



# 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:

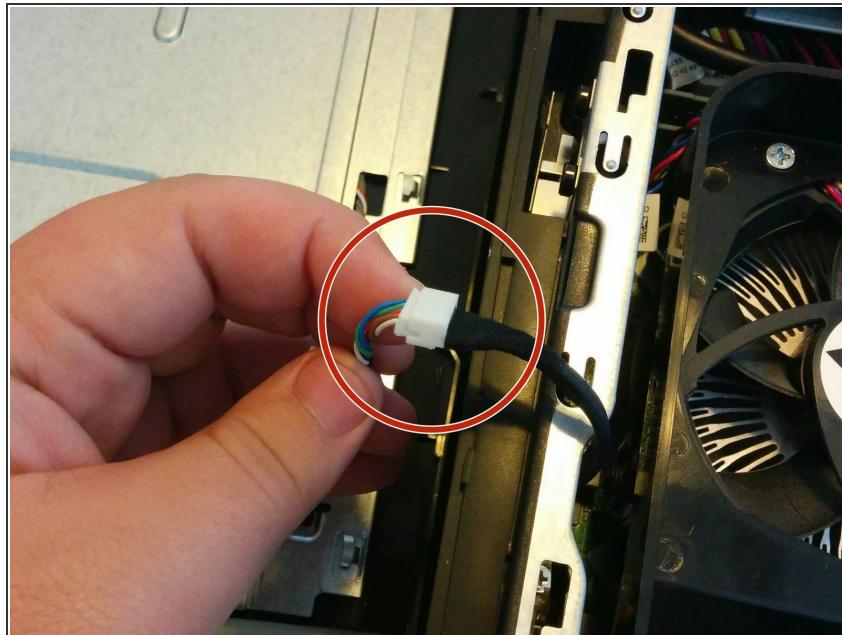
- [Any Socket LGA1151 processor](#) (1)

## Step 1 — CPU (Processor)



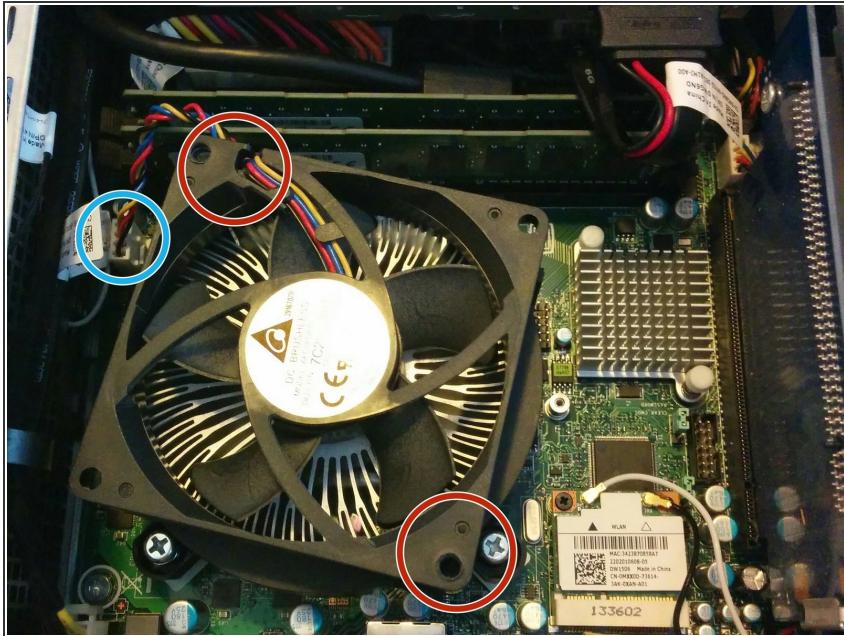
- The first step is to unscrew this screw. After that you want to slide the case cover off of the computer.

## Step 2



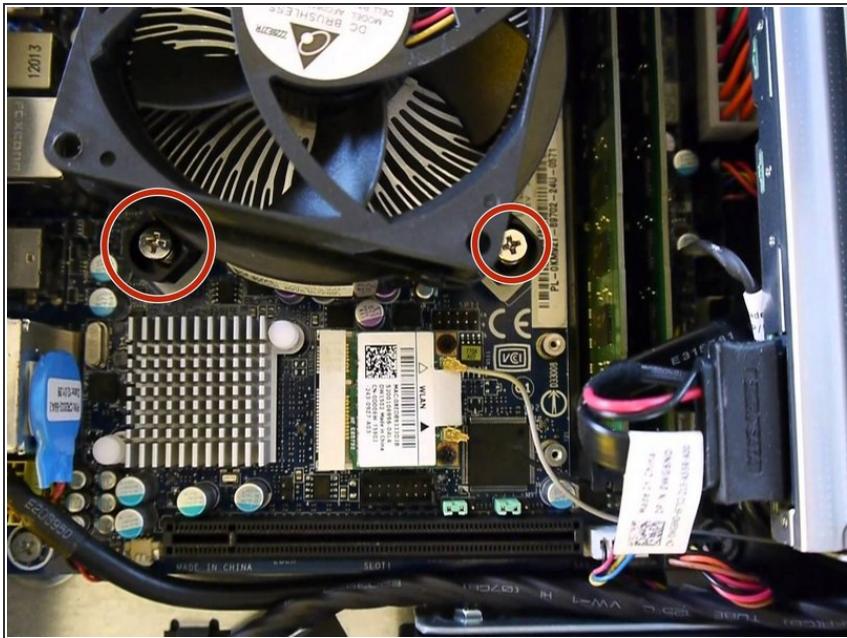
- After the Case is open, you want to disconnect the cable to the LED's on the system case.

## 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.

