

HARDCANO 13

Integrate the Intelligent Fan controller and 6 in 1 Card reader
Multi-function 5.25 " Drive bay PIN:A2259

User's Manual



Thermaltake
COOLall YOUR LIFE

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Part I

Components Check

1.1 Overview

Hardcano 13 is a multi-functional media panel with **Intelligent Thermal Management System** and **Smart Card Reader**.

The **Intelligent Thermal Management System** monitors fan speeds, temperatures at 4 different locations in real-time with "**Thermal Alarm**". The smart card reader supports 6 popular Flash Memory Card formats:

CompactFlash™, **Microdrive™**, **Memory Stick™**, **Memory Stick Pro™**, **Secure Digital™**, **MultiMedia Card™**, and **SmartMedia™**. No matter what, you can be sure that your Data will be transferred to your computer safely and securely.

1.2 Components Check

User s' Manual x 1

Accessory Pack x 1

Hardcano 13 Module x 1



1.3 Key Introduction



No.	Key	Function
1	Alarm	To set the value of alarm temperature. (*Default: 40 °C. ** Preset Values: 40 °C/ 50 °C/60 °C/ 70 °C)
2	Fan	Switch the different channels circularly(Fan1/Fan2/Fan3/Fan4)
3	Color	1.Switch the color display / Return from Clock Mode 2.Press 4 seconds to start the cycle of 8 color display 3.When the color is in rotation, press again to fix the color you like.
4	Knob	1.At Manual mode, adjust the fan speed by rotating the knob. Rotate clockwise for acceleration, counter clockwise for deceleration. 2.At Time setting Mode, rotate the knob to adjust the hour and press it to set the minute. When the time is set, press the knob again as ending.
5	°C/°F	To toggle between Celsius and Fahrenheit display mode. (Default: Celsius)
6	Clock	1.Switch to Clock Mode. Display in 24 Hours. 2.Press 4 seconds to Time setting Mode.
7	A/M	To switch between Auto Mode and Manual Mode (Default: Auto)
8	SD/MMC Socket	For SD/MMC Card
9	CF Socket	For Compact Flash Card
10	SM Socket	For Smart Media Card
11	MS Socket	For MS Card / Memory stick pro.

1.4 Display Introduction

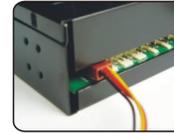


No.	Icon	Description
1	Fan1~Fan4	Displays the current location monitored.
2	Mode	Display the Auto or Manual Mode.
3	CF/SD/SM/MS/MMC	Indicate the type of memory card in use.
4	Temp/clock	Display the temp feedback by thermal sensor Show the time at CLOCK Mode.
5	XXXXRPM	Displays fan speed in RPM unit .(Display range 0~9999RPM)
6	Alarm temp.	Displays the value of alarm temperature (40 °C/ 50 °C/60 °C/ 70 °C)

Part II Installation

2.1 How to Install in case

STEP 1: Connect the Fans



Connect the 3 pin connector of the fan directly to the 3 pin socket of Hardcano 13. If the cable length is not long enough, use the 3pin extension adapter. Some fan units uses 4 pin connector instead of 3 pin connector. In this case, please use the **4pin to 3 pin adapter** provided in the package to connect it to the 3pin socket of Hardcano 13.

STEP 2: Connect the Thermal Sensor



Connect the 2 pin connector of thermal sensor cable to the 2pin socket of Hardcano 13. You may place the **Thermal Sensor Probes** to different chassis locations.

STEP 3: Install the Hardcano 13.



Secure the Hardcano 13 into any open external 5.25" drive bay with the screws provided in the package.

Note: Some PC chassis requires 5.25" guide rails to be mounted on the drive units in order to slide into the drive bay.

STEP 4: Connect the Power Cable



Connect the 4 pin MOLEX connector from computer power supply to the 4pin socket of Hardcano 13.

STEP 5: Install The Card Reader To Motherboard



Connect the USB signal cable to the USB socket on Motherboard

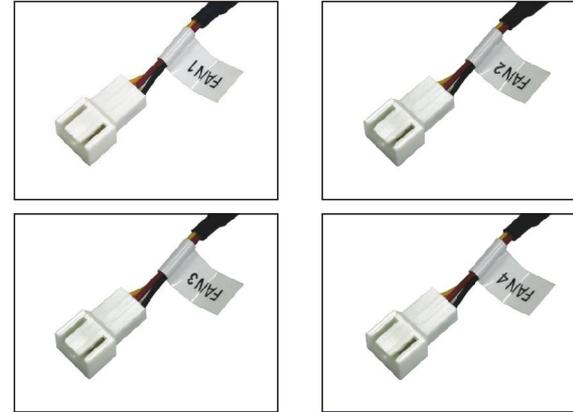
Note: Please refer to your motherboard manual for USB connectors.

2.2 Connectors from Hardcano 13

Connectors: 4pin connector X1	 For power supply
Connectors: thermal probe X4	 <ul style="list-style-type: none"> Example For CPU cooler Example For VGA cooler Example For case environment Example For power supply
Connectors: 3pin connector X4	 <ul style="list-style-type: none"> Example For CPU fan Example For VGA fan Example For case fan Example For power supply fan
Adaptor: RPM (Speed) Signal Connector "Provide RPM Signal Only, Not Power"	<ul style="list-style-type: none">  Connect H13 Control Connector  +12V +5V 4pin Power Connector  Fan Control Connector

2.3 How to Connect with 3pin Fan

Fan Control Cable X 4



Application:

Each set of Fan Control Cable is labeled as followed:
 Fan1/Fan2/Fan3/Fan4
 Each can be connected to 3pin fan connector.



Controller connection figure

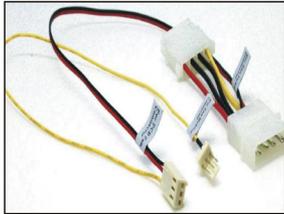
Connecting Fans



Above application shows Fan1 Fan Control Cable connected to a most common fan connector. This setup will allow Hardcano 13 to adjust fan speed and receive RPM signal as well.

2.4 How to Connect with 4pin Fan

Some fan unit may be using 4pin connector. In order for Hardcano 13 module to control, you'll need to utilize this included adaptor.



Adaptor(3 pin to 4 pin) X 1

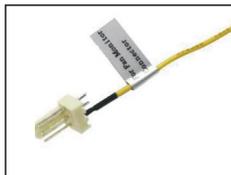
Connector



4pin Fan Connector

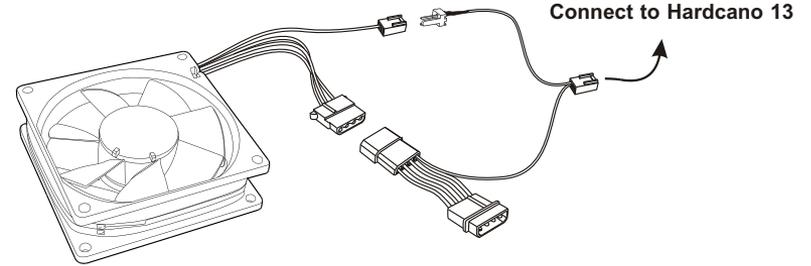


Hardcano 13 Fan connector

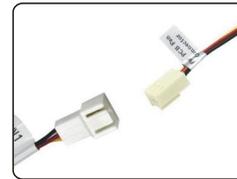


RPM (Speed) Signal Connector
"Provide RPM Signal Only, Not Power"

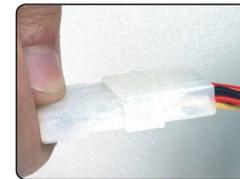
Instruction



Using 3-pin to 4-pin Adapter



Connect the Hardcano 13 fan connector to the 3-pin adapter



Connect the 4-pin Power connector to 4-pin adapter



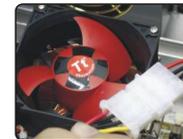
Connect the RPM Signal Connector to the Fan Connector

Note:

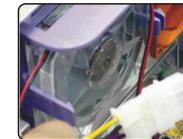
A few variation of fans does not output RPM (Speed) signal. Therefore, Hardcano 13 is unable to monitor the RPM (Speed) of the fan, but it is still able to adjust the RPM (Speed).



CPU Fan



CPU Fan

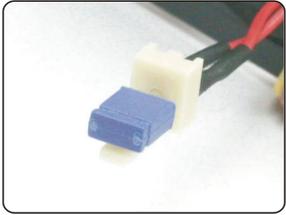


Case Fan



VGA card cooler

2.5 What is the jumper cap for?



If you are using Thermaltake Smart Case Fan, please connect the jumper to the VR connector of the fan in order for Hardcano 13 detect the fan speed signal properly.

2.6 Where should I place the Thermal Sensor Probe?

Thermal Probe X 4



T1



T2



T3



T4

There are 4 sets of Thermal Sensor Probe that you may place in the computer case. Please see pictures below for recommended monitor areas.

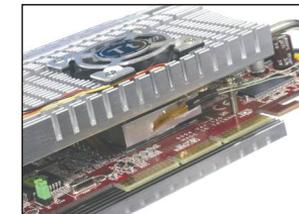
Application:

Hardcano 13 includes 4 sets of Thermal Probe. Attach each Thermal Probe to different heat sources with the included thermal tape.

Recommended Sensor Area:



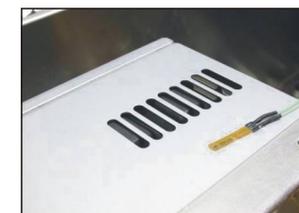
CPU cooler
detect CPU temp



VGA card cooler
detect VGA temp.



CPU fan
detect case environment
temp.



Power supply
detect PSU temp

3.1 System Requirements

One of following operating systems:

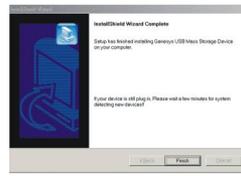
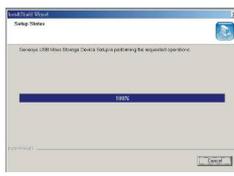
- windows 98/ SE
- windows 2000
- Windows ME (No drive needed)
- Windows XP (No drive needed)
- Mac OS 8.6
- Mac OS 9.X
- Mac OS X 10.1.2(No drive needed)

3.2 Driver Installation for Windows 98/SE and Windows 2000

STEP 1. Insert the driver CD into the CD-ROM drive. Run the program **Setup.exe**.

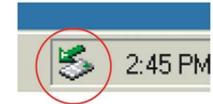


STEP 2. The Install shield Wizard will guide you through the installation process.

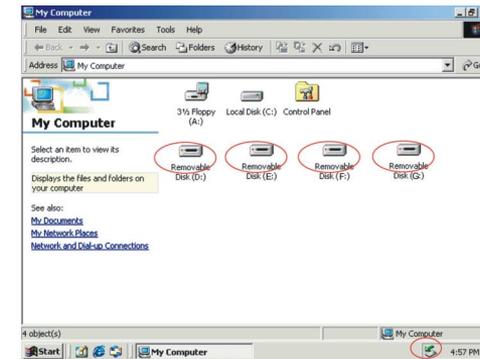


3.3 Hardware setup

STEP 1: The Windows will automatically recognize the Smart Card Reader and it will continue installing files that is required for the SmartCard Reader.



STEP 2: The Smart Card Reader is ready to use! Please check there are four new drives under "My Computer".



3.4 Drive Installation for Mac OS 8.6

STEP 1. Insert the driver CD into the CD-ROM drive. Run the **Setup.exe** program.

STEP 2. The Install shield Wizard will guide you through the installation process.

3.5 Drive Installation for Mac OS 10.X

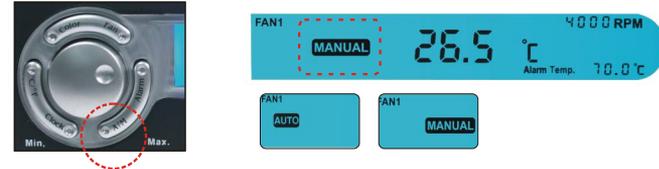
The Hardcano 13 is a drive-free device for Mac OS 10.X and up. Mac OS 10.X and up will detect the device and install all the associated files required for its use automatically.

3.6 How to Use the 6 in 1 Card Reader with Mac OS

When disk icon will appear on the desktop. You can then use the storage card as if it were a Mac HardDisk.

4.1 How to change A/M

STEP 1. Switch between Auto Mode and Manual Mode



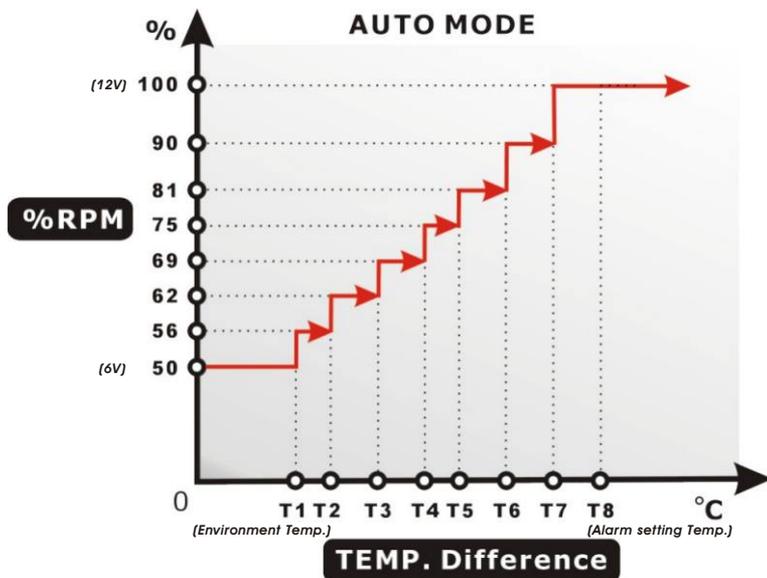
4.2 How to distinguish Auto / Manual Mode

While the computer is idling or under minor workload, it is recommended to switch operating mode to Automatic to minimize the overall noise level.

Auto. Mode

(when you away from the computer or the system workload is minor)

Each fan's speed will be automatically adjusted according to each preset location's temperature. Following chart represents the approximate speed at which fan will be operating under at different temperature.



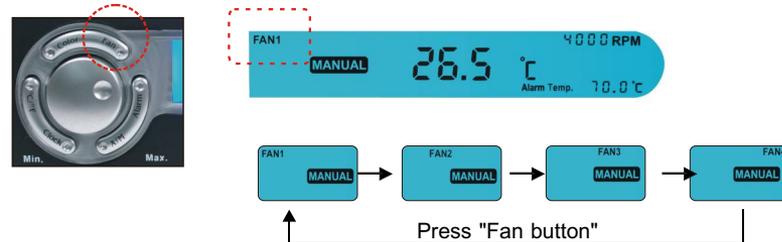
Manual Mode

(when you are using the computer or the system workload is heavy)

While operating under Manual Mode, users may . adjust the fan speed by rotating the knob. Rotate clockwise for acceleration, counter clockwise for deceleration.

4.3 How to set Fan Speed (only in manual mode)

STEP 1. Select the Fan you wish to adjust by press "Fan button"



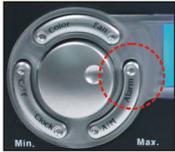
STEP 2. Rotate the Knob to increase and decrease fan speed. Rotate clockwise for acceleration, counter clockwise for deceleration. (Maximum speed varies from each different fan unit.)



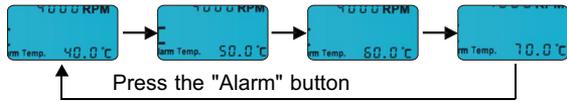
Note : The range for the RPM signal display is 0 RPM to 9999 RPM.

4.4 How to set Alarm

Press the "Alarm" button repeatedly until your desired temperature is shown on the LCD. (Default: 60°C)



EX. This display shows Alarm temp.
60°C at FAN/T1



4.5 How to change the color of the LCD Panel?

STEP 1. Simply press "Color" Button as shown on the Picture Below.
Press 4 seconds to start the cycle of 8 color display



Deep Blue



Purple



Yellow



Deep Green



Red



Light Green



Light Blue



White

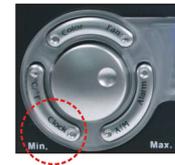
4.6 How to switch to Celsius or Fahrenheit?

STEP 1. Press switch button as shown on the picture below



4.7 How to change Clock Display Mode

STEP 1. Press & Hold 4 seconds to set Time Mode as shown on the picture below.



STEP 2. Rotate the knob to adjust the hour and press it to set the minute. When the time is set, press the knob again as ending.

Part III

Q&A

5.1: The Hardcano 13 Module does not come on after system is Powered?

Ans: Please make sure the main power connector is connected to Power Supply.



Slide the cover towards back to remove.



Make sure all connectors are connected securely.

5.2: LCD does not display temperature?

Ans: 1. Make sure its corresponding Thermal Probe is attached correctly to the component you wish to monitor.
2. Examine the Thermal Probe to see if there is any cut or Discontinuity!

5.3: LCD does not display fan RPM?

Ans: 1. Make sure the cables are connected securely.
2. Verify the fan unit you are controlling & monitoring has RPM signal capability. Majority of the 3 wire fan have RPM signal Capability, while 2 wire fans do not.

5.4: LCD screen seems to be a little dimmer after some usage?

Ans: After some time, LCD may not be as bright as initial use. This is a normal characteristic for all LCD screen and will not affect Hardcano 13's performance in any way.

5.5: Hardcano 13 unit is unable to adjust fan speed?

Ans: A portion of fan unit have built in fan speed control.
To allow Hardcano 13 to take control, certain steps need to be
Performed. ie. Insert jumper.

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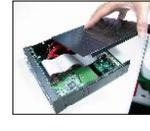


Note - Please follow below process or your Hardcano memory function will be failed

Section.1 First time using Hardcano13

When you first time use Hardcano13,you have to remove the insulation between battery and socket.

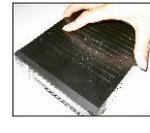
1.Open the cover case and will see a battery on PCBA.(Figure.A)



2.Remove the battery insulation from the socket.(Figure.B)



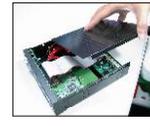
3.Cover the upper case back.(Figure.C)



Section.2 Changing battery process

If your time memory function failed you may have to replace the Hardcano's battery.

1.Open the cover case and will see a battery on PCBA.(Figure.D)



2.Please remove the original battery from the socket.(Figure.E)



3.Plug the new battery into the socket

NOTE:The battery model is 3volt "CR2032" (Figure.F) .



4.Cover the upper case back.(Figure.G)

