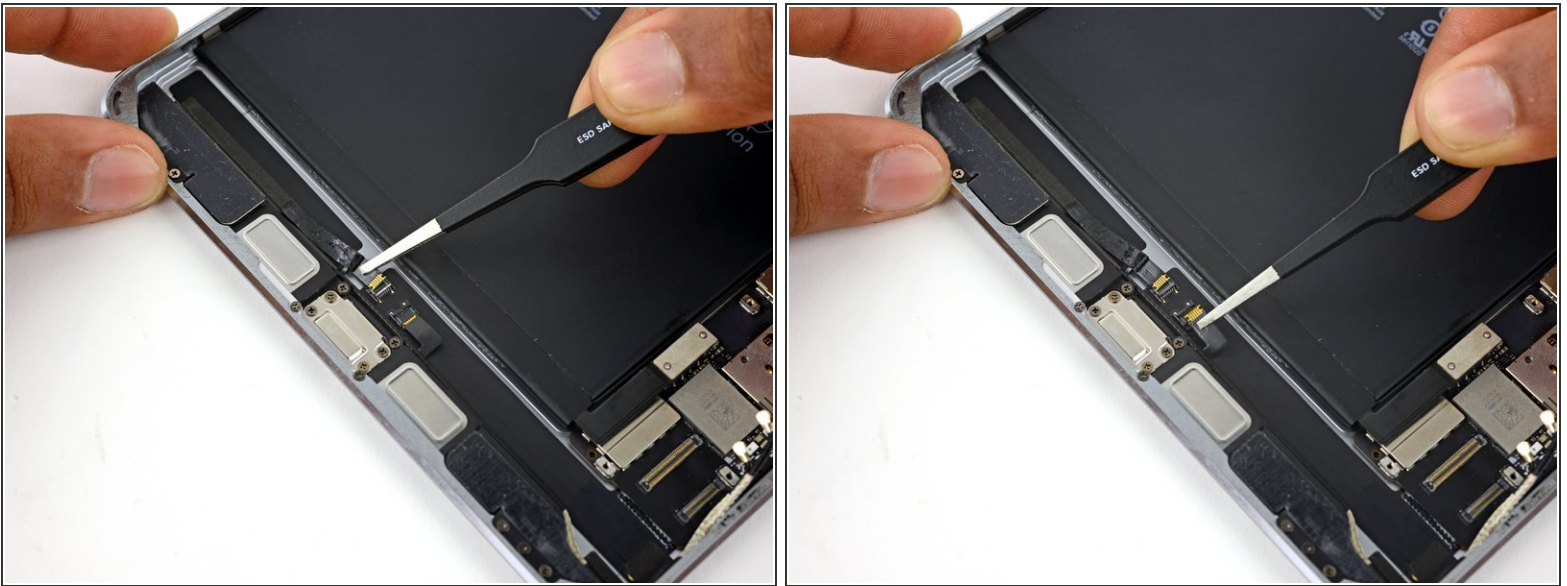
- Remove any tape covering the ZIF connectors near the Lightning connector port.

## Step 46



- Use the tip of a spudger to lift each of the two ZIF connector retaining flaps.

## Step 47



- Pull each speaker cable out from its ZIF socket.

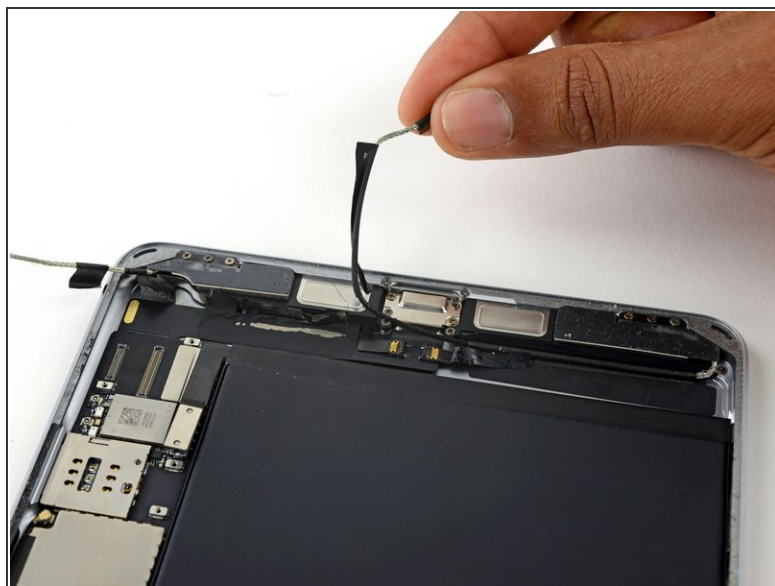
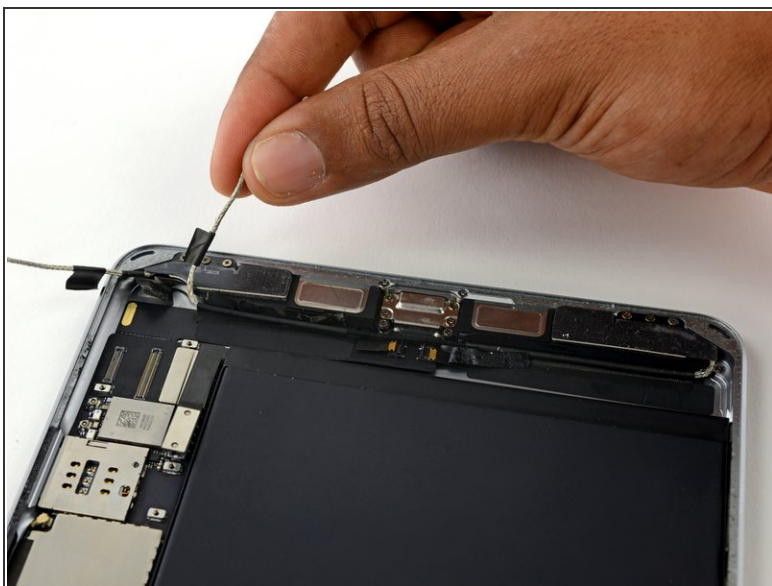


## Step 48



- Peel the lower antenna interconnect cables away from the corner of the rear case.

## Step 49



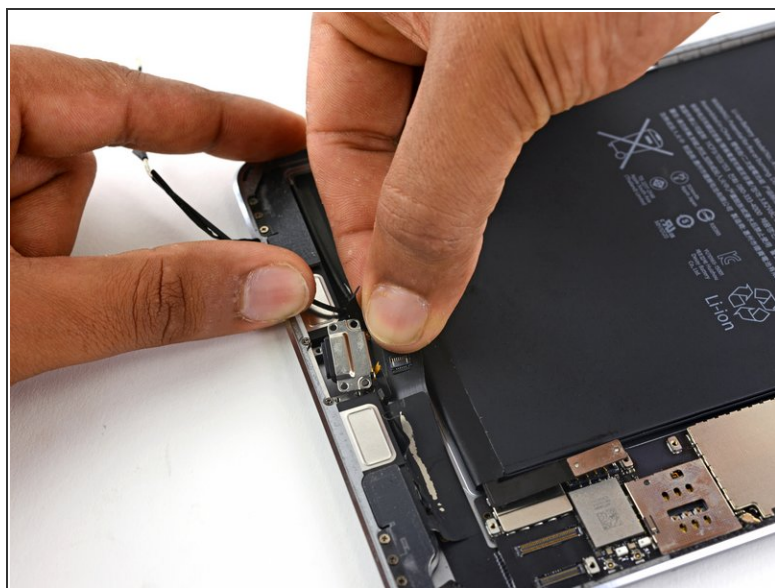
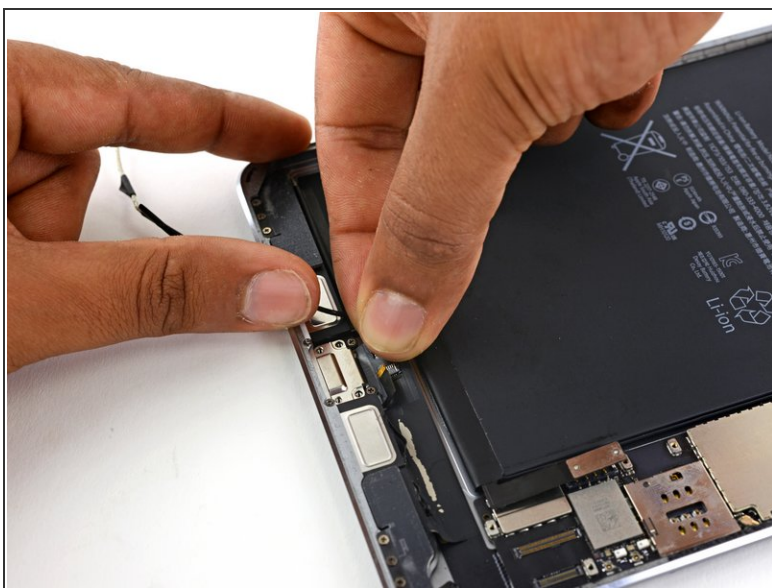
- Peel the left antenna interconnect cable up off the Lightning port cable.

## Step 50



- Remove the four 1.5 mm Phillips screws securing the Lightning port to the rear case.

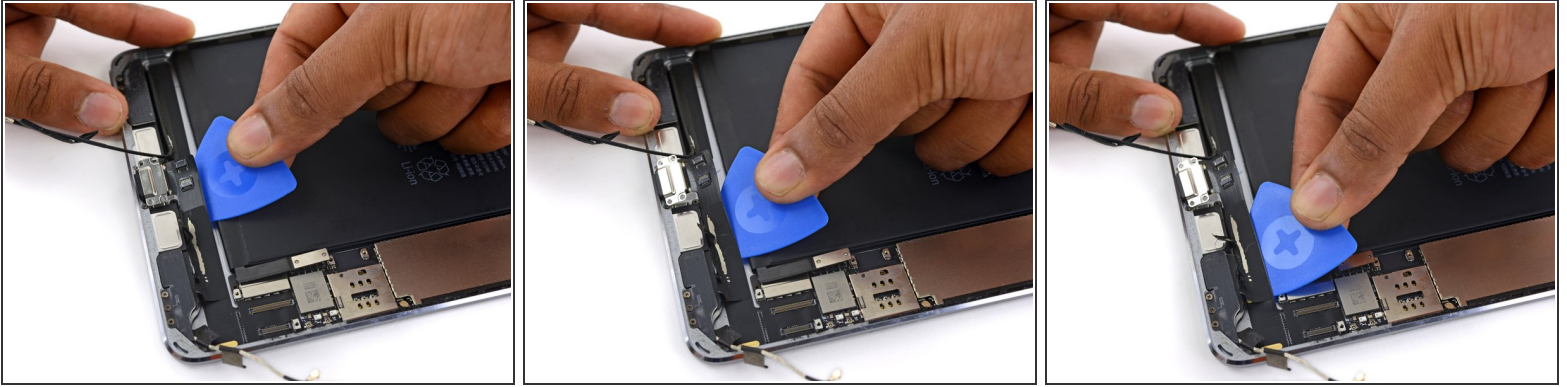
## Step 51



- Begin to gently lift the Lightning connector cable up.



## Step 52

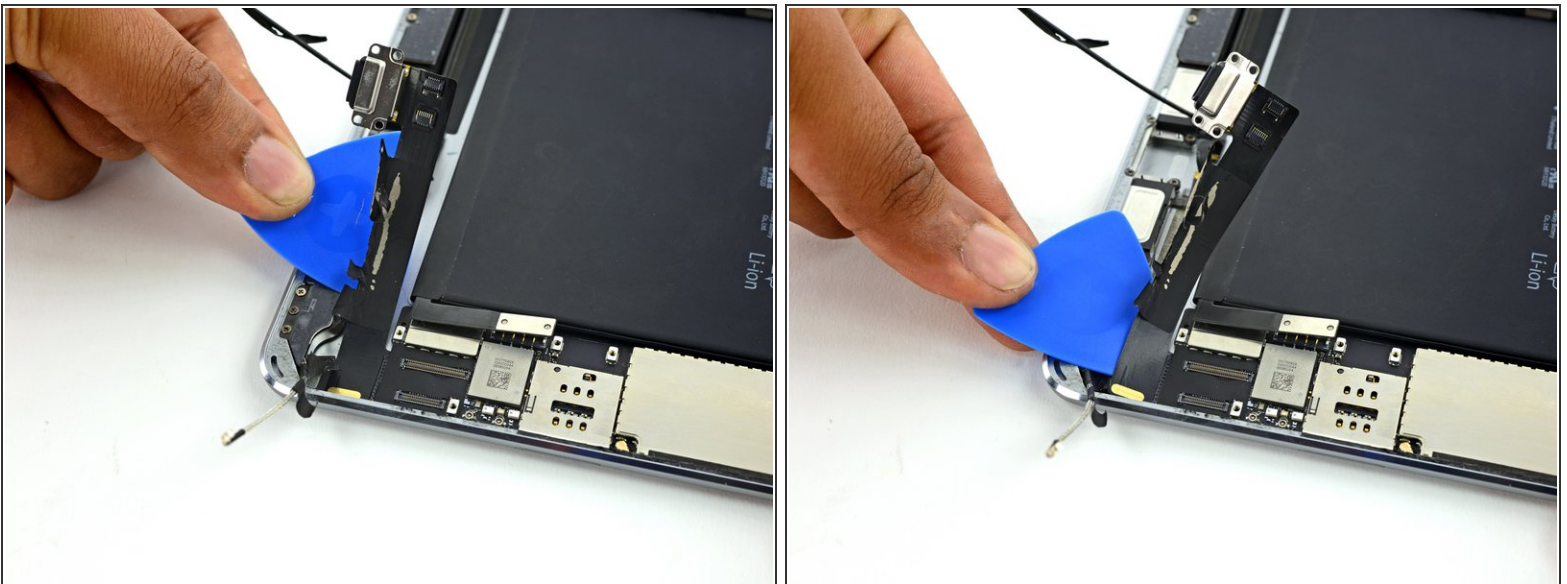


- Use an opening pick to separate the adhesive connecting the lightning connector cable to the iPad case.

⚠ If you push with pick too hard, or slip, you could sever the Lightning port cable.

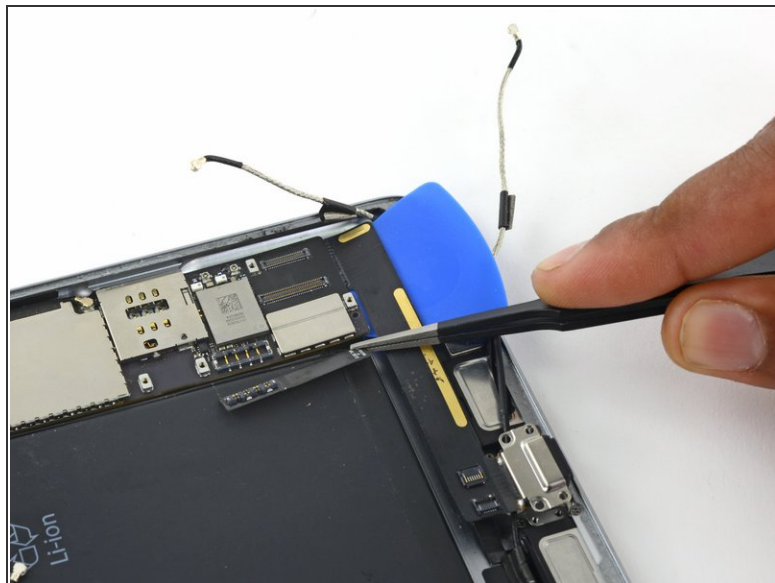
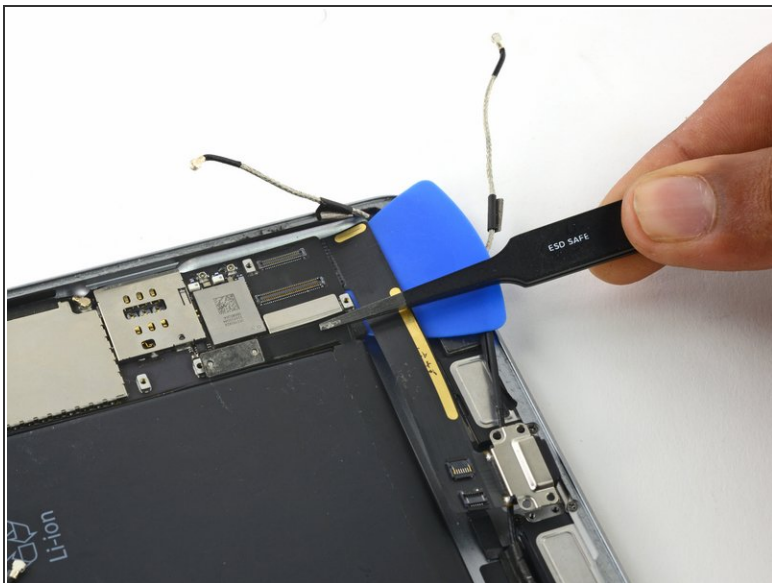
- ⓘ You should not need a lot of force, if you are struggling, reapply an iOpener to the back of the case to warm the adhesive.

## Step 53



- Continue to slide the pick under the Lightning port cable until you reach the end of the logic board.
- Leave the pick in place to prevent the adhesive from re-adhering.

## Step 54



- Bend back the battery connector over the battery, out of the way of the logic board.

**i** Be very careful in the following steps not to sever any cables.

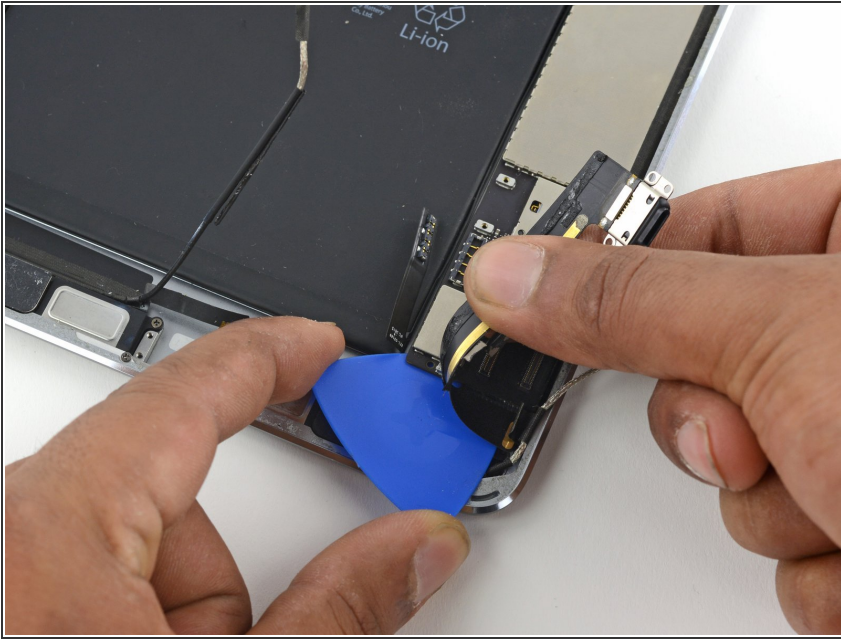
## Step 55



- Reheat an iOpener and lay it on the backside of the iPad near the SIM slot for at least two minutes.



## Step 56



- Once the adhesive has softened, carefully push the opening pick under the logic board.
- ⓘ Be very cautious and patient as you pry, do not sever the battery cable, antenna cable, or Lightning port cable.

## Step 57



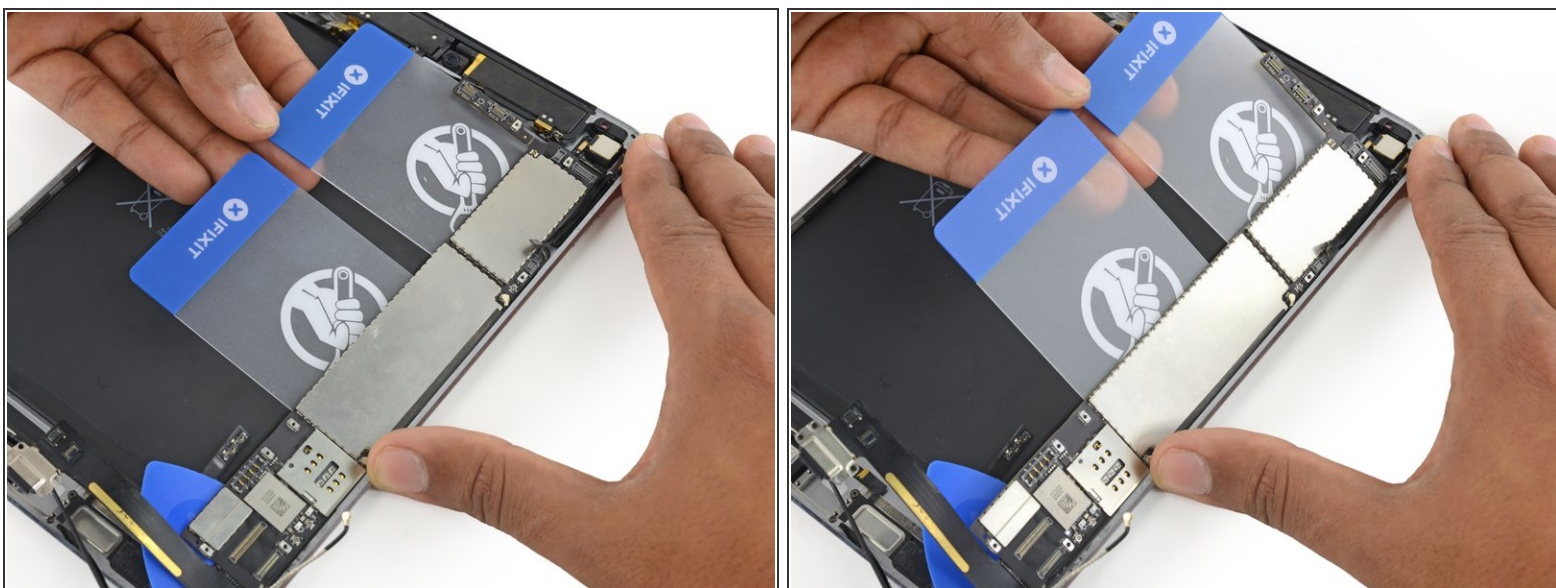
- Once the opening pick has lifted a corner of the logic board, you can insert a plastic card under the board.
- Slide the plastic card under the logic board, toward the top of the iPad, near the cameras.
- ❗ If the logic board adhesive provides too much resistance, reheat your iOpener and lay it on the rear case to soften the glue.

## Step 58



- Insert a second plastic card underneath the first one.
  - ❗ It's easiest to lead with the corner of the plastic card, then slide the long edge underneath the logic board.
- Slide the second plastic card up to the top edge of the logic board.

## Step 59



- Lift up on the edges of both plastic cards to pry the logic board from the rear case.

## Step 60



- Remove the logic board assembly from the rear case.
- ★ If you are replacing your logic board with a new part, be sure the parts match identically, you may need to transfer additional components.
- i iPad mini 4 logic boards are paired to their home buttons, if you replace your logic board, you will no longer have Touch ID functionality.

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