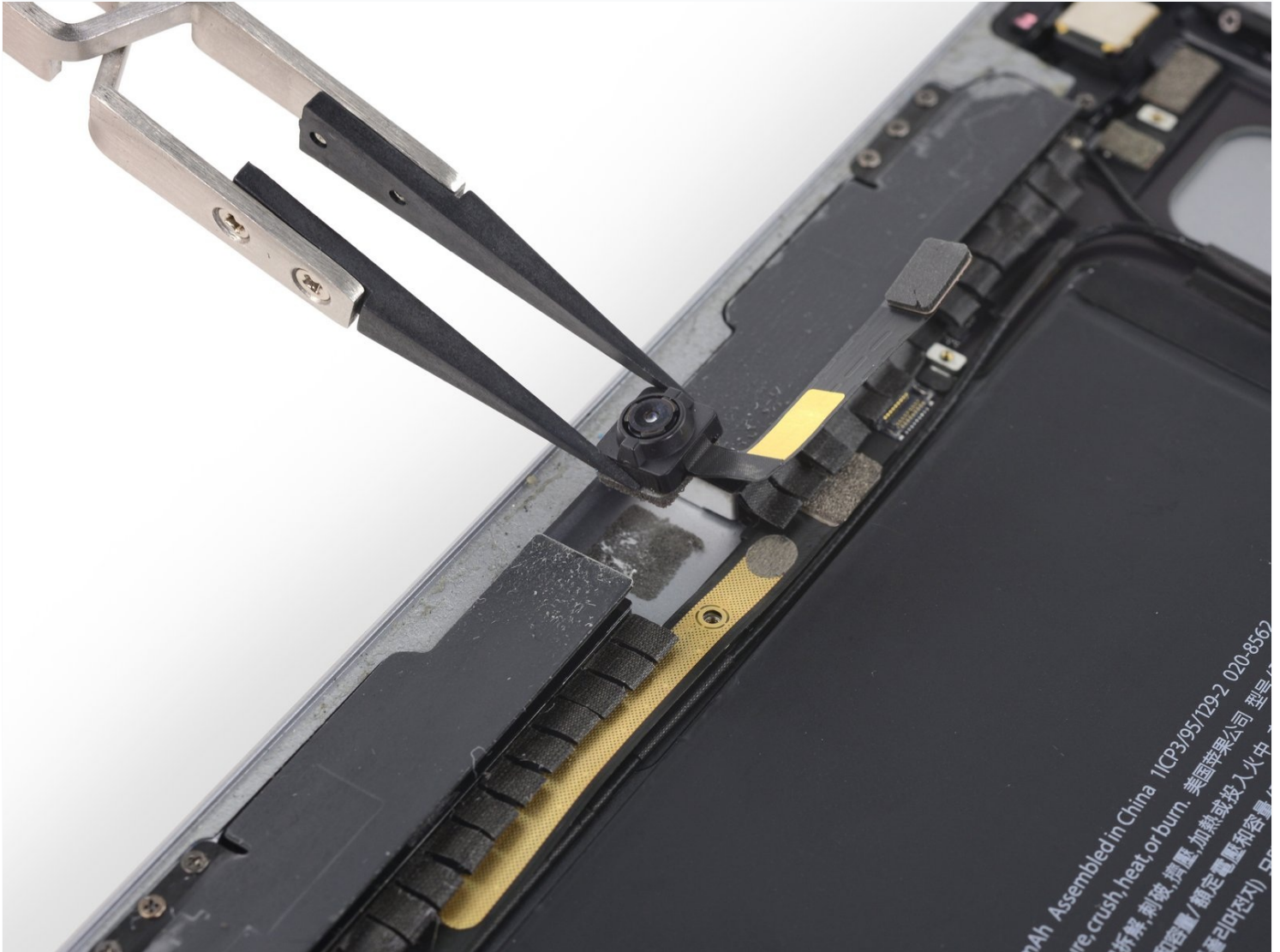




iPad Air 2 Wi-Fi Front-Facing Camera Replacement

Use this guide to replace the front-facing...

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INTRODUCTION

Use this guide to replace the front-facing camera (also known as the selfie camera or FaceTime camera) in an iPad Air 2 Wi-Fi.

Be very careful when you isolate the battery using a battery blocker. The battery contacts are easily damaged, resulting in irreversible damage to the logic board. If you choose to complete the guide without isolating the battery, avoid using metal tools except when completely necessary (like when removing screws) to prevent shorting the battery and damaging sensitive circuit components.



TOOLS:

[Anti-Clamp](#) (1)
[iFixit Opening Picks \(Set of 6\)](#) (1)
[Battery Blocker](#) (1)
[Phillips #00 Screwdriver](#) (1)
[iOpener](#) (1)
[Suction Handle](#) (1)
[Spudger](#) (1)
[iFixit Opening Tool](#) (1)



PARTS:

[iPad Air 2/mini 4/Pro 12.9" Front Camera](#) (1)

Step 1 — iOpener Heating



- ① 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 2



- 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. Do not attempt to heat over 100°C (212°F).

⚠ 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 3



- 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 4 — Alternate iOpener heating method



ⓘ If you don't have a microwave, follow this step to heat your iOpener in boiling water.

- Fill a pot or pan with enough water to fully submerge an iOpener.
 - Heat the water to a boil. **Turn off the heat.**
 - Place an iOpener into the hot water for 2-3 minutes. Make sure the iOpener is fully submerged in the water.
 - Use tongs to extract the heated iOpener from the hot water.
 - Thoroughly dry the iOpener with a towel.
- ⚠ The iOpener will be very hot, so be careful to hold it only by the end tabs.
- Your iOpener is ready for use! If you need to reheat the iOpener, heat the water to a boil, turn off the heat, and place the iOpener in the water for 2-3 minutes.

Step 5 — iPad Air 2 Wi-Fi Opening Procedure



- 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.
 - ⓘ 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.

⚠ Wear safety glasses to protect your eyes, and be careful not to damage the LCD screen.

Step 6



- ① The following steps involve using an iOpener to soften the adhesive holding the front panel assembly in place. When using the iOpener, be sure to heat it in the microwave for no more than 30 seconds.
- Handling it by the tabs on either end, place a heated iOpener over the top edge of the iPad.
- Let the iOpener sit on the iPad for two minutes to soften the adhesive securing the front panel to the rest of the iPad.

Step 7



- ⓘ While the iPad looks uniform from the outside, there are delicate components under certain portions of the front glass. To avoid damage, only heat and pry in the areas described in each step.
- As you follow the directions, take special care to avoid prying in the following areas:
 - Home Button
 - Front Facing Camera
 - Main Camera

Step 8 — Anti-Clamp instructions



- ① The next two steps demonstrate the [Anti-Clamp](#), a tool we designed to make the opening procedure easier. **If you aren't using the Anti-Clamp, skip down two steps for an alternate method.**
- ① For complete instructions on how to use the Anti-Clamp, [check out this guide](#).
- Elevate the iPad enough for the Anti-Clamp's arms to rest above and below the screen.
- Pull the blue handle towards the hinge to disengage opening mode.
- Position the suction cups near the top edge of the iPad—one on the front, and one on the back.
- Push down on the cups to apply suction to the desired area.
- ① If you find that the surface of your device is too slippery for the Anti-Clamp to hold onto, you can use packing tape to create a grippier surface.

Step 9



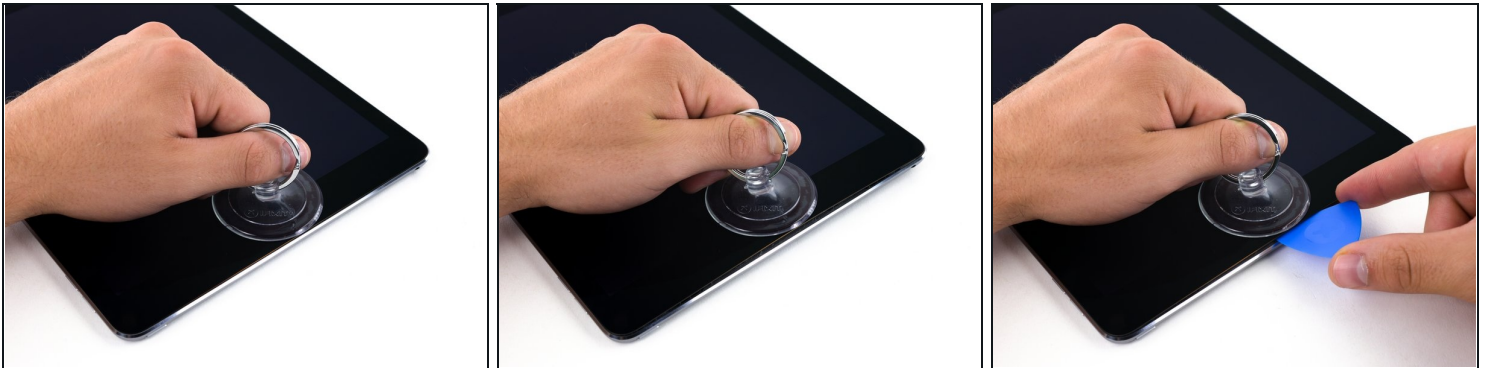
- Push the blue handle away from the hinge to engage opening mode.
 - Turn the handle clockwise until you see the cups start to stretch.
 - ⓘ Make sure the suction cups remain aligned to each other. If they begin to slip out of alignment, loosen the suction cups slightly and realign the arms.
 - Wait one minute to give the adhesive a chance to release and present an opening gap.
 - Insert an opening pick under the screen when the Anti-Clamp creates a large enough gap.
 - ⓘ If the Anti-Clamp doesn't create a sufficient gap, apply more heat to the area and rotate the handle clockwise half a turn.
- ⚠ Don't crank more than a half a turn at a time, and wait one minute between turns. Let the Anti-Clamp and time do the work for you.**
- **Skip the next two steps.**

Step 10



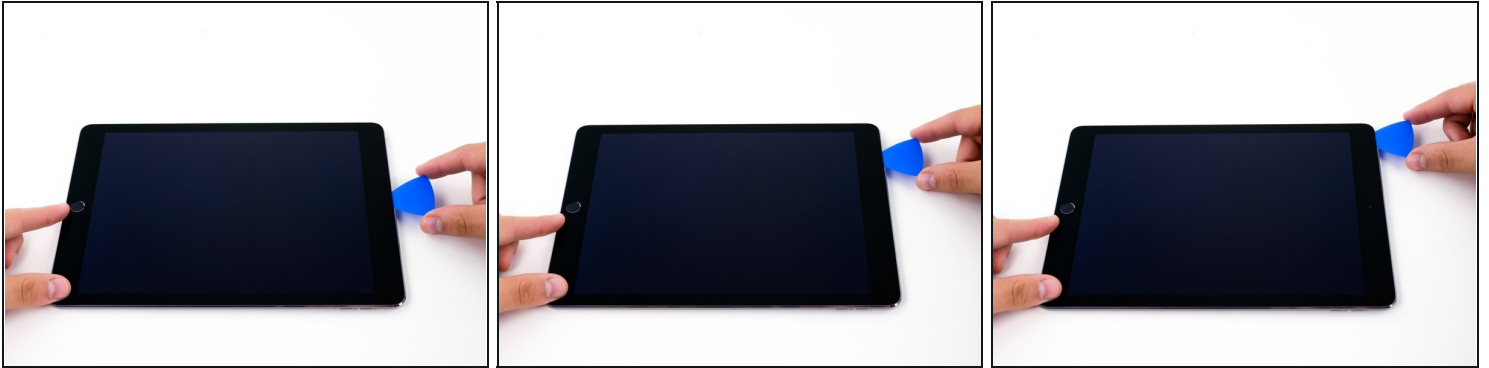
- Place a suction cup over the iPad's front-facing camera and press down to create a seal.
 - ① To get the most leverage, place the suction cup as close to the edge as possible without going past the edge of the display.

Step 11



- Firmly pull up on the suction cup to create a small gap between the front panel and the rear case.
 - ⚠ Do not pull too hard or you may shatter the glass.
- Once you've opened a sufficient gap, insert an opening pick into the gap to prevent the adhesive from resealing.

Step 12

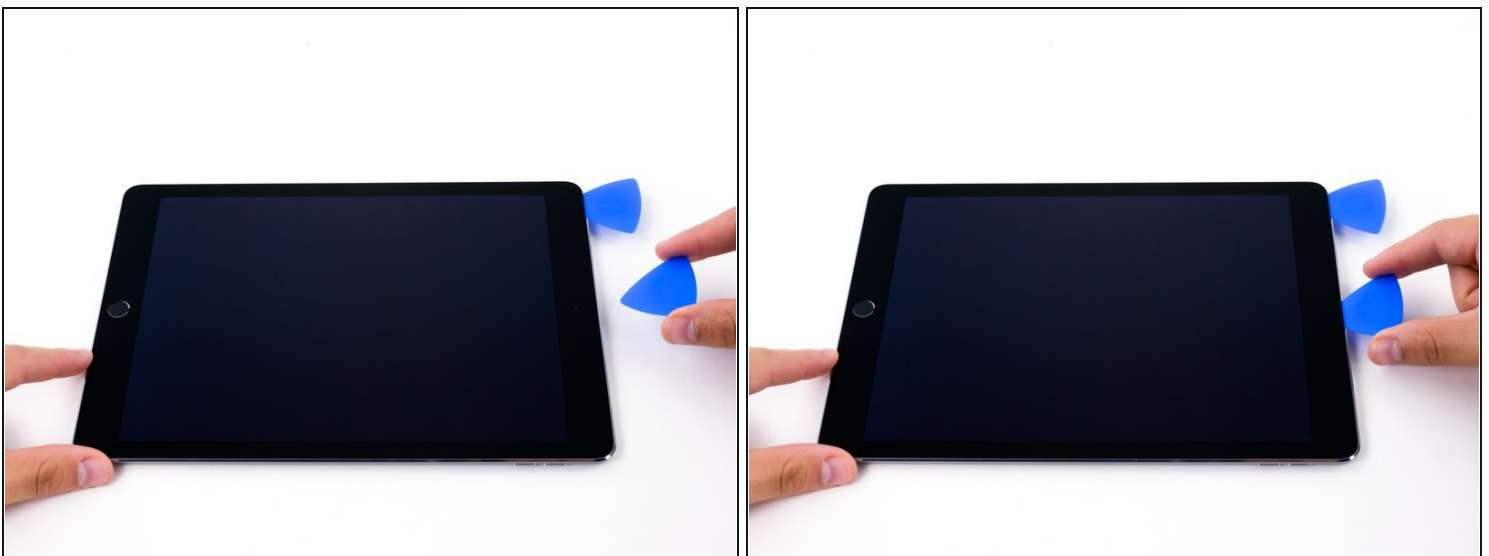


- Slide the pick along the edge of the display, towards the headphone jack.
- If there is still a considerable amount of resistance when sliding the opening pick, repeat the iOpener heating procedure and apply additional heat.

⚠ Be careful not to let the opening pick slide between the fused LCD and front panel, as doing so can permanently damage the display.

- ① A good rule of thumb is to never insert the opening pick more than a quarter inch (6 mm) into the iPad.

Step 13



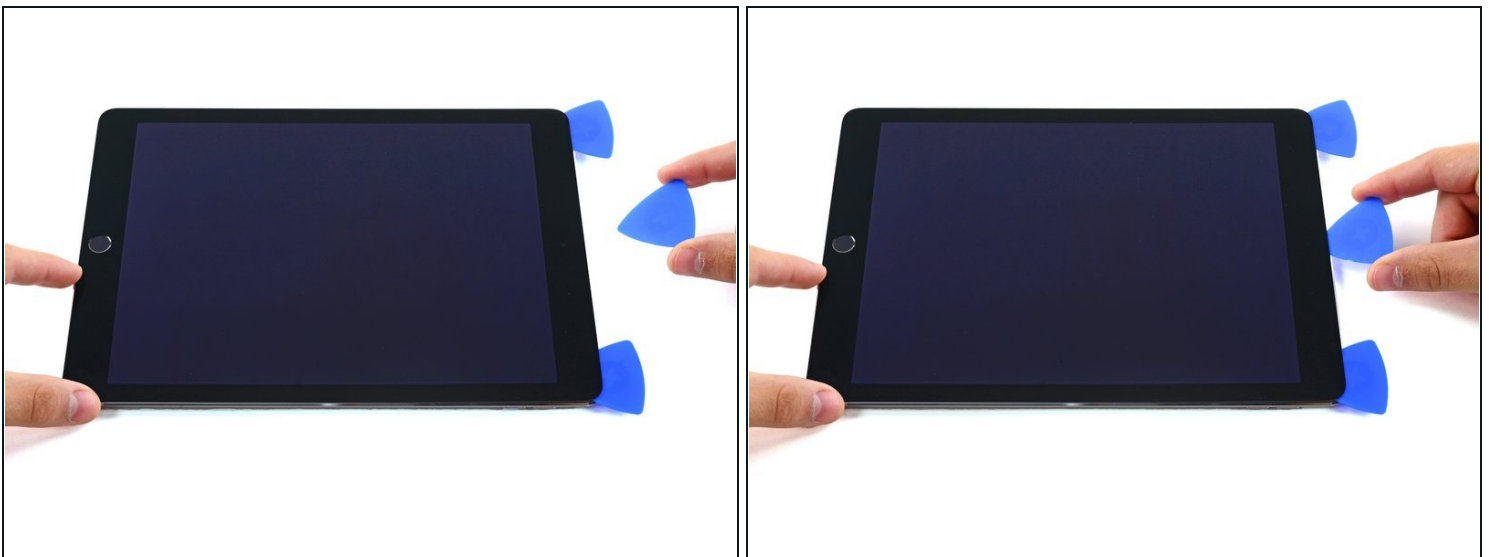
- Insert a second opening pick by the front-facing camera.

Step 14



- Slide the second pick along the top edge of the iPad, towards the Sleep/Wake Button.

Step 15



- Insert a third pick by the front-facing camera.

Step 16



- Bring the right opening pick down and around the top right corner of the iPad.

Step 17



- Bring the left opening pick around the top left corner of the tablet.

Step 18



- Reheat the iOpener and lay it over the right edge of the display to loosen the adhesive underneath.

Step 19



- Slide the right opening pick roughly halfway down the display.

Step 20



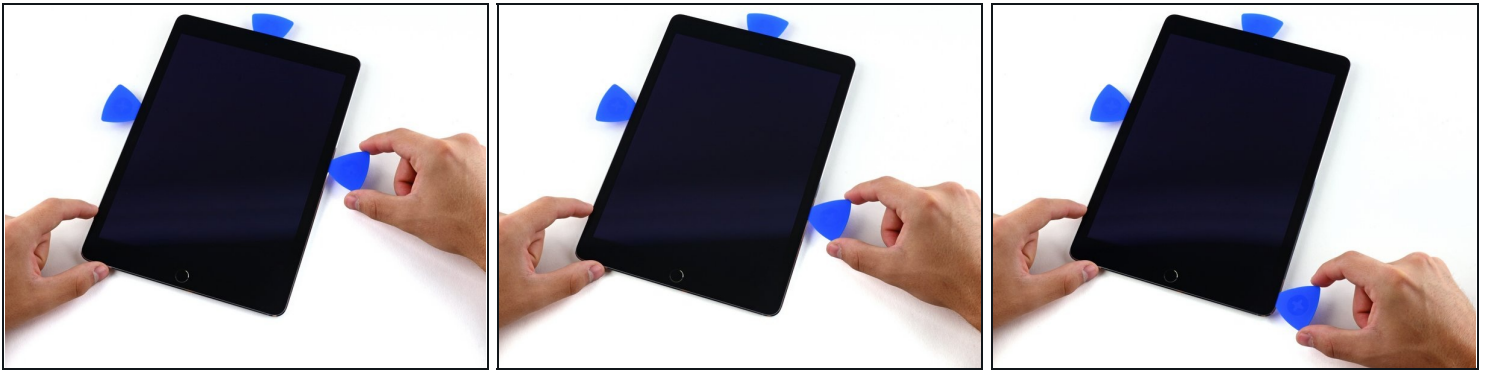
- Reheat the iOpener and apply heat to the left side of the iPad.

Step 21



- Slide the left-hand opening pick about halfway down the edge of the display.

Step 22



- Slide the opposite opening pick down to the bottom right corner of the iPad.
- ⓘ If necessary, reheat the adhesive on the right edge to loosen the display assembly.

Step 23



- Slide the left-hand opening pick down the edge of the display until you reach the corner.

Step 24



- Use the iOpener to apply heat to the bottom edge of the iPad.

Step 25



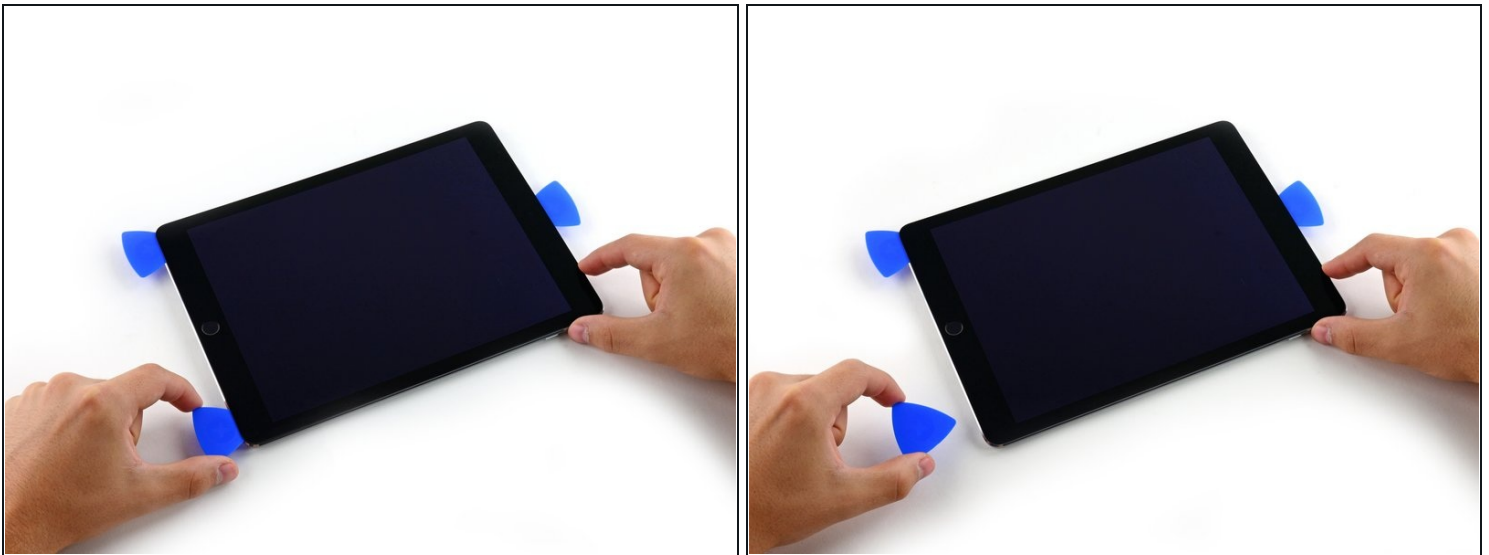
- Bring the right-hand opening pick around the bottom corner of the iPad.

Step 26



- Repeat for the left-hand pick.
- ① Reheat and reapply the iOpener as needed. Always wait at least ten minutes before reheating the iOpener.

Step 27



- Remove the right-hand opening pick at the bottom of the iPad.

Step 28



- Slide the left-hand opening pick along the bottom edge of the display, then remove it from the bottom right corner of the iPad.

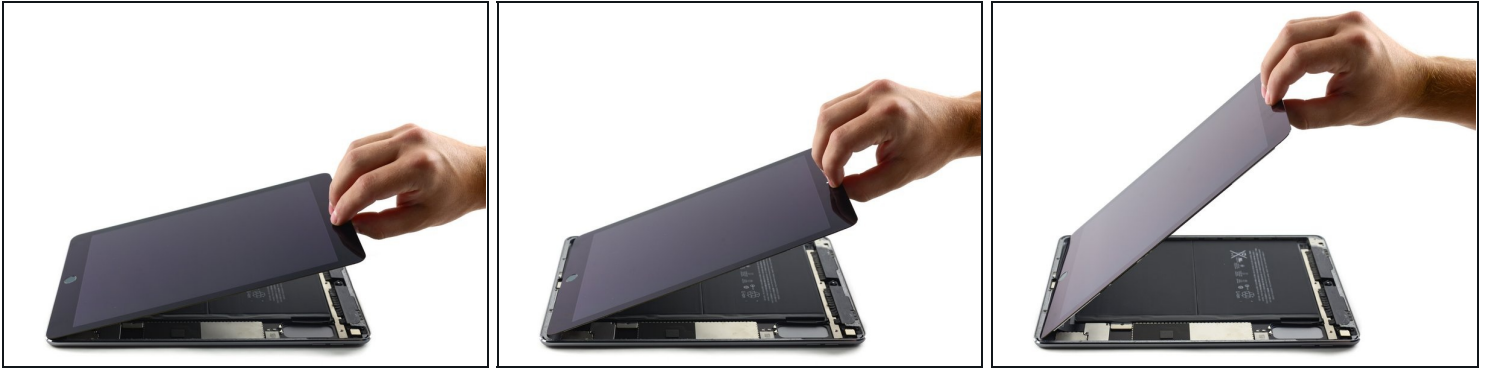
- ⚠ Be very careful to not insert the pick more than 2 mm below home button to avoid damaging the button.
- ⚠ Be very careful to not insert the pick more than a quarter inch (6 mm) into either side of the home button to avoid damaging the display cables underneath.

Step 29



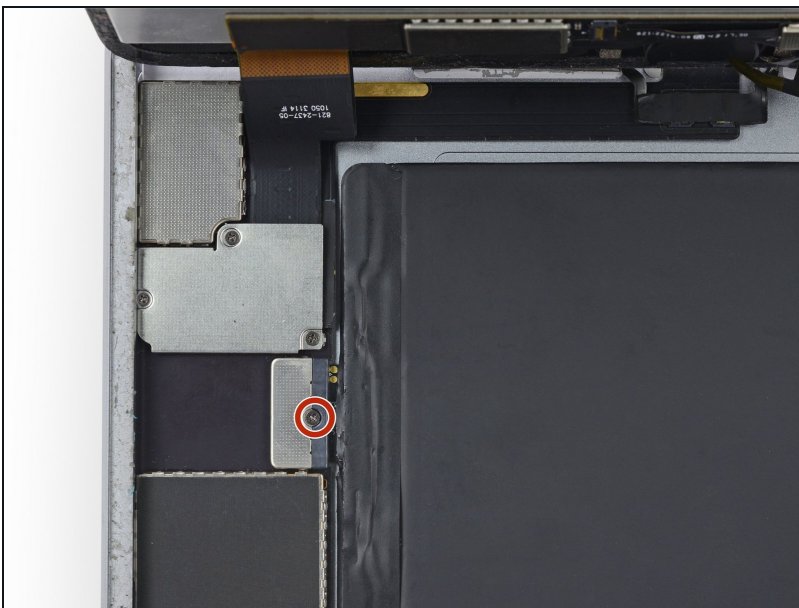
- Twist the remaining pick by the front-facing camera to separate the top edge of the display assembly from the rear case.

Step 30



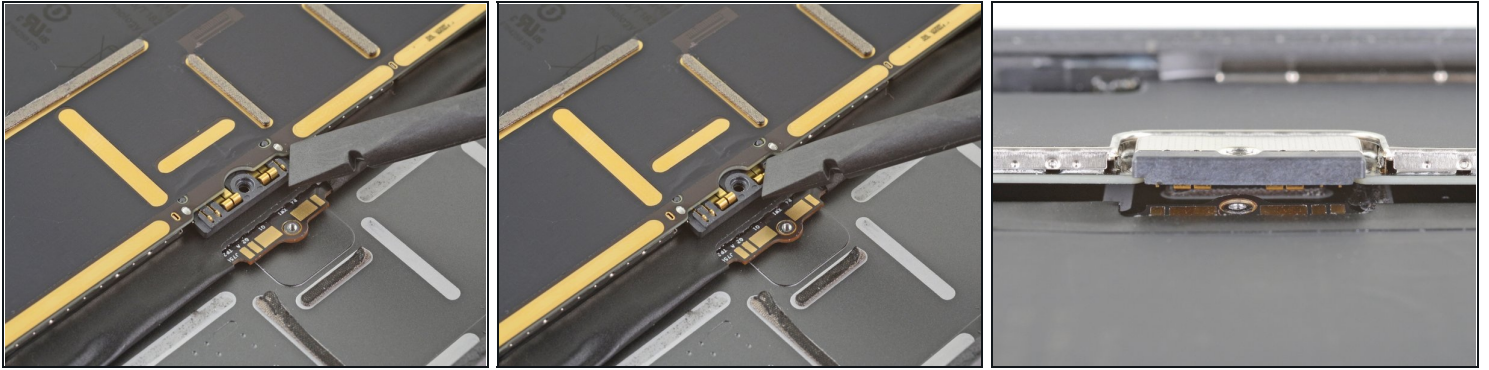
- Continue lifting the display assembly from the front-facing camera side.
- Pull the display slightly away from the bottom edge to completely separate it from the rear case.
- Keep lifting until the display assembly is roughly perpendicular to the body of the iPad.
⚠ Do not attempt to remove the display yet—it is still attached to the rear case by three delicate ribbon cables.

Step 31



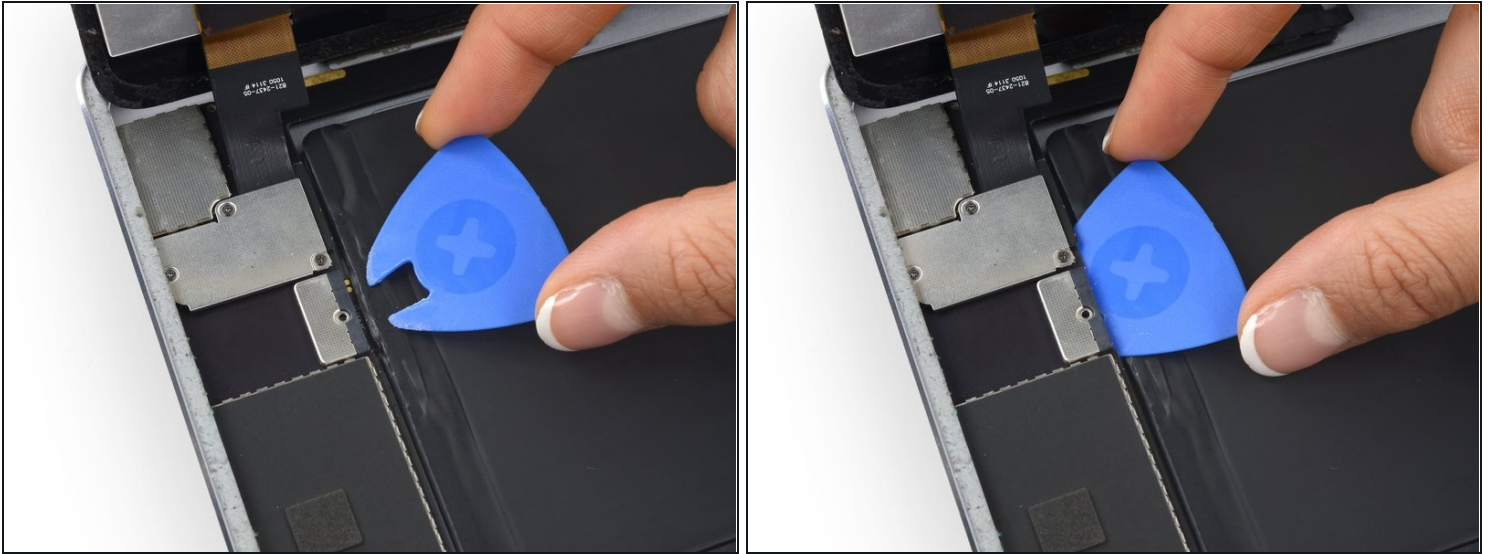
- Remove the single 1.8 mm Phillips screw securing the battery terminals to their contacts on the logic board.

Step 32 — Battery connector information



- ① These photos show what the battery connector looks like underneath the logic board. Use these photos as a reference while you safely disconnect the battery.
- ① Notice that the battery connector has springs on the logic board that press down against the battery contact pads. You'll need to slide something thin and flexible between the contact points to disconnect the battery.

Step 33



① To reduce the risk of a short, you can use a battery isolation pick to disconnect the battery.

⚠ Be very careful when you isolate the battery using a battery blocker. The battery contacts are easily damaged, resulting in irreversible damage to the logic board.

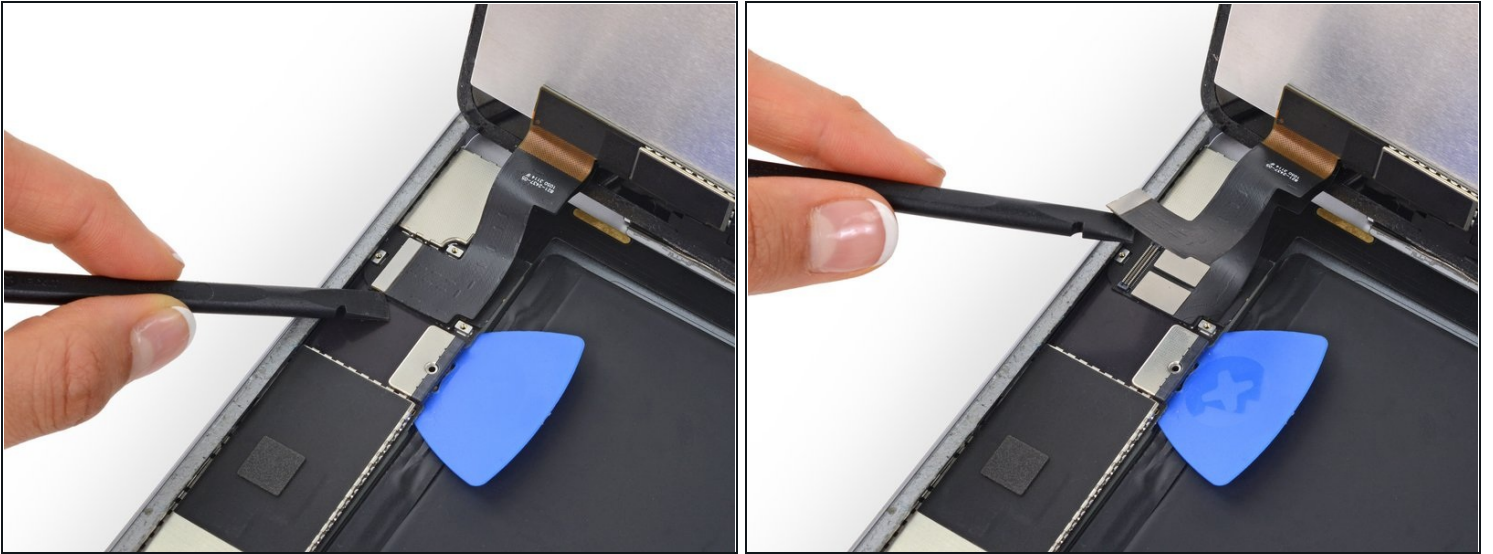
- Slide a battery isolation pick underneath the battery connector area of the logic board, and leave it in place while you work.
- Alternatively, [make a battery blocker using a playing card](#) and slide it underneath the logic board connector to disconnect the battery.

Step 34



- Remove the three 1.3mm Phillips screws from the display cable bracket.
- Remove the bracket.

Step 35



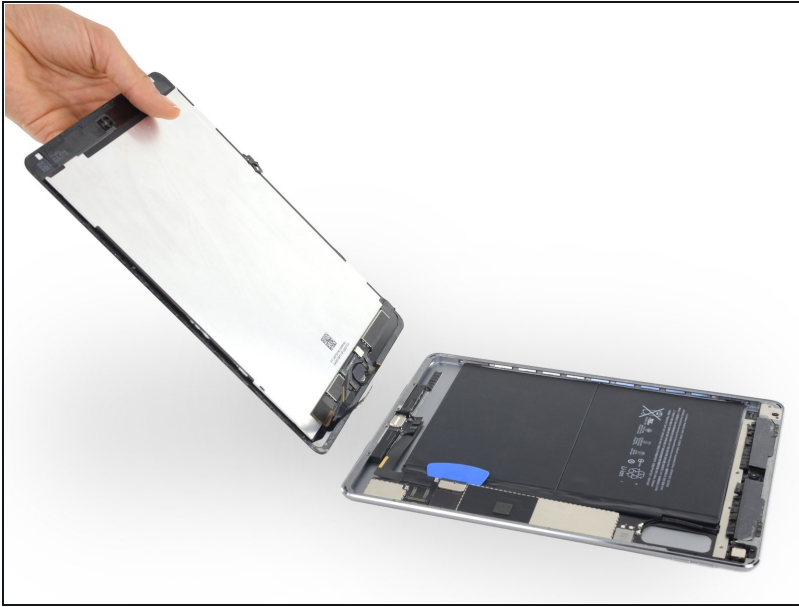
- Disconnect the display data connector from its socket on the logic board.

Step 36



- Disconnect the two remaining digitizer cables underneath the display data cable.

Step 37



- Remove the front panel assembly from the rear case.
- ★ If you plan to reuse your display assembly, you will need to replace the display adhesive. Follow our [iPad Adhesive Guide](#) to reapply your display adhesive and reseal your device.

Step 38 — Upper Component Cable Bracket



- Remove the following four Phillips screws securing the upper component cable bracket to the tablet.
 - Two 1.6 mm
 - Two 1.3 mm
- Slide the upper component cable bracket out from under the protective flaps and remove it from the iPad.

Step 39 — Front-Facing Camera



- Use the flat end of a spudger to disconnect the FaceTime camera cable from its socket on the logic board.

Step 40



- Use an opening pick to break up the adhesive holding the FaceTime camera ribbon cable to the headphone jack cable underneath.

Step 41



- Firmly grasp the FaceTime camera with your hands or tweezers and pull up to remove it from the rear case.
 - ☑ The camera is attached to the rear case with single-use foam adhesive. When replacing the camera, use new adhesive or double-sided tape to install it.

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