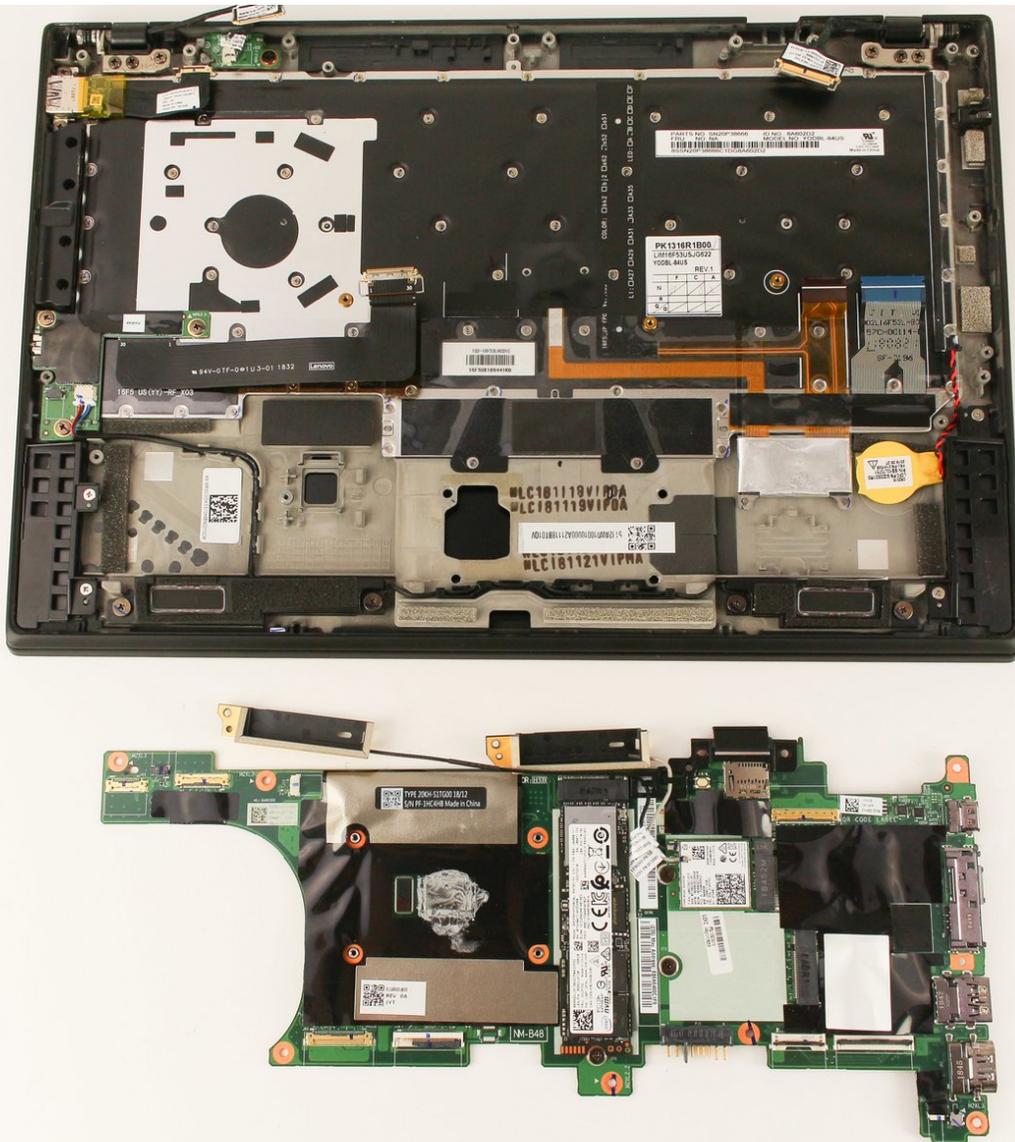# Lenovo ThinkPad X1 Carbon 6th Gen Motherboard Replacement

This guide details how to replace the motherboard in a Lenovo ThinkPad X1 Carbon 6th Gen.

Written By: Michael Megna

This document was generated on 2020-03-26 06:41:32 PM (MST).

INTRODUCTION

In this guide, you will learn how to replace the motherboard in a Lenovo ThinkPad X1 Carbon 6th Gen. Be sure to power off your device and disconnect it from any power source before beginning.

🔧 TOOLS:

- Phillips #0 Screwdriver (1)
- iFixit Opening Tools (1)
- iFixit Opening Picks set of 6 (1)
- Nylon Tipped Tweezers (1)

This document was generated on 2020-03-26 06:41:32 PM (MST).
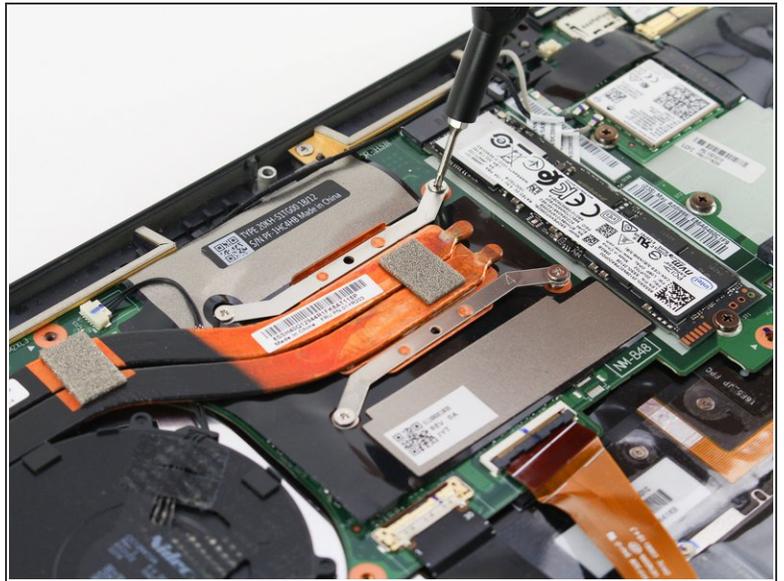
Step 1 — Back Cover

- Use a Phillips #0 screwdriver to loosen the five screws that secure the back cover to the laptop.

- ⓘ The screws do not completely come off from the back cover. Loosen until the screws are completely loose.

This document was generated on 2020-03-26 06:41:32 PM (MST).

© iFixit — CC BY-NC-SA   www.iFixit.com   Page 3 of 13

Step 2

- Use a Jimmy to lift the cover directly up off of the locating pins.

- (i) Though a metal opening tool is shown in the image, we recommend using plastic opening tools to minimize any cosmetic damage.

- Once the case is lifted enough using the tool, grab the cover and take it the rest of the way off.

- (i) If you encounter resistance when lifting the cover, revisit the screws to see if any of them are still threaded on to the device.
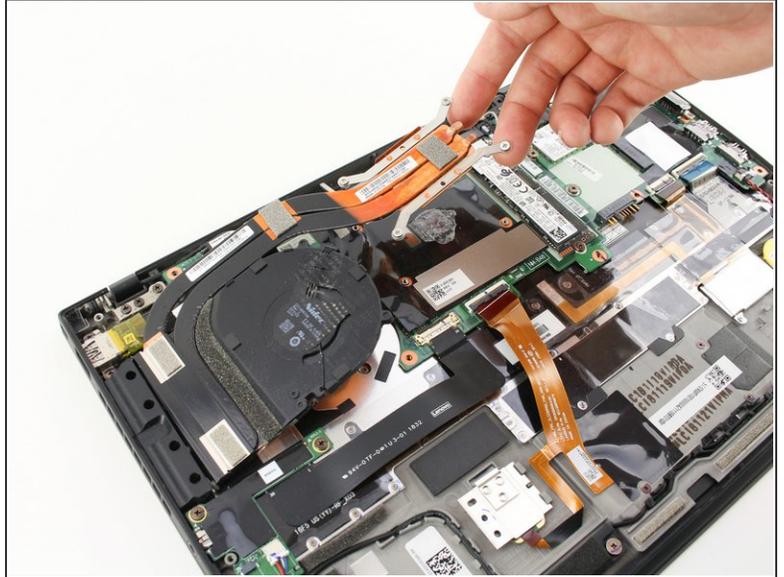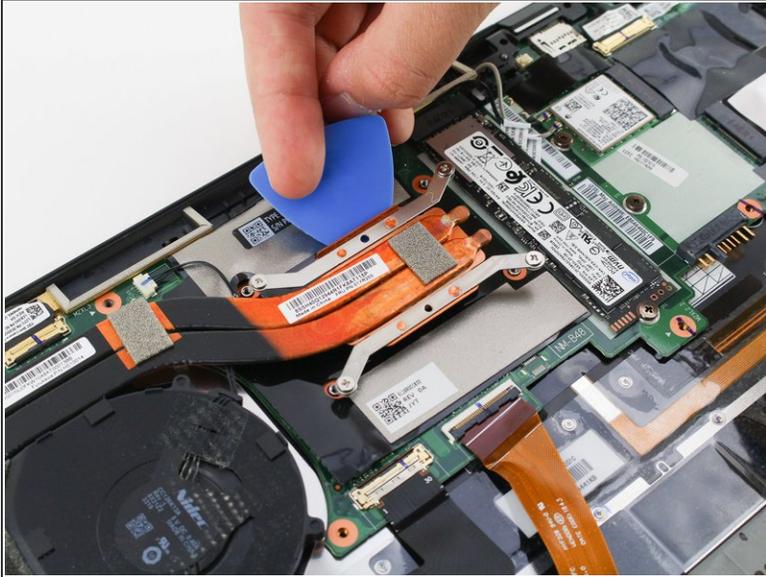
Step 3 — Fan

- Use a Phillips #0 screwdriver to loosen the four screws that secure the fan to the motherboard.

- (i) The screws do not completely come off from the fan mount. Loosen until the screws are completely loose.

This document was generated on 2020-03-26 06:41:32 PM (MST).

© iFixit — CC BY-NC-SA   www.iFixit.com   Page 5 of 13

Step 4

- Use nylon tipped tweezers, or your fingers, to gently pull the fan's power cable towards the SSD, disconnecting it from the pins.

- ⓘ Be sure to pull on all of the cables at the same time.

This document was generated on 2020-03-26 06:41:32 PM (MST).

© iFixit — CC BY-NC-SA   www.iFixit.com   Page 6 of 13

Step 5

- Use a plastic opening pick to lift the fan mount.
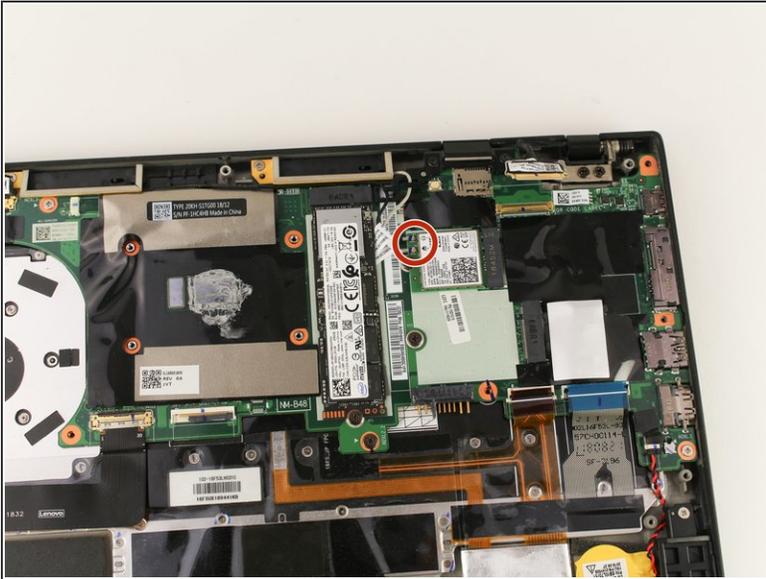
- Use your fingers to gently pull the fan diagonally away from where it is connected.

Step 6

- Turn the fan over to expose the interior.

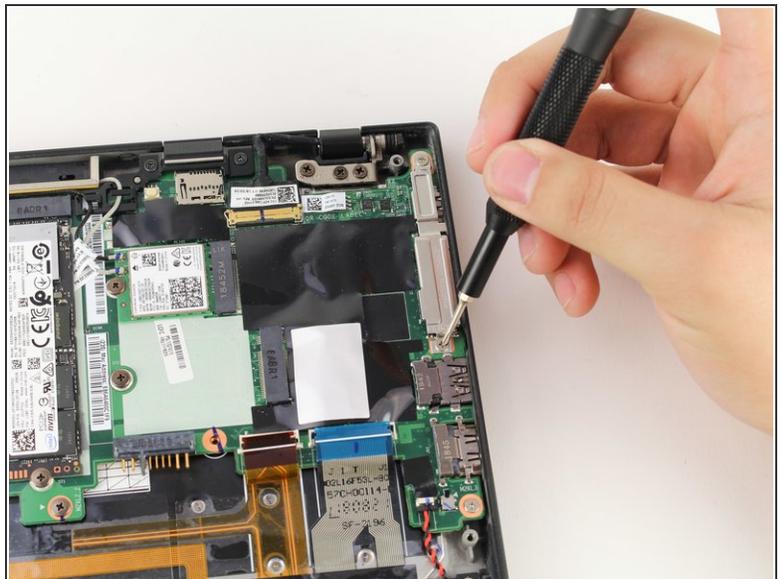- If necessary, clean out the fan or wipe away and replace the thermal paste.

This document was generated on 2020-03-26 06:41:32 PM (MST).

Step 7 — Motherboard

- Remove each of the 7 main ribbon cables that connect the motherboard to the rest of the laptop.

- Detach the last ribbon cable in the same way as before.

⚠️ These connectors and cables and are all very fragile. Handle with care.

- For the red and orange cables, use a spudger to lift the black plastic bar.

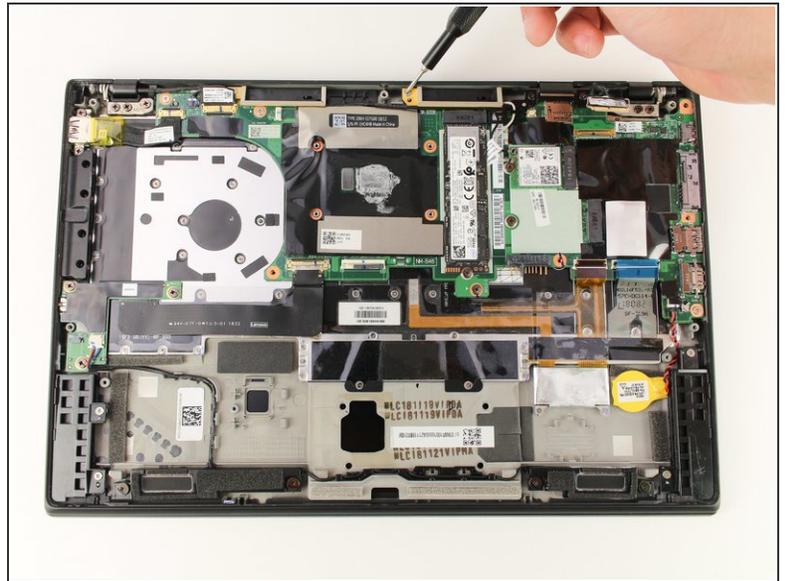ⓘ The bar should be lifted to the point where it can move easily.

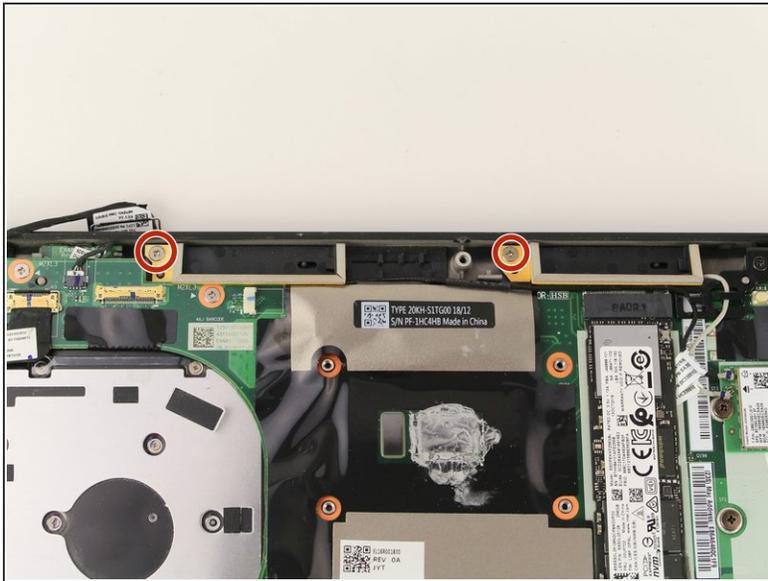www.iFixit.com

Step 8

- Place a spudger under the cables to disconnect them from the WAN card.

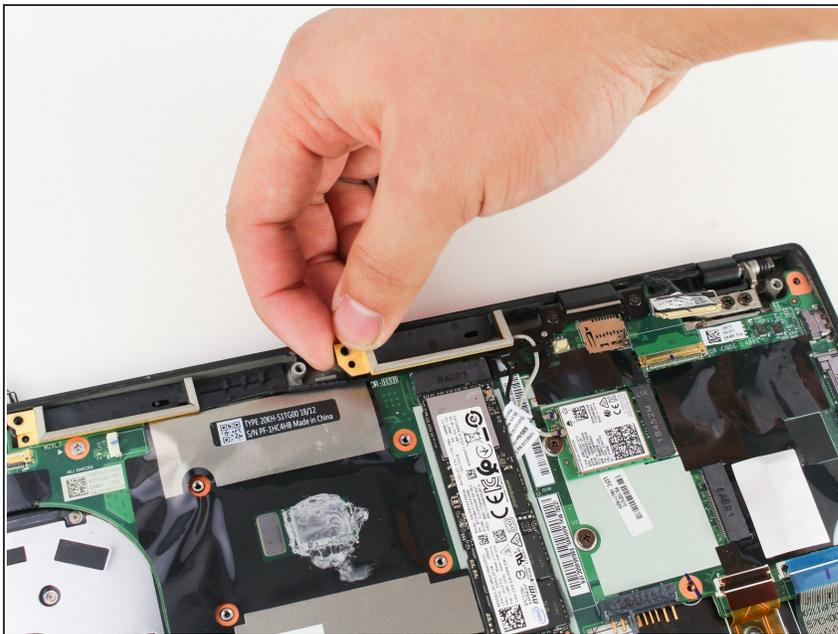- ⓘ Tweezers or a hook may also be used for this step.

Step 9

- Use a Phillips #00 screwdriver to remove the two 3mm screws that secure the IO bracket.

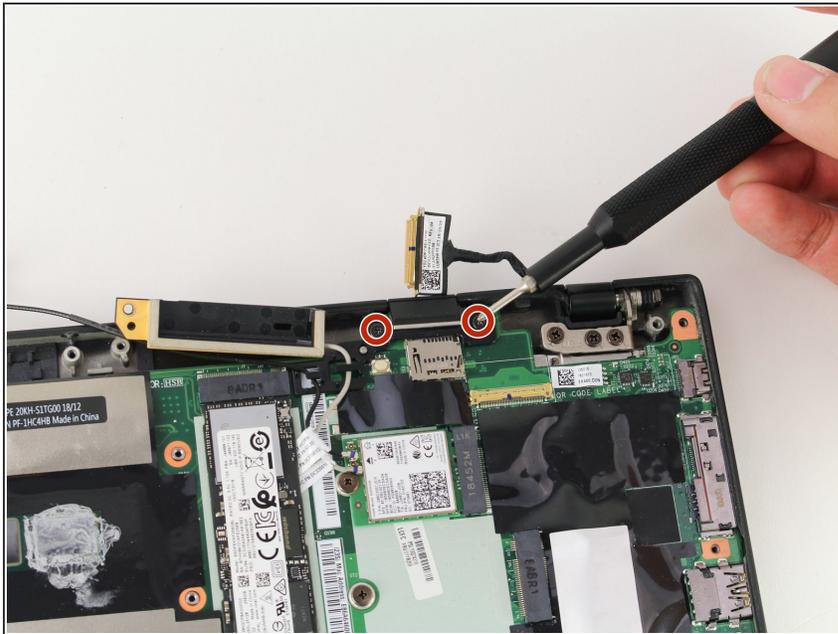This document was generated on 2020-03-26 06:41:32 PM (MST).

Step 10

ⓘ The antenna brackets act as a securing mount for the motherboard to the device.

● Remove the two 3mm antenna bracket screws using a Phillips #00 screwdriver.
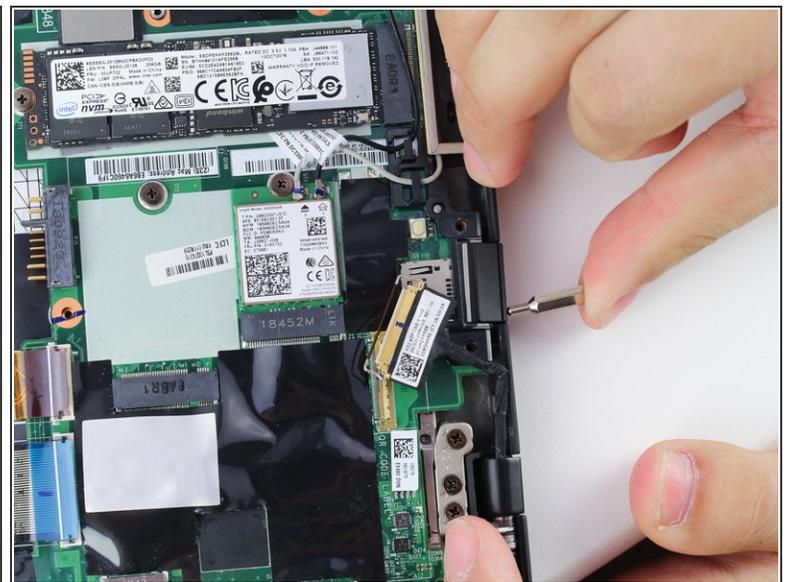
Step 11

● Lift from the location of the screw towards you. Then pull towards the screw side to remove the bracket.

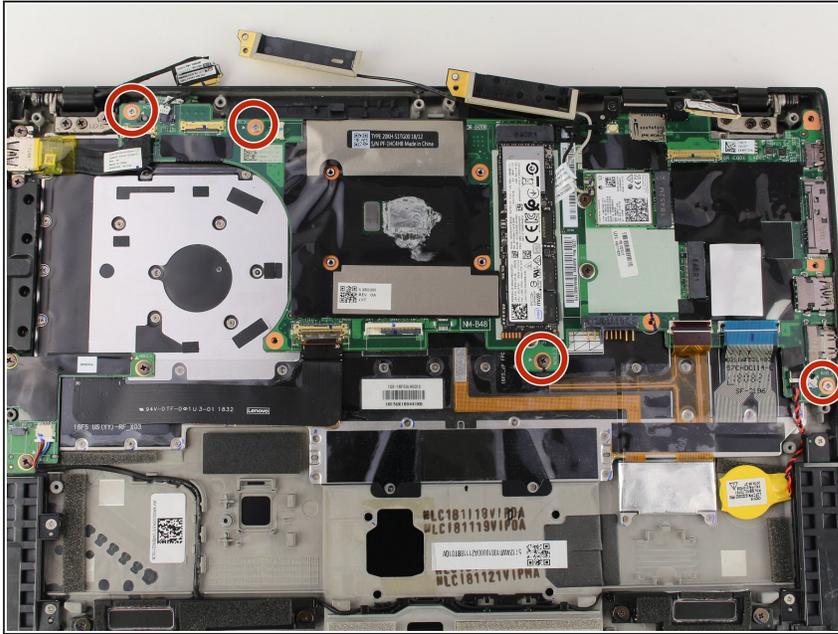This document was generated on 2020-03-26 06:41:32 PM (MST).

Step 12

(i) The housing for the SD card slot is directly attached to the device.

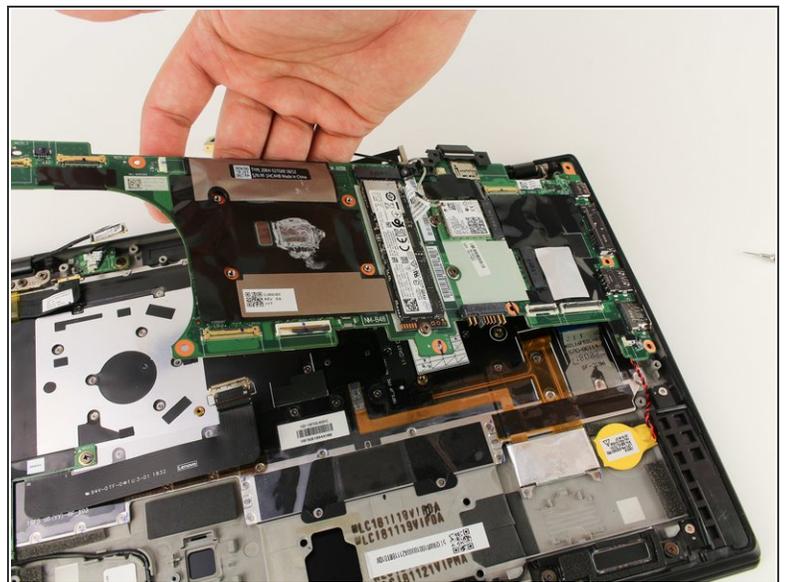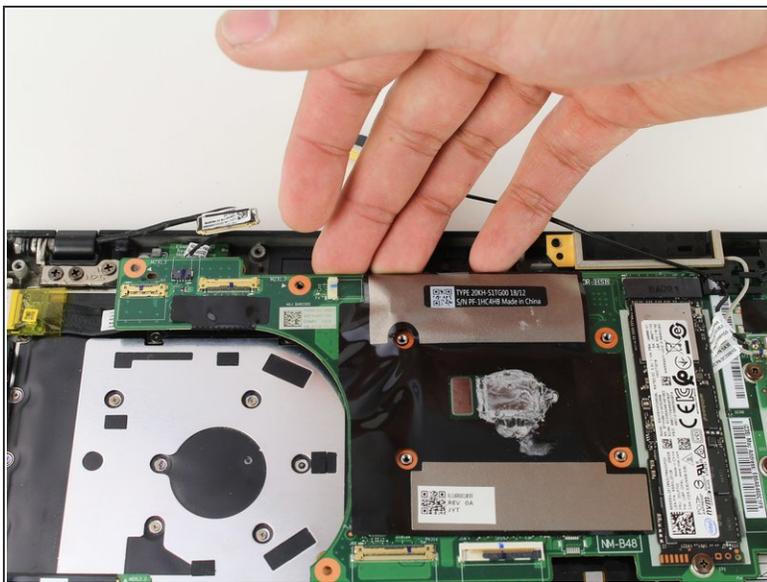● Remove and unscrew the two 5mm screws with a Phillips #0 screwdriver..

Step 13

● Using an iFixit SIM card screw head tip, apply pressure to the hole to disconnect the SD card slot from the device.

This document was generated on 2020-03-26 06:41:32 PM (MST).

Step 14

- Use a Phillips #00 screwdriver to remove each of the four remaining 3mm screws securing the motherboard to the device.

Step 15

- Lift from the top of the motherboard towards you.

- Pull away from the IO port side to remove the motherboard.

This document was generated on 2020-03-26 06:41:32 PM (MST).

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