



Indigo Xtreme™ Application Note for Noctua NH-D14™ CPU Cooler

This product is intended for installation only by expert users. Improper installation may result in damage to your equipment. Enerdyne Solutions 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.indigo-xtreme.com for the latest installation guides and application notes. Indigo Xtreme is a trademark of Enerdyne Solutions. Noctua NH-D14 is a trademark of Rascom Computer Dist.

QUICK OVERVIEW

The following application note includes supplementary instructions to be used in conjunction with the Indigo Xtreme installation manual.



Read entire instructions before using Indigo Xtreme. Computer operating system and temperature monitoring utilities must be installed prior to use. Prior to installing Indigo Xtreme, mount the fastening brackets (Step 1) as illustrated in the Noctua NH-D14 installation manual. In addition, install the mounting bars in the recommended orientation (see Figure 1 below).

WITHIN Step 11: HEAT SINK MOUNTING:



Figure 1

1. Place the cooler onto the screw threads of the mounting bars.
2. Apply a uniform pressure to the cooler to prevent twisting or shifting. Initially tighten each screw and then fully tighten down uniformly (Figure 2).
3. Mount Internal/external cooler fans and plug into motherboard power headers.

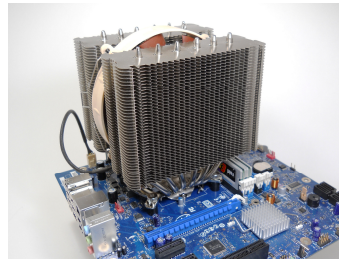


Figure 2

4. Stack 2-3 full-size paper towels together and loosely wrap the heat sink fins as seen in Figure 3. Use strips of tape to temporarily hold the towels in place. Be certain the fins are fully covered.
5. Proceed to ETI Reflow Procedure (within the installation guide and illustrated below).

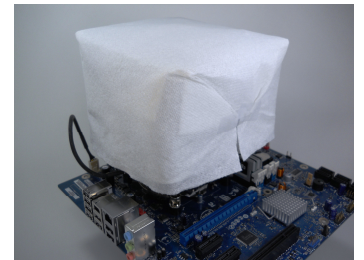


Figure 3

WITHIN ETI REFLOW PROCEDURE:

1. Orient the computer such that the motherboard and CPU are in a horizontal position.
2. Boot the computer. Clock frequency and voltage must be set to default (stock).
3. Unplug all Noctua fans and any case fans.
4. Use a CPU temperature monitoring program (such as SpeedFan™) and select the graphing option to track the profile of all core temperatures during reflow. Be certain the graph is open with all core temperatures selected before proceeding to the next step.
5. Exercise the CPU with a "burn" program (such as Prime 95™) to generate adequate heat for reflow. Multi-core CPUs require one open copy of the burn program for each core.
6. Follow the average core temperature profile (with SpeedFan) illustrated in the graph and table below; peak temperatures will vary depending on CPU type, ambient temperatures, etc.

#	NH-D14
1	All burn programs have been activated.
2	Core temperatures will immediately rise to peak of ~85-95°C.
3	Core temperatures will level off at ~85-95°C.
4	All core temperatures will drop to a Bottoming Point.
5	Following the Bottoming Point, average core temperatures will slowly rise again. Keep towels on cooler and allow core temperatures to reach ~85-90°C.
6	Once core temperatures have reached ~85-90°C, de-activate all burn programs and shut down computer; allow PC to cool for at least 10 minutes before booting and connecting fans.

