User's Manual

(English)

ZALMAN

High Performance Fanless VGA Cooler

Model : VNF100

Please visit our website and watch the VNF100 installation video installation.

※ Please read this manual thoroughly before installation.
※ The specifications of this product and its components may change without prior notice to improve performance.

Cautions on Use and Installation

1. By installing this product on a VGA (Video Graphics Array) card, a PCI slot adjacent to the PCIe (or AGP) slot will become unusable.
2. If this product will be installed on a recently released VGA card, please check for compatibility at Zalman's website first.
3. The product cannot be installed on Matrox VGA cards, NVIDIA PCX 5 , NVIDIA Geforce 6600 AGP Series, Geforce 7600/7300 AGP Series, and ATI Radeon X700 Pro Series.
4. If the VGA card and its components interfere with the installation of this product, stop the installation, refer to the list of compatible VGA cards at Zalman's website and install this product with one of the compatible VGA cards.
5. The use of an exhaust fan positioned on the rear side of the case is recommended for enhancement of product performance.

Disclaimer

Features

1. Zalman's patented VFP (Variable Fin Profile) Fin Design maximizes cooling efficiency and dissipation surface area for excellent performance.
2. Fanless VNF100 does not emit any noise and can be used semi-permanently.
3. Three high performance heatpipes provide maximized heat transfer.
4. Thin aluminum fins (0.4mm) provide minimized heatsink weight, and prevents excessive force on the VGA card.
5. The heatsink positioned above the VGA card optimizes cooling efficiency and allows compatibility with SLI and CrossFire setups.
6. VGA RAM Heatsninks allow the cooling of VGA RAM.
7. Improved installation structure provides easy installation and broad compatibility.

Specifications

- Heatsink Dimensions (mm) : 166(L) X 95(W) X 38.5(H)
- Weight (g) : 180
- Materials
  · Fins : Pure Aluminum (Anodized)
  · Base : Pure Aluminum
  · Front Heatsink : Aluminum
  · Heatpipes : Pure Copper (Nickel-Plated)
  · RAM Heatsink : Pure Aluminum

Components

① One (1) Rear Heatsink
② One (1) Base
③ One (1) Socket A
④ One (1) Socket B
⑤ One (1) Front Heatsink
⑥ Four (4) Nipples
⑦ Four (4) Fixing Nuts
⑧ Four (4) Fixing Bolts
⑨ One (1) PVC Washer Plate
⑩ Four (4) Rubber Rings
⑪ Two (2) Thermal Grease
⑫ Eight (8) RAM Heatsinks (ZM-RHS2)
⑬ One (1) User's Manual

Fixing Bolt

Front Heatsink

Nipple

Socket

Base

Rubber Ring

Ram Heatsink

Rear Heatsink

VGA Chipset

VGA RAM

PVC Washer

Fixing Nut

Logo
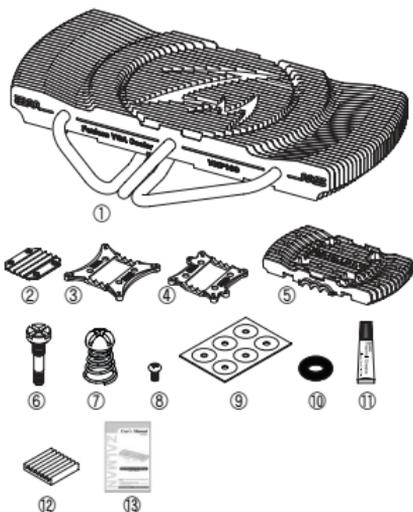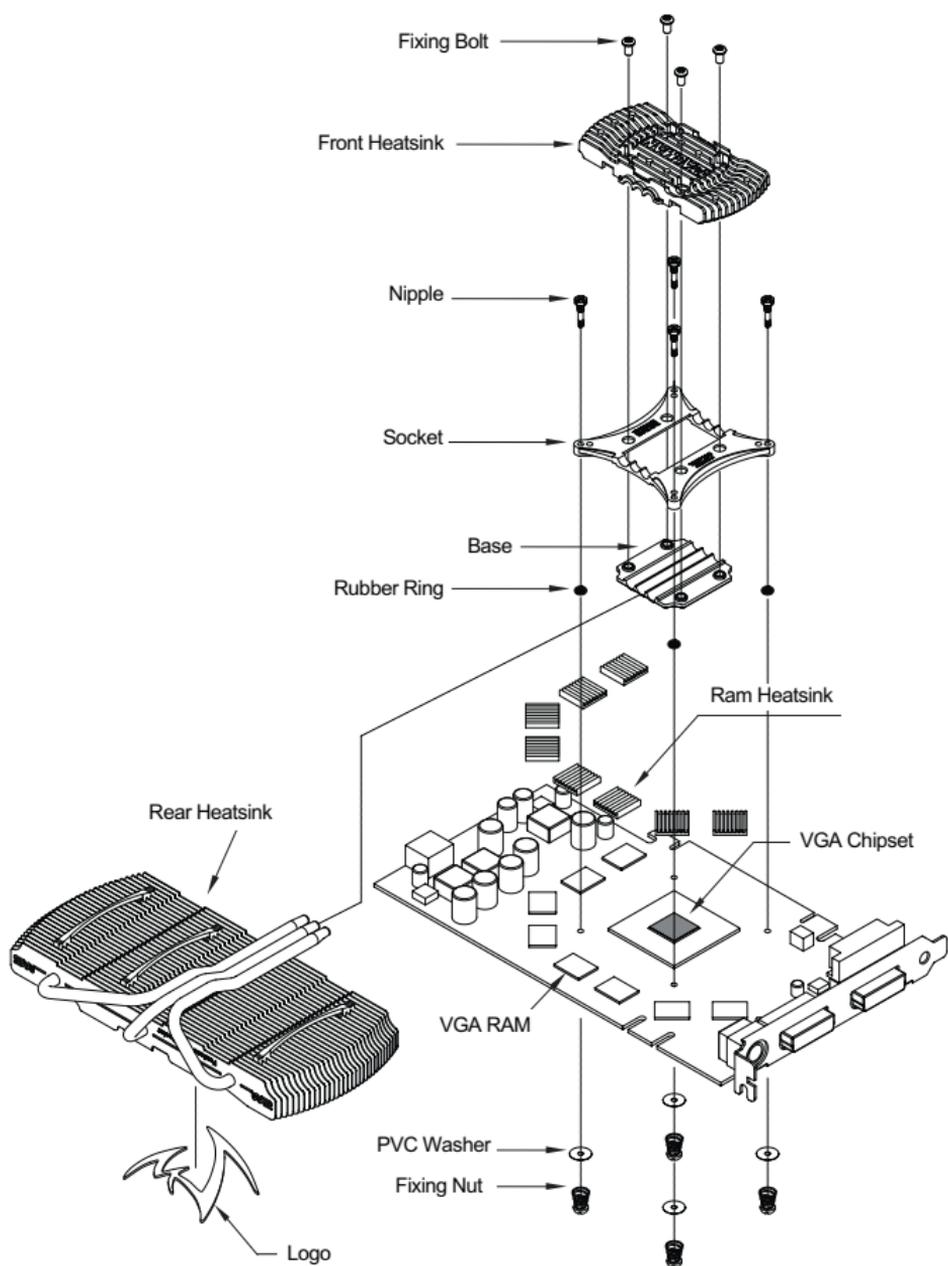
✵**The following installation sequence MUST be followed.**

(VGA RAM Heatsink Attachment → Thermal Grease Application on VGA Chipset → Socket Selection & Nipple Attachment on Socket Guide → Socket Assembly on Base → Installation of Base Assembly → Assembly of Fixing Nut on Base Assembly → Thermal Grease Application on Base → Rear Heatsink Installation → Thermal Grease Application on Front Heatsink → Front Heatsink Installation → VGA Card Installation)

1. VGA RAM Heatsink Attachment

① Remove the Film from the Thermal Tapes on the bottom of the RAM Heatsinks (ZM-RHS1) and attach the Heatsinks on the VGA RAM.

Note 1) If Thermal Grease or other residue remains on the RAM, the Thermal Tapes will not stick. Clean the surface of the RAM with acetone or alcohol before attaching.

Note 2) The bonding strength of the Thermal Tapes reaches 90% after 24 hours of curing. Do not exert excessive force on the RAM Heatsinks during this period.

Note 3) Thermal Tapes are not reusable because they lose adhesiveness after their initial attachment. Purchase new Thermal Tapes if the RAM Heatsinks need to be reattached.
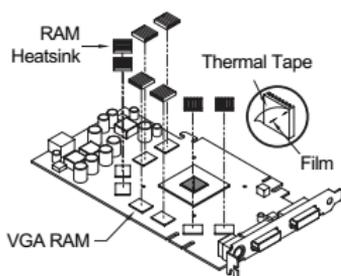
2. Thermal Grease Application on VGA Chipset

Clean the contact surface of the VGA Chipset completely. Apply Thermal Grease on the VGA Chipset that makes contact with the base of the VGA Cooler.
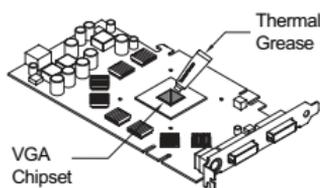
3. Socket Selection & Nipple Installation on the Socket Guide

Check the hole locations compatible with Socket A or Socket B and choose a socket accordingly. **Install the Nipples to anti-clockwise on the Socket Guide.**

✵ Please check the table below to identify the correct Nipple Installation Holes for specific models of VGA cards.
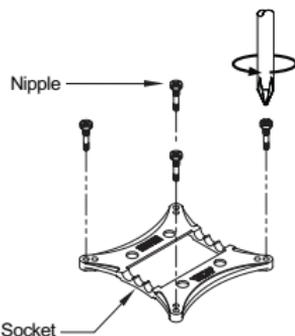
Nipple Installation Holes for Various VGA Cards

Nipple Installation Holes	VGA Card
❶	ATI X1050 Series
	ATI X1300 Series
	ATI X1600 Series
	ATI Radeon 9••• Series
	ATI Radeon X••• Series (except X700 Pro, X850 Series)
	NVIDIA Geforce4 MX Series
	NVIDIA Geforce FX 5200
	NVIDIA Geforce FX 5500
	NVIDIA Geforce FX 5600 (FX 5700)
	NVIDIA Geforce 6600 Series (except 6600 AGP Series)
	NVIDIA Geforce 7300 Series (except 7300 AGP Series)
❷	NVIDIA Geforce4 Ti 4 Series
	NVIDIA Geforce FX 5700(Ultra) Series
	NVIDIA Geforce FX 5800 Series
	NVIDIA Geforce 6600 Series (except 6600 AGP Series)
❸	ATI X1300 Series
	ATI X1550 Series
	ATI X1600 Series
	NVIDIA Geforce 8600 Series
	NVIDIA Geforce 8500 Series
	NVIDIA Geforce 7600 GS Series
	NVIDIA Geforce 6600 Series (except 6600 AGP Series)
❹	NVIDIA Geforce FX 5900 Series
	NVIDIA Geforce FX 5950 Series
❺	ATI X1800 XL Series
	NVIDIA Geforce 7950 Series (except GX2 Series)
	NVIDIA Geforce 7900 Series (except GTO, GTX Series)
	NVIDIA Geforce 7800 Series (except GS, GTX Series)
	NVIDIA Geforce 7600 Series (except 7600 AGP Series)
	NVIDIA Geforce 7300 Series (except 7300 AGP Series)
	NVIDIA Geforce 6800 Series
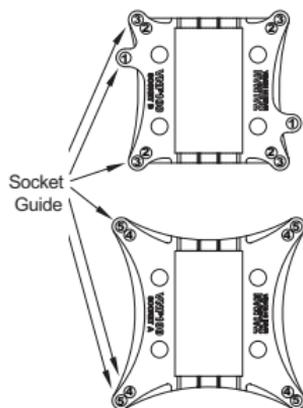
4. Socket Assembly on Base

Assemble the Base with the Nipple-attached Socket in as shown in the diagram.

Note 1) Make sure that the Heatpipe Grooves are aligned when assembling the Socket with the Base.

Note 2) If the Base and Socket are not properly assembled, it may cause the Base to be unbalanced. Make sure that the Base is properly set into the Socket.
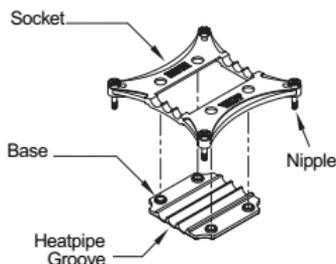
5. Installation of Base Assembly
① Insert the Rubber Rings into the Nipples installed on the Base Assembly.
② Align and insert the Base Assembly's Nipples into the VGA Card's Mounting Holes.

(Note)
Make sure that the Base Assembly is installed so that the center of the Base Assembly is closely adhered to the center of the VGA Chipset.
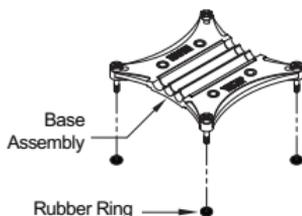
6. Installation of Fixing Nuts on the Base Assembly
① Place a PVC Washer over each Nipple installed on the rear side of the VGA card.
② Slightly screw each of the four Spring-attached Fixing Nuts onto each Nipple, then tighten each Fixing Nut one rotation at a time until all are completely tightened.

Note 1) Make sure that the VGA Chipset and Base Assembly do not get disconnected while simultaneously flipping the Base Assembly and VGA Card.

Note 2) Fully tightening one Fixing Nut at a time may result in damaging the VGA Chipset. Please tighten each Fixing Nut one rotation at a time until all are completely tightened.
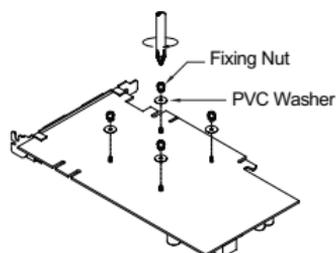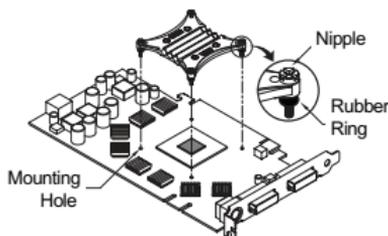
7. Thermal Grease Application on the Base
Evenly apply the Thermal Grease on the Heatpipe Grooves of the Base.
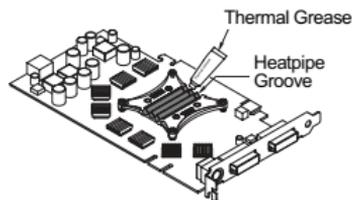
8. Rear Heatsink Installation
① Insert the Rear Heatsink in the direction of the slot (in the direction of the arrow) from the VGA Card's center as shown on the diagram.
② Insert the Rear Heatsink so that the Heatpipe's straight line section is closely adhered to the Base's Heatpipe Grooves.

Note 1) Make sure that the Heatpipes do not come in contact with the side of the VGA Card when connecting the Rear Heatsink with the VGA Card. Heatpipe must be distanced by at least 3 mm from the PCB side.

Note 2) Make sure that the Heatsink Fins do not come in contact with the rear side of the VGA Card or with other components when connecting the Rear Heatsink with the VGA Card.
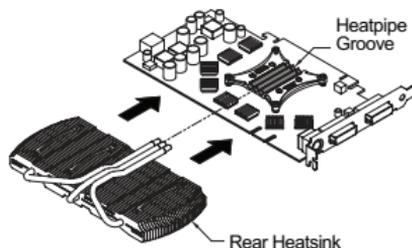
9. Thermal Grease Application on the Front Heatsink

Evenly apply the Thermal Grease on the Front Heatsink's Heatpipe Grooves.
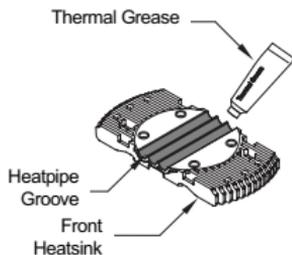
10. Front Heatsink Installation

① Place the Front Heatsink above the Heatpipes.
② Assemble the Base Assembly and the Front Heatsink with the four Fixing Bolts.

(Note) Fully tightening one Fixing Bolt at a time may cause the Front Heatsink to tilt, preventing optimal contact with the Heatpipes, and lead to a decrease in performance. Please tighten each Fixing Bolt one rotation at a time until all are completely tightened.
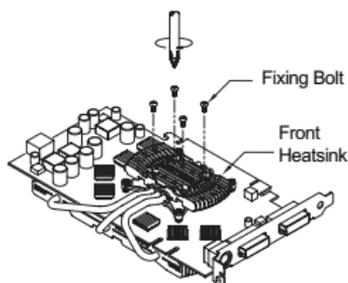
11. VGA Card Installation

Insert the assembled VGA Card into the motherboard's PCIe (or AGP) slot. Use the Fixing Bolt to secure the VGA Card onto the computer case. If the VGA Card has a power connector on it, remember to plug in the power cable.
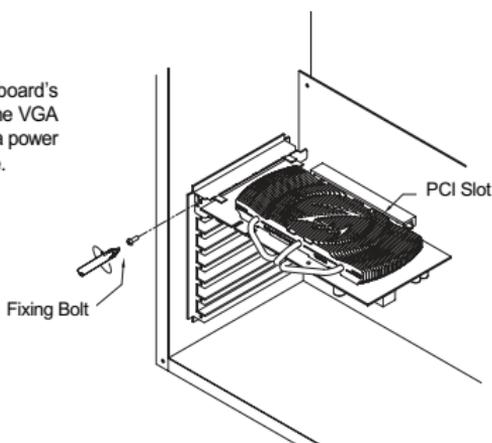
Zalman Computer Noise Prevention Systems

When building a noiseless computer, use Zalman's Ultra Quiet CPU Cooler, Noiseless Power Supply, Heatpipe HDD Cooler, Fanless Northbridge Cooler and Noiseless Case Fan for more stable performance and a noiseless environment.

Noiseless Power Supply

Heatpipe HDD Cooler

Ultra Quiet CPU Cooler
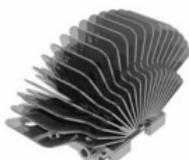
Fanless Northbridge Cooler

Noiseless Case FAN

Computer Enclosures

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- Three Tool Free Hinged Magnetic Panels (2 Left, 1 Right) for Easy Installation and Assess to Components
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GT-1000

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HD160XT

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