Video Demonstration - Install the CPU (4 min)

We're going to install a CPU, central processing unit, into our motherboard. Here is an exercise that is not commonly done in the classroom. We're going to take a CPU, like this chip here, and we're going to install it into our motherboard slot.

Now, what we must do is orient the CPU. Step one is locating pin one. Pin one is usually what indicates how the CPU orientation should work. We have a triangle, which we'll be able to see, right here, let me zoom in. And this triangle, is what's going to inform us of the alignment of pin one.

Now, if we go to our motherboard, and we open up our motherboard slot. If we look closely, what we'll be able to see here as well is that same triangle marking. And that triangle marking is right here, where it shows us the orientation for our CPU.

Now, our CPU also has a keyed slot on it, and on the CPU on the motherboard housing, you'll also be able to see here that we'll be dropping the CPU in those keyed slots to ensure that it's correctly aligned. Now that we know how it should be aligned, step two, is to safely lower the CPU into the CPU slot. For step three, we can lower the CPU housing and lock the lever into place to hold our CPU firmly in place. For step four, it is important that we take some thermal paste, and we're going to place a pea-sized drop, carefully, on the top center of our CPU. This thermal paste will help the distribution of heat from the CPU to the heat sink that we will install next. Now to keep this CPU cool and prevent it from overheating, we are going to install a heat sink for step five.

These commonly have a fan attached to them, but not all of them do. These fins we see here are going to absorb the heat from the CPU and have slots for airflow to move in between. The fan on top of the heat sink will help draw the heat away and cool the fins. This will allow them to absorb more heat from the CPU. As we attempt to place the heat sink on the motherboard, it may take one to two attempts to position it correctly over the screws that are going to surround our CPU. The final step, step six, is to screw down the heat sink.

After positioning the heat sink correctly, so that it aligns with the heat sink screws on the motherboard, we will screw in the four screws in a specific order. It is best to screw one corner first, and then go to the opposite corner, diagonally from it. This will help ensure we have a flushed connection between the CPU and thermal paste and the heat sink. As I mentioned, we'll go diagonally across to the other corner.

Now we can continue on the last two screws. Now that all four screws are locked in, the heat sink will not be able to move or shift at all. Having a tight and flushed fitting will also allow the CPU to better stay cool. Thanks for watching our CPU install.