

Alienware X51 R2/R3 CPU Replacement

This guide will encompass how to replace or upgrade the processor for the Alienware X51 R2/R3 PC.

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INTRODUCTION

Before you start this project, you should take proper precautions. Before you start anything, you need to unplug the computer from the wall. Unplugging the computer is a must to avoid electrocution. It is recommended to take precautions against ESD by using an anti-static mat and a grounding cable. The only tool you will need for this fix is a screwdriver. You will also need a replacement CPU and thermal grease.



TOOLS:

- Thermal Grease (1)
- Phillips Screwdriver (1)
- Arctic Silver ArctiClean (1)



PARTS:

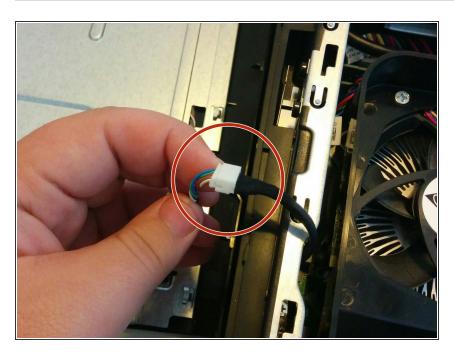
Any Socket LGA1151 processor (1)

Step 1 — CPU (Processor)



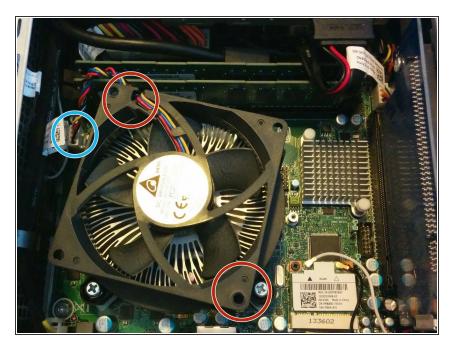
 The first step is to unscrew this screw. After that you want to slide the case cover off of the computer.

Step 2



 After the Case is open, you want to disconnect the cable to the LED's on the system case.

Step 3



- You will need to unscrew two screws from the fan cover. The screws are located in the red markers. Then you will gently lift the cover out of the case.
- Afterwards, you will need to unplug the fan from the motherboard at the blue marker.

Step 4



- Using the screwdriver, unscrew the 4 screws securing the heat sink and fan to the motherboard. THE SCREWS DO NOT COME OUT ALL THE WAY.
- Afterward, lift the heat sink out of the case to reveal the processor.

Step 5



- If there is already thermal paste on the heat sink and/or processor, clean it off using the ArctiClean.
- Carefully move the lever to release the processor bracket. Then, flip the bracket over, and CAREFULLY remove the processor BY THE EDGES.

To reassemble your device, follow these instructions in reverse order with the new processor installed. Don't forget to apply thermal grease to the new CPU.