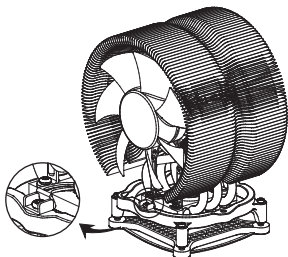


# User's Manual

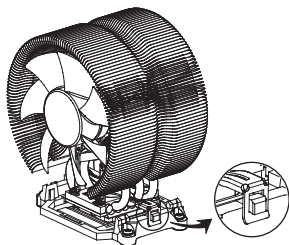
(English version)

## CNPS9700 LED



### Intel Socket 775 CPU

Core 2 Duo  
Dual Core Pentium  
Pentium D  
Pentium 4  
Celeron D



### AMD Socket AM2/754/939/940 CPU

Athlon 64 FX  
Athlon 64 X2 Dual Core  
Athlon 64  
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 and dual core CPUs for Intel's Socket 775 and AMD's Socket AM2/754/939/940.
- 2) 100% copper heatsink with aerodynamically optimized "tunnel" design for maximum cooling efficiency.
- 3) Innovative and patented, curved heatpipe design for a heat transfer capacity of up to six heatpipes with the use of just three.
- 4) 0.2mm ultra-slim fins for minimized weight and reduced airflow resistance.
- 5) Ultra quiet CNPS 110mm LED fan.
- 6) Does not generate noise or vibration in Silent Mode.
- 7) Adjustable fan speed controller (FAN MATE 2) included.
- 8) Super Thermal Grease (ZM-STG1) included.

## 2. Specifications

Spec.	Model	CNPS9700 LED
Materials		Pure Copper and Aluminum
Dimensions (mm)		90(L) X 124(W) X 142(H)
Dissipation Area (cm <sup>2</sup> )		5,490
Weight(g)		Heatsink: 690g, Total (including fan): 764g <sup>(1)</sup>
Fan	Bearing Type	2-Ball
	Speed	1,250RPM $\pm$ 10 % (Silent Mode)
		2,800RPM $\pm$ 10 % (Normal Mode) <sup>(2)</sup>
Noise Level (dBA)	19.5dBA ~ 35dBA $\pm$ 10% <sup>(3)</sup>	
FAN MATE 2	Output Voltage	5V ~ 11V $\pm$ 2 %
	Power Consumption	6W or lower
ZM-STG1 <sup>(4)</sup>	Weight	3.5g
	Temperature Range	-40°C ~ 150°C (-40°F ~ 302°F)

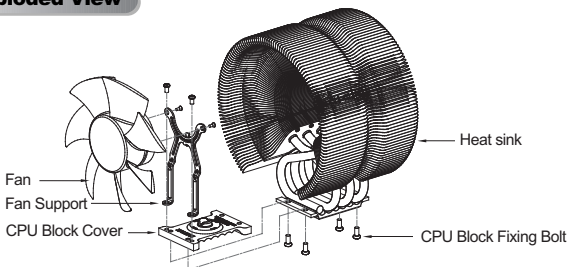
**Note<sup>(1)</sup>** The maximum weight for a cooler is specified as 450g for Intel Socket 775 and AMD Sockets 754/939/940. Special care should be taken when moving a computer equipped with a cooler that exceeds the specified weight limit. Zalman is not responsible for any damage that occurs when moving a computer.

**Note<sup>(2)</sup>** The fan rotates at 2,800rpm if connected directly to the motherboard's power connector without the use of FAN MATE 2.

**Note<sup>(3)</sup>** measured at 1m from noise source.

**Note<sup>(4)</sup>** Optimal Performance will be reached after approximately 7 days of regular computer use from the time of installation.

## 3. Exploded View



## 4. Patents

- ❖ Korean Patent Reg. No. 10-0600448
- ❖ Korean Design Reg. No. 30-0403411, 0403412
- ❖ Patent applications pending in over 20 nations around the world including USA, EU, and Japan.

## 5. Precautions

- 1) Excessive force exerted on the fan may damage the fan, resulting in damage to the system.
- 2) Avoid inserting any objects into the fan while it is in operation.
- 3) Use and keep the product away from the reach of children and pets.
- 4) 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.
- 5) Do not ingest or make oral contact with the Thermal Grease. If ingested, get medical attention.

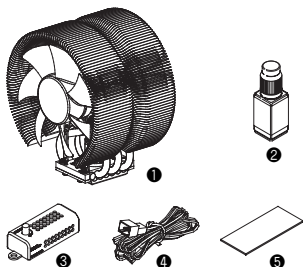
### Disclaimer

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.

## 6. Components

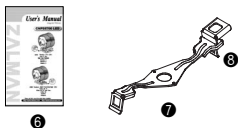
### 1) General Components

- ① One (1) CNPS9700
- ② One (1) Thermal Grease (ZM-STG1)
- ③ One (1) Fan Speed Controller (FAN MATE 2)
- ④ One (1) FAN MATE 2 Cable
- ⑤ One (1) Double-sided Tape  
(For attaching FAN MATE 2)
- ⑥ One (1) User's Manual



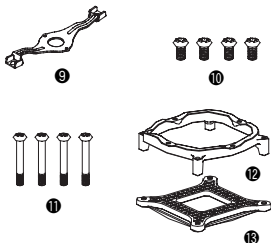
### 2) Components for AMD Sockets AM2/754/939/940

- ⑦ One (1) Clip for AMD Sockets
- ⑧ One (1) Clip Lever for AMD Sockets



### 3) Components for Intel Socket 775

- ⑨ One (1) Clip (S-Type)
- ⑩ Four (4) Bolts (for installing the cooler)
- ⑪ Four (4) Clip Support Fixing Bolts for Socket 775
- ⑫ One (1) Clip Support for Socket 775
- ⑬ One (1) Backplate for Socket 775



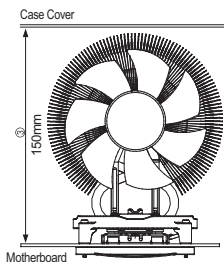
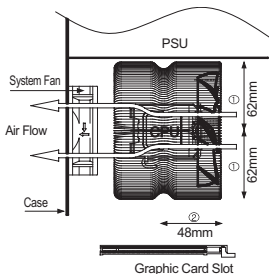
## 7. Compatible CPUs

- 1) All Intel CPUs of Socket 775
- 2) All AMD CPUs of Socket AM2/754/939/940

## 8. Installation Requirements

If the case is equipped with an Air Guide, then the Air Guide Duct must be removed before installation. Refer to the following diagrams, and install only on systems that meet the following installation requirements:

- ① No interfering components (PSU, graphic card etc.) within 62mm from the center of the CPU.
- ② No interfering components (ODD etc.) within 48mm from the center of the CPU.
- ③ Case cover must be at least 150mm apart from the motherboard.



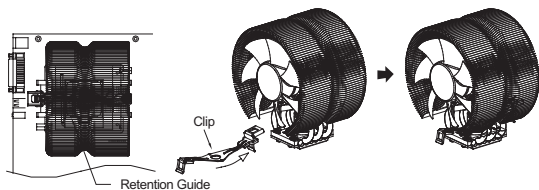
## 9. Installation

### ※ The Clip Installation Method

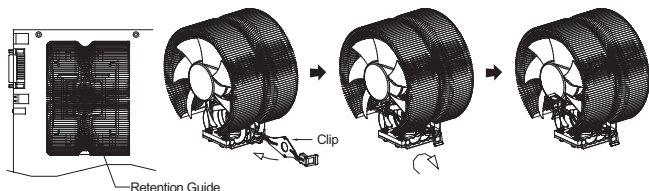
The CNPS9700 must be installed in the orientation that matches the rear system fan's airflow. (Refer to the diagram above)

- The Clip installation method depends on the motherboard's socket orientation.
- Follow the correct installation method for your motherboard type.
- Be careful not to exert excessive force on the fan during installation of the Clip, as it may damage the fan.

### A. For motherboards with a horizontally-oriented Retention Guide



### B. For motherboards with a vertically-oriented Retention Guide



## 1) Intel Socket 775

### ① Clip Installation

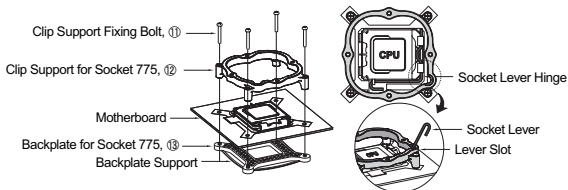
Refer to "The Clip Installation Method" on page 3 to correctly install the Clip (S-Type, ⑨) according to the orientation of the Retention Guide.

### ② Clip Support Installation

Align the Clip Support for Socket 775 (⑫) and the Backplate for Socket 775 (⑬) with the mounting holes on the motherboard, and fasten them together by using the Clip Support Fixing Bolts (⑪).

The Lever Slot on the Clip Support for Socket 775 (⑫) must be properly oriented on the hinged side of the socket lever when installing.

※ The Backplate Support on the Backplate for Socket 775 (⑬) can be removed if deemed unnecessary.



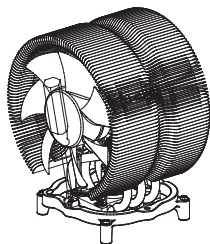
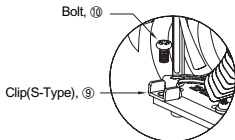
### ③ Thermal Grease Application

Clear off particles or any residue from the contact surface of the CPU and heatsink. Shake the Thermal Grease (ZM-STG1, ②) well then apply on the contact surface of the CPU and heatsink base.



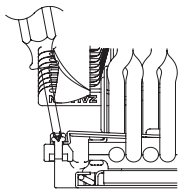
### ④ Cooler Installation

Insert two Bolts (⑩) into the holes of the Clip (S-type, ⑨) and place the CNPS9700 on the center of the CPU. Slightly fasten the Bolts (⑩) into the holes of the Clip Support for Socket 775 (⑫), then fasten the Bolts (⑩) in an alternating manner until the Clip (S-Type, ⑨) is completely pressed against the Clip Support for Socket 775.



### ※ Note

When installing the CNPS9700 on a motherboard with a horizontally-oriented Retention Guide, take extra care to not exert excessive force on the fan. **Excessive force may damage the fan.**



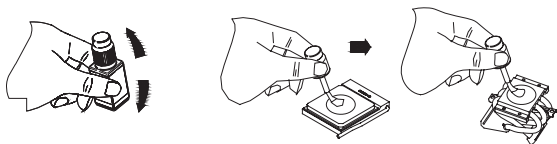
### ⑤ Power Connection (FAN MATE 2)

◆ Please refer to "FAN-MATE 2 Installation and Usage" on page 6.

## 2) AMD Socket AM2/754/939/940

### ① Thermal Grease Application

Clear off particles or any residue from the contact surface of the CPU and heatsink. Shake the Thermal Grease (ZM-STG1, ②) well then apply on the contact surface of the CPU and heatsink base.

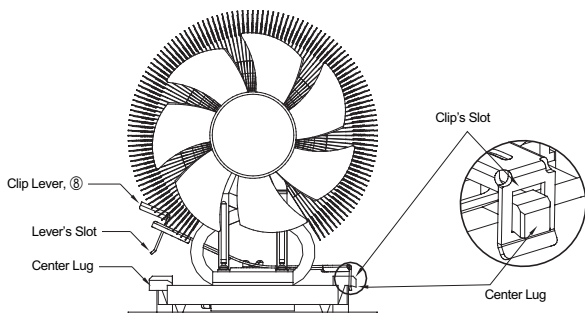


### ② Clip Installation

Refer to "The Clip Installation Method" on page 3 to correctly install the Clip for AMD Sockets (⑦) and Clip Lever (⑧) on the CNPS9700 according to the orientation of the Retention Frame. First insert the Clip for AMD Sockets (⑦) into the Heatsink (①), then connect the Clip Lever (⑧) with the Clip (⑦).

### ③ Cooler Installation

Place the CNPS9700 on the center of the CPU. Align and connect the Slot of the Clip (⑦) with the Center Lug of the Retention Frame. Press onto the Clip Lever (⑧) when aligning the Clip Slot and Center Lug.

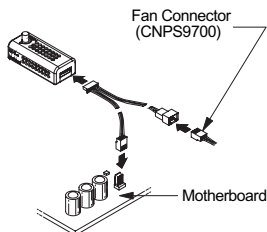


### ⑤ Power Connection (FAN MATE 2)

◆ Please refer to "FAN-MATE 2 Installation and Usage" on page 6.

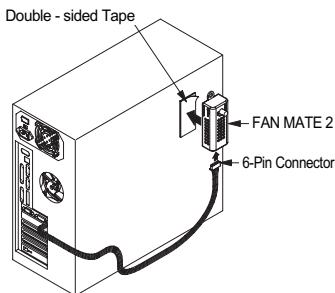
## 10. FAN MATE 2 Installation and Usage

### 1) FAN MATE 2 Installation Inside a System



Connect the two 3-pin connectors of the cable to the motherboard and to the CNPS9700's Fan Connector as shown in the diagram.

### 2) FAN MATE 2 Installation on the Outside of a System



Pull the 6-Pin Connector out of the system through the back and connect it to FAN MATE2, 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.

## 11. Notes on Usage

### 1) Checking CPU Compatibility

Please refer to "Compatible CPUs" on page 2 to confirm that your CPU is compatible with the CNPS9700 before using it.

### 2) Caution 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 1300rpm 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's 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

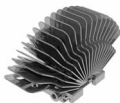
Zalman Tech Co., Ltd. is not responsible for any damages resulting from CPU Overclocking.

## 12. Zalman Computer Noise Prevention System

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

## 13. TNN (Totally No Noise) Computer Enclosures



TNN 300



TNN 500AF

TNN Computer Enclosures are the world's first environment-friendly noiseless computer enclosures that operate without the use of a fan. TNN Computer Enclosures use the aluminum enclosure itself as a heatsink. They are ideal for environments that require silence, as well as for home theatre systems and multi-media systems.

## 14. Home Theatre PC Enclosures



HD160

The HD160 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)