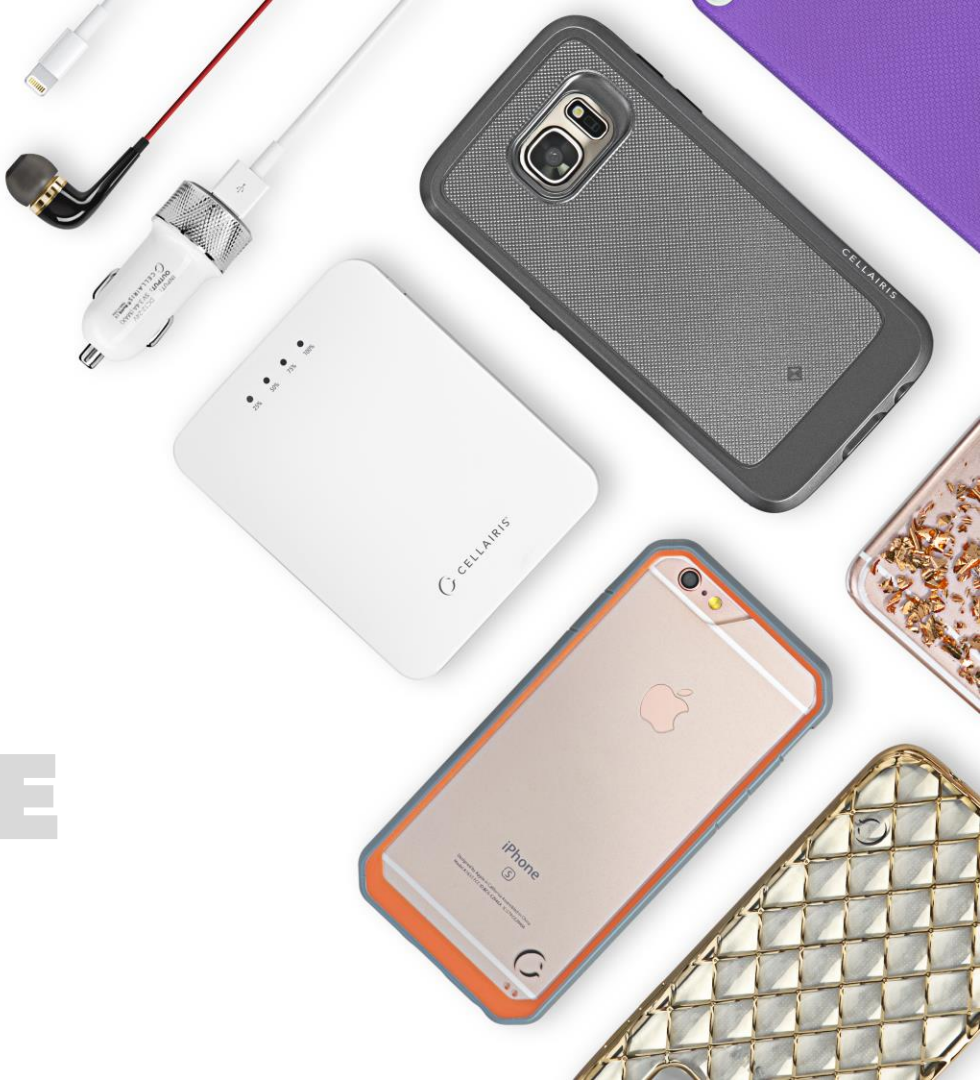
CELLAIRIS®

IPad 3 (glass) REPAIR GUIDE

Version 1
2016 Edition



IPad 4 REPAIR GUIDE
LCD AND DIGITIZER REPLACEMENT

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FOR EVERY REPAIR

MAKE SURE TO COMPLETE, INITIAL,

AND HAVE CUSTOMER SIGN THE CELLAIRIS

REPAIR LIABILITY WAIVER FORM

PRE-REPAIR DEVICE CHECK-IN

	Pre-Repair Device Inspection			Post-Repair Device Inspection		
Liquid Damage:	☐ Yes	☐ NO	☐ N/A	☐ Yes	☐ NO	☐ N/A
Jailbroken or Rooted:	☐ Yes	☐ NO	☐ N/A			
Unlocked or Flashed:	☐ Yes	☐ NO	☐ N/A			
Previously Repaired:	☐ Yes	☐ NO	☐ N/A			
Frame Damage:	☐ Yes	☐ NO	☐ N/A	☐ Yes	☐ NO	☐ N/A
Digitizer Damage:	☐ Yes	☐ NO	☐ N/A	☐ Yes	☐ NO	☐ N/A
LCD Damage:	☐ Yes	☐ NO	☐ N/A	☐ Yes	☐ NO	☐ N/A
Device is unable to be turned on prior to repair for Device Inspection		☐ Yes	☐ NO			
	Yes (Working)	No (Not Working)		Yes (Working)	No (Not Working)	
Volume Button:	☐ Yes	☐ NO	☐ N/A	☐ Yes	☐ NO	☐ N/A
Mute Switch:	☐ Yes	☐ NO	☐ N/A	☐ Yes	☐ NO	☐ N/A
Vibration :	☐ Yes	☐ NO	☐ N/A	☐ Yes	☐ NO	☐ N/A
Power Button:	☐ Yes	☐ NO	☐ N/A	☐ Yes	☐ NO	☐ N/A
Home Button:	☐ Yes	☐ NO	☐ N/A	☐ Yes	☐ NO	☐ N/A
WiFi:	☐ Yes	☐ NO	☐ N/A	☐ Yes	☐ NO	☐ N/A
Cell Service/Call:	☐ Yes	☐ NO	☐ N/A	☐ Yes	☐ NO	☐ N/A
Proximity Sensor:	☐ Yes	☐ NO	☐ N/A	☐ Yes	☐ NO	☐ N/A
Ear Speaker:	☐ Yes	☐ NO	☐ N/A	☐ Yes	☐ NO	☐ N/A
Phone Microphone:	☐ Yes	☐ NO	☐ N/A	☐ Yes	☐ NO	☐ N/A
External Speaker:	☐ Yes	☐ NO	☐ N/A	☐ Yes	☐ NO	☐ N/A
External Microphone:	☐ Yes	☐ NO	☐ N/A	☐ Yes	☐ NO	☐ N/A
Headphone Jack:	☐ Yes	☐ NO	☐ N/A	☐ Yes	☐ NO	☐ N/A
Rear Facing Camera & Flash:	☐ Yes	☐ NO	☐ N/A	☐ Yes	☐ NO	☐ N/A
Front Facing Camera:	☐ Yes	☐ NO	☐ N/A	☐ Yes	☐ NO	☐ N/A
Charge Port:	☐ Yes	☐ NO	☐ N/A	☐ Yes	☐ NO	☐ N/A
Fingerprint Scanner:	☐ Yes	☐ NO	☐ N/A	☐ Yes	☐ NO	☐ N/A

TOOLS NEEDED

Philips screwdriver #00

Spudger

Tweezers

Isesamo

Large Flathead screwdriver/Hammer

Magnetic Mat

Heat Gun

Canned Air

PDI Adhesive Remover Pad

Alcohol Prep Pad

3M #94 Adhesive Primer

Silicone

Ipad ¾ digitizer Assembly

Safety Glasses

Nitrile Latex Gloves

HEAT-GUN PRECAUTIONS

- Always operate the heat gun on the lowest setting.
- Keep face, hands, hair, and clothing away from the air stream.
- The air nozzle also becomes extremely hot. Never grab the heat gun by the nozzle.
- Never operate the heat gun by laying it on its side on a table. It should be firmly grasped in one hand at all times during usage.
- Never operate near flammable or explosive liquids and vapors. Cleaning supplies and the 3M #94 Primer are of concern. Make sure fumes are absent from the work area before operating the heat gun
- The heat gun nozzle should never get closer than 2" to the object being heated.
- Keep heat gun moving. Never stay in one spot.

ADDITIONAL PRECAUTIONS

- Magnetic Pad: During the repair, you will be utilizing a magnetic pad to organize the plethora of differing screws that you will be pulling out of the iPad mini. Below is a list of several internal components of the iPad mini that should never be placed on the pad, or you risk damaging the hardware or erasing client data:
  - LCD/Digitizer Assembly
  - Cameras
  - Motherboard
  - Battery
  - Speaker

ADDITIONAL PRECAUTIONS

- Power on/off: To avoid any damage to the hardware during the repair, it is best to have the device powered off until you can get to and disconnect the battery.
- Battery: Never unplug any flex cables unless the battery has been completely disconnected to avoid frying your hardware. Do not plug the battery back until all cables have been reconnected.
- Release Screws: Apply pressure on the screw and twist counterclockwise to initially loosen it, then lighten the pressure and continue twisting until the screw is gently released. Make sure you have properly sized screwdrivers available for the repair.
- Pin Connectors: extremely fragile and must be plugged or unplugged with extreme caution.
- Battery connector: held down by light adhesive and solder. If not cautious it will come off the motherboard. Very time consuming to be repaired. Do not break it in the first place.
- Motherboard: small surface mount components can be easily damaged if they are nicked by the spudger. Always take your time and never touch the surface of the motherboard.

ADDITIONAL PRECAUTIONS

THE HEAT GUN CAN REACH TEMPERATURES OF 1000° F

- Always operate the heat gun on the lowest setting
- Keep face, hands, hair, clothing etc. away from the air stream
- The air nozzle also becomes extremely hot, never grab the heat gun by the nozzle
- Never operate the heat gun by laying it on it's side on a table. It should be firmly grasped in one hand at all times during usage.
- Never use heat gun if overly tired or after taking any kind of drug that has drowsiness as a side effect
- Never operate near flammable or explosive liquids and vapors. Cleaning supplies and the 3M #94 Primer are of concern – make sure fumes are absent from the work area before operating the heat gun
- The heat gun nozzle should never get closer than 2" to the object being heated.
- Keep the heat gun moving – never stay in one spot and apply constant heat.

ADDITIONAL PRECAUTIONS

WEAR SAFETY GLASSES DURING SCREEN REMOVAL

When removing the old digitizer, the glass often splinters and shatters. This discharges small glass shards at high velocities that can become lodged in the soft tissue of the eye, causing serious injury. Safety glasses should be worn until all glass has been removed from the iPad frame.

WEAR LATEX GLOVES AT ALL TIMES

Small glass splinters are created when the old digitizer is removed, and they can be spread all over the work area. If you run your hand over them, they can become embedded in your skin. This is painful and they can be very difficult to see and remove. Wearing gloves should keep the splinters from endangering your skin.

Wearing gloves also keeps fingerprints off of the LCD and digitizer, and from getting finger oils on the frame which may weaken the new adhesive.

Pre-Repair Check-in

Hardware/Functionality to be Checked:

- Wifi
- Home button
- Volume Keys-Up&Down
- Mute-UP&Down
- Charging
- Cellular Signal(3G Version Only)
- Built in Microphone
- External Speaker
- Headphone Jack
- Rear Facing Camera
- Front Facing Camera
- Power Button/Power off

Has:

- The Device Been Repaired Before?
- The Device Been Exposed to water?
- The Charge port Been smashed/Damaged?

Pre-Repair Check-in

Turn on Assistive Touch
Since the home button will not be useable during the digitizer replacement, it is usually advisable to turn on assistive Touch for any testing/diagnostic that needs to be done before the new digitizer is installed.
You can turn on assistive touch by opening setting, general, accessibility, assistive touch, turn on.

Pre-Repair Check-in

To avoid any damage to hardware during the repair, it is best to have the device powered off until you can get to and disconnect the battery.

Normal power off: Hold down power button and home button until the screen goes black, the Apple logo appears, and then the screen goes black again and release.

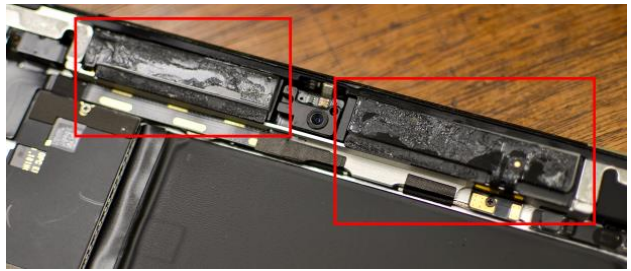
Nonfunctioning Power Button: Use assistive touch, press and hold “lock Button” until “slide to turn off” appears, slide to turn off

Tools: heat gun, Painters knife, Tweezer, Philips screwdriver, spudger

Tips: Put iPad on a flat surface!! Never start from the bottom the digitizer cable is located in that area as well as the home button significant pieces that should not be touched by metal.

STEP 1
Disassemble the device

- The first step needed to repair an iPad is identifying which one it is. The iPad 2-4 are similar, however they do have slight differences with antenna placement and home button flex cable specifically speaking of an iPad 4.
- Once established knowing where and how to start to open the glass display is key.
- Identifying the Wi-Fi or cellular service models is easy either it has a band along the top with white or black tape across the top (see picture below).



iPad (4th generation)

- Year: Late 2012
- Capacity: 16, 32, 64, 128 GB
- Model number (on the back cover):
  A1458 on the iPad (4th generation) Wi-Fi
  A1459 on the iPad (4th generation) Wi-Fi + Cellular
  A1460 on the iPad (4th generation) Wi-Fi + Cellular (MM)
- White or black front bezel
- 9.7-inch Retina display
- Lightning connector
- The micro-SIM tray is on the right side on iPad (4th generation) Wi-Fi + Cellular
- FaceTime HD and iSight cameras

Tools: heat gun, Tweezers, plastic cards, Painters knife or isesamo

Tips: Refer to step 3 before starting step 2!!!

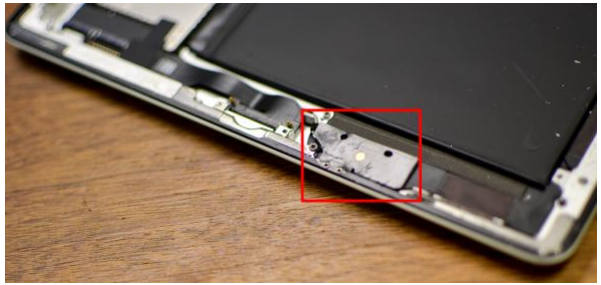
STEP 2
Disassemble the device

- The first step will require you to heat the top glass. Take the heat gun and go around the frame In a constant motion never allowing the heat gun to rest in one spot to long. Hold the heat gun at a 45 degree angle while doing this process.
- Take painters knife and slide it in between the glass and frame of iPad to start. As you heat you will need to slide your isesamo or painters knife along heated area simultaneously. If you notice it's getting harder to separate the screen from adhesive more heat is need as it is cooling down. Do not start at the bottom!

Tips: Taking your time throughout this process is essential and do not slide tool to far into the screen or you might scratch the lcd. If you can see the tool near lcd then you have gone to far into the glass with isesamo.

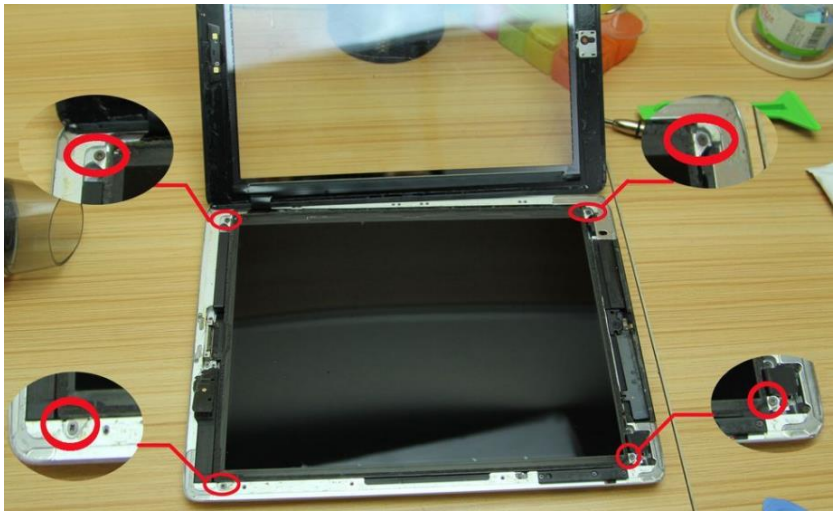
STEP 3
Disassemble the device

- As you heat the frame of the glass use the painters knife or isesamo and flex the tool left to right slightly to help lift the glass. You can use plastic cards or picks to keep the glass from sticking back down.
- There are few components you will want to be aware of as you start to slide your opening tool between the glass/bezel and the frame of device.
- The iPad 3 has one less area to worry about compared to the iPad 2. The iPad 3 has a plastic cover over the volume button cables so sliding your opening tool should be easy in that designated area. Its important to know which iPad you are working with.



Tools: Tweezers, Fingers

STEP 4
Disassemble the device

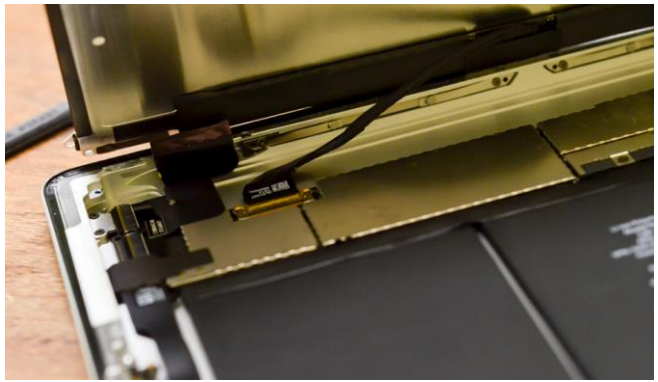


- Once opened turn the iPad 3 facing you as if you are going to use it and lean the opened glass on an object so the digitizer cable won't pull.
- Remove the four (4) lcd Philips screws with your Philips screwdriver.
- Now use your flat end of the plastic spudger to slide underneath the lcd and lift up to the left and lean the lcd on the glass display that should be leaning on an object.
- Unscrew the single screw to disconnect the battery. After removal use a plastic thin card or playing card and slide it underneath the battery connector to lift it slightly off the motherboard to assure no reconnecting while doing the repair.

Tools: Spudger, Philips screwdriver, tweezers

STEP 5
Disassemble the device

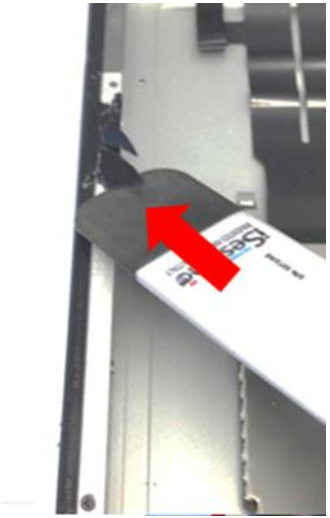
- Next step is to peel the black tape off covering the lcd flex cable and put tape to the side we will place it back after the repair. Lift the metal gold door to release the cable, which you should be able to slide the cable out of the connector. Move LCD to safe place to the side.
- Next, you will see two black doors holding the digitizer cable in place lift both black door then pull up and out the digitizer cable. Remove the glass.



Tools: Spudger, tweezers, Philips screwdriver

STEP 6

- Now that we have the glass and lcd removed next step is to remove the old bezel and begin removing all old adhesive.
- Make sure to clean the frame of the iPad from glass shards best way to clean the frame is to use one PDI pad and wipe around the frame then use a scraping tool (isesamo, flat head screwdriver) to remove old adhesive and glass.
- A key part to making sure the frame is appropriate for reassembly is pulling or reshaping the corner damage if any so the screen will lay flush. Use pliers to pull the corners out to create room for the new glass to lay in the frame.



Tools: Spudger

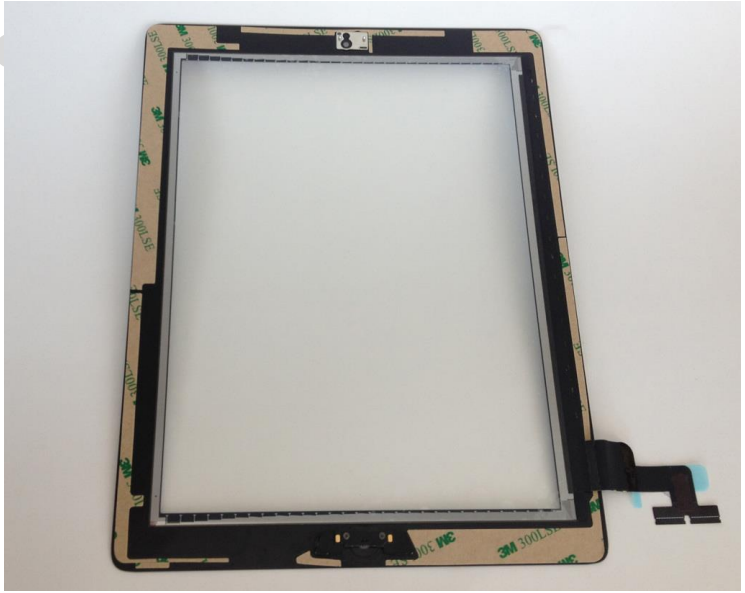
STEP 7
Disassemble the device

- When the corners and frame is clean we can now reassemble. Take the new bezel and lay it in the frame. Most new bezels come with adhesive adhered to the back so peel off plastic then lay it in place.
- Next, we will take the new assembly that should come with adhesive already on it and slide the digitizer cable into the cable connector and close the two black doors back down.
- After that take the LCD flex cable and slide it into its designated connector then close metal door. Make sure to put the black tape back over the cable as it was originally placed.
- Remove plastic card placed near battery and screw in the single screw with the Philips screwdriver.

Tips: Try not to double up tape over same area will cause the screen to be lifted higher than normal.

STEP 1
Reassemble the devic

- The replacement screen may or may not come with adhesive already attached if it does not add double sided adhesive around the glass so it will adhere. Line thin pieces of tape around highlighted blue area.
- Also the new screen may or may not come with a home button if not transfer the original home button from old digitizer to the new digitizer.
- Make sure the LCD is clean, no fingerprints or lint on the lcd. If so, use a new micro-fiber cloth to wipe any fingerprints off. DO NOT use any liquid (alcohol) to clean it will cause a slight film residue that will require a lot of wiping to eventually remove the smug.



Tips: Heat for 5 to 6 seconds around frame.

STEP 2
Reassemble the device

- Now, laying the screen will require you to pay attention to the lcd and digitizer cables as you lay it down because they are thick. Lay the side opposite of the cables to the frame first then use your spudger to make sure digitizer/lcd are fitting in the indention on the frame then push straight down on the screen so the cables fit into the frame properly.
- Once the screen is laid down smooth out all sides with your hands. Use the heat gun to heat around the frame again but one time around to help seal the adhesive. Same method as before at 45 degree angle constant motion so it doesn't burn the lcd or screen.
- Do post test again after sealing.

Tools: Weights, binder clips

STEP 3
Reassemble the device

- Now that the new digitizer is laying down on the on iPad you want to test it one more time make sure the functionality is proper and to ensure that it is sealed lay it down on a flat surface and put some weight on it so it has time to seal for about 2 hrs.
- A good method for this is heat the frame of screen exactly how you removed it but not as long. Heat around the frame about 2 times consecutively then flip screen facing down put a towel over the back and place a weight on top. If you don't have physical weights use some type of book or you can use medium sized binder clips and place one on each corner of the iPad to clamp and leave it for about 2 hours.

Tips: Clamp the four corners with these medium sized. Make sure to clean the glass with cleaning cloth leave no fingerprints!

Troubleshooting

- If you notice the screen is ghosting most likely that is because no tape was added to the new replacement screen.
- If there is dead spots on screen and weren't there during the pre-test most likely it's a defective screen try a new one.
- Now, if those efforts don't work possibly could mean that the iPad has severe frame damage. These devices are sensitive items therefore the issues are internal and couldn't be diagnosed before repair. Let the customer know the situation and, let the manager go over some options with customer and go from there.

CONTACT

BECOME A MASTER FRANCHISE

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THANK YOU!