

Temperature Sensor



CAUTION: Be sure to attach the Koolance temperature probe to the CPU cooler during installation. The safety features of your system may not function properly without the correct placement of this probe, and hardware damage can result.

Remove the protective film from the bottom of the CPU cooler.



Insert the temperature sensor into *either* bottom groove on the CPU cooler. The sensor is required for proper fan speed control and system safety features.



DO NOT attempt to install the temperature probe *in between* the processor and cooler. Despite its thin size, it will interfere with CPU contact or burn-out the sensor.

Apply metal tape to keep the temperature probe in place. DO NOT stick metal tape or the temperature probe to the raised (polished) portion of the CPU cold plate.

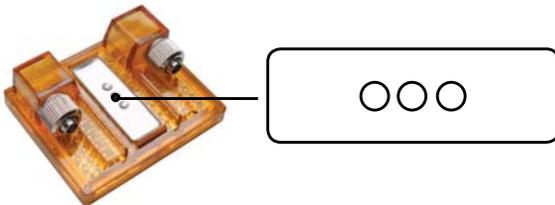


You can use a zip-tie to further secure the temperature probe wire to the CPU tubing.

Tension Screw

There are 3 metal center receptacles on the CPU-305 cooler:

3 center holes correspond with different CPU socket positions

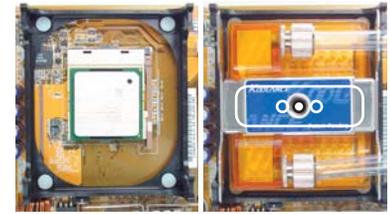


CAUTION: Installing the tension screw into the wrong cooler receptacle can cause insufficient cooler contact, and may result in hardware damage.

For Intel P-4 (478 & 775), Xeon, AMD Athlon 64, FX, or Opteron processors, use the center hole:

2

Screw alignment for P-4, Xeon, Athlon 64, FX, X2, and Opteron processors



Intel P-4/Xeon & AMD 64/Opteron Black Screw

Use the included black screw for the following processors: Intel Pentium-4 (including dual core), Xeon, AMD Athlon 64, FX, Opteron, & X2 chips.

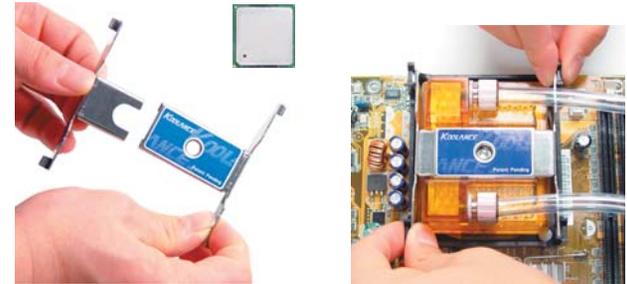


CAUTION: Installing the tension screw into the wrong cooler receptacle can cause insufficient cooler contact, and may result in hardware damage.

With the bracket properly aligned, insert and slowly twist the tension screw until it can no longer be tightened. Over-tightening is prevented by a ratcheting action.

Intel Socket 478 Processors

Apply thermal interface compound directly to the CPU die. Do not add more than is necessary to cover it with a very thin layer.



Clips for Intel P-4 socket 478

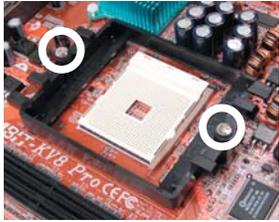
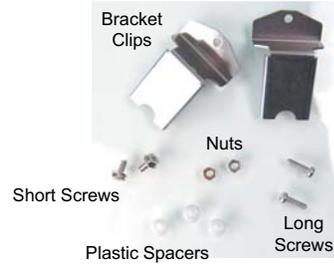
Assemble the CPU mounting bracket using the appropriate clips. The longer pair are for Intel Pentium-4 processors; the shorter are for AMD Athlon/XP and Intel P-III processors.

Fit the cooler and mounting brackets onto the CPU socket. The bracket clips slide inward and outward in order to hook to the socket tabs. Check that the bracket clips are aligned before installing the tension screw.

The tension screw must be aligned over the center of the CPU. Otherwise, insufficient contact could result in poor performance, or even damage. (Please see *Tension Screw* for more details.)

AMD Socket 939, 754, & 940 Processors

The AMD 64 Adapter is designed for **AMD Athlon 64, X2, FX, and Opteron** processors in socket 754, 940, and 939 formats. The motherboard may need to be removed from the chassis in order to install this device.



Various hardware comes with the Koolance AMD 64 Kit, and depending on your particular motherboard, some of it may not be required.

AMD 64-bit boards have 2 primary mounting holes which the Adapter will use.

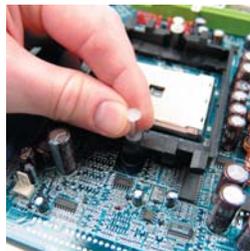
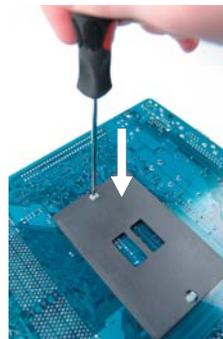


Remove the black plastic retention frame from the motherboard. Generally, this is held in place with 2 metal screws.

(If there are plastic tabs instead of screws, please skip to the next paragraph.)



For motherboards with plastic tabs instead of metal screws, turn the motherboard over and push the center locking bolt inward with a small flat screw driver.



From the top side, pull up both plastic center locking bolts.



Finally, squeeze the remaining tabs together beneath the board, and gently push them through with long-nose pliers.

This should allow you to remove the CPU socket's plastic retention frame from the motherboard.

The included bracket clips are used to mount the Cooler. Assemble the bracket by inserting these clips into the center slider of the CPU Cooler.



Apply thermal paste to the CPU directly. Spread the paste so that it evenly covers the CPU. A piece of thick paper (such as a business card) works well for this.

Ideally, the short screws with the Koolance AMD 64 Adapter kit are all that will be required to mount the bracket. (These are standard ATX chassis screws.)

However, if the socket's backplate is a different design, the longer screws, plastic spacers, and nuts may be needed to hold the bracket.



Short Metal Screws



Plastic Washer (with Long Screw)



Bottom Metal Nut (with Long Screw)

Despite the final method of attachment, the Koolance AMD 64 Adapter should utilize the original motherboard backplate. This is a necessary component to avoid physical damage of the motherboard or CPU.



5



CAUTION: Always use the motherboard's original CPU socket backplate with the Koolance AMD 64 Adapter. This component is designed to avoid damage to your hardware from over-extension.



Be sure to install the temperature sensor before mounting the CPU Cooler.

The CPU Cooler will use the black tension screw and the center hole for AMD 64, Opteron, or FX processors. (Please see *Tension Screw* for more details.)

Intel Socket LGA-775 ("T") Processors

The LGA 775 Adapter is designed for Intel LGA 775 ("Socket T") processors. The motherboard should be removed from the chassis in order to install this device.



LGA 775 boards have 4 mounting holes which the adapter will use.

The adapter can be mounted in any direction, but it will be easier to install the CPU if the metal rails are mounted parallel to the socket locking arm.

CORRECT: rails parallel to socket locking arm

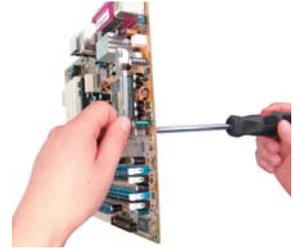
INCORRECT: rails perpendicular to socket locking arm



6



Both rails are mounted with two screws from the back side of the motherboard.



Apply thermal paste to the CPU directly.

Spread the paste so that it evenly covers the processor. A piece of thick paper (such as a business card) works well for this.

The P-4 socket 478 bracket clips are also used with the LGA-775 Adapter. Assemble the bracket by inserting these clips into the center slider.



The temperature sensor should already be installed into the CPU Cooler.

Fit the cooler and mounting bracket onto the CPU socket. The bracket clips slide inward and outward in order to hook to the rail holes.

The CPU-305 uses the bottom rail holes of the LGA-775 Adapter. Once the tension screw is tightened, the cooler should not be loose when mounted to the processor.



Use the bottom holes on the LGA-775 Rails



Check that the bracket clips are aligned in all 4 rail holes before installing the tension screw.

The CPU-305 Cooler will use the black tension screw, and the center hole for LGA-775 processors. (Please see *Tension Screw* for more details.)