



**Intel® Pentium® 4 LGA775 / mPGA478
AMD K8(939/754) / K7**



Installation Guide



GH-PDU21-MF

REV.1002
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Checklist



(1)GH-PDU21-MF Cooler



(2)LGA775 RM



(3) P4 clips



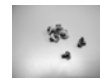
(4) K8 clip



(5) K7 clip



(6) Heat sink paste



(7) Screw



(8) Fan control box



(9) Speed control
& 3.5" bracket



(10)Powercable



(11)PCI bracket



(12)GH-PDU21-MF
user's manual



(13) Double-sided
adhesive strip
(note1)

<note1> The double-sided adhesive strip is to attach the fan control box to the chassis.

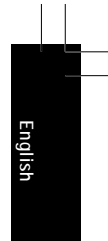
English

Specification

- Heat Sink Dimension : 110x110 x 109mm
- Heatpipe Number : 4
- Fan Speed : 1,700-3,200 rpm
- Rated Voltage : 12V
- Noise :21.3 ~ 40.1 dBA
- Bearing Type: Ball Bearing
- Base Maerial : Copper w/ Ni coating
- Fin Material : Al fin
- Rated Current : 0.1 ~ 0.5A
- Airflow : 36.2 ~ 68.5 CFM
- Life Expectancy : 50,000 hr
- Total Weight : 430g
- Application :
Intel® Pentium® 4 LGA775 840 / 670 / 570(3.8GHz)
Intel® Pentium® 4 478 3.4GHz
AMD Athlon™ FX55 / AMD Athlon™ XP 4000+
AMD K7 3200+

Feature

- Unique and patented cooler bracket design for Intel® Pentium®4 LGA775 / mPGA 478 / AMD K8(939/ 754) / K7 Platform
- 4 heatpipe design
- Adjustable fan speed control panel
- High airflow fan w/ VR function (1,700-3,200 rpm)
- Unique fan frame design sustained by 4 artistic pillars
- Brilliant Blue LEDs
- Omni- directional cooler design
- Linear fan speed control module, suitable for both 3.5" front panel and PCI rear panel
- Easy clip installation – No tool required



Precautions

The cooler fan speed levels provided are for reference use only. Please refer to the motherboard BIOS to verify actual fan speed levels.
Each connector on the fan control box is foolproof. Read the user's manual before use.
Before use, please remove the bottom protective layer of the cooler.
Please make sure the computer is turned off and its power disconnected prior to installation.

Warranty Item

<Warranty coverage does not include the following>

- Incorrect method of operation or use of product not for intended use
 - Operational use beyond the advised standards (eg. overclocking)
 - Inability to install the product as a result of incompatibility with the motherboard used
 - Damage of product as a result of other product components
 - Any form of alteration to original product
 - A faulty product that leads to harm or damage to other products
 - Damage caused by natural disasters (eg. earthquake, fire, flood)
 - Products with a warranty sticker that is removed, torn or unreadable
- Due to the weight of the cooler exceeding normal standards, please remove the cooler before computer transport to prevent damage to the cooler itself as well as prevent problems during installation.



Installation Instructions for Fan Control Box & Power Cable



Power Cable connector



Connect the other end of the power cable to the 3-pin CPU fan header on the motherboard.



Fan Control Box

or



Connect the other end of the power cable to the 4-pin CPU fan header on the motherboard. (LGA775)

Connector for 3.5" Fan Speed controller



Power connector for Cooler

Power Installation and 3.5" Fan Speed Controller Installation



Figure 1-1



Figure 1-2

Figure 1
Securely hold the 3.5" fan speed controller bracket in place with the screws provided(Figure 1-1).



Figure 2-1

Figure 2
Connect the cable connector of the 3.5" fan speed controller to the fan control box (Figure 2-1).



Figure 3-1

Figure 3
Connect the power cable connector of the cooler to the fan control box (Figure 3-1).



Figure 4-1



Figure 4-2

Figure 4
Assure that one end of the power cable included with the GH-PDU21-MF cooler is connected to the fan control box (Figure 4-1). Connect the other end to the CPU fan header on the motherboard. Then the installation is completed . (Figure 4-2).

Power Installation and PCI Fan Speed Controller Installation



Figure 1-1



Figure 1-2

Figure 1
Disassemble the turn knob, bolt and fan speed controller from the 3.5" bracket and reassemble these parts onto a PCI bracket in sequence.

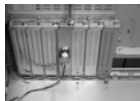


Figure 2-1

Figure 2
Place the PCI bracket with the fan speed controller in the selected PCI slot. Use screws to secure the PCI bracket in place.



Figure 3-1

Figure 3
Repeat the steps in "Power Installation and 3.5" Fan Speed Controller Installation (Figure 2-1 - Figure 4-2)".
The installation is now completed.

Installation Instructions for P4 LGA775RM & Cooler

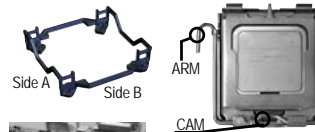


Figure 1

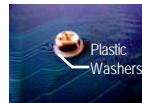


Figure 2



Figure3-1



Figure3-2



Figure 1

Place the LGA775RM onto the LGA775 motherboard so that side A is parallel with ARM and side B is parallel with CAM.

Figure 2

From the underside of the motherboard, use screws (4) and plastic washers (4) together to secure the LGA775RM into place..

Figure 3

Gently push down on the cooler unit to lock it into position. (Figure3-1).Repeat the steps in "Power Installation and 3.5" Fan Speed Controller Installation (Figure 2-1-Figure 4-2)". The installation is now completed.



GH-PDU21-MF provides manual fan speed control function. The fourth pin of the 4-pin CPU fan header does not necessarily have to be connected (Figure 3-2).

Note: About P4 Clips installation, please refer to "Installation Instructions for Intel® Pentium® 4 mPGA478 Clips"

Installation Instructions for Intel® Pentium® 4 mPGA478 Clips



Figure 1-1



Figure 1-2



Figure 2



Figure 3-1



Figure 3-2



Figure 4

Figure 1
Please add an adequate layer of heat sink paste on the surface of the CPU (Figure 1-1). Figure 1-2 showing the correct installation of the cooler atop the CPU.

Figure 2
Clip introduction--
Part A: Secured to the retention mechanism hook.
Part B: Tightly contact the cooler bracket.
Part C: Secured to the retention mechanism hook.

Figure 3
Secure Parts A, B, and then C of the clip to the retention mechanism. Assure that Part C is secured to the retention mechanism hook on the same side as the heat pipes.

Figure 4
Repeat the steps in "Power Installation and 3.5" Fan Speed Controller Installation (Figure 2-1-Figure 4-2)". The installation is now completed.

Installation Instructions for AMD K8 (939 / 754) Clip



Figure 1-1



Figure 1-2



Figure 2



Figure 3



Figure 4-1



Figure 4-2

Figure 1
Please add an adequate layer of heat sink paste on the surface of the CPU.

Figure 2
Figure showing the correct installation of the cooler atop the CPU.

Figure 3
Align the three insert spaces of the clip with the three juts on the CPU socket and then push firmly downwards to hold the clip in space.

Figure 4
Push the lever on the side of the cooler towards the lever position on the base of the CPU to secure the cooler atop the CPU. Repeat the steps in "Power Installation and 3.5" Fan Speed Controller Installation (Figure 2-1~Figure 4-2)". The installation is now completed.

Installation Instructions for AMD K7 Clip



Figure 1-1



Figure 1-2



Figure 1-3

Figure 1

Please add an adequate layer of heat sink paste on the surface of the CPU. Remove the bracket of the cooler along the direction of the arrow (Figure 1-2). The bracket should be removed as that shown in Figure 1-3.

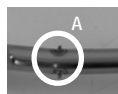


Figure 2-1



Figure 2-2



Figure 2-3

Figure 2

Place point A of the clip (Figure 2-1) on point B at the bottom of the cooler (Figure 2-2). As Figure 2-3.



Figure 3

Figure 3

Align the three spaces on the cooler with the three clips on the base of the CPU and make sure point A of the clip (Figure 2-1) is placed on point B at the bottom of the cooler (Figure 2-2) and push down on the clip until it's firmly locked.



Figure 4

Figure 4

Repeat the steps in "Power Installation and 3.5" Fan Speed Controller Installation (Figure 2-1~Figure 4-2)". The installation is now completed.



**Intel® Pentium® 4 LGA775 / mPGA478
AMD K8 (939 / 754) / K7**



中文安裝說明

GH-PDU21-MF





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清點附件



(1) GH-PDU21-MF 散熱器



(2) LGA775 腳座



(3) P4 扣具



(4) K8 扣具



(5) K7 扣具



(6) 散熱膏



(7) 螺絲



(8) 風扇調速盒



(9) 3.5 吋風扇
轉速控制器



(10) 電源線



(11) PCI 擋板



(12) GH-PDU21-MF
安裝手冊



(13) 雙面膠(註1)

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<註1> 此雙面膠片為將風扇調速器固定至機殼之用。

規格說明

- 散熱器尺寸: 110 x 110 x 109 mm
- 導熱管: 4 隻
- 額定速率: 1,700 ~ 3,200 rpm
- 額定電壓: 12V
- 噪音: 21.3 ~40.1 dBA
- 軸承類型: Ball Bearing
- 底部材質: 銅底鍍鎳
- 鳍片材質: Aluminum
- 額定電流: 0.1~ 0.5 安培
- 風量: 36.2 ~ 68.5 CFM
- 風扇壽命: 50,000 hr
- 總重量: 430g
- 支援平台:
Intel® Pentium® 4 LGA775 840 / 670 / 570(3.8GHz)
Intel® Pentium® 4 478 3.4GHz
AMD Athlon™ FX55 / AMD Athlon™ XP 4000+
AMD K7 3200+

特色彙總

- 獨特散熱器底板專利設計，適用於 P4 LGA775 ， P4 mPGA478 ， AMDK8(939 / 754) ， AMDK7 主機板
- 風扇調速盒可調節風扇最大效能或安靜運轉品質
- 具高熱傳導性的 4 隻熱管設計
- 高風量風扇具可調速功能(1,700-3,200 rpm)
- 風扇線性轉速控制模組可安裝於 3.5 吋面板及 PCI 背板
- 亮眼藍光 LED
- 獨特造型的風扇框及風扇固定架
- 免用工具即可輕鬆安裝扣具
- 熱管無方向性設計，任何方向安裝皆可達到完美效能



注意事項

散熱器的轉速數值只供參考用，實際的數值請從主機板的BIOS來確認散熱器的迴轉數。

風扇調速盒之各接頭皆有防呆設計，使用時請先閱讀使用手冊。

請務必將底部保護膜撕掉才可使用。

安裝前請將電腦的電源關閉，並且拔除電源插頭。

保固條款

【以下事項不屬於保固範圍之內】

使用錯誤的方法進行操作，或是用於指定用途之外時。

在規定的正確操作方法之外時。〈例如：超頻〉

主機板等部份的規格不適合，所引起無法進行安裝。

因他產品的影響引起故障發生時。

使用時將本產品進行改裝。

因本產品的不良引起他產品的故障，破損。

因災害〈地震、打雷、火災、水災〉等引起的故障。

產品本身之保固貼紙被撕毀或破損時。

在搬運電腦產品過程中，未先卸下散熱器，而造成散熱器本身及電腦相關裝置損壞。

風扇調速盒及電源線接頭介紹

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電源線接頭



風扇調速盒

3.5 吋風扇轉速控制器
連接線接頭



散熱器之電源線接頭



電源線接頭另一端插入
主機板上 3 pin CPU fan 插座

或



電源線接頭另一端插入主機板
上 4 pin CPU fan 插座 (LGA775)

風扇電源線及 3.5 吋轉速控制器安裝方式



圖 1-1



圖 1-2



圖 2-1



圖 3-1



圖 4-1



圖 4-2

圖 1

安裝 3.5 吋風扇轉速控制器擋板並以螺絲轉緊固定(圖 1-2)。

圖 2

將 3.5 吋風扇轉速控制器上的連接線插入風扇調速盒上的接頭(圖 2-1)。

圖 3

將散熱器上的電源線插入風扇調速盒上的接頭(圖 3-1)。

圖 4

將 GH-PDU21-MF 所附之電源線連接風扇調速盒上的接頭，電源線另一端插入主機板上 CPU fan 插座(圖 4-1)，如此即安裝完成(圖 4-2)。

風扇電源線及 PCI 擋板安裝方式

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圖 1-1



圖 1-2

圖 1

將 3.5 吋風扇轉速控制器依序拆卸旋鈕、螺栓、控制器(圖 1-1)。再依相反順序安裝在 PCI 擋板上並轉緊(圖 1-2)。

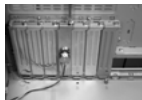


圖 2-1

圖 2

選擇一個 PCI 槽，將安裝完成之轉速控制器的 PCI 擋板固定在上面。最後用螺絲固定(圖 2-1)。

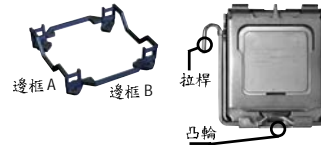


圖 3-1

圖 3

重覆”風扇電源線及 3.5 吋轉速控制器安裝方式”章節(圖 2-1-圖 4-2)”步驟。
安裝完成如圖 3-1。

P4 LGA775 腳座及散熱器安裝方式



GH-PDU21-MF 散熱器安裝於 LGA775 主機板，需要 LGA775 腳座 & P4 扣具。
先將散熱膏適量塗抹於 CPU 上。

先將散熱膏適量塗抹於 CPU 上。



圖 1

將 LGA775 腳座放置在 LGA775 主機板上，並將邊框 A 與 LGA775 腳座之拉桿平行，邊框 B 與 LGA775 腳座底部凸輪平行(圖 1)。

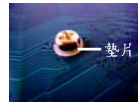


圖 2

將螺絲及墊片一同鎖在主機板背部之散熱器腳座孔位上(圖 2)。



圖 3-1



圖 3-2

將 P4 扣具及散熱器固定在 LGA775 腳座上(圖 3-1)。重覆”風扇電源線及 3.5 吋轉速控制器安裝方式章節(圖 2-1- 圖 4-2)”步驟。如此即完成。

GH-PDU21-MF 為手動調速控制，不需使用第 4 隻針腳，請安心使用。

詳細 P4 扣具安裝步驟請參考” Intel® Pentium®4 mPGA478 扣具安裝方式”。



Intel® Pentium® 4 mPGA478 扣具安裝方式

圖 1-1



圖 1-2



圖 2



圖 3-1



圖 3-2



圖 4

圖 1

先將散熱膏適量塗抹於 CPU 上(圖 1-1)。再將散熱器放在 CPU 上(圖 1-2)。

圖 2

扣具 A 點: 固定在主機板散熱器腳座上。

扣具 B 點: 緊貼在散熱器底座上。

扣具 C 點: 固定在主機板散熱器腳座上。

圖 3

將扣具各點依序(A 點、B 點、C 點)固定在主機板散熱器腳座上，並注意 C 點需與導熱管同側安裝。

圖 4

重覆” 風扇電源線及 3.5 吋轉速控制器安裝方式 章節(圖 2-1~ 圖 4-2)” 步驟。如此即安裝完成。

AMD K8 (939 / 754) 扣具安裝方式



圖 1-1



圖 1-2



圖 2



圖 3



圖 4-1



圖 4-2

圖 1

先將散熱膏適量塗抹於CPU上。再將扣具穿入散熱器中(圖 1-2)。

圖 2

將散熱器放在CPU上。

圖 3

將散熱器扣具對準CPU腳座的三個凸點，並將扣具向下施力扣上。

圖 4

再將散熱器拉桿向下扣在CPU腳座上的扣點，確實扣緊。重覆”風扇電源線及3.5吋轉速控制器安裝方式章節(圖 2-1~圖 4-2)”步驟。如此即安裝完成。



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AMD K7 扣具安裝方式



圖 1-1 圖 1-2 圖 1-3

圖 1
先將散熱膏適量塗抹於 CPU 上。將散熱器底座依箭頭方向取下(圖 1-2)。取下完成如圖 1-3。



圖 2-1 圖 2-2 圖 2-3

圖 2
請將扣具的 A 處(圖 2-1)放置在散熱器底部 B 處(圖 2-2)。如圖 2-3 所示。



圖 3

圖 3
將散熱器扣具對準 CPU 腳座的三個凸點並扣住，再施力於扣具把手，同時確定扣具的 A 處(圖 2-1)是否置入散熱器底部 B 處(圖 2-2)，再將扣具向下扣上。



圖 4

圖 4
重覆”風扇電源線及 3.5 吋轉速控制器安裝方式章節(圖 2-1- 圖 4-2)”步驟。如此即安裝完成。

