Dell OptiPlex FX170 Heat Sink Replacement

This guide outlines the steps to remove the Heat Sink from the motherboard for replacement.

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INTRODUCTION

The Heat Sink is the metal part with fins that is mounted on top of the motherboard.

🔧 TOOLS:

- Phillips #0 Screwdriver (1)
- Phillips #00 Screwdriver (1)
- Spudger (1)
- Tweezers (1)

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Step 1 — Case

- With the base stand facing upwards, unscrew the 6mm Phillips #2 screw.

- Pull the base stand straight up from the device.

Step 2

- Unscrew and remove the eight 4mm Phillips #0 screws (four on top, four on bottom) from the top and bottom of the device.

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Step 3

- Run the flat side of the spudger along the entire line of the case starting from the back where the power plug and a small screw are located.

⚠ Use care to not apply excessive force that could damage retaining clips while running the spudger along the case.

Step 4

- Once the clips have been released, gently disengage the cover from the rest of case by pulling in opposite directions.

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Step 5 — RAM
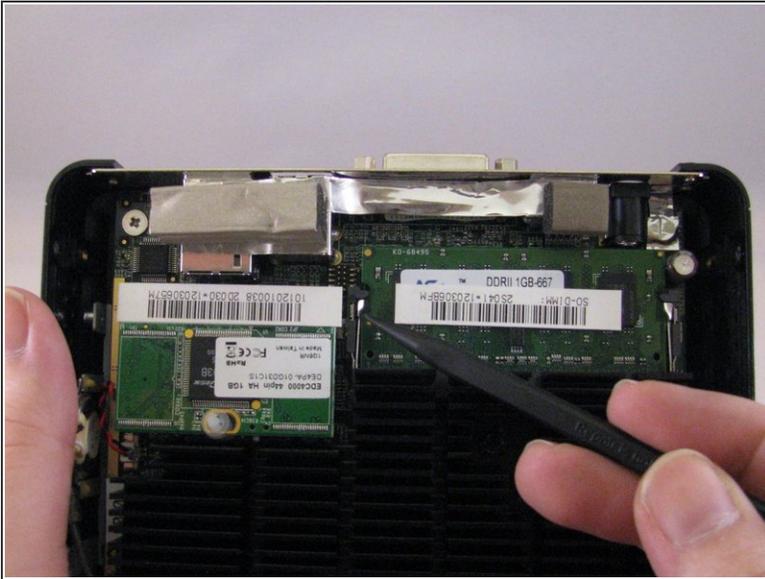
- Using fingers, push the clips on either side of the RAM. The RAM will pop up at a 45 degree angle when both clips are disengaged.

Step 6
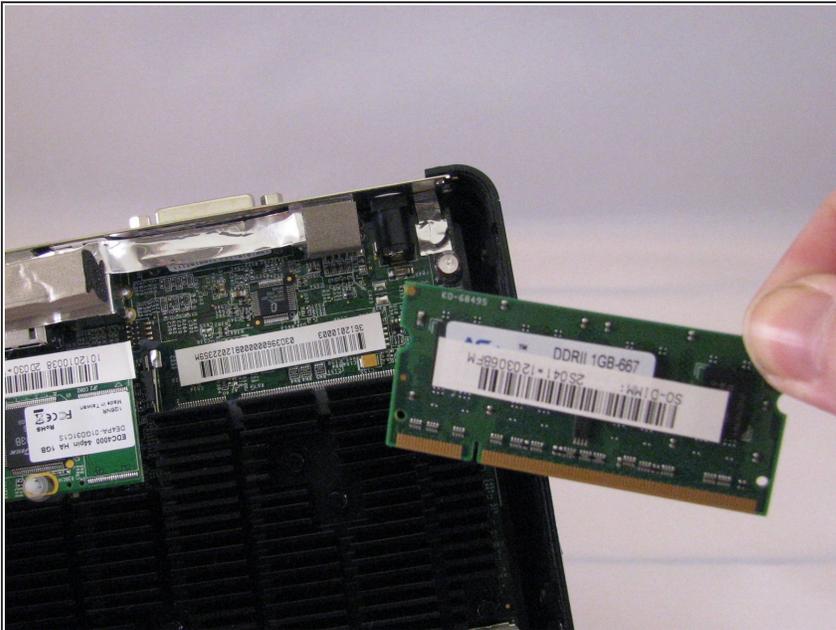
- Lift and pull out the RAM.

Step 7 — Memory Board
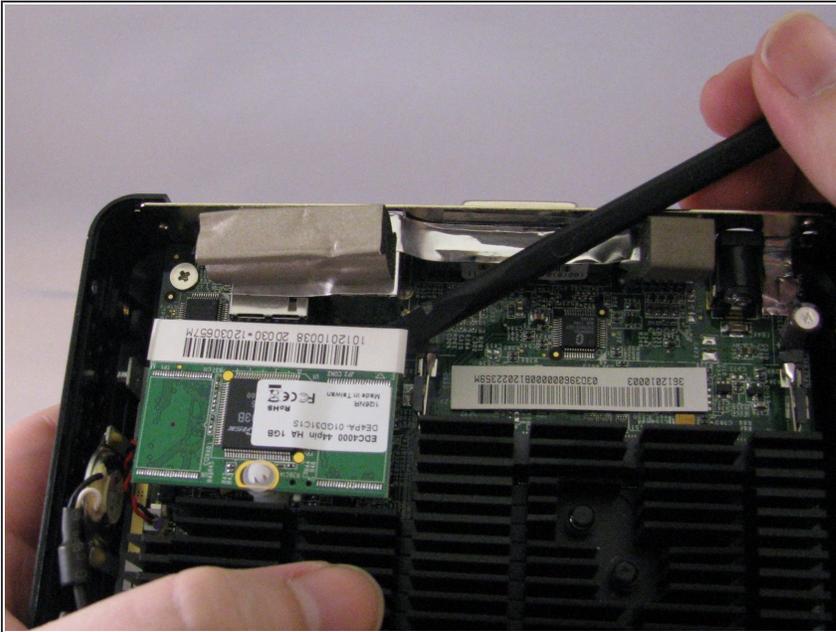
- Using the spudger, gently push on the underside of the memory board to loosen it. Gently grasp each side and pull up to release the memory board.

Step 8 — CMOS Battery
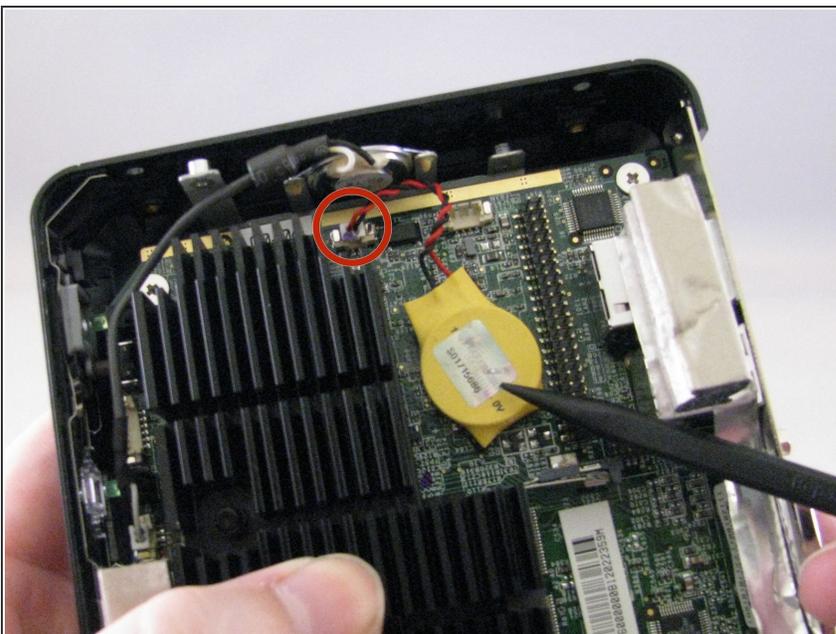
- To remove the battery, pull up on the connector that is plugged into the motherboard.

Step 9 — Motherboard
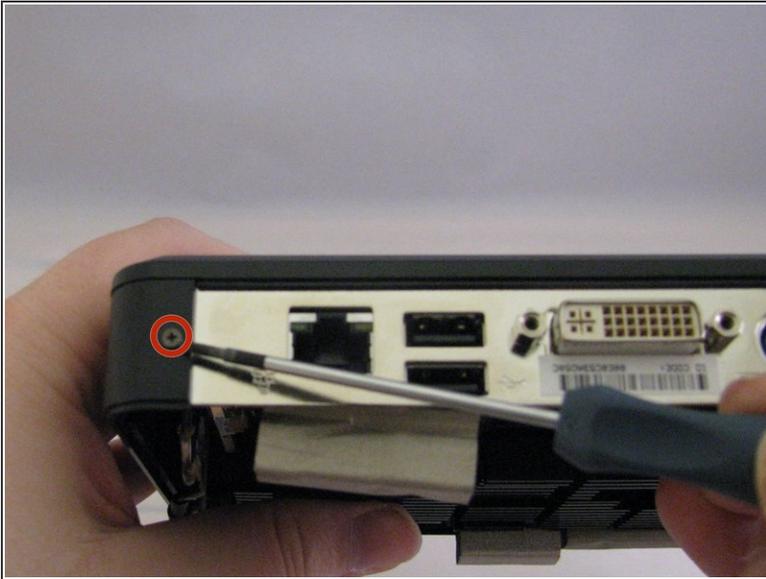
● Remove the two 4mm Phillips #00 screws that are along the back of the case.

Step 10
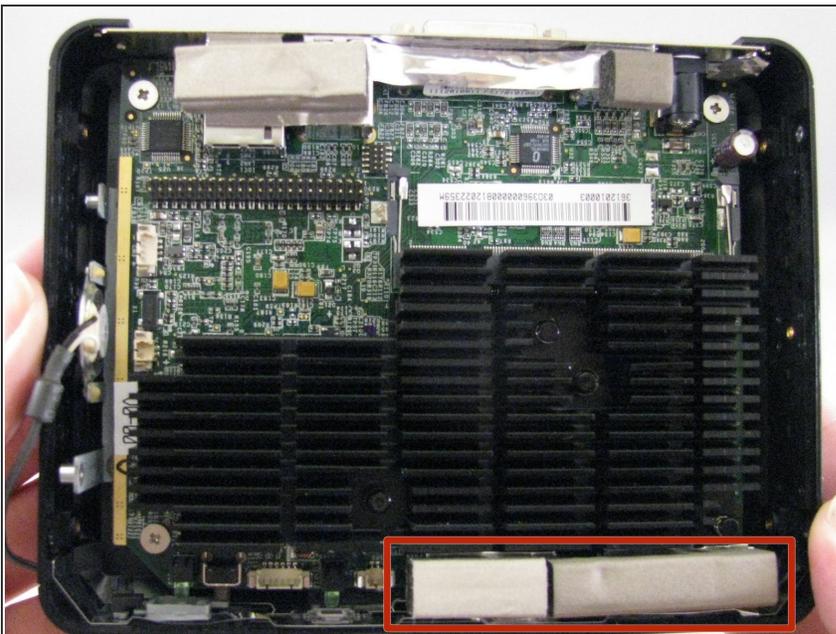
● Remove the two foam bumpers that lie on top of the two front USB ports with fingers. Do not throw them away.

Step 11
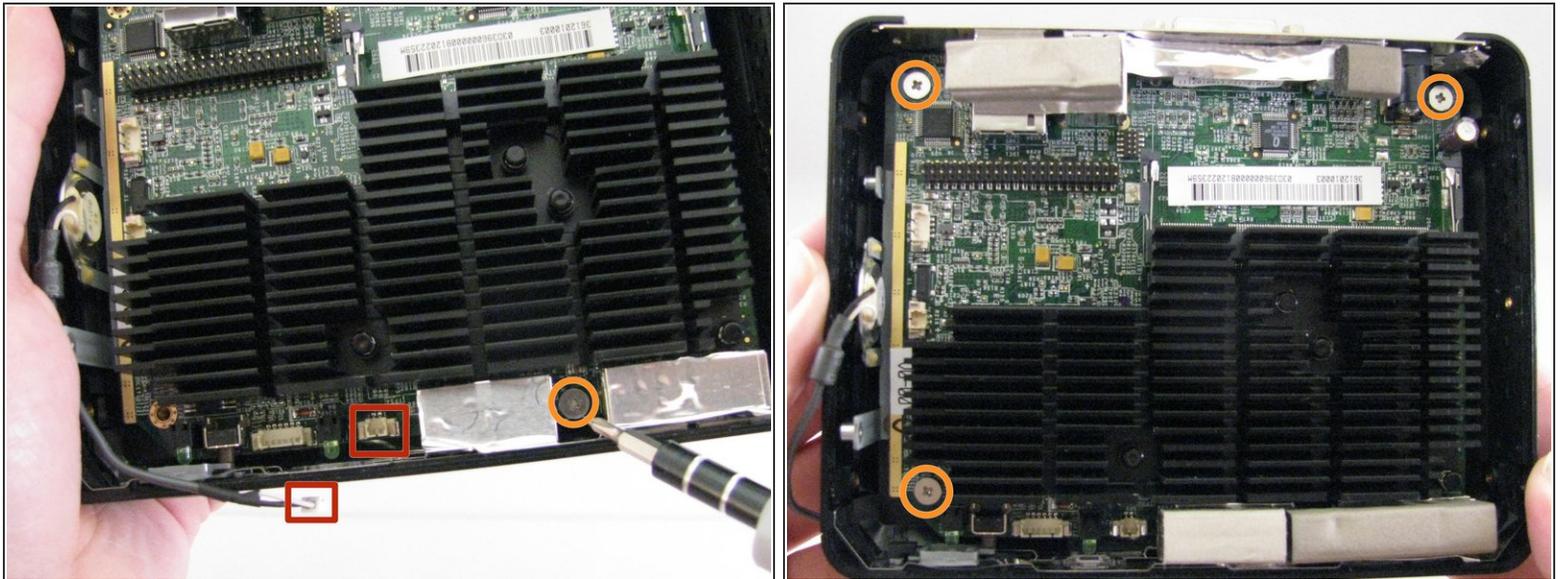
- Disconnect the speaker cable from the motherboard by gently pulling it straight up to disengage it from the port.

- Remove the four 4mm Philips #0 screws that secure the motherboard to the case.

- (i) The screw in the corner where the RAM is located is covered by a small piece of Mylar tape, peel this tape back to reveal the screw. The tweezers can be helpful for this.

Step 12

- Gently grasp the motherboard by the heat sink (the black finned piece). Lift the motherboard at an angle such that the ports along the back side come up first.

- Continue lifting the motherboard, then slowly tilt the piece off to the right to break the Mylar tape over the front USB ports.

⚠ Be careful when handling the motherboard to prevent electro-static discharge (ESD) damage. If the motherboard is being removed as part of a prerequisite, place the motherboard into a bag designed to prevent a build up of a static charge (usually referred to as a static bag).

Step 13 — Replacing the Heat Sink
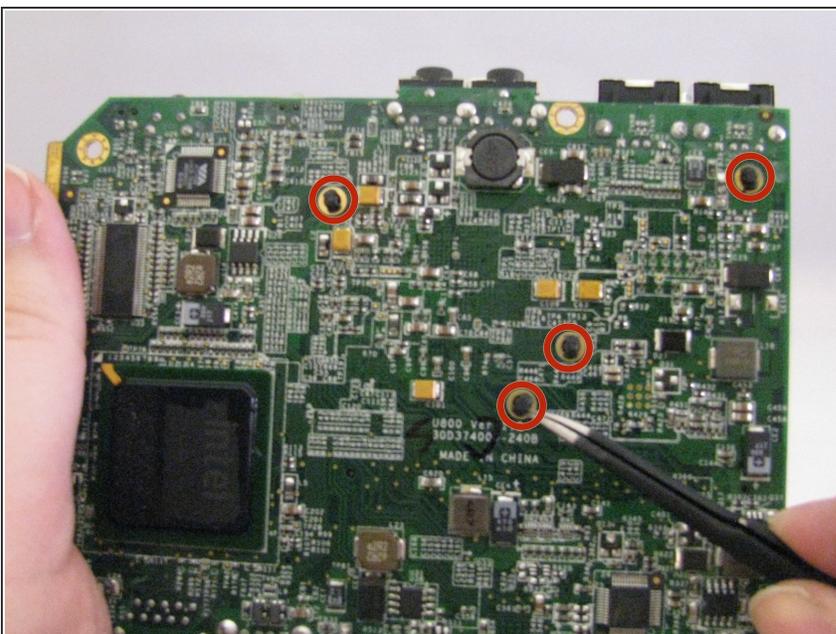
- On the back side of the motherboard, use the tweezers to squeeze the four protruding clips. These should be in the same position as the four black buttons recessed into the heat sink (when viewed from the front).

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Step 14

- Grab the heat sink and motherboard.

- Gently pull the heat sink away from the board.

- When replacing the heat sink, be sure to apply a new layer of thermal compound to the CPU to avoid overheat damage.

- To reattach the heat sink: line the four clips up with the appropriate holes in the motherboard then simply push down on them to push them through to board. There should be a small click when each one is engaged.

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

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