

User's Manual

(English Edition)

ZALMAN[®]
Zalman Tech Co., Ltd.

CNPS6500B-AICu
CNPS6500B-Cu

3. Product Specifications

Spec.		Model	CNPS6500B-AICu	CNPS6500B-Cu
Weight (g)			424	898 ⁽¹⁾
Dimensions (mm)			115~120(L) × 83(W) × 65(H)	
FHS				
Dissip. Area (cm ²)			3300 ~ 3400	
Base Material			Pure Aluminum & Pure Copper	Pure Copper
T. R. (°C/W)	Silent Mode		0.36	0.33
	Normal Mode		0.30	0.28
FAN				
Bearing Type			2-Ball	
Speed (RPM)	Silent Mode		1300 RPM ± 10%	
	Normal Mode		2500 RPM ± 10%	
Nois (dB)	Silent Mode		20 dB ± 10%	
	Normal Mode		32 dB ± 10%	
FAN MATE 1				
Weight (g)			20	
Dimensions (mm)			200(L) × 23(W) × 21(H)	
Output Voltage (V)			5V ~ 11V ± 2%	
Allowable Capacity			6W or lower	

Note 1) The maximum weight of a heatsink is specified as 450g for use with Intel's Pentium 4 processor. If a heatsink which exceeds the relevant weight limit is installed in a computer, special care should be taken while the computer is being moved. Zalman Tech. Co., Ltd. is not responsible for any damage to a system or a CPU occurring when moving a computer with an overweight heatsink.

Zalman's 6500B-AICu / 6500B-Cu coolers have an extended heat dissipating area and include a new fan assembly (FB123) with an adjustable bracket and a bigger fan (92mm) for maximum cooling performance.

1. Features

- Zalman's CPU Coolers do not generate noise and vibration in Silent Mode.
 - Separation of the FHS from the CPU fan prevents transfer of the fan's vibration to the CPU.
 - By utilizing a 92mm fan, both the CPU and the motherboard chipset are cooled.
 - The cooling fan can be mounted at any desired location making it compatible with virtually all computer cases and motherboards
(Note : computer cases that have the power supply covering the CPU cannot be used).
 - With the included adjustable fan speed connector, the user can freely adjust the CPU fan's RPM.
 - Zalman's CPU Coolers enable very stable operation of a CPU in an OVERCLOCKED environment.
- * When OVERCLOCKING, please make sure to use Normal Mode.
- * Zalman Tech. Co., Ltd. is not responsible for any damage to a system or a CPU caused by CPU OVERCLOCKING.

2. Components

- FHS : ZM6568CD-XXXX
- NP FAN & Bracket : FB123
- For placing FB123 - inch type bolts / mm type bolts - three each
- Thermal Grease
- Two Clips
- Two Reinforcers
- One Adjustable Fan Speed Connector (FAN MATE 1)

4. CPU Compatibility: INTEL Pentium 4 (Socket 478)

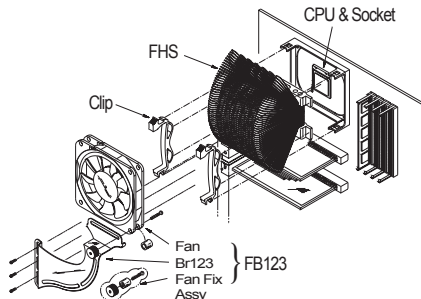
Mode \ Model		CNPS6500B-AICu	CNPS6500B-Cu
Willamette (0.18 micron)	Silent Mode	Up to 1.8 GHz	Up to 2.0 GHz
	Normal Mode	2.0 GHz	2.0 GHz
Northwood (0.13 micron)	Silent Mode	2.8 GHz	Over 2.8 GHz
	Normal Mode	Over 2.8 GHz	Over 2.8 GHz

Note) Willamette is discontinued at 2.0GHz

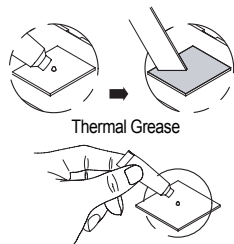
Note) At present, the most powerful Intel CPU (Northwood) is the Socket 478 Pentium 4 with a speed of 2.8GHz. Before using this product with a more powerful CPU, please check Zalman's website (www.zalman.co.kr) for compatibility notes.

5. Patents

- ❖ Patent Applications pending in over 20 nations around the world, including the U.S., E.U., and Japan
- ❖ Korean Patent Nos. 317450 and 317451

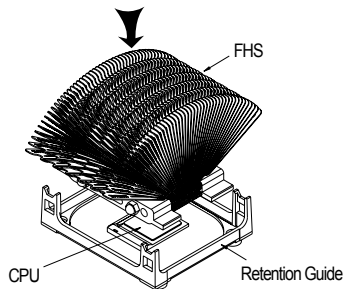


Installation / Removal of FHS

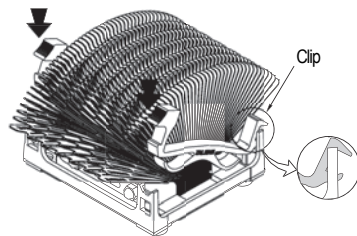


Thermal Grease

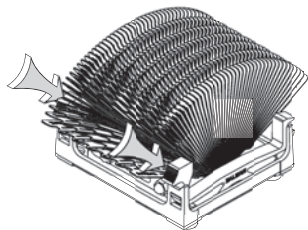
1. Spread the thermal grease thinly onto the CPU core's surface that comes in contact with the FHS.



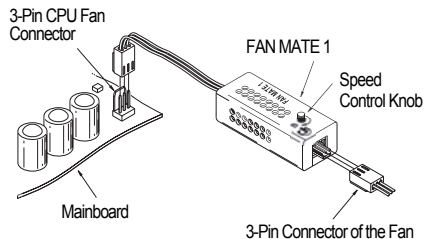
2. Lightly place the heatsink on the CPU.



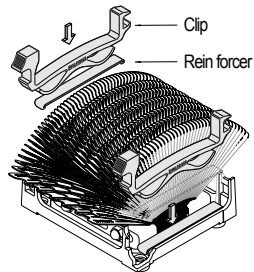
3. Insert one end of each of the two clips into the holes on the Retention Guide. Then press the other ends of the clips downwards simultaneously to finish the installation. Try moving the FHS around with your hand to see that it is properly installed.



4. When removing, press the upper ends of the clips from the no-slip surface at a 45-degree angle to separate the clips from the Retention Guide as shown above.



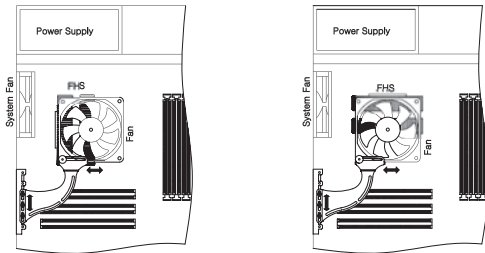
5. Install the FAN MATE 1 as shown above.



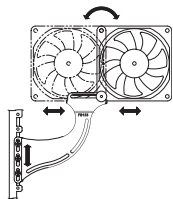
- * **Supplement** : If the CPU temperature exceeds 70°C even after properly installing the heatsink, add reinforcers under the two sides of the clip.

Installing Fan Bracket

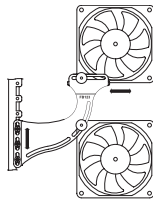
1. As shown in Figure 2, the fan and the bracket can be freely placed in any desired location with the FB123. Therefore, place the fan in an ideal location as shown in Figure 1. An additional fan can also be placed on the FB123 to maximize the cooling of the VGA Card as shown in Figure 3.
2. Using the bolts included, firmly screw the FB123 into the VGA Card slot hole and the expansion slot hole next to it. Use the appropriate type of bolts for the slot holes.



< Figure 1 >



< Figure 2 >



< Figure 3 >

Usage & Caution

1. Check the 'CPU Compatibility' section and confirm that your CPU is compatible before using the CPU cooler. When the speed control knob on FAN MATE 1 is turned fully counter-clockwise, the fan speed is at the minimum and operates in Silent Mode. Turned fully clockwise, it operates in Normal Mode. You can select the desired fan speed by turning the knob.

Note) FAN MATE 1 has been specifically designed for the fan of this product. Zalman Tech. Co., Ltd. is not responsible for any damage to systems or CPUs caused by using it with other types of fans.

2. If a system monitoring program detects the rotation of the CPU fan as being too slow, the computer may generate an alarm sound and automatically power down. If this happens, you may turn the speed control knob fully clockwise to increase the fan speed and set "CPU Fan Detected" to "Disabled" in the BIOS settings, or set the slowest rotation of the CPU fan in the system monitoring program to less than or equal to 1500RPM.

Note) Some mainboards do not boot if the rotation of the CPU fan is below a certain RPM. If the BIOS is updated, Silent Mode can be used. For more information on updating the BIOS, please refer to your mainboard manufacturer's web site. Even in a case where the fan RPM is not measured in Silent Mode, performance will not be affected.

3. To prevent CPU overheating due to anomalies, set the maximum CPU temperature in the BIOS setup to 70°C. Zalman Tech. Co., Ltd. is not responsible for damage to a system or a CPU when the user has not adjusted the temperature as stated above.

Note) Methods in preventing CPU Overheating may differ between mainboards. Consult your mainboard manufacturer for details.