

## Lab 2.3.3: Identifying the CPU

**Estimated time:** 30 Minutes

### Objective

This lab will focus on the student's ability to locate and identify the type of CPU and CPU Socket on the motherboard. The student may need to use various resources such as device manuals to gain additional information on these components to determine the possibility of improvement and/or upgrades. Observe proper care concerning power supplies and ESD.

### Equipment

The following equipment is required for this exercise:

- A motherboard
- Motherboard manual
- Processor manual/documentation

### Scenario

Your next-door neighbor would like to upgrade her computer with a new CPU. She has hired you to determine the speed and type CPU her motherboard currently supports.

### Procedures

The Central Processing Unit (CPU) is the heart of the computer. It receives data, interprets data, and performs major calculations. You will need to determine which CPU is currently installed on the motherboard and the CPU speed the motherboard can support. Slot or socket type will also need to be determined and contrasted with other socket types.

#### Step 1

What type CPU socket is used in this system?

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#### Step 2

Will this socket support an upgrade to the CPU?

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### Step 3

What type of CPU is used?

Manufacturer:	
Type/Part #:	
Speed:	
Heat Sink (if used):	
Cooling Fan (if used):	

### Step 4

Is this socket type compatible with CPUs from other manufacturers?

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### Step 5

Using the Internet or other resources, locate all the specifications about the particular CPU that is in your computer. Attach copies of any additional research material used in completing this assignment.

### Troubleshooting

Take care when installing a CPU into a Zero Insertion Force (ZIF) Socket. The CPU will be keyed with a pin missing on one corner. Installation should be straightforward; simply line up the processor with the socket and it should fall into place.

Single-Edge Contact (SEC) processors also need to be installed correctly. SEC processors are easily identified because they make connection with the motherboard through a connector that is along one side of the processor. To install an SEC properly, attach the retention mechanism to the motherboard. Refer to the motherboard manual for installation instructions of the retention mechanism. After the retention mechanism is securely fastened to the motherboard, carefully slide the SEC processor into the retention mechanism. Verify that the SEC connectors are making good contact with the motherboard.

### Reflection

Explain the skills necessary to install a CPU:

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