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INTRODUCTION

This guide will provide the instructions needed in order to replace the motherboard.

TOOLS:

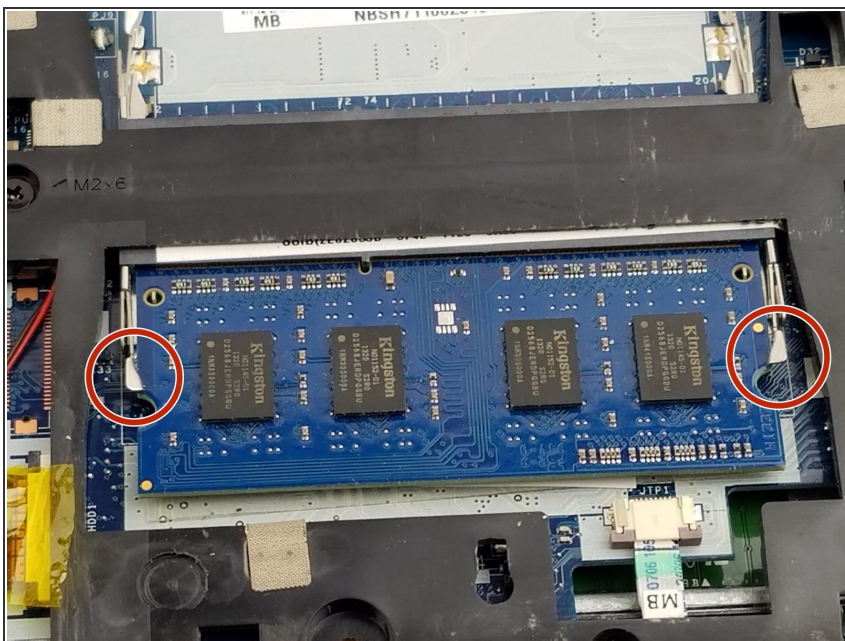
- [Phillips #1 Screwdriver](#) (1)
 - [Phillips #0 Screwdriver](#) (1)
 - [Phillips #000 Screwdriver](#) (1)
 - [iFixit Opening Tools](#) (1)
 - [Spudger](#) (1)
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Step 1 — RAM



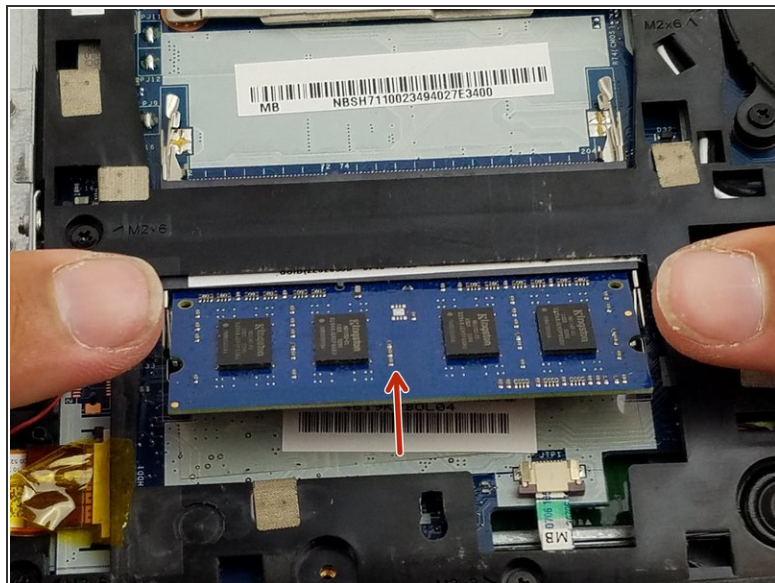
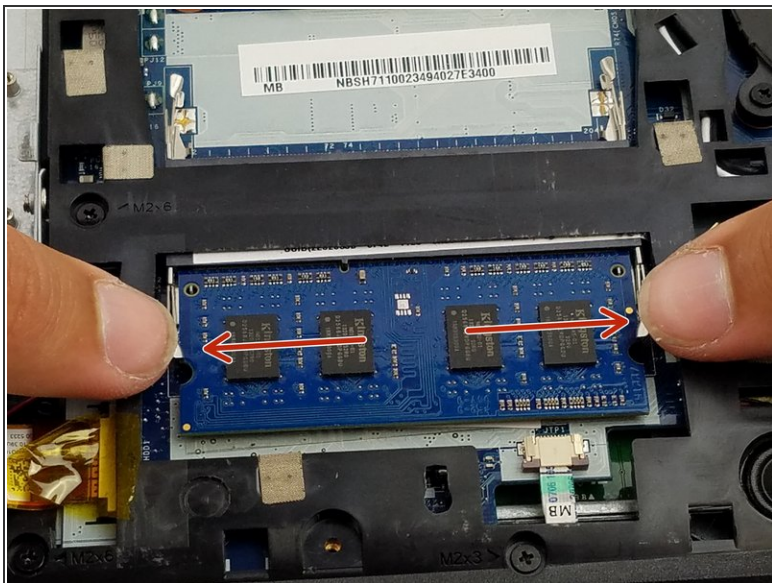
- Remove the one 4.3mm Phillips #1 screw holding the back cover on.

Step 2



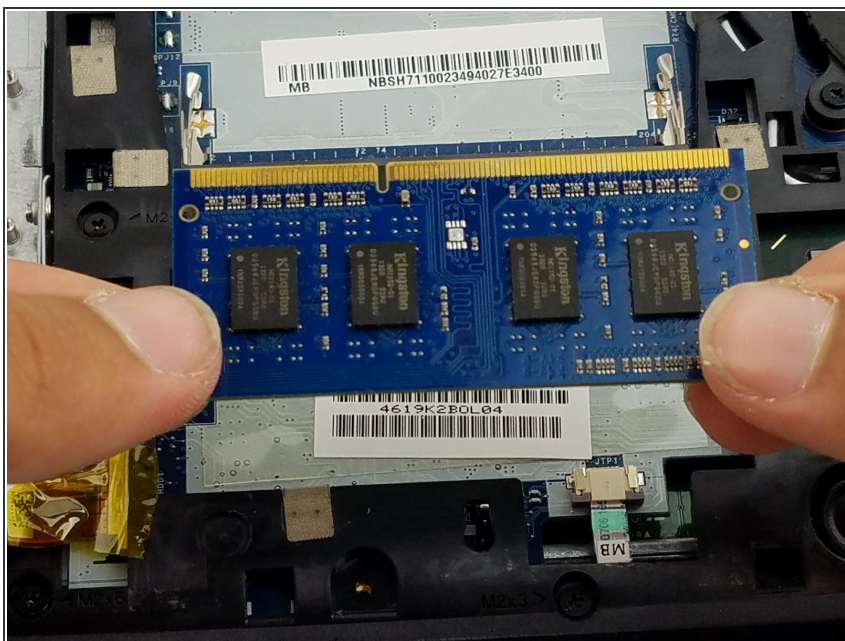
- Locate the RAM and the metal clips holding the RAM in place.

Step 3



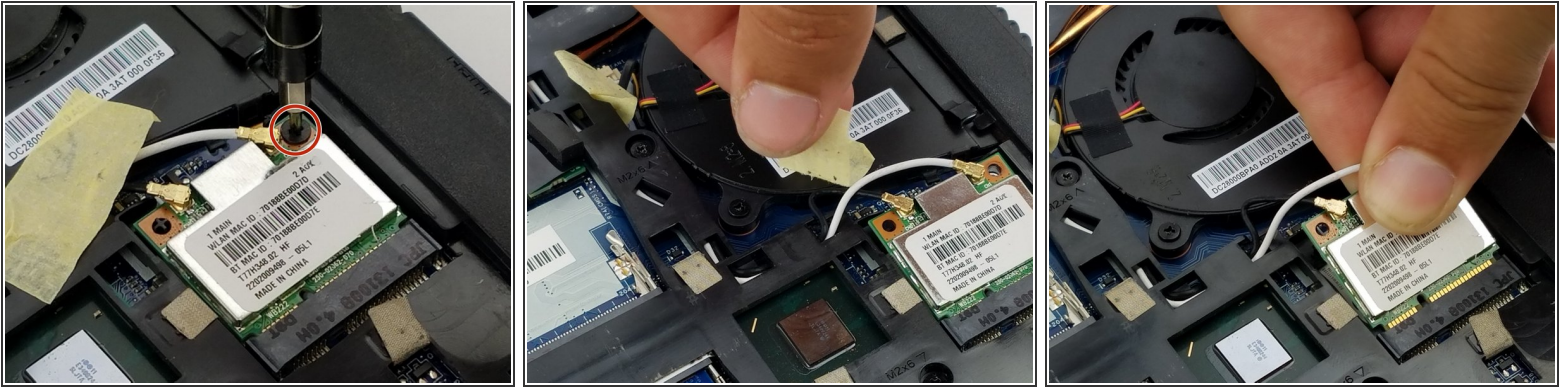
- Push the two clips outwards at the same time with your fingers. The RAM will gently pop upwards.

Step 4



- Pull the RAM out of the slot.

Step 5 — Wi-Fi Card



- Using the Phillips #1 screwdriver, remove the screw from the Wi-Fi card.
- Carefully remove the piece of tape to allow for more room to remove the Wi-Fi card.
- Use the blue plastic opening tool to lift and remove the Wi-Fi card from its socket.

Step 6



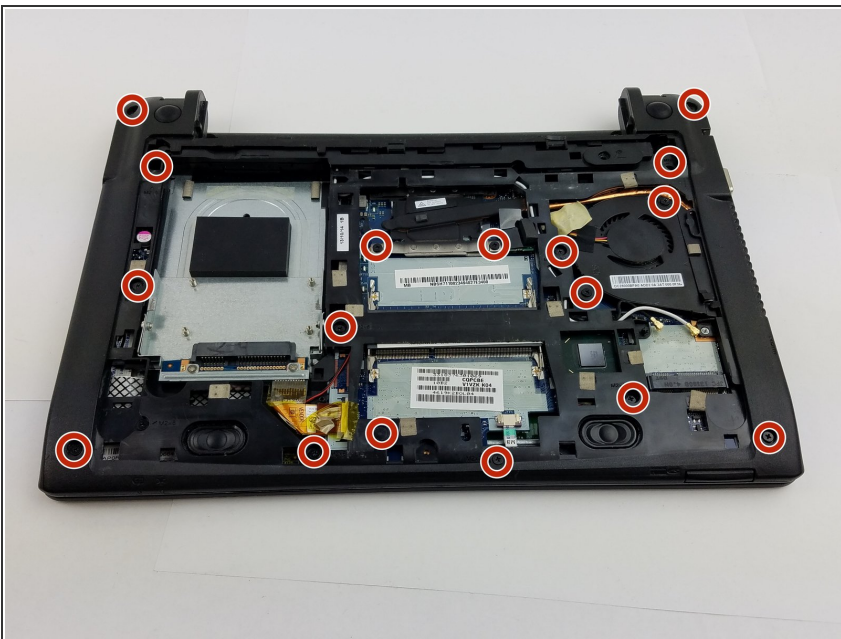
- Use the blue plastic opening tool and carefully remove the connectors from the Wi-Fi card.

Step 7



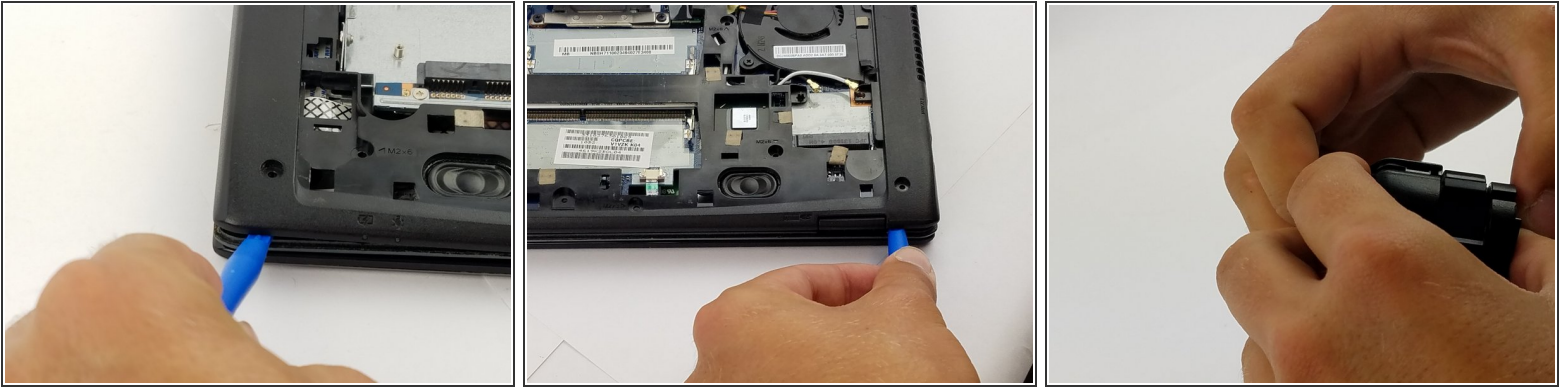
- Remove the Wi-Fi card.

Step 8 — Motherboard



- Unscrew the circled screws, a total of 17 (15 M 2x6 and 2 M 2x3), with a cross-head screwdriver.

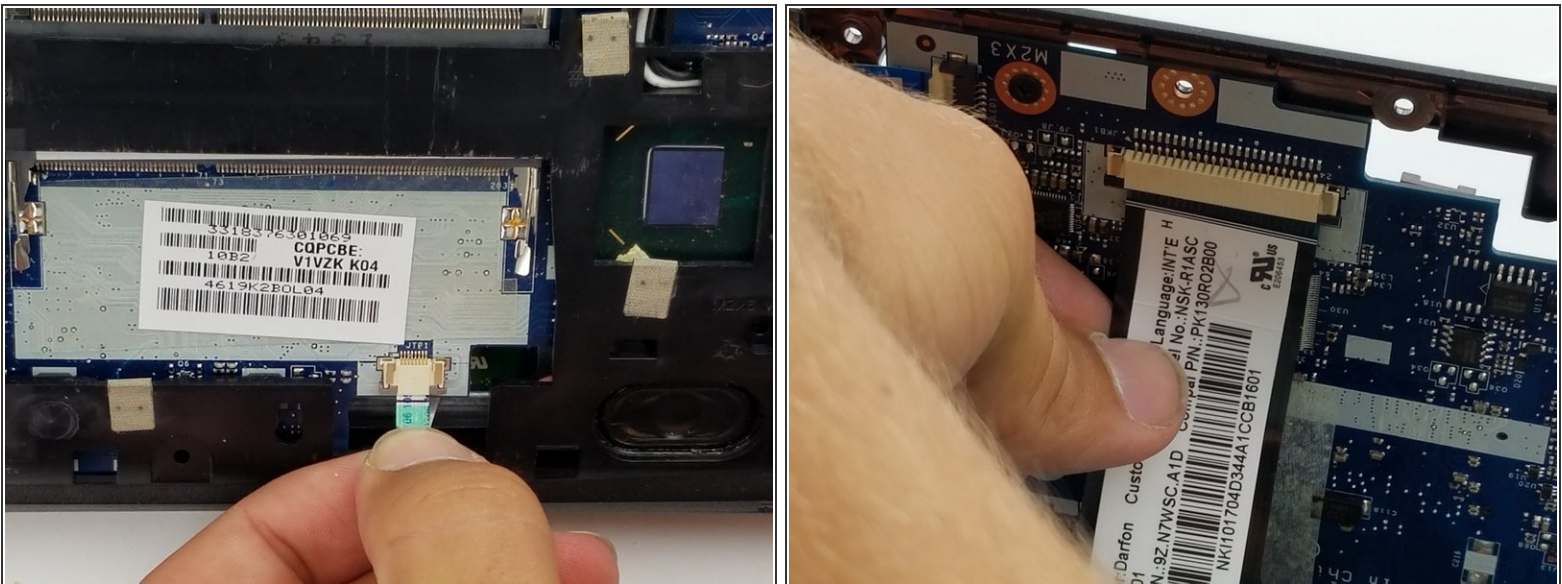
Step 9



- Using the blue plastic opening tool, work your way around the perimeter of the laptop and remove the bottom frame.

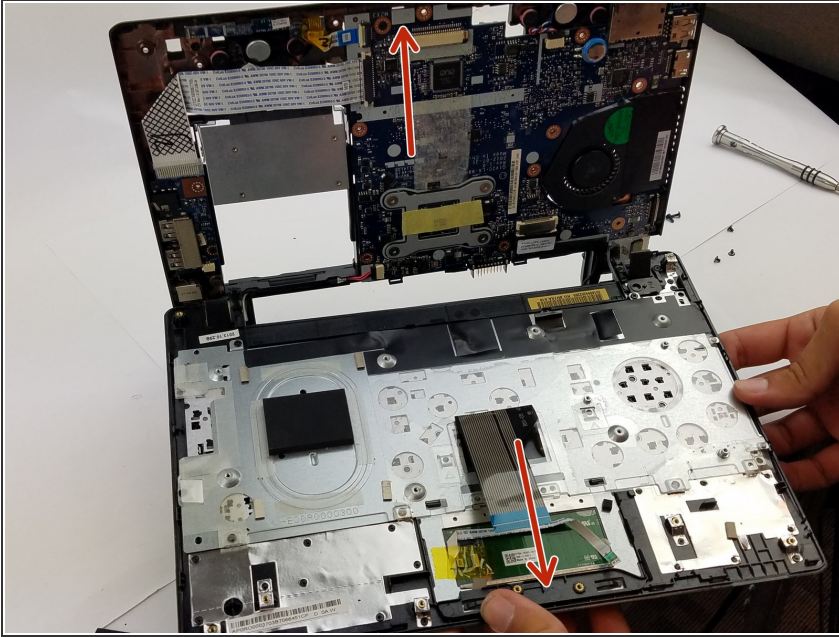
⚠ Be careful though, because we will not be pulling it completely apart since we will need to disconnect 2 ribbon cables first (shown in next step).

Step 10



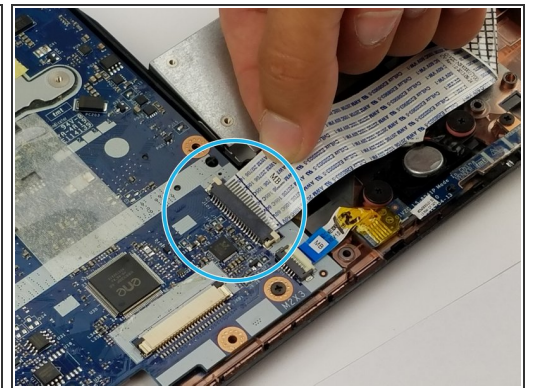
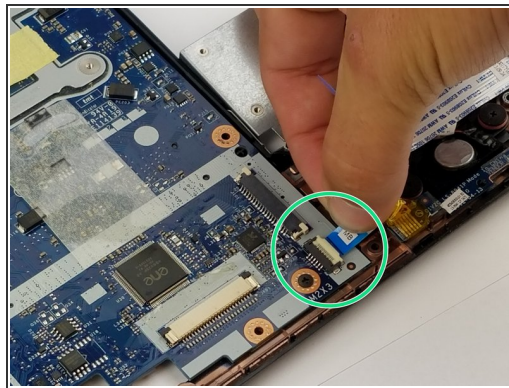
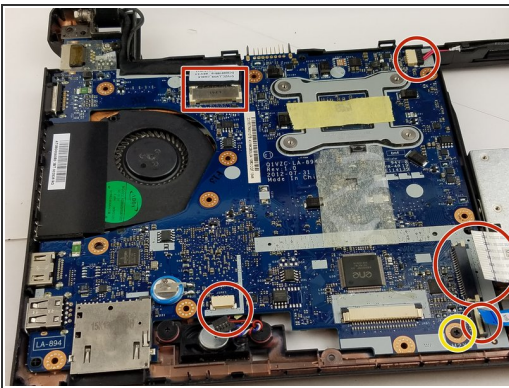
- Remove the green ribbon on the backside of the laptop by pulling on it lightly as shown.
- Gently remove the back ribbon that is holding the two parts of the laptop together (found between the two parts that are being pulled apart).

Step 11



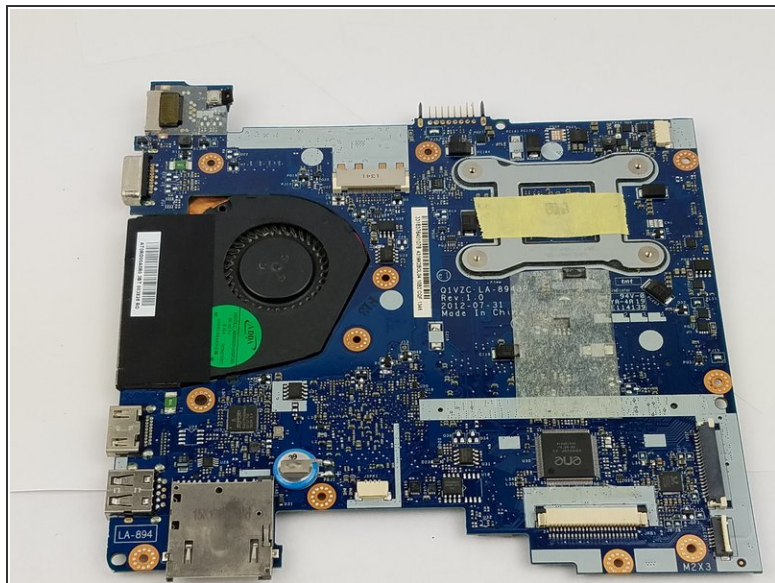
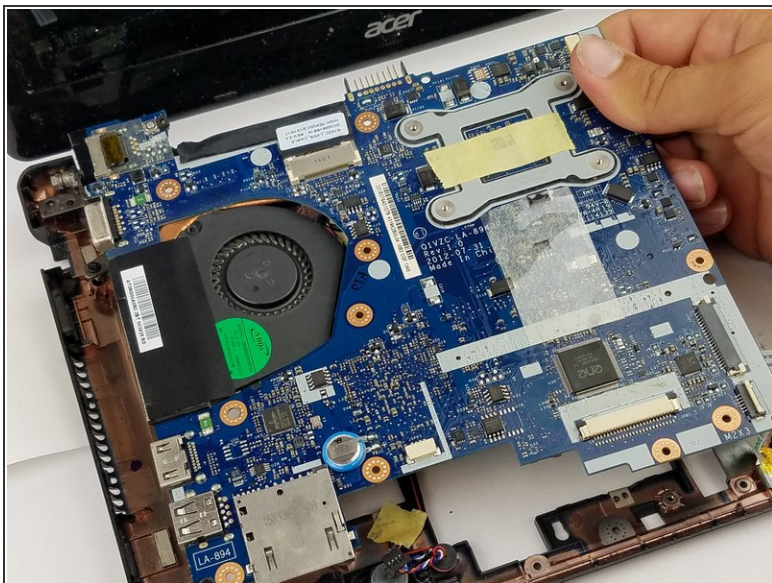
- Now completely pull apart the motherboard from the underside of the laptop by pulling on the location of the arrows.

Step 12



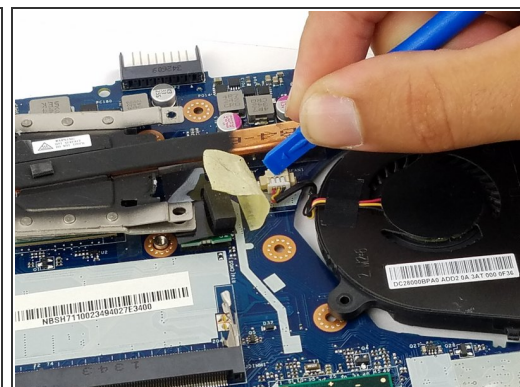
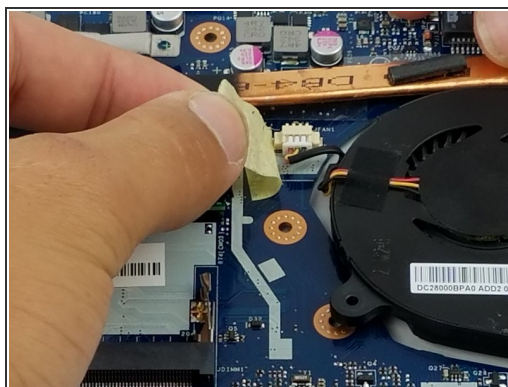
- Disconnect the five ribbons by pulling gently on the ribbon.
- Unscrew the M2x3 screw.
- Disconnect the blue connector from the motherboard.
- Disconnect the wider white connector from the motherboard.

Step 13



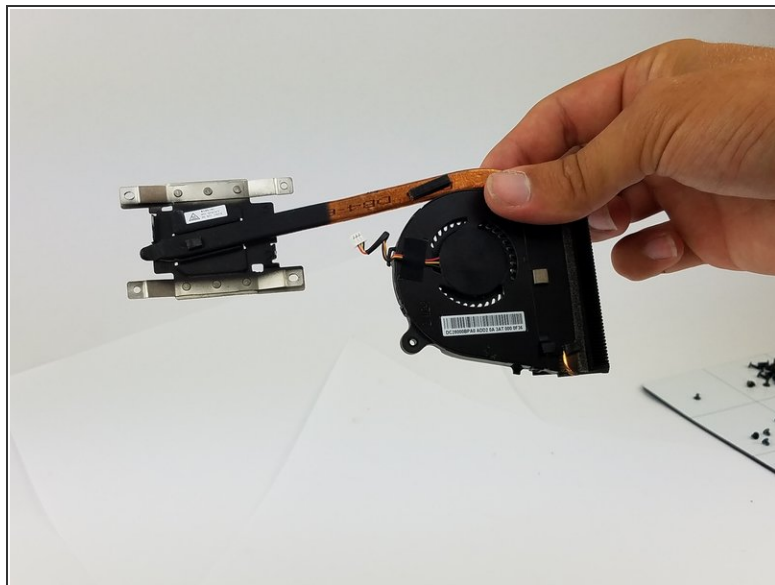
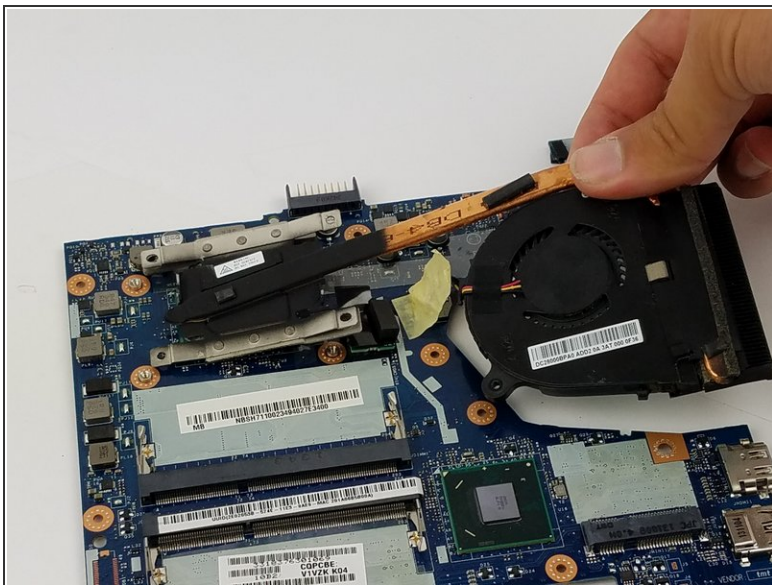
- Remove the motherboard from the frame.

Step 14



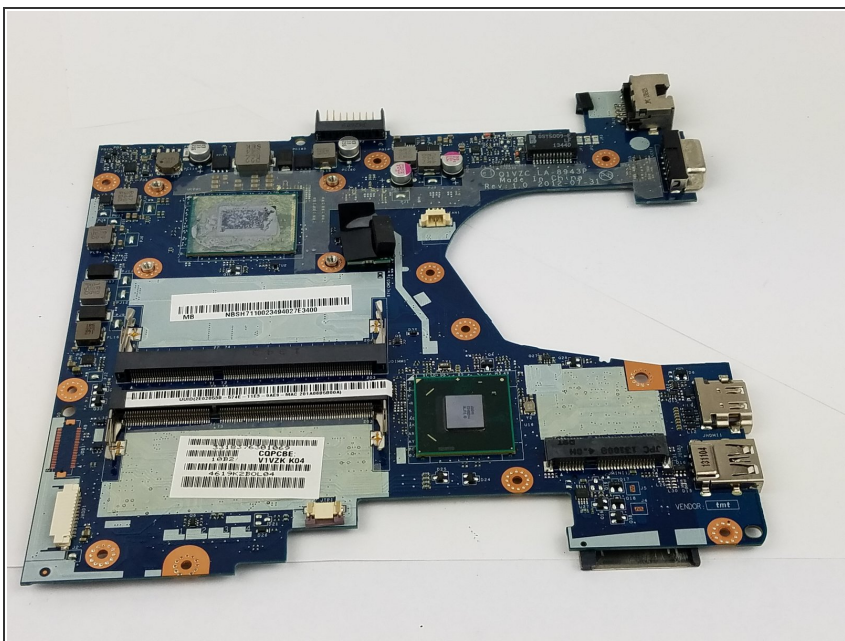
- Remove the fan by unscrewing two M2x3 screws.
- Peel the tape off the ribbon connection for easy access.
- Use the plastic opening tool to disconnect the connector.

Step 15



- Remove the fan.

Step 16



- The motherboard is now bare of any extras and is ready to be replaced.

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