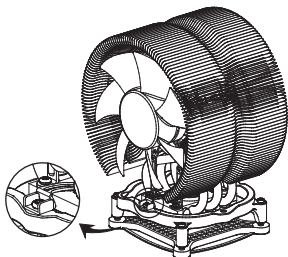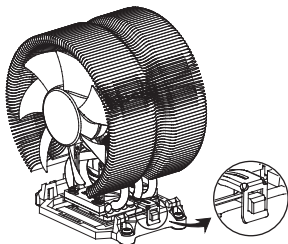# *User's Manual*

(English version)

CNPS9700 NT

ZALMAN

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.

1. Features

1) Compatible with all single and dual core CPUs for Intel Socket 775 and AMD Sockets AM2/754/939/940.
2) Automatic Fan Speed Control feature included in the Ultra Quiet 110mm PWM(Pulse Width Modulation) enabled fan.
3) 100% copper heatsink with aerodynamically optimized "tunnel" design for maximum cooling efficiency.
4) Innovative, patented, "figure 8" heatpipe design for a heat transfer capacity of up to six heatpipes with the use of just three.
5) 0.2mm ultra-slim fins for minimized weight and reduced airflow resistance.
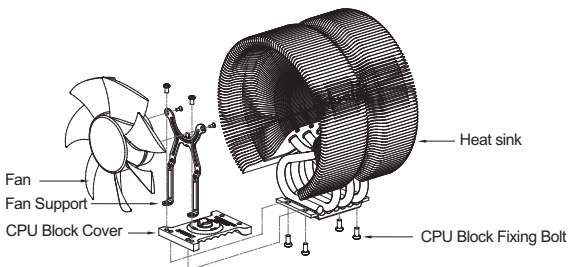6) Super Thermal Grease (ZM-STG1) included.

2. Specifications

Spec.	Model	CNPS9700 NT
Materials		Pure Copper and Aluminum
Dimensions (mm)		90(L) X 124(W) X 142(H)
Heat Dissipation Area (㎠)		5,490
Weight(g)		Heatsink : 690g, Total (including fan) : 764g [(1)]
Fan	Bearing Type	2 Ball-Bearing
	Rotation Speed	1,250RPM ± 30 % ~ 2,800RPM ± 10 %
	Noise Level (dBA)	19.5dBA ~ 35dBA ± 10%[(2)]
	Control Method	PWM Control, Auto Restart
ZM-STG1[(3)]	Capacity	3.5g
	Temperature Range	-40℃~150℃ (-40℉~302℉)

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)] Measured at 1m from noise source.

Note [(3)] Optimal performance will be reached after approximately 7 days of regular computer use from the time of installation.

3. Exploded View

Fan
Fan Support
CPU Block Cover
Heat sink
CPU Block Fixing Bolt

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.
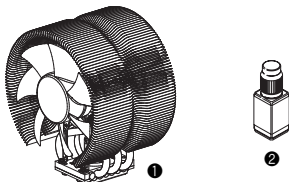5) Do not ingest or make oral contact with the Thermal Grease. If ingested, get medical attention.

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.
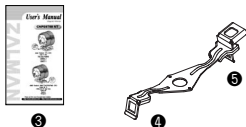
6. Components

1) General Components
❶ One (1) CNPS9700
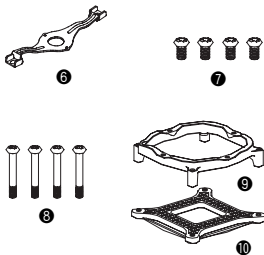❷ One (1) Thermal Grease (ZM-STG1)
❸ One (1) User's Manual

2) Components for AMD Sockets AM2/754/939/940
❹ One (1) Clip for AMD Sockets
❺ One (1) Clip Lever for AMD Sockets

3) Components for Intel Socket 775
❻ One (1) Clip (S-Type)
❼ Four (4) Bolts (for installing the cooler)
❽ Four (4) Clip Support Fixing Bolts for Socket 775
❾ One (1) Clip Support for Socket 775
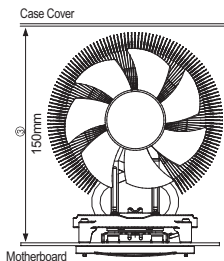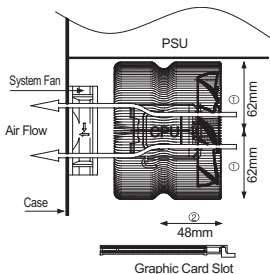❿ One (1) Backplate for Socket 775

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.

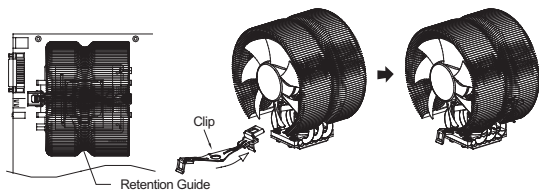③ Case cover must be at least 150mm apart from the motherboard.

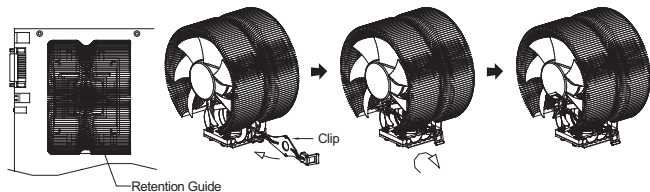## 9. Installation

✳ **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
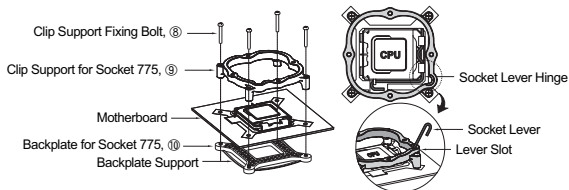
Refer to "The Clip Installation Method" on page 3 to correctly install the Clip (S-Type, ⑥) according to the orientation of the Retention Guide.

② Clip Support Installation

Align the Clip Support for Socket 775 (⑨) and the Backplate for Socket 775 (⑩) with the mounting holes on the motherboard, and fasten them together by using the Clip Support Fixing Bolts (⑧).
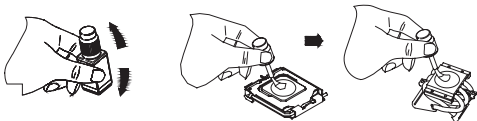The Lever Slot on the Clip Support for Socket 775 (⑨) must be properly oriented on the hinged side of the socket lever when installing.

※ The Backplate Support on the Backplate for Socket 775 (⑩) can be removed if deemed unnecessary.

Clip Support Fixing Bolt, ⑧
Clip Support for Socket 775, ⑨
Motherboard
Backplate for Socket 775, ⑩
Backplate Support
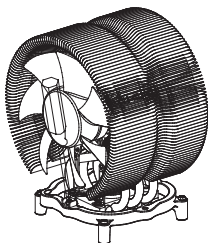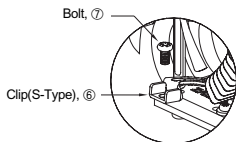Socket Lever Hinge
Socket Lever
Lever Slot
CPU

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 (⑦) into the holes of the Clip (S-type, ⑥) and place the CNPS9700 on the center of the CPU. Slightly fasten the Bolts (⑦) into the holes of the Clip Support for Socket 775 (⑨), then fasten the Bolts (⑦) in an alternating manner until the Clip (S-Type, ⑥) is completely pressed against the Clip Support for Socket 775.
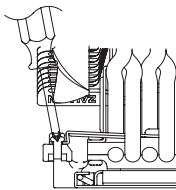
Bolt, ⑦
Clip(S-Type), ⑥

※ 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.**
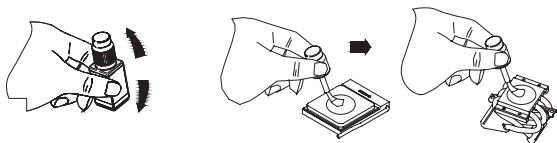

⑤ Power Connection

◆ Please refer to "10. Power Connection" 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.
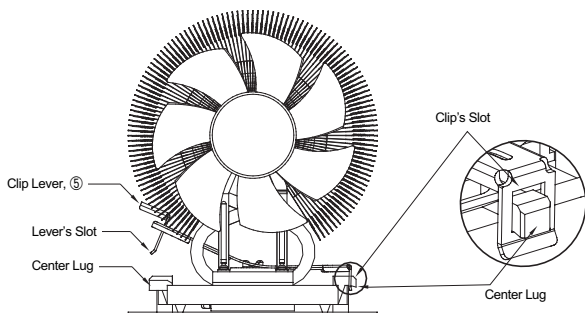

② Clip Installation

Refer to "The Clip Installation Method" on page 3 to correctly install the Clip for AMD Sockets (④) and Clip Lever (⑤) on the CNPS9700 according to the orientation of the Retention Frame. First insert the Clip for AMD Sockets (④) into the Heatsink (①), then connect the Clip Lever (⑤) with the Clip (④).

③ Cooler Installation

Place the CNPS9700 on the center of the CPU. Align and connect the Slot of the Clip (④) with the Center Lug of the Retention Frame. Press onto the Clip Lever (⑤) when aligning the Clip Slot and Center Lug.
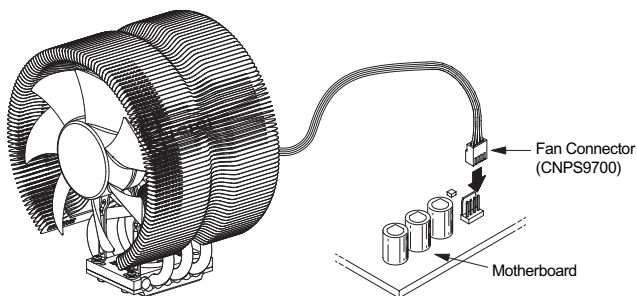

Clip's Slot

Clip Lever, ⑤

Lever's Slot

Center Lug

Center Lug

④ Power Connection (FAN MATE 2)

◆ Please refer to "10. Power Connection" on page 6.

10. Power Connection

Connect the CNPS9700 NT's Fan Connector to the Motherboard as shown in the diagram.

Fan Connector
(CNPS9700)

Motherboard

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) Cautions During Booting

Operation of the PWM fan varies depending on the motherboard's BIOS settings. Please activate the PWM Control mode in the BIOS settings after installation. Refer to the motherboard's manual for detailed information regarding the PWM Control mode.
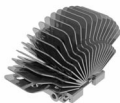
3) Overclocking

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)