

MCX462+T™ Heatsink AMD® Installation Guide

Packing list

Parts	Qty	Parts	Qty
Thermoelectric Heat Sink assembly	1	6-32 Hex Lock-Nuts (for motherboard)	4
Snap-rivets (for 80mm fan)	4	Black fiber washers (for motherboard)	10
Spring assembly – pre-installed	4	2 pole euro-style wire connector	1
Standoffs	4	Thermal grease – Arctic Alumina	1
.220x.046 Nylon spacers (for motherboard)	4	Motherboard gaskets	2

Preamble:

This product is intended for expert users only. Please consult with a qualified technician for installation. Improper installation may result in damage to your components. **Swiftech assumes no liability whatsoever, expressed or implied, for the use of these products, nor their installation.** The following instructions are subject to change without notice. Please visit our web site at www.swiftnets.com for updates.

I. Preparing the motherboard

1. **You must uninstall** your MB prior to installing the MCX462+™ heat sink.
2. **Install standoffs in MB**
Determine which standoff washers to use, depending on the mounting holes sizes of your particular MB model:
 - Large holes .230" (5.8mm) diameter, use in the following order: standoff, black fiber washer, .220x.046 Nylon spacers (fits inside the MB hole), then on the other side of the MB, black fiber washer, and lock-nut.
 - Small **grounded** holes .150" (3.8mm) diameter (you can recognize grounding by a silver ring around the holes), use in the following order: standoff directly to the MB (black fiber washer is NOT necessary), then on the other side of the MB, black fiber washer, and lock-nut.
 - Small holes, **NOT grounded** (bare circuit board): you **must** use black fiber washers, or damage to the MB may occur: use in the following order: standoff, black fiber washer, then on the other side of the MB, black fiber washer, and lock-nut.

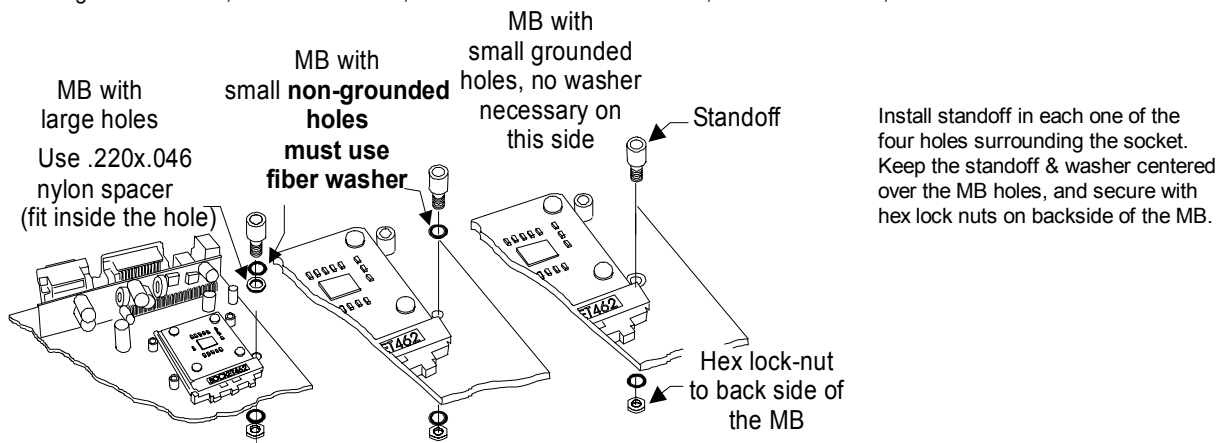


Figure 1

- **Fill-up the socket with dielectric grease:** Do not confuse dielectric grease with the provided thermal compound that is only used for the CPU. Dielectric grease is used to prevent condensation where parts are exposed to cold. We use Lubrex (available on our web site under the [liquid cooling accessories section](#)), but any similar product can be used, as long as it clearly states "good dielectric properties". Fill-up the socket center cavity (grease is to be level with the upper surface of the socket), and coat the socket pinholes with grease. Spread the grease with your finger so that it will penetrate inside the pinholes.
 - **Insert the processor** into the socket. Since there is grease inside the socket, some hydraulic pressure lift may occur: for this reason, make sure that the processor is completely inserted into the socket. **Apply paper-thin coat of thermal compound to processor core**, using a razor blade, or a credit card, held between thumb and index at a 45° angle. It is critical to ascertain that the entire core is covered with a uniform coat of thermal compound. Thermal performance will dramatically decrease if any portion of the core is not covered by thermal compound.
 - Remove the peel-off paper back of the motherboard gasket, and install it as shown Fig. 2, sticky side towards the motherboard.
 - Apply the provided neoprene sticker to the back of the motherboard as shown in Fig. 2
3. **Install the MB** inside the case..

II. Heat sink Installation

1. The case should be laying flat on a table. Install the MCX462+T™ heatsink onto the CPU as shown in fig. 2, heatsink step side over the socket's cam box. Tighten the mounting screws in a crisscross pattern. **Important note: Due to wide variations in gasket thickness tolerances, we suggest that you uninstall the heatsink once following the initial assembly, just to verify that you have good contact between cold plate and CPU. Inspect the grease imprint that the CPU left on the copper plate: it should be perfectly even!**

2. **Fan installation:**

- ❑ Use provided snap-rivets as shown in fig. 4 to secure fan to heatsink.
- ❑ **Recommended fans**
Minimum 68cfm 80mm fans, such as but not limited to Delta FFB0812SHE, FFB0812EHE, or Vantec 84cfm Tornado.

3. **Thermoelectric module installation:**

- ❑ **IMPORTANT WARNING:** Solder joints of the wires to the thermoelectric module are **extremely fragile**. Bending the wires at their root will break the solder joint, with no possible repair. **Swiftech will not honor the warranty for broken wires.**
- ❑ **Connection to a dedicated auxiliary power supply (recommended):**
 - The TEC module is provided with "bare wires" to facilitate installation with screw type terminals. We recommend the "Meanwell S320-12" power supply, available on our website in the liquid cooling accessories section. Connect red wire from TEC module to the +V terminal, and black wire to the -V terminal as shown in figure 3 below:

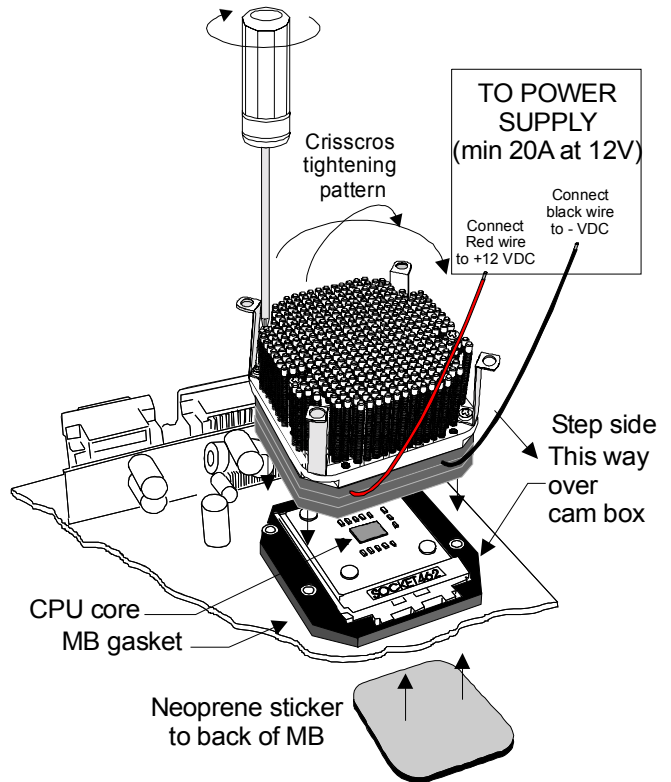


Figure 2

❑ **Connection to an ATX computer power supply:**

- **Important Warning:** to connect the MCX462+T cooler to your computer power supply, you must carefully consider the existing requirements of other devices connected on the +12V line. Connecting to an underpowered unit will definitely damage the power supply.
- Minimum requirements for an ATX computer power supply: 28A at +12V in a typical setup.
- **Only use the provided euro-style wire connector** shown in fig 4 below. Connect red wire from TEC module to +12V of P/S (Yellow wire), and black wire to black wire:



Figure 3

- Minimum requirements for a dedicated power supply: 20A @ +12 V.
- If adjustable voltage is available: setting the voltage higher than +12V is not recommended. Lower voltage, can be safely used, down to 9 volts.

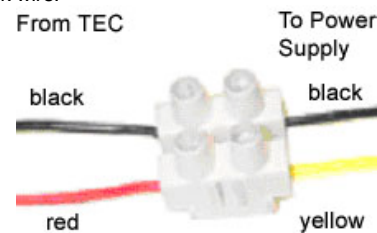


Figure 5

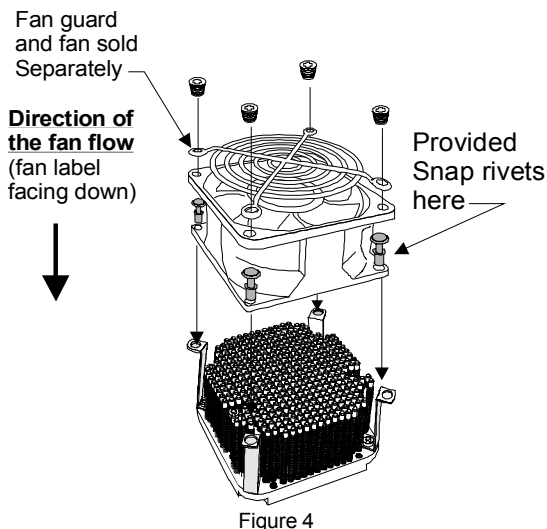


Figure 4

III. Final inspection

Now that the heat sink is installed, startup your computer, go into the BIOS and observe the CPU temperature. Under normal ambient temperature conditions, the processor temperature should never exceed 55° C (130 ° F). If it does, shut down the computer immediately, and review your entire installation. Troubleshooting help is available on our web site at www.swiftnets.com, or by calling customer support at 562-595-8009.

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