



Mac Pro Late 2013 CPU Replacement

Replace the CPU in your Mac Pro Late 2013.

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INTRODUCTION

Use this guide to replace the CPU.

Removing the logic board means you'll need to [reapply a layer of thermal compound](#).

Before beginning any work on your Mac Pro: Unplug the computer and press and hold the power button for ten seconds to discharge the power supply's capacitors.

Be very careful not to touch the capacitor leads or any exposed solder joints on the back of the power supply. Only handle the board by the edges.



TOOLS:

- [TR10 Torx Security Screwdriver](#) (1)
 - [TR7 Torx Security Screwdriver](#) (1)
 - [Tweezers](#) (1)
 - [Spudger](#) (1)
 - [T5 Torx Screwdriver](#) (1)
 - [TR8 Torx Security Screwdriver](#) (1)
 - [Arctic Silver ArctiClean](#) (1)
 - [Arctic Silver Thermal Paste](#) (1)
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Step 1 — Outer Case



- Slide the lock switch to the right, to the unlocked position.

Step 2



- Lift the outer case straight up off the Mac Pro.

i It may help to push down on the center of the fan while lifting the case up.

Step 3 — Fan Assembly



- Remove five 5.1 mm T10 Torx screws from around the outer perimeter of the fan assembly.

Step 4



- ⓘ The fan assembly is attached to the rest of the computer by two cables on the IO board side.

- Tilt the assembly up away from the IO board.

⚠ Do not try to remove the fan assembly yet, as it is still attached by two cables.

Step 5



- While supporting the fan assembly with one hand, loosen the two T8 captive screws in the fan cable bracket.

⚠ These screws are captive in the Mac Pro. Do not try to remove these screws from your Mac Pro.

Step 6



- Use a pair of tweezers to pull the fan cable bracket away from the fan assembly.

Step 7



- Use the flat end of a spudger to disconnect the fan assembly ribbon cable from the IO board.

Step 8



- Disconnect the fan assembly antenna cable from the IO board.
- Remove the fan assembly from the Mac Pro.

Step 9 — Lower Case



 Flip the Mac Pro upside down, 180 degrees.

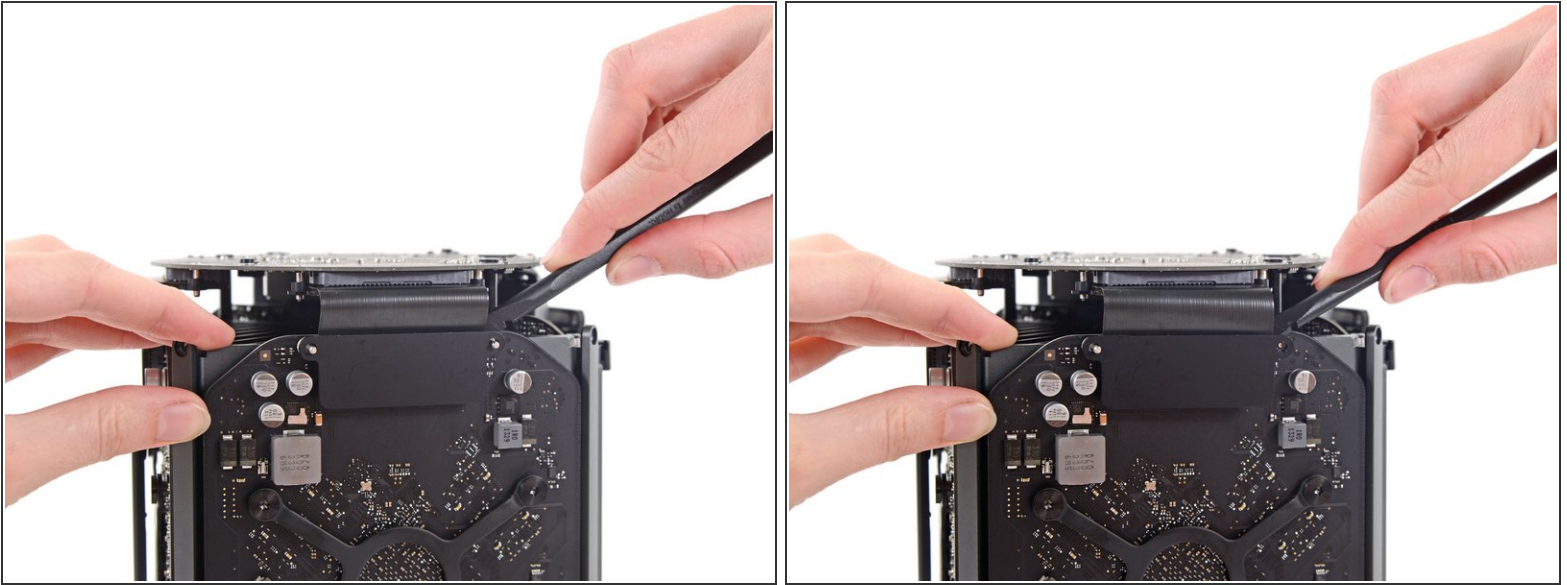
- Remove five 5.1 mm T10 Torx screws from the outer perimeter of the lower case.

Step 10



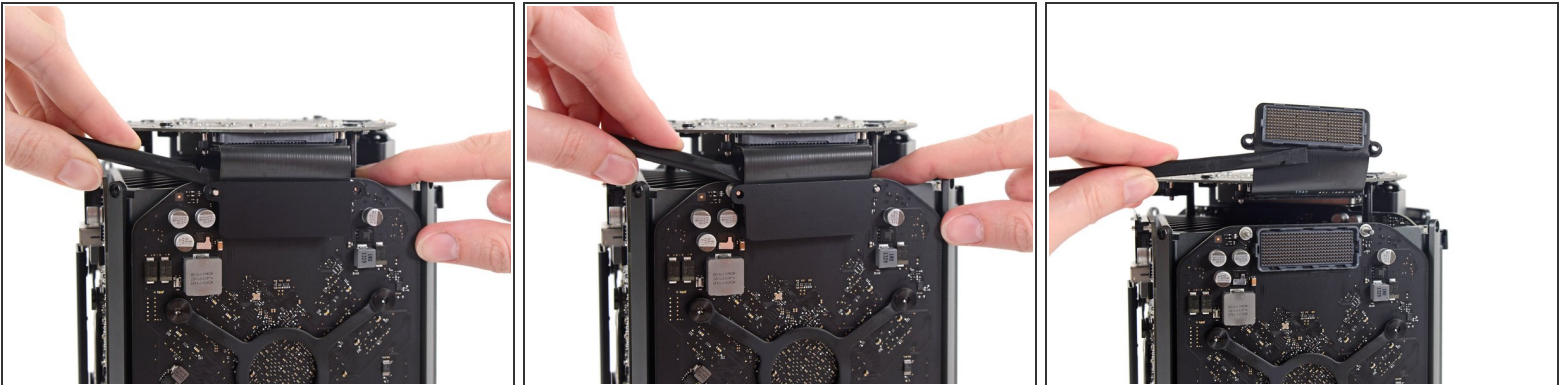
- Carefully lift the lower case up and remove it from the Mac Pro.

Step 11 — Interconnect Board



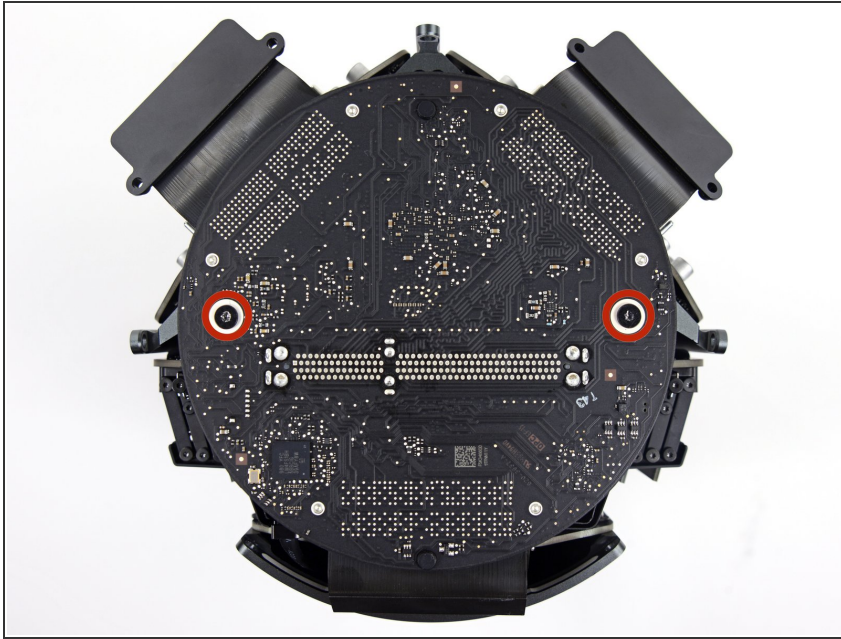
- Use the flat end of a spudger and a twisting motion to gently separate one side of the graphics card data connection.

Step 12



- Gently separate the other side as well.
- Flip the connector up and out of the way of the graphics card.
- ⓘ Repeat this procedure on the other graphics card.

Step 13




- Remove the two 6.0 mm T8 Torx screws securing the interconnect board to the heat sink.

Step 14

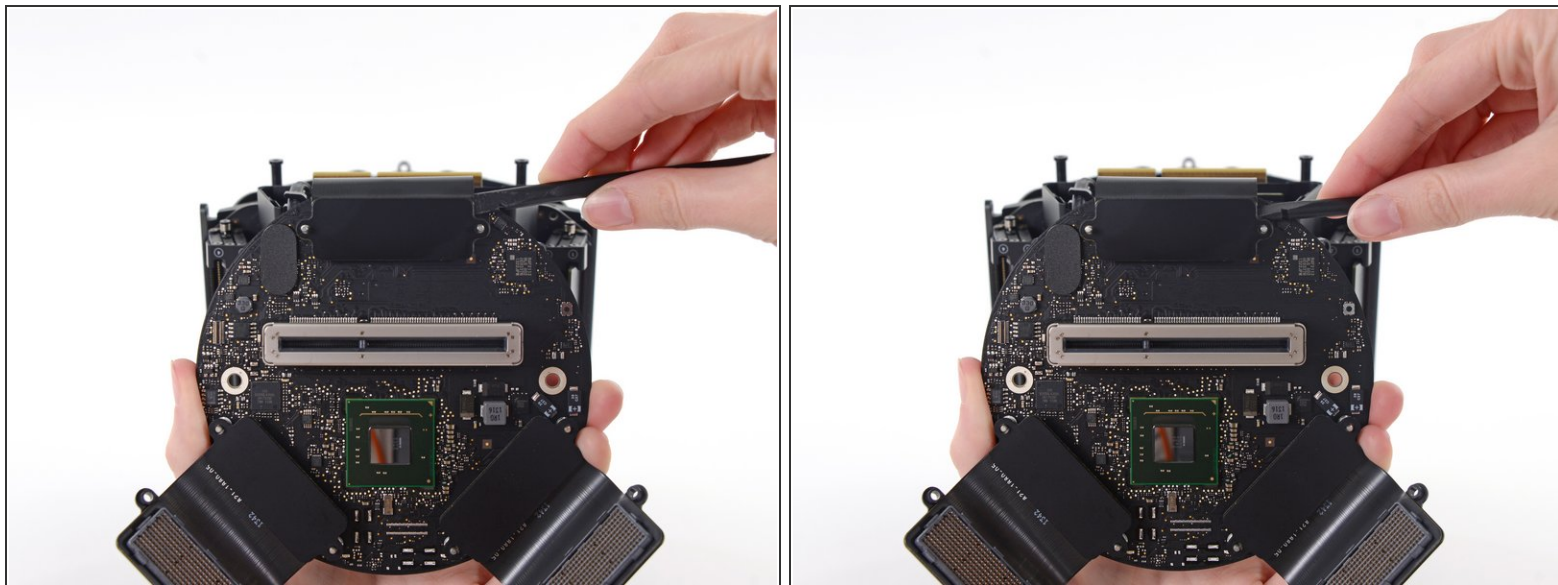


- Gently walk the interconnect board straight up off the logic board's slot connection.

 It is recommended to lift one side and then the other.

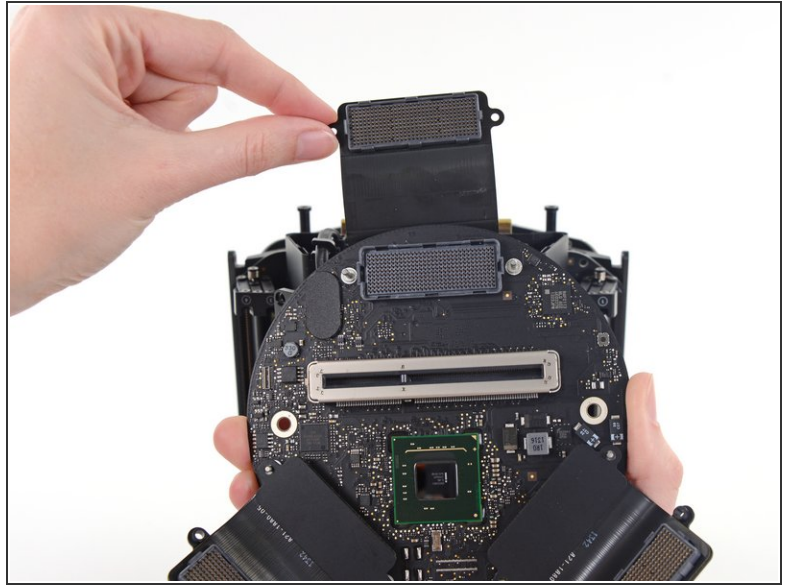
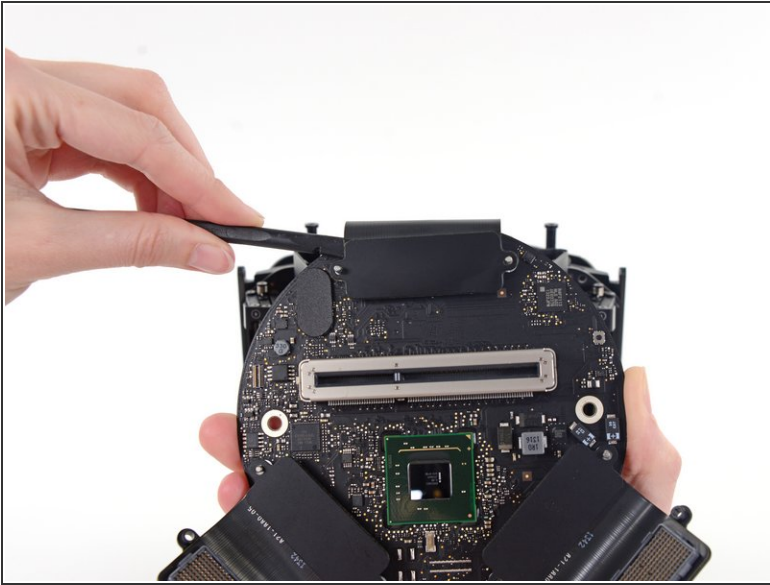
 Do not try to remove the interconnect board from the Mac Pro yet, as it is still connected to the IO board.

Step 15



- Flip the interconnect board up and over, exposing the IO board data cable.
- Use the same sort of twisting and spreading motion with the flat end of a spudger to separate one side of the IO board data cable.

Step 16



- Use the flat end of a spudger to separate the other side of the IO board data cable.
- Bend the cable out of the way and remove the interconnect board from the Mac Pro.

Step 17 — Power Supply Assembly



- Flip the Mac Pro back over and set it gently on a flat surface.
- ⓘ We recommend laying the Mac Pro on the corner of the heat sink and the two standoff screw posts that attach to the interconnect board.

Step 18



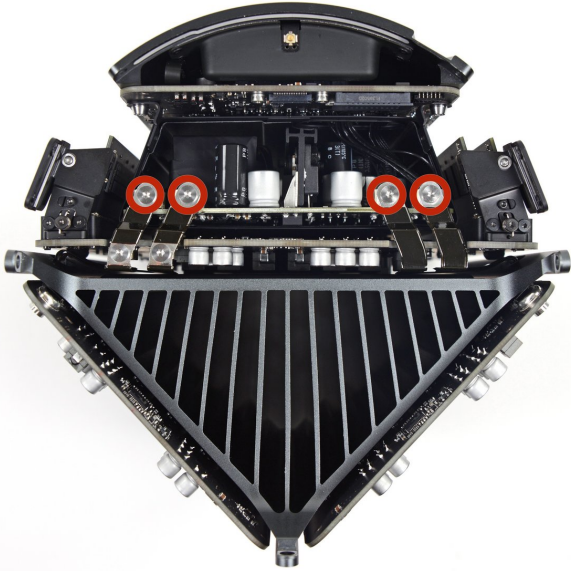
- Remove the two 3.6 mm T5 Torx screws from the sides of the power supply cage (one on each side).

Step 19



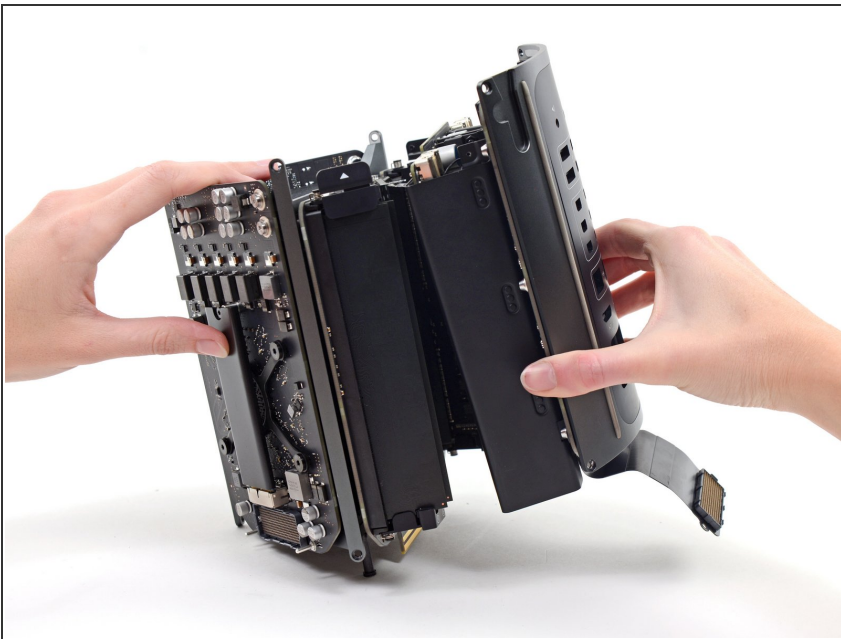
- Remove the power supply cage from the top of the power supply.
- ⚠ By removing this cage, you are exposing internal components of the power supply. Be very careful not to touch any of the power supply components or circuitry.
- ⓘ Be careful not to drop any screws or tools into the power supply, as this may damage the power supply.

Step 20



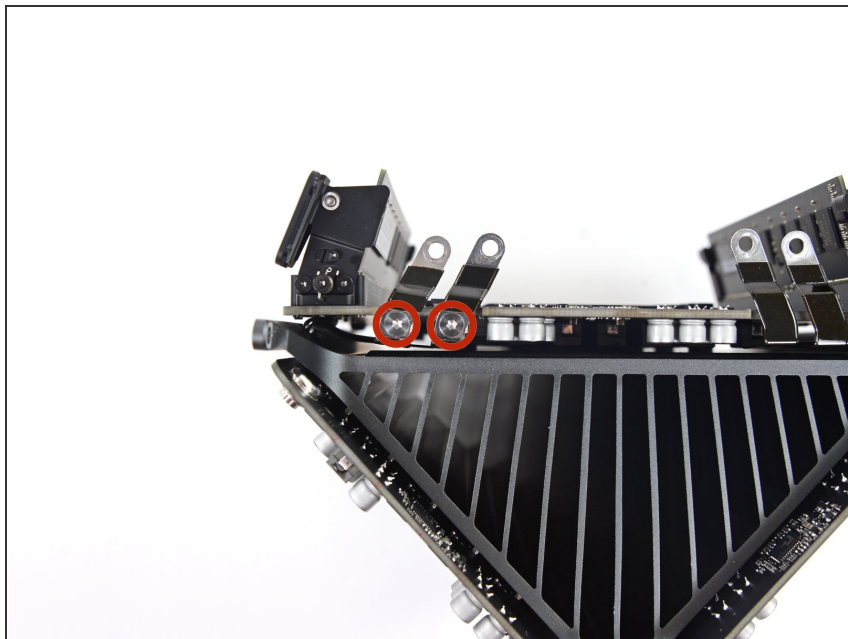
- Remove the four 5.5 mm T8 Torx screws securing the power supply assembly to the Mac Pro.

Step 21



- Remove the power supply assembly from the Mac Pro.

Step 22 — Logic Board



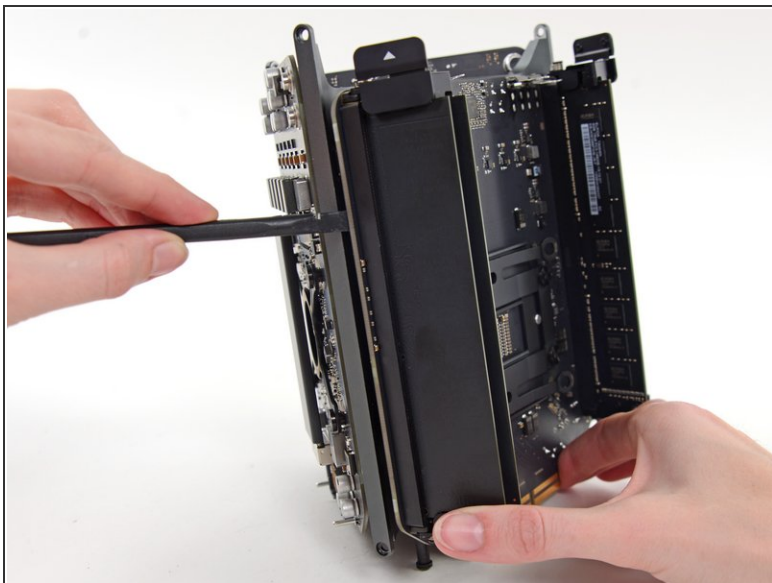
- Remove two 5.5 mm T8 Torx screws.

Step 23



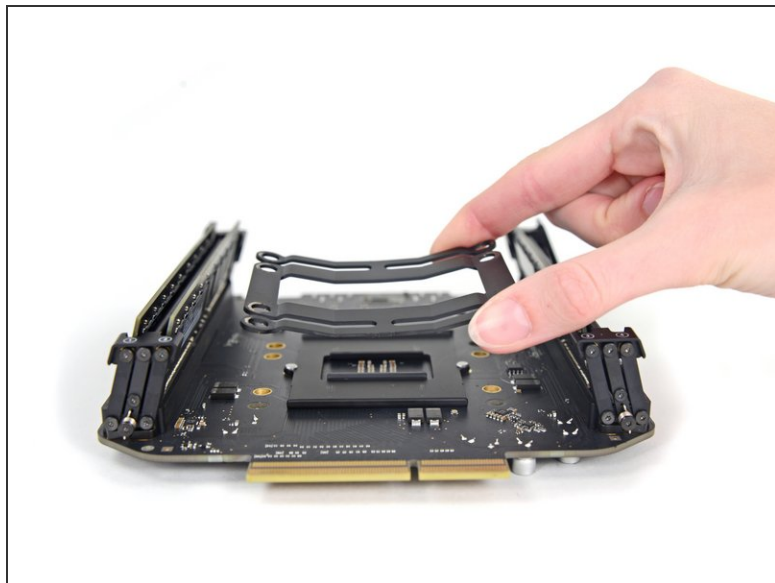
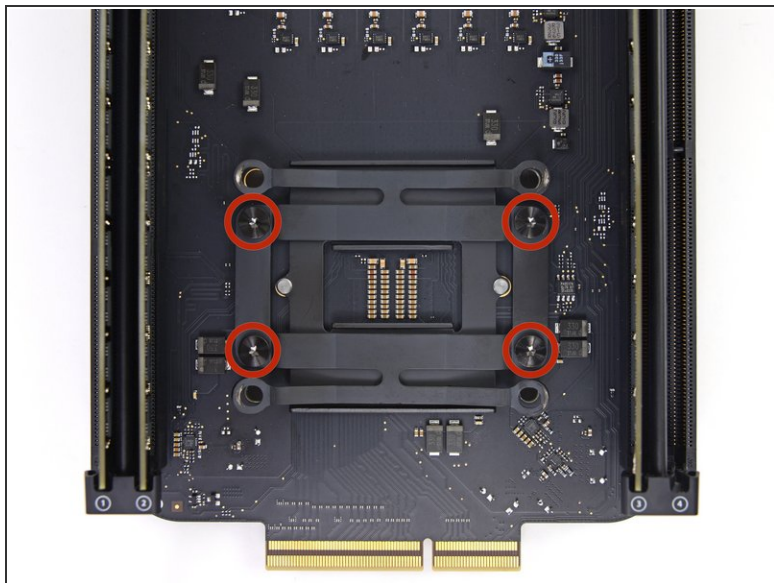
- Remove four 12.8 mm T10 Torx screws from the CPU heat sink bracket.
- ⓘ Remove only the outer four of the eight screws.

Step 24



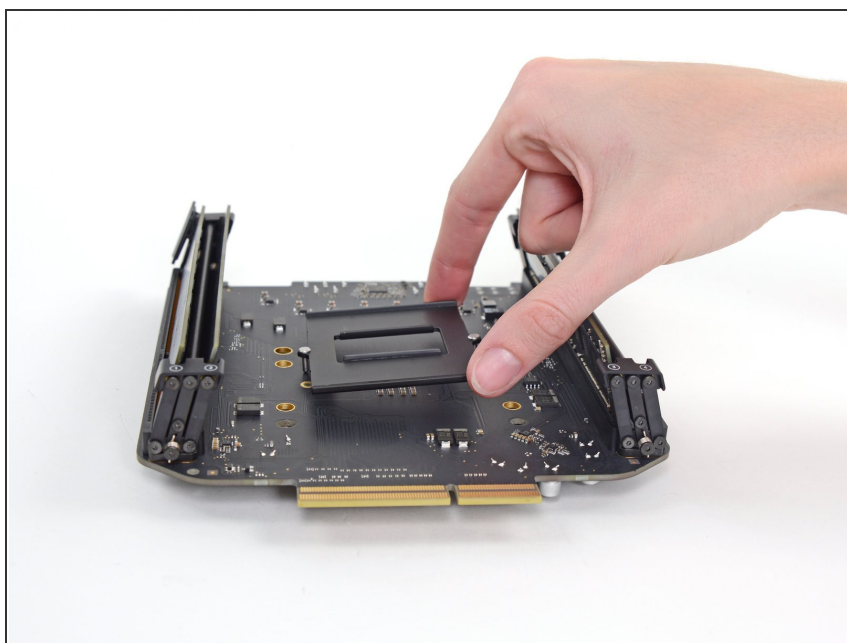
- ⓘ At this point, the logic board is held onto the heat sink by thermal compound.
- ⓘ You may need to gently pry with a spudger to separate the logic board from the heat sink.
 - ⚠ Be very careful not to bend and break the logic board.
- Remove the logic board from the heat sink.

Step 25



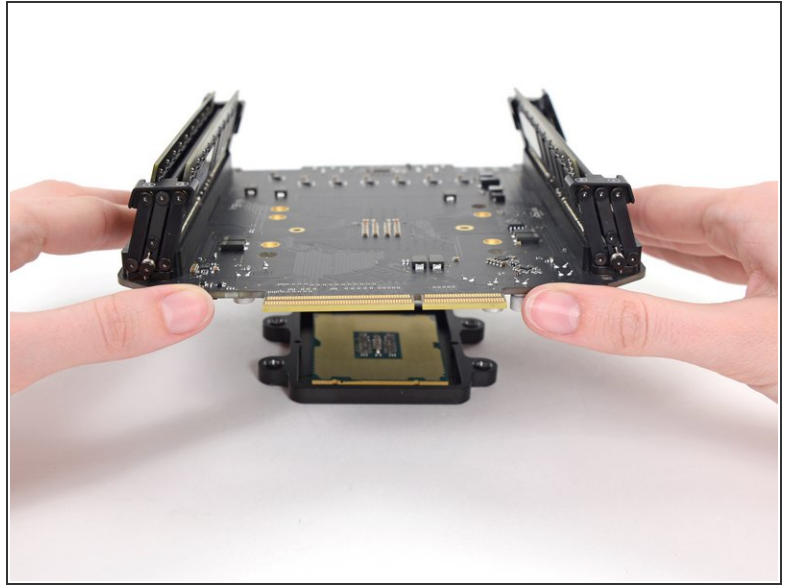
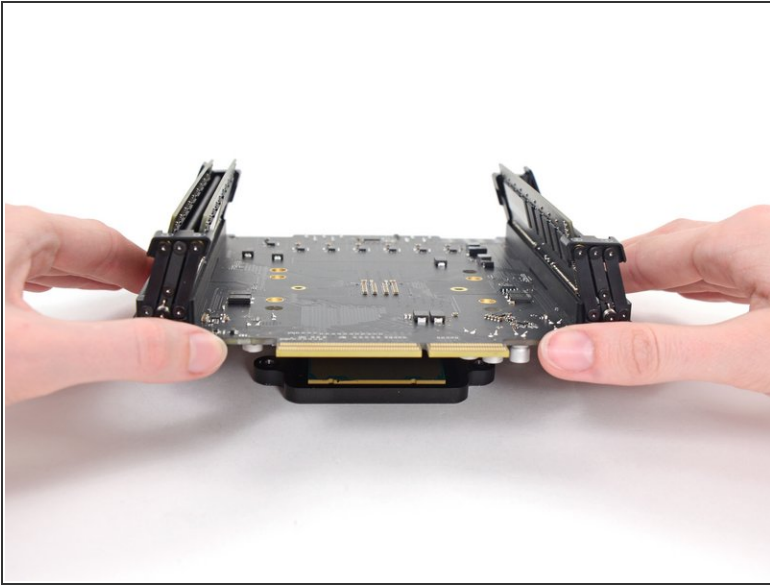
- Remove the inner four 12.8 mm T10 Torx screws from the CPU heat sink bracket.
- Remove the CPU heat sink bracket.

Step 26



- Remove the second heat sink bracket.

Step 27



- Lift and remove the logic board from the CPU and bracket.
- During reassembly, be sure to clean off and replace the thermal compound on the CPU.
- We have a [thermal paste guide](#) that makes replacing the thermal compound easy.

Step 28 — CPU



- Remove the CPU from the CPU bracket.
- CPU remains.
- ★ During reassembly, be sure to clean off and replace the thermal compound on the CPU.
- ⓘ We have a [thermal paste guide](#) that makes replacing the thermal compound easy.

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