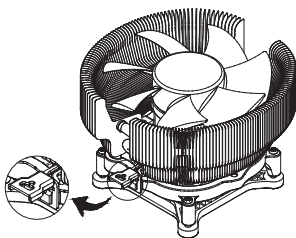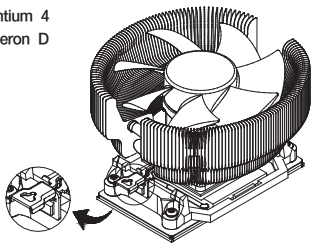# *User's Manual*

(English version)

CNPS8700 LED

ZALMAN

Intel Socket 775 CPU
Core 2 Quad
Core 2 Extreme
Core 2 Duo
Pentium D
Pentium 4
Celeron D

AMD Socket AM2/754/939/940 CPU
Athlon 64 FX
Athlon 64 X2 Dual-Core
Athlon 64
Opteron
Dual-Core Opteron
Sempron

* Please read this manual thoroughly before installation.

http://www.zalman.co.kr   http://www.zalmanusa.com

1. Features

1) Compatible with all single, dual, and quad core CPUs for Intel socket 775 and AMD socket AM2/754/939/940.
2) Compatible with Slim Tower / Low Profile Home Theatre PC Enclosures.
3) 100% pure copper heatsink with aerodynamically optimized "tunnel" design for high performance cooling.
4) Patented curved heatpipe design for heat transfer performance of up to 4 heatpipes using just 2.
5) Ultra-thin 0.2mm fins for minimized weight and significantly reduced airflow resistance.
6) The 110mm fan inside the heatsink cools not only the CPU, but the VGA card, Northbridge, FET, and RAM as well.
7) Does not generate noise or vibration in Silent Mode.
8) The adjustable fan speed controller (Fan Mate 2) enables control of noise and fan performance.
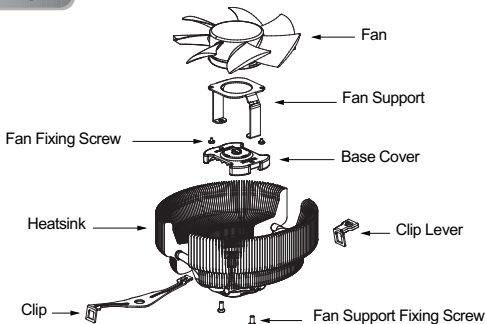
2. Specifications

Spec.	Model	CNPS8700 LED
Material		Pure Copper
Dimensions		120(L) X 123(W) X 67(H)mm
Heat Dissipation Area		3300㎠
Weight		475g[1]
Fan	Bearing Type	2 Ball-Bearing
	Rotation Speed[2]	1,150 ~ 2,300 rpm ± 10 %
	Noise Level[3]	17.5 ~ 33 dBA ± 10%
Fan Mate 2	Output Voltage	5 ~ 11V ± 2%
	Power Consumption	6W or lower

Note[1] The maximum weight for a cooler is specified as 450g for Intel Socket 775 and AMD Sockets AM2/754/939/940. Special care should be taken when moving a computer equipped with a cooler that exceeds the specified weight limit. Zalman is not responsible for any damage that occurs when moving a computer.
Note[2] The fan operates at 2,550rpm (35.5dBA) if directly connected to the motherboard's power connector without the use of Fan Mate 2.
Note[3] Measured at 1m distance away from the sound source.

3. Exploded View

Fan

Fan Support

Fan Fixing Screw

Base Cover

Heatsink

Clip Lever

Clip

Fan Support Fixing Screw

4. Patents

❖ Korean Patent Registration No. 10-0600448
❖ Korean Design Registration No. 07-9753
❖ Patent applications pending in over 20 nations around the world including the USA, EU, and Japan.

Precautions

1) Use and keep the product away from the reach of children.
2) Check the components list and condition of the product before installation. If any problem is found, contact your place of purchase to obtain a replacement.
3) Excessive force exerted on the fan may damage the fan, resulting in damage to the system.
4) Avoid inserting any objects into the fan while it is in operation.
5) Do not ingest or put the thermal grease into the mouth. If ingested, get medical attention.
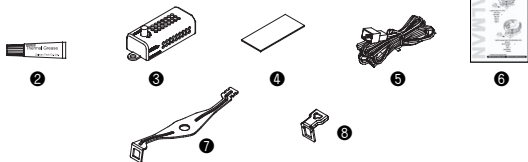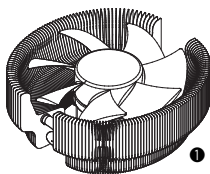
Disclaimer)

Zalman Tech Co., Ltd. is not responsible for any damages due to external causes, including but not limited to, improper use, problems with electrical power, accident, neglect, alteration, repair, improper installation, or improper testing.
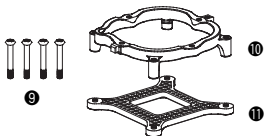
5. Components

1) Common Components

❶ Cooler (CNPS8700 LED)
❷ Thermal Grease
❸ Fan Speed Controller (Fan Mate 2)
❹ Double-Sided Tape (for Fan Mate 2 attachment)
❺ Cable for Fan Mate 2
❻ User's Manual
❼ Clip
❽ Clip Lever

2) Components for Intel Socket 775

❾ Four (4) Clip Support Fixing Bolts
❿ One (1) Clip Support for Socket 775
⓫ One (1) Backplate for Socket 775
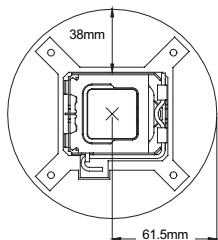
3) Components for AMD Socket AM2/754/939/940

∗ No additional components
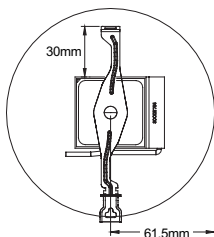
6. Compatible CPUs

1) All CPUs conforming to Intel Socket 775 platform

2) All CPUs conforming to AMD Socket AM2/754/939/940 platform

Caution) No motherboard components such as the PSU, disk drives, VGA card, and RAM with a height greater than 39mm should be present within a 61.5mm radius from the center of the CPU.
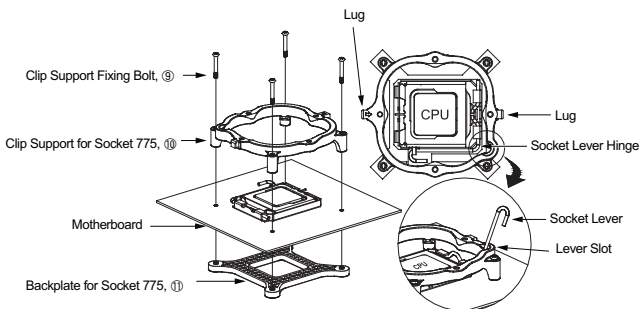

< Intel Socket 775 >   < AMD Socket AM2/754/939/940 >

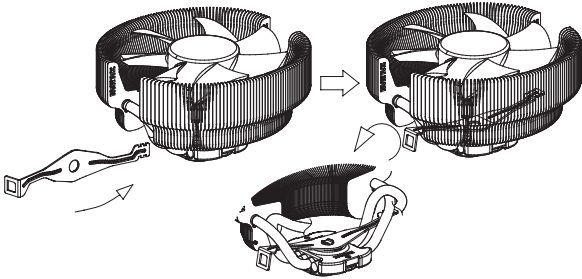## 7. Installation (Intel Socket 775)

1) Clip Support Installation

Align the Clip Support for Socket 775(⑩) and the Backplate for Socket 775(⑪) with the mounting holes on the motherboard and fasten them together with the Clip Support Fixing Bolts(⑨). The Lever Slot on the Clip Support for Socket 775 should be properly oriented on the hinged side of the Socket Lever when installing.

※ If the Lug of the Clip Support for Socket 775 interferes with any motherboard components, install the Clip Support for Socket 775 with the Lug facing a different direction to avoid interference.
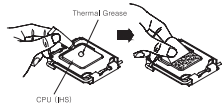
2) Clip Installation

Insert the Clip(⑦) between the Heatpipes. Turn the Clip so that the central hole comes in alignment with the Base Cover's projecting part. Now attach the Clip so that its central hole slides over the projecting part of the Base Cover. Do not exert any excessive force on the fan during the Clip installation. Excessive force on the fan could lead to product damage.
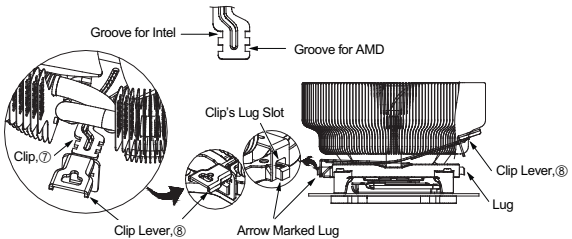

3) Thermal Grease Application

Clear off particles or any residue from the top of the CPU then spread a sufficient amount of the included Thermal Grease(②) on top of the CPU.

4) Cooler Installation

Slide the Clip Lever(⑧) onto the Clip's(⑦) Groove for Intel. Align and connect the Clip's Lug Slot with the Arrow Marked Lug on the Clip Support for Socket 775. Press onto the Clip Lever when aligning the Lever's Slot with the Lug. Make sure that the cooler is installed on the center of the CPU.
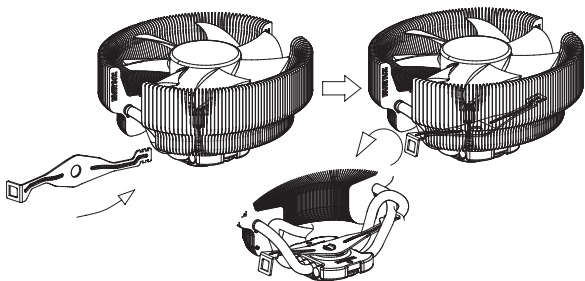

Groove for Intel — Groove for AMD

Clip's Lug Slot

Clip,⑦

Clip Lever,⑧   Arrow Marked Lug

Clip Lever,⑧

Lug

5) Power Connection (Fan Mate 2 Connection)

◆ Please refer to Fan Mate 2 Installation and Usage on page 6.
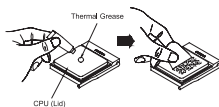
8. Installation (AMD Socket AM2/754/939/940)

1) Clip Installation

Insert the Clip(⑦) between the Heatpipes. Turn the Clip so that the central hole comes in alignment with the Base Cover's projecting part. Now attach the Clip so that its central hole slides over the projecting part of the Base Cover. Do not exert any excessive force on the fan during the Clip installation. Excessive force on the fan could lead to product damage.
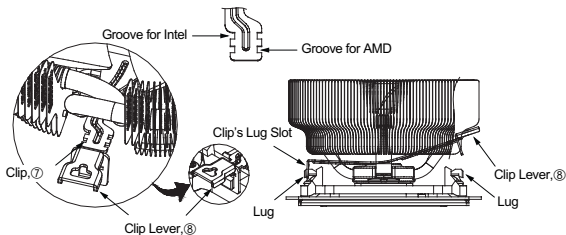

2) Thermal Grease Application

Clear off particles or any residue from the top of the CPU then spread a sufficient amount of the included Thermal Grease(②) on top of the CPU.

3) Cooler Installation

Slide the Clip Lever(⑧) onto the Clip's(⑦) Groove for AMD. Align and connect the Clip's Lug Slot with the Lug on the motherboard's Retention Frame. Press onto the Clip Lever when aligning the Leve's Slot with the Lug. Make sure that the cooler is installed on the center of the CPU.
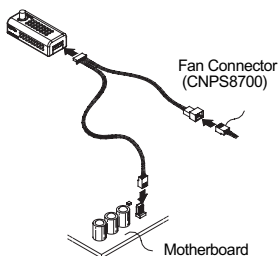

4) Power Connection (Fan Mate 2 Connection)

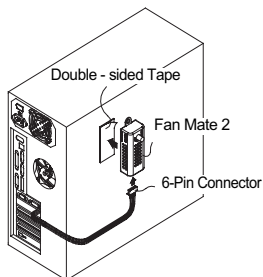◆ Please refer to Fan Mate 2 Installation and Usage on page 6.

9. FAN MATE 2 Installation and Usage

1) FAN MATE 2 installation inside a System

2) FAN MATE 2 installation on the outside of a system

Fan Connector (CNPS8700)

Motherboard

Double - sided Tape

Fan Mate 2

6-Pin Connector

Connect the two 3-pin connectors of the cable to the motherboard and to CNPS8700's Fan Connector as shown in the diagram.

Pull the 6-Pin Connector out of the system through the back and connect it to FAN MATE 2, which should be installed on the case using the included Double-sided tape.

◆ The fan operates in Silent Mode when the speed control knob of FAN MATE 2 is fully turned in the counter-clockwise direction. The fan operates in Normal Mode when the speed control knob of FAN MATE 2 is fully turned in the clock-wise direction. The fan speed can be controlled according to user preference by adjusting the speed control knob.

Note) FAN MATE 2 has been specifically designed for the fan of this product.
Zalman Tech Co., Ltd. is not responsible for any damages to the system or CPU resulting from its use with other types of fans.

10. Notes on Usage

1) Checking CPU Compatibility
Please refer to "Compatible CPUs" on page 3 to confirm that your CPU is compatible with CNPS8700 before using it.

2) Cautions During Booting
The computer system may automatically shut down when booting the computer after the system monitoring program outputs a warning stating that the CPU fan is rotating slowly. In such a case, fully turn the speed control knob in the clockwise direction before rebooting to disable the 'CPU Fan Detected' option in BIOS, or set the CPU fan's rotational speed to 1,150rpm or lower in the system monitoring program.

Note) Some motherboards fail to boot if the rotational speed of the CPU fan is below a certain rpm. However, booting can be possible even at low fan rpm if the BIOS settings are updated. For more information on updating your BIOS, please refer to the website of the motherboard manufacturer. There are motherboards which fail to detect the rpm while operating the cooler in Silent Mode, but this does not affect computing performance.
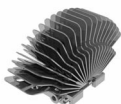
3) OVERCLOCKING
Zaman Tech Co., Ltd. is not responsible for any damages to the system and CPU resulting from overclocking.

11. Zalman Computer Noise Prevention Systems

Zalman's Noiseless Power Supplies, Fanless Northbridge Coolers, Heatpipe HDD Cooler, Noiseless Case Fans, VGA Coolers, and Fan Controllers facilitate stable performance and a noiseless computing environment.

Noiseless Power Supply

Fanless Northbridge Cooler

Heatpipe HDD Cooler

Noiseless Case Fan

Ultra Quiet VGA Cooler

Fan Controller

12. Home Theatre PC Enclosures

HD160XT

The HD160XT is designed for ultra quiet home theatre PC operation, utilizing optimized ventilation and anti-vibration reinforcements, making it ideal for environments that require silence such as living rooms, bedrooms, educational facilities, and offices.

For more information, please visit our website.

Disposal of Old Electrical & Electronic Equipment
(Applicable in the European Union and other European countries with separate collection systems)