

## Answers: 3.1.2.6 Lab - Install the Motherboard

### Introduction

In this lab, you will install a CPU, a heat sink/fan assembly, and RAM module(s) on the motherboard. You will then install the motherboard in the computer case.

### Recommended Equipment

- Computer case with power supply installed
- Motherboard
- CPU
- Heat sink/fan assembly
- Thermal compound
- RAM module(s)
- Motherboard standoffs and screws
- Antistatic wrist strap and antistatic mat
- Tool kit
- Motherboard manual

### Step 1: Install the CPU.

- Place the motherboard, the CPU, the heat sink/fan assembly, and the RAM module on the antistatic mat.
- Put on your antistatic wrist strap and attach the grounding cable to the antistatic mat.
- Locate Pin 1 on the CPU. Locate Pin 1 on the socket.

**Note:** The CPU may be damaged if it is installed incorrectly.

- Align Pin 1 on the CPU with Pin 1 on the socket.
- Place the CPU into the CPU socket.
- Close the CPU load plate and secure it in place by closing the load lever and moving it under the load lever retention tab.
- Apply a small amount of thermal compound to the CPU.

**Note:** Thermal compound is only necessary when it is not included on the heat sink. Follow all instructions provided by the manufacturer for specific application details.

- Align the heat sink/fan assembly retainers with the holes in the motherboard around the CPU socket.
- Place the heat sink/fan assembly onto the CPU and the retainers through the holes in the motherboard.
- Tighten the heat sink/fan assembly retainers to secure it.
- Plug the fan connector into the motherboard. Refer to the motherboard manual to determine which set of fan header pins to use.

### Step 2: Install the RAM.

- a. Locate the RAM slots on the motherboard.

In what type of slot(s) will the RAM module(s) be installed?

How many notches are found on the bottom edge of the RAM module?

- b. Align the notch(es) on the bottom edge of the RAM module to the notches in the slot.
- c. Press down until the side tabs secure the RAM module.
- d. Ensure that none of the RAM module contacts are visible. Reseat the RAM module if necessary.
- e. Check the latches to verify that the RAM module is secure.
- f. Install any additional RAM modules using the same procedure.

### Step 3: Install the Motherboard.

- a. Install the motherboard standoffs.
- b. Install the I/O connector plate in the back of the computer case
- c. Align the connectors on the back of the motherboard with the openings in the back of the computer case.
- d. Place the motherboard into the case and align the holes for the screws with the stand-offs. You may need to adjust the motherboard to line up the holes for the screws.
- e. Attach the motherboard to the case using the appropriate screws.

This lab is complete. Please have the instructor verify your work.