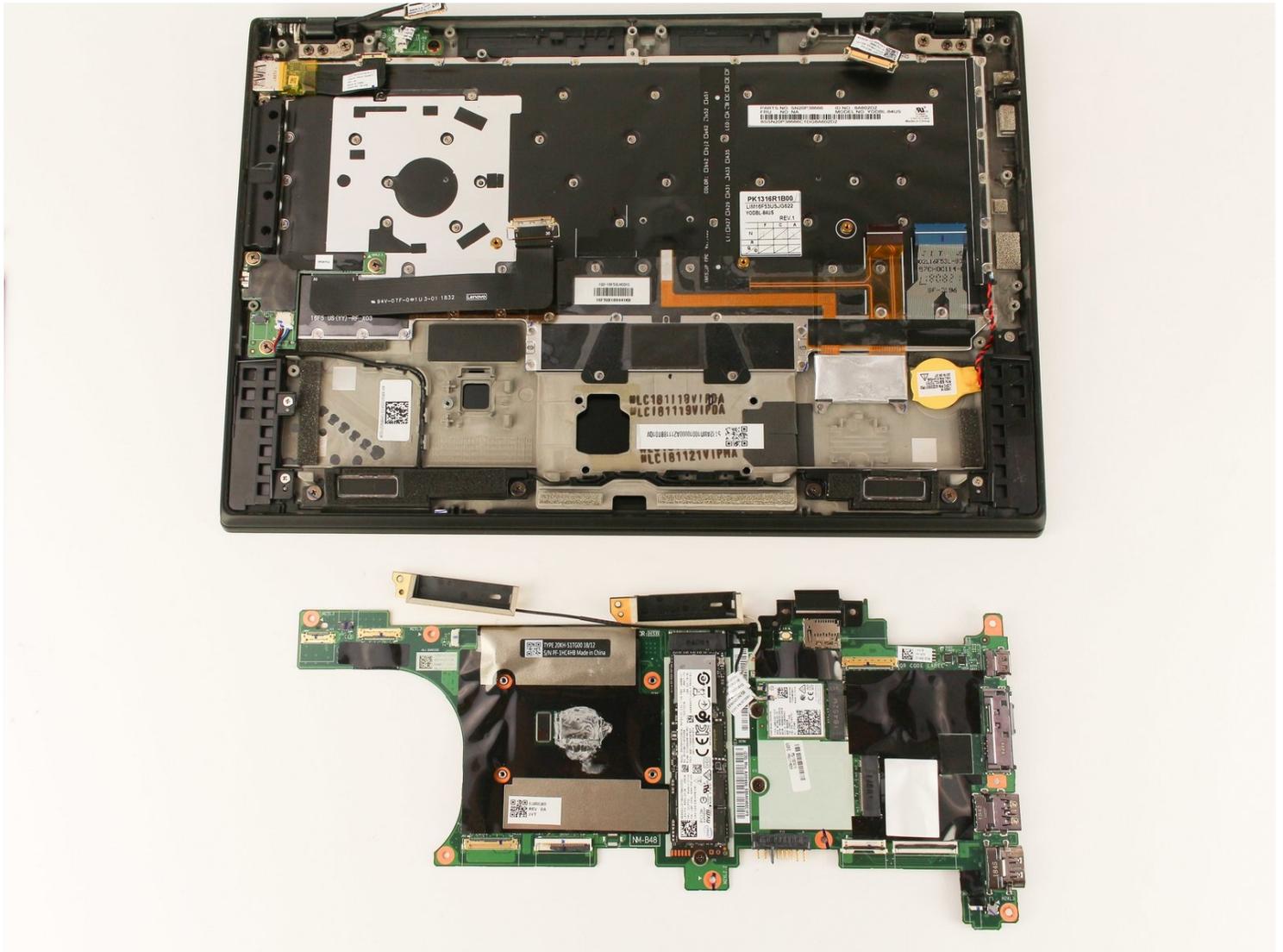




# Lenovo ThinkPad X1 Carbon 6th Gen Motherboard Replacement

In this guide, you will learn how to replace...

Written By: Michael Megna



# 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 Tool (1)

iFixit Opening Picks (Set of 6) (1)

Nylon Tipped Tweezers (1)

## Step 1 — Back Cover



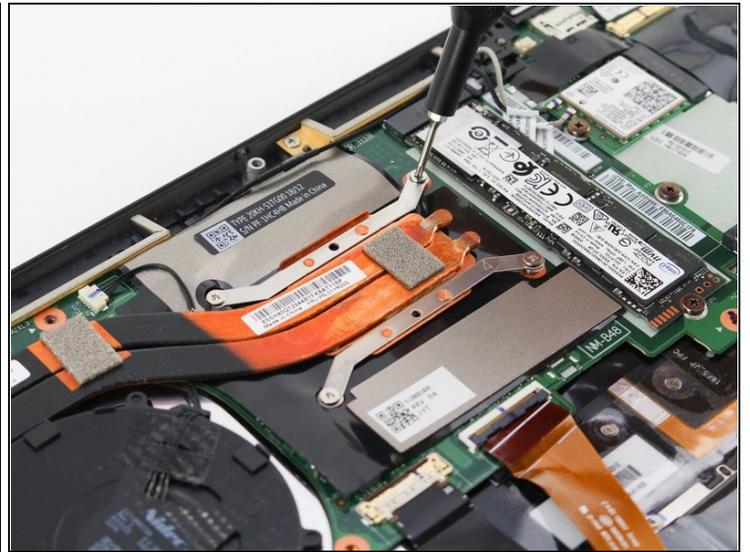
- Use a Phillips #0 screwdriver to unscrew the five screws that secure the back cover to the laptop.
- ⓘ The screws do not completely come off from the back cover. Loosen until the screws are completely loose.

## Step 2



- Use a Jimmy to lift the cover directly up off of the locating pins.
- ⓘ Though a metal opening tool is shown in the image, we recommend using plastic opening tools to minimize any cosmetic damage.
- Remove the back cover.
- ⓘ 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



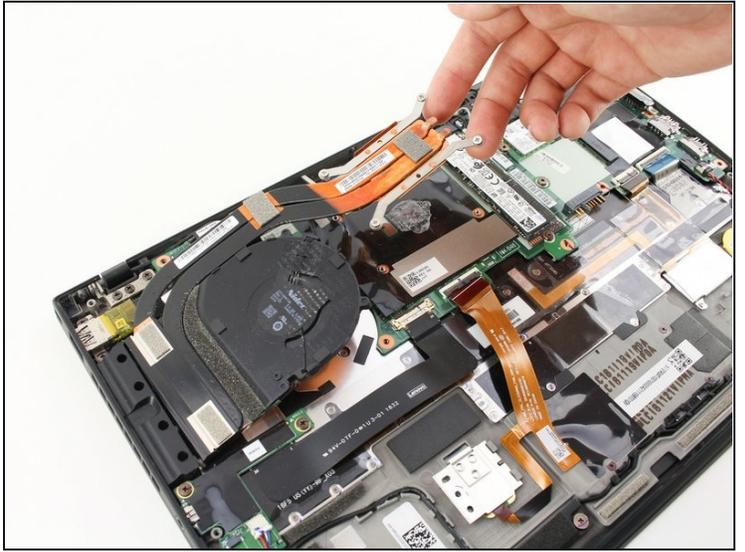
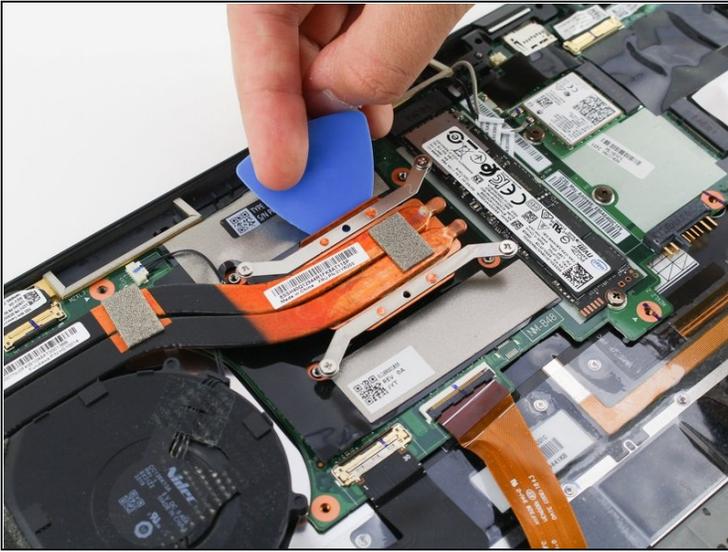
- Use a Phillips #0 screwdriver to loosen the four screws that secure the fan to the motherboard.
- ⓘ The screws do not completely come off from the fan mount. Loosen until the screws are completely loose.

## Step 4



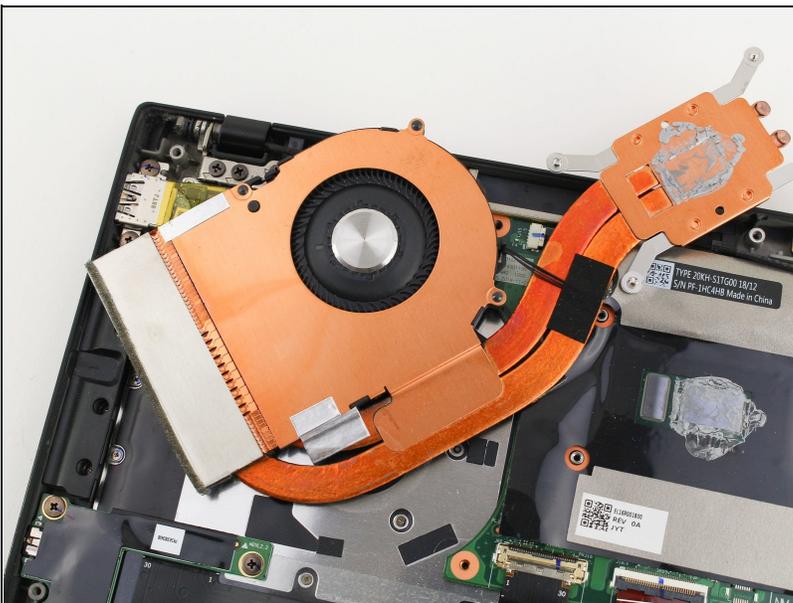
- Use nylon tipped tweezers, or your fingers, to gently pull the fan's power cable towards the SSD, disconnecting it from the pins.
- ⓘ Be sure to pull on all of the cables at the same time.

## Step 5



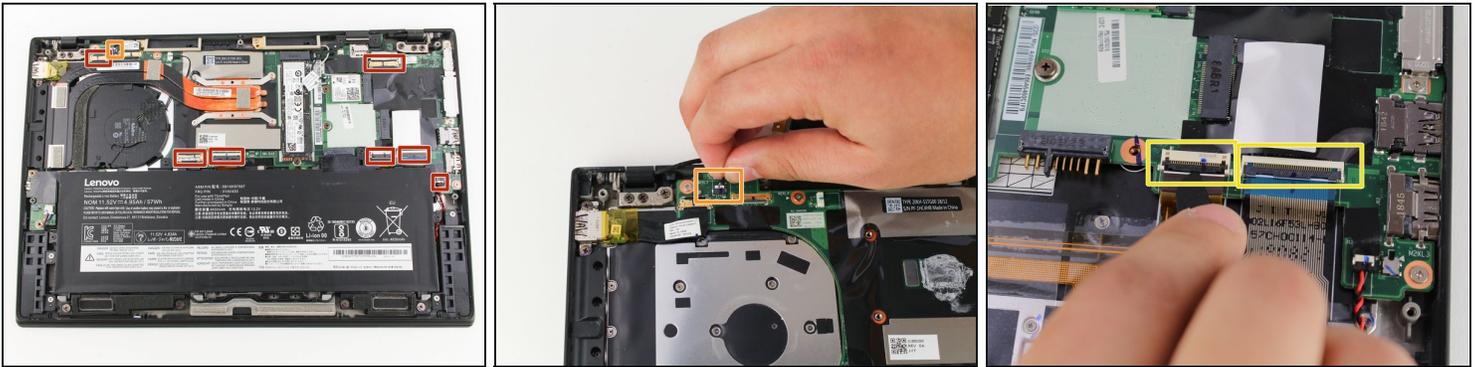
- Use a plastic opening pick to lift the fan mount.
- Use your fingers to gently pull the fan diagonally away from where it is connected.

## Step 6



- Turn the fan over to expose the interior.
- If necessary, clean out the fan or wipe away and replace the thermal paste.

## Step 7 — Motherboard



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

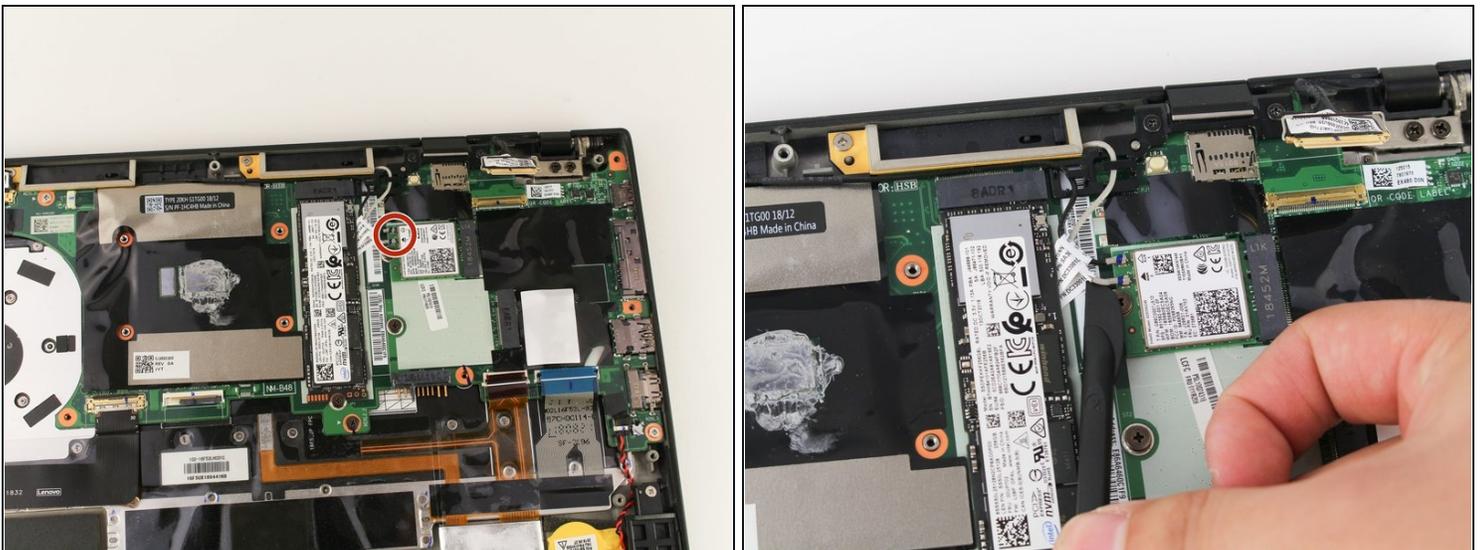
- Detach the last ribbon cable in the same way as before.

**⚠ These connectors and cables 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.

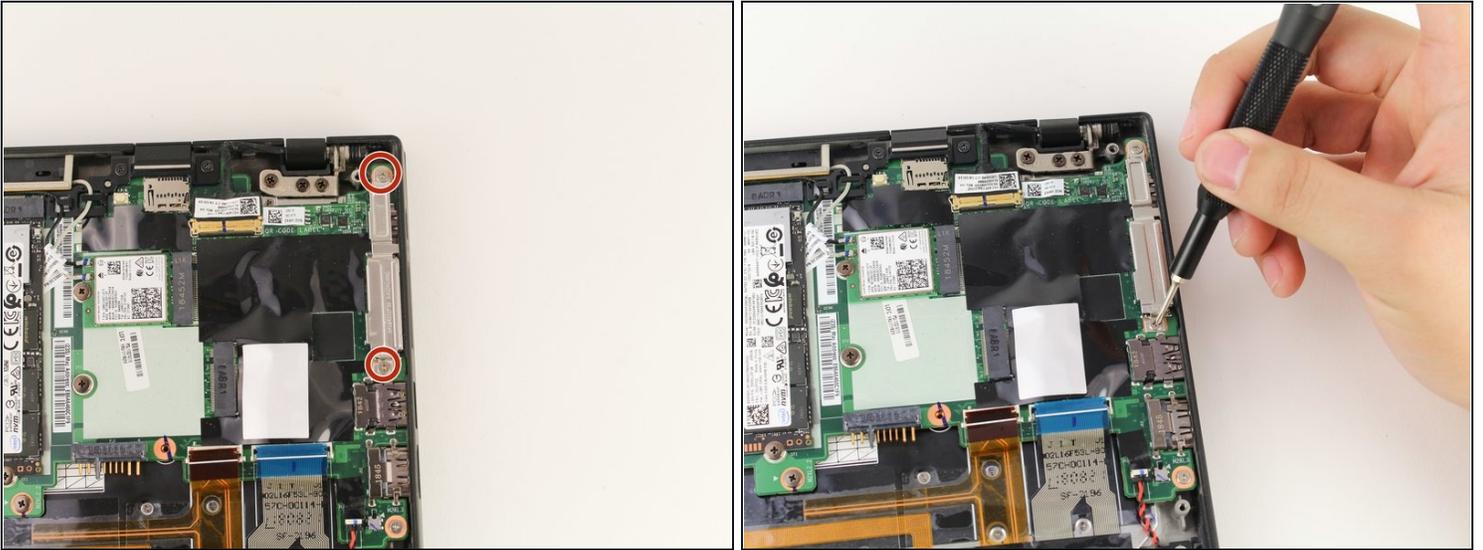
## Step 8



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

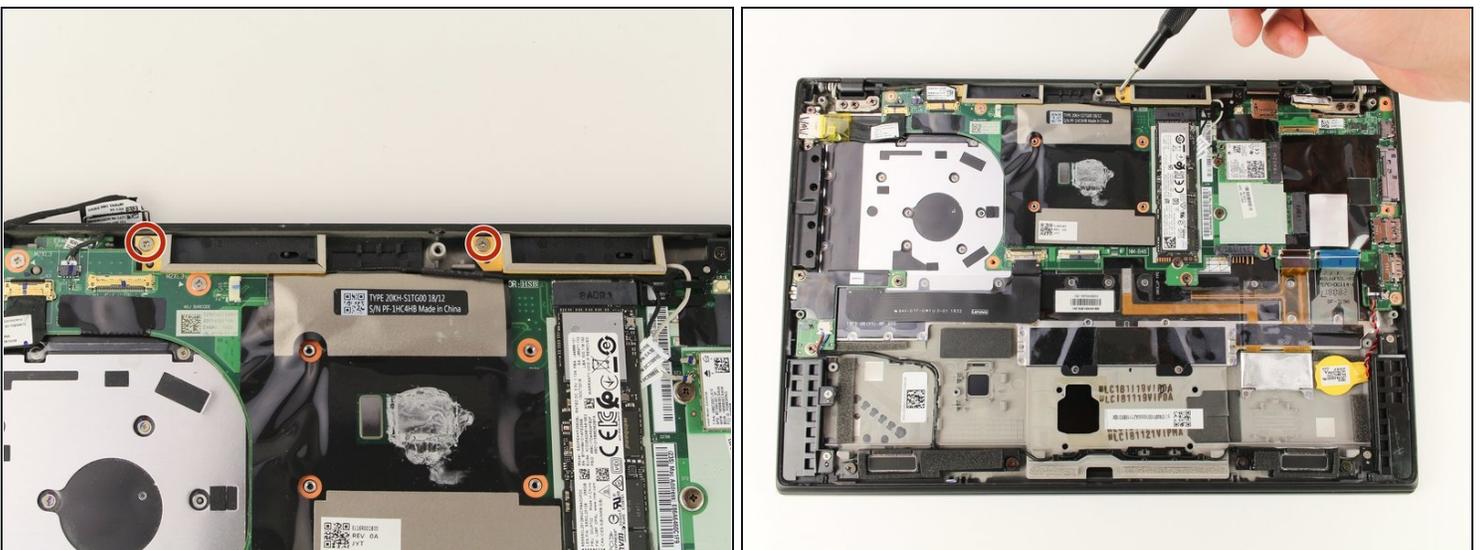
**ⓘ** Tweezers or a hook may also be used for this step.

## Step 9



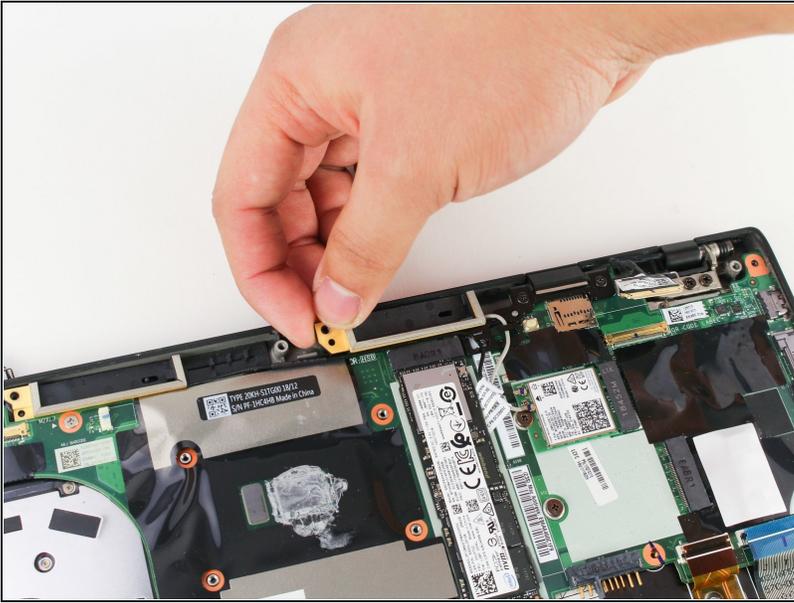
- Use a Phillips #00 screwdriver to remove the two 3mm screws that secure the IO bracket.

## Step 10



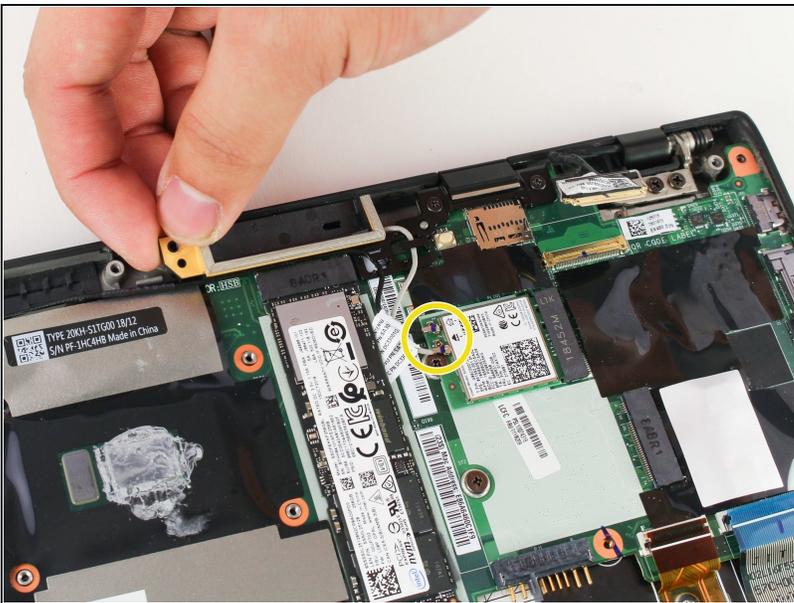
- ⓘ The antenna brackets act as a securing mount for the motherboard to the device.
- Remove the two 3mm antenna bracket screws using a Phillips #00 screwdriver.

## Step 11



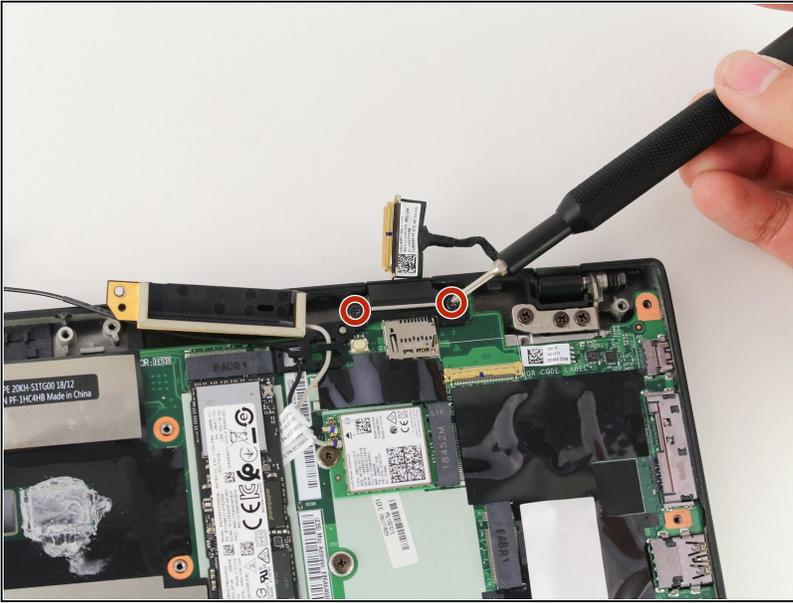
- Lift from the location of the screw towards you. Then pull towards the screw side to remove the bracket.

## Step 12



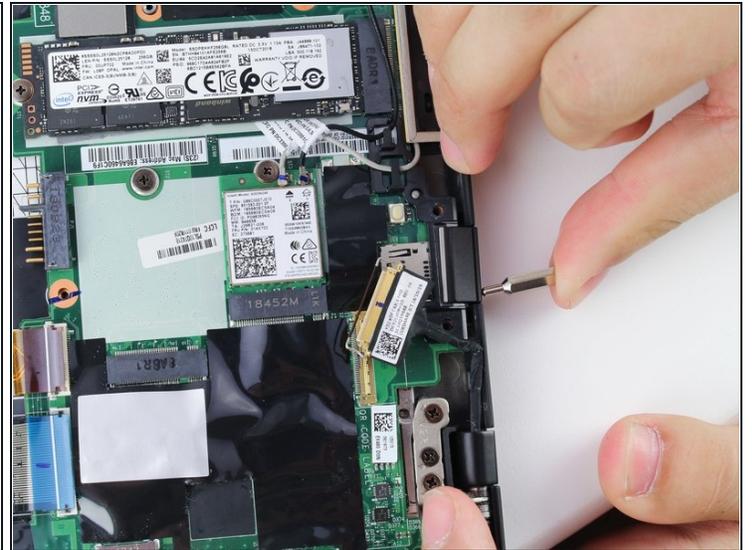
- Lift the white and black wires from their press on connections. Make sure to grab the connector head, not the wire itself

## Step 13



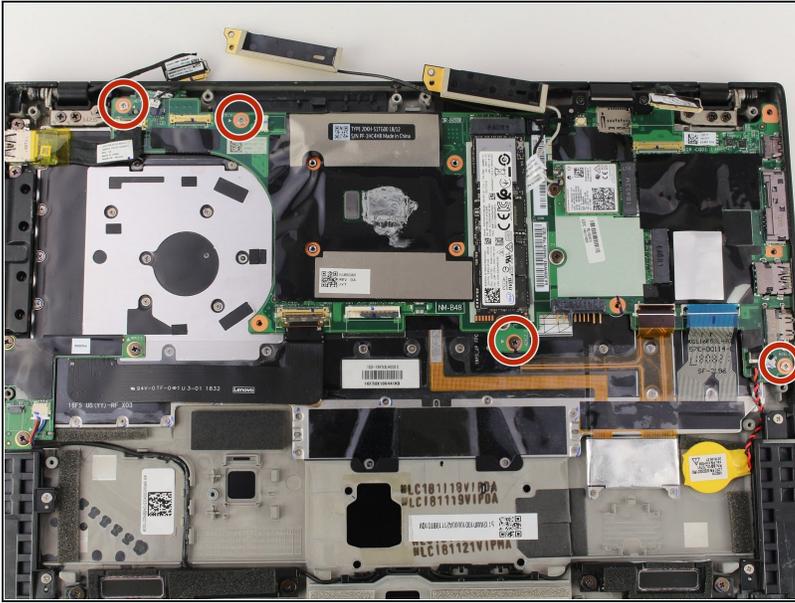
- ❗ The housing for the SD card slot is directly attached to the device.
- Remove and unscrew the two 5mm screws with a Phillips #0 screwdriver.

## Step 14



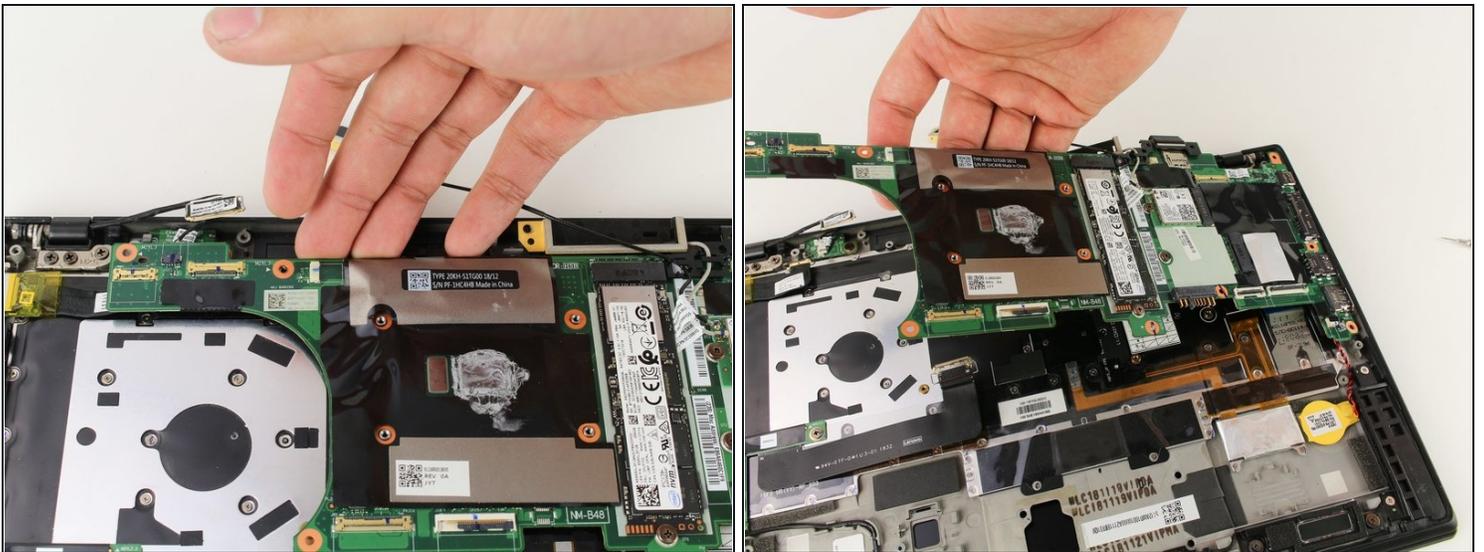
- Using an iFixit SIM card screw head tip, apply pressure to the hole to disconnect the SD card slot from the device.

## Step 15



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

## Step 16



- Lift from the top of the motherboard towards you.
- Pull away from the IO port side to remove the motherboard.

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