



# Panasonic Toughbook CF-29 Motherboard Replacement

Written By: Dylan Bloom



## INTRODUCTION

This guide will tell you how to gain access to and remove the motherboard.

### TOOLS:

- [Phillips #0 Screwdriver](#) (1)
- [Phillips #1 Screwdriver](#) (1)
- [iFixit Opening Tools](#) (1)

## Step 1 — Battery



- Locate the bay door for the battery on the left side of the laptop.

## Step 2



- Slide the latch to the right and then down to unlock it.
- Pull out the battery.

## Step 3 — Hard Drive



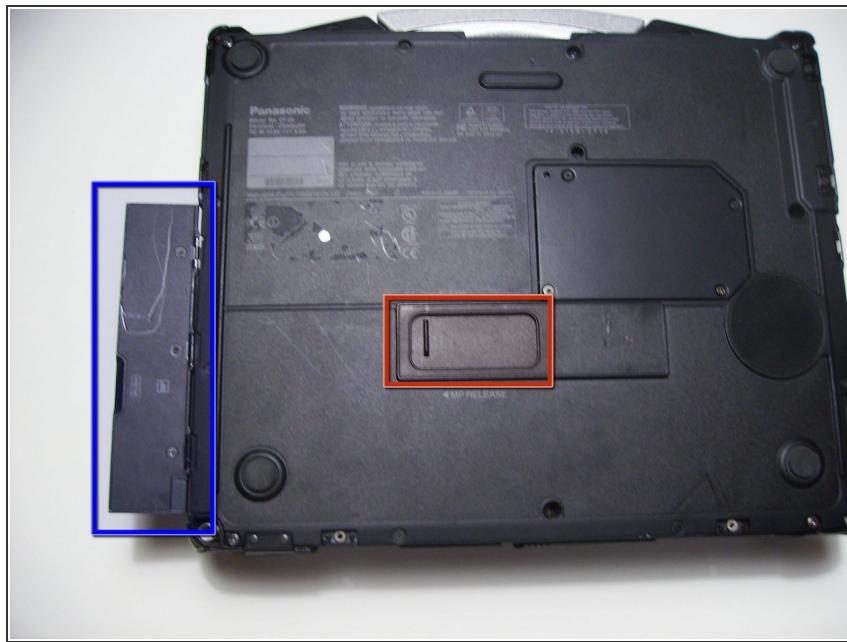
- Locate the door for the hard drive on the right side of the laptop

## Step 4



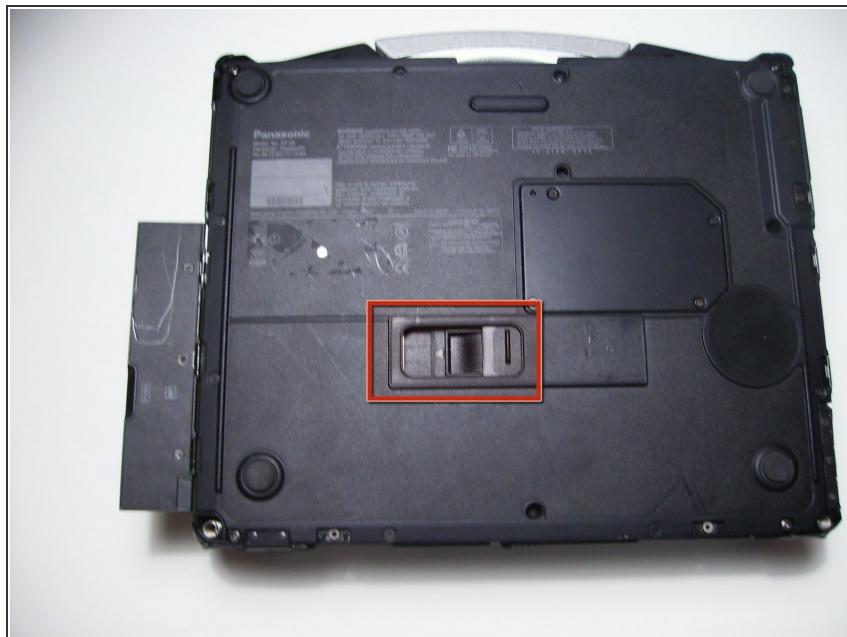
- Push and slide the latch up to open the hard drive door.
- Pull out the hard drive.

## Step 5 — Optical Drive



- Flip the device upside down with the handle facing away from you.
- Open the optical drive bay by sliding its latch to the right.
- Locate optical drive release mechanism on the bottom of the laptop.

## Step 6



- Slide the latch cover to the right.

## Step 7



- Push the exposed switch to the left to eject the optical drive.

## Step 8 — Back Cover



- Begin by turning the laptop upside down with the handle towards you.
- Use a Phillips size 0 screwdriver to remove the 4 screws holding down the ram cover.

## Step 9



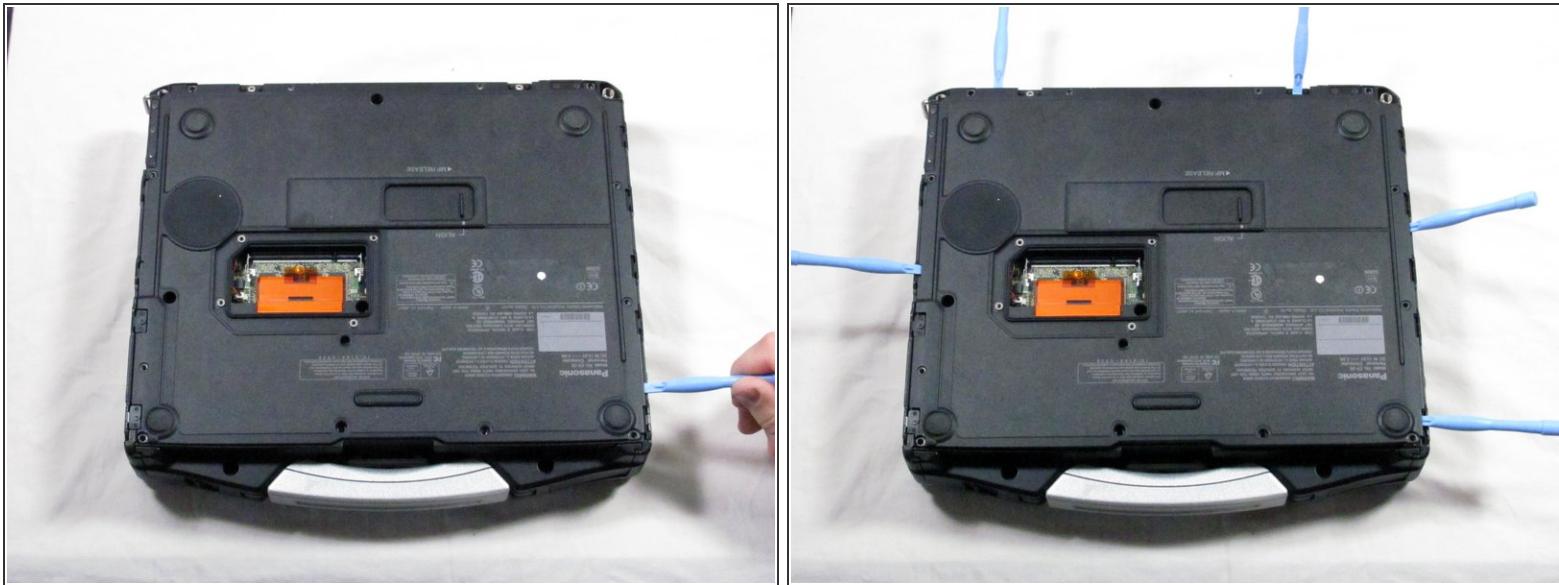
- Remove the panel and set it aside.
- Use a Phillips size 0 screwdriver to remove these 8 small screws.

## Step 10



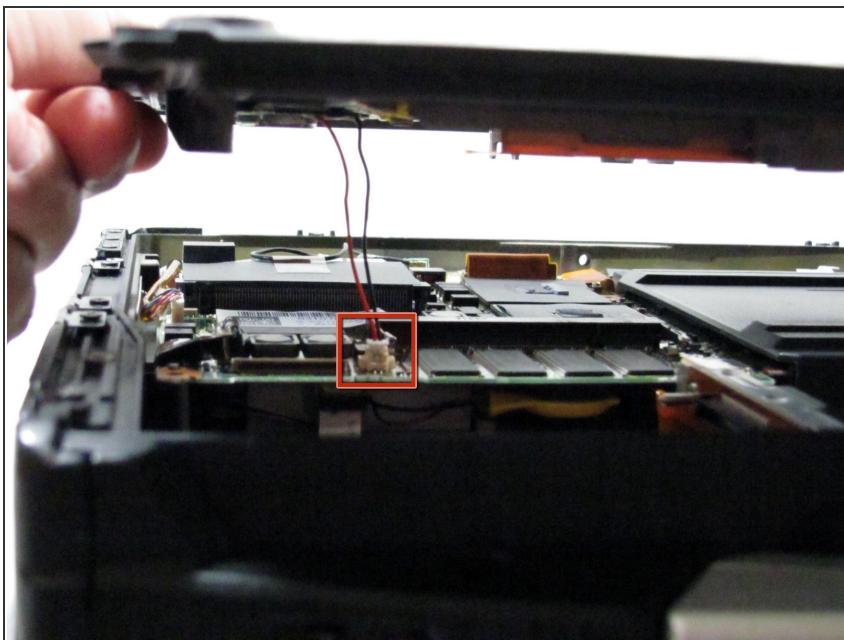
- Use a Phillips size 1 screwdriver to remove the remaining 8 screws.

## Step 11



- Use a plastic opening tool to release, but NOT remove, the back cover because it is sealed with adhesive.

## Step 12



 Be careful when lifting the cover as you may damage some connections.

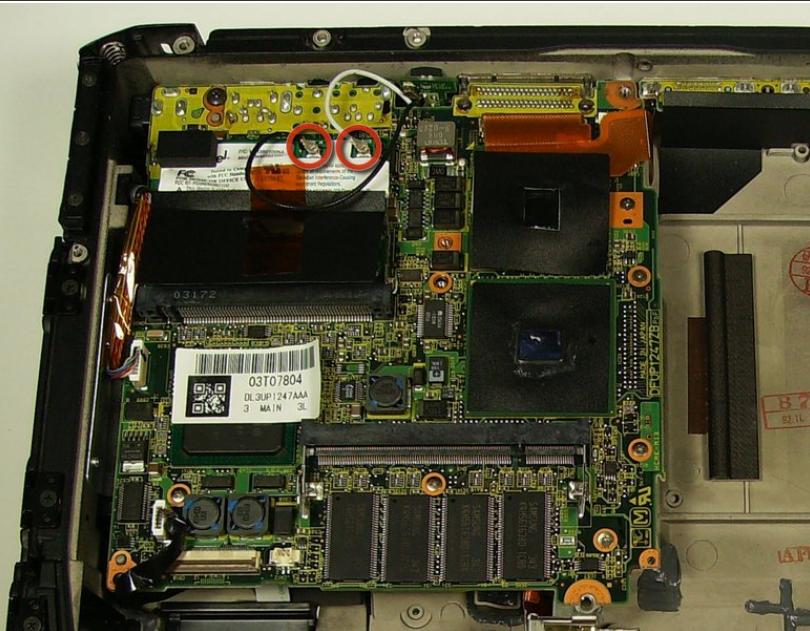
- Slowly lift the cover so that you can disconnect the red and white wires connecting the speaker to the sound card.

## Step 13



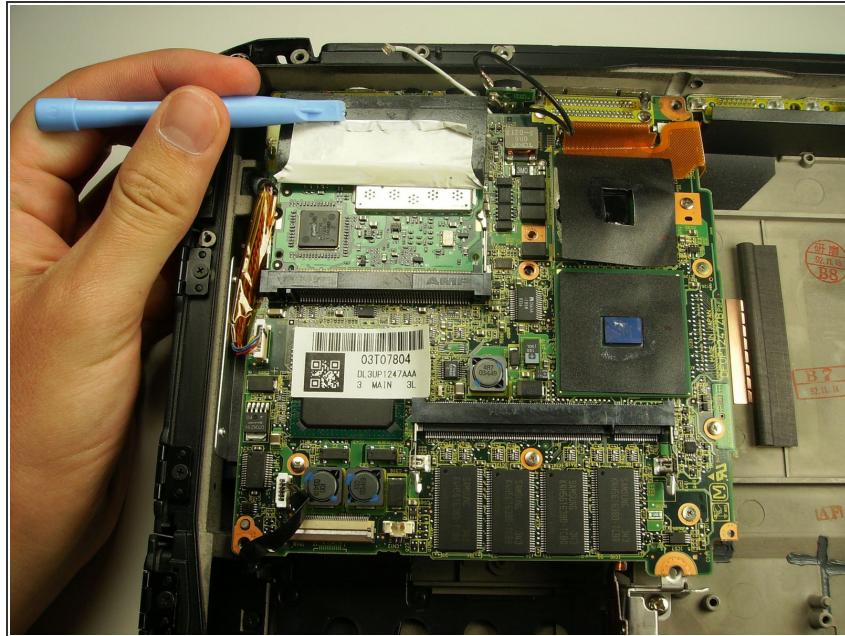
- Now the back cover should be off and you can access the inside of the casing.

## Step 14 — Wireless Card



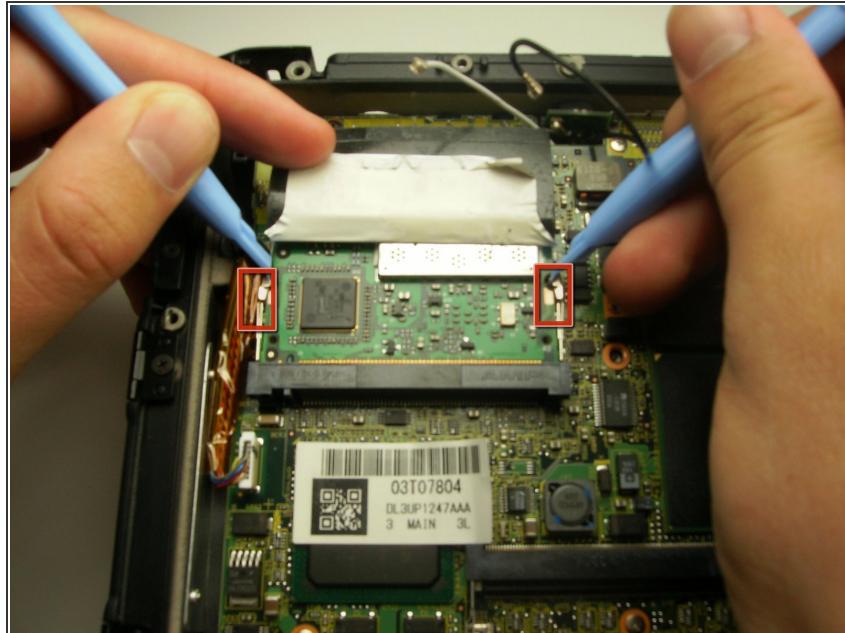
- Remove the black and white wires attached to the wireless card by simply pulling up.

## Step 15



- Peel back the black cover to expose the clips holding in the wireless card.

## Step 16



- Using a pair of plastic opening tools, push the two metal tabs away from the card.

## Step 17



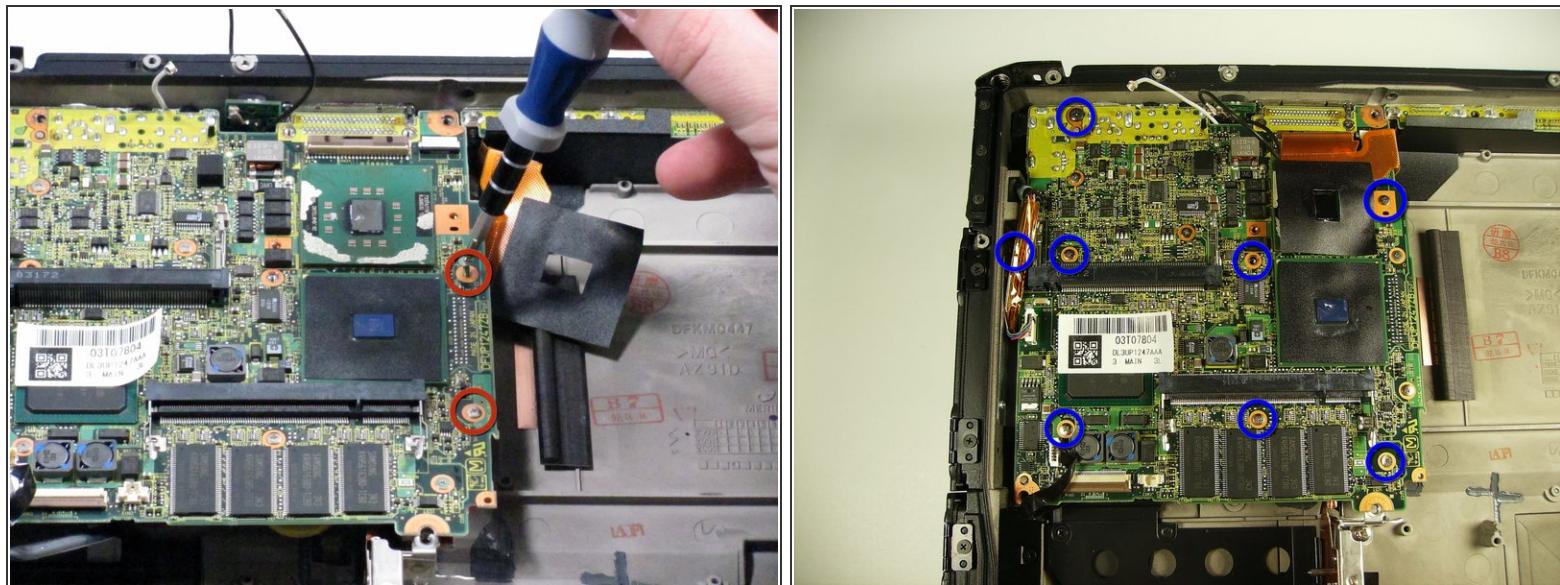
- The wireless card should now easily disengage from the motherboard.
- Pull the card horizontally away from you to remove it from its housing.

## Step 18 — Motherboard



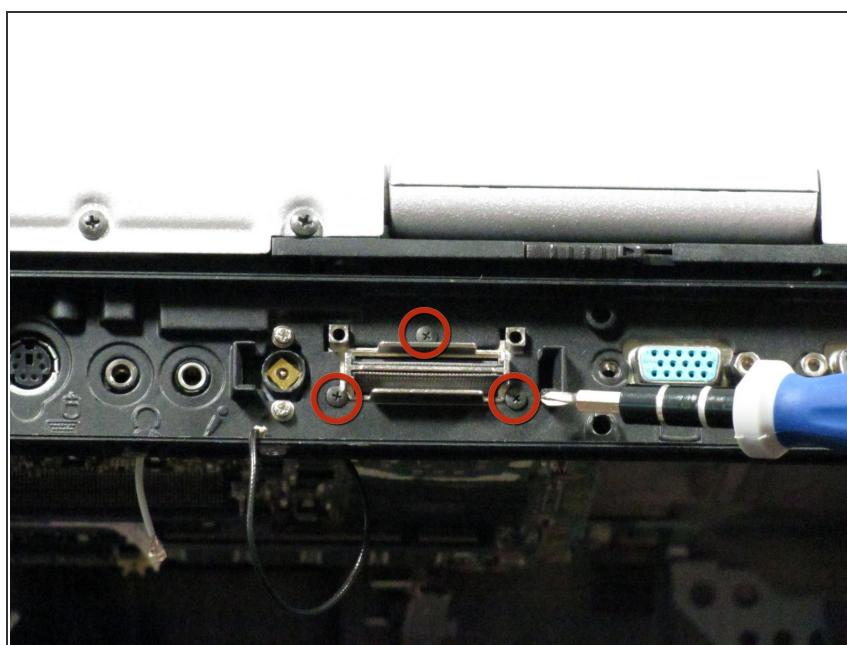
- Unplug 3 cables
  - Lift up on brown tab to release cable
  - Pull cable up and out

## Step 19



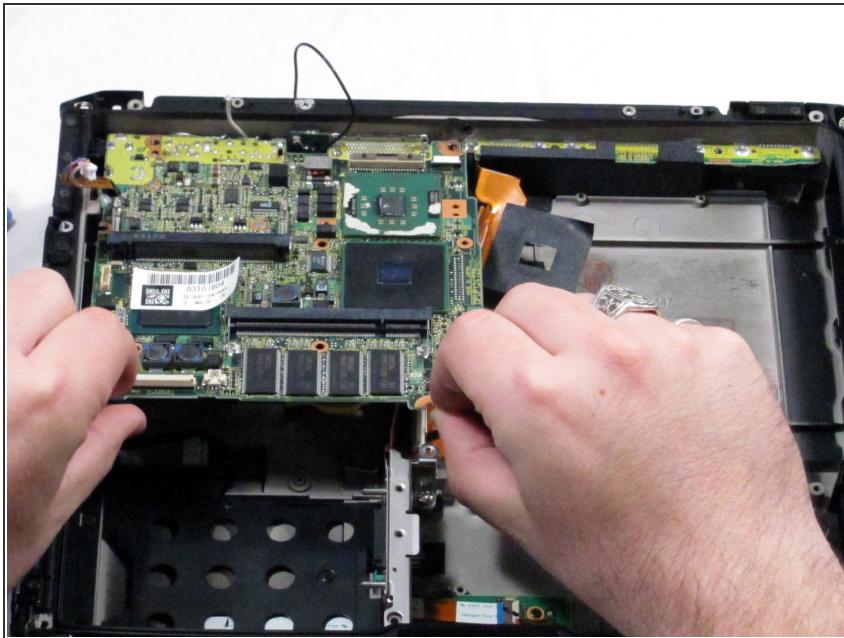
- Remove 2 long screws indicated with red circles
- Remove the remaining screws indicated in blue

## Step 20



- On the back of the unit, unscrew the three screws surrounding the serial port.

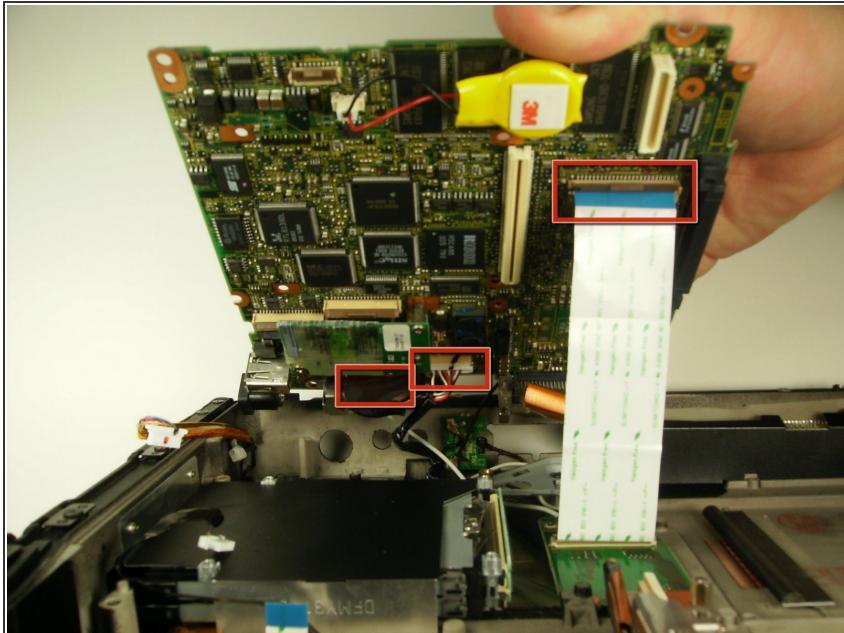
## Step 21



- Lift the motherboard as shown, pull towards you and then up.

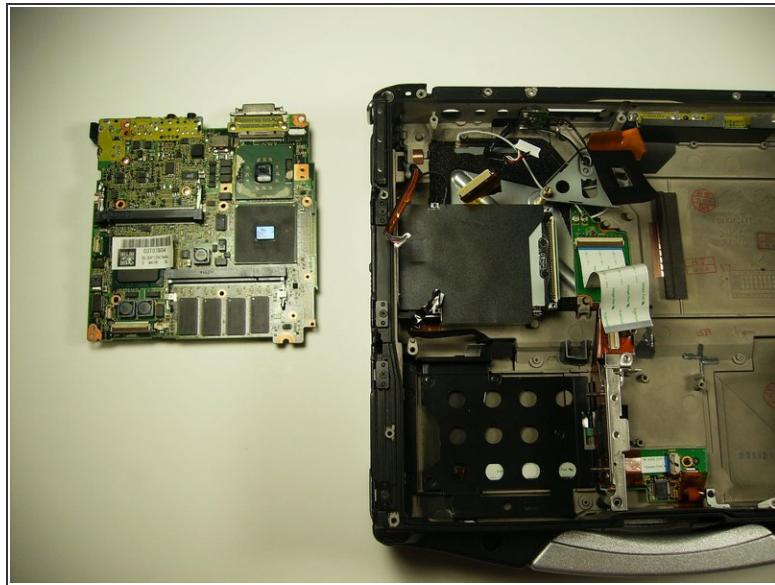
 Do not yet try to fully remove the motherboard or you may destroy the connections

## Step 22



- Detach the white ribbon cable, the white cluster connector, and the ribbon cable right next to the cluster

## Step 23



- Remove the board.

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