

ASUSTeK COMPUTER INC.	EAH5670 Standard Operation Procedure	Doc. No:	
		Date: Mar.10, 2011 Revision:1.15	
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Rev.	Modified Chapters	Modification Description	Issued Dept.	Issued by	Revised Date
1.00		First Release	GTC	Ariel_wang	Jan.29,2010
1.01		Add new P/N C1CNZ5(A01)	GTC	Ariel_wang	Mar.2,2010
1.02		Add new PCBA C1CNZ5(A11)	GTC	Ariel_wang	Mar.16,2010
1.03		Add new PCBA C1CNZ0(B01)	GTC	Ariel_wang	Apr.13,2010
1.04		Add new PCBA C1CNZ0(B11)	GTC	Ariel_wang	Apr.26,2010
1.05		Add new PCBA C1CNZA(A01)	GRMA	Chongling	Apr.27,2010
1.06		Add new PCBA C1CNZA(A11)	GRMA	Chongling	Jul.05,2010
1.07		Add new PCBA C1CNZA(A21)	GRMA	Chongling	Aug.16,2010
1.08		Add new PCBA C1CNZ0(B23)	GRMA	Chongling	Aug.24,2010
1.09		Add new PCBA C1CNZ0(B33)	GRMA	Chongling	Nov.16,2010
1.10		Add new PCBA C1CNZ0(B45)	GRMA	Ariel_wang	Dec.29,2010
1.11		Add new PCBA C1CNZA(A34)	GRMA	Ariel_wang	Dec.31,2010
1.12		Add new P/N C1CNZF(A01)	GRMA	Ariel_wang	Jan.13,2011
1.13		Add new PCBA C1CNZF(A12)	GRMA	Ariel_wang	Feb.21,2011
1.14		Add new P/N C1CNZK(A01)	GRMA	Ariel_wang	Feb.21,2011
1.15		Add new PCBA C1CNZK (A11)	GRMA	Ariel_wang	Mar.10,2011

Authorize by		Review by		Originator By	Ariel
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<div data-bbox="86 248 309 297"><b>1.Objectives</b></div> <div data-bbox="304 297 632 338">Create test procedure.</div> <div data-bbox="86 383 225 432"><b>2.Scope</b></div> <div data-bbox="304 432 587 472">Model: EAH5670</div> <div data-bbox="304 472 1385 512">PN: C1CNZ0(A01&amp;B01&amp;B11&amp;B23&amp;B33&amp;B45) C1CNZ5(A01&amp;A11)</div> <div data-bbox="229 512 1417 553">C1CNZA(A01&amp;A11&amp;A21&amp;A34) C1CNZF(A01&amp;A12) C1CNZK(A01&amp;A11)</div> <div data-bbox="86 560 288 609"><b>3.Test Item</b></div> <div data-bbox="304 609 724 649">3.1 Diagnostic test in <b>Linux</b></div> <div data-bbox="304 649 831 689">3.2 3DMark03(contain HDMI test)</div> <div data-bbox="304 689 619 730">3.3 Temperature test</div> <div data-bbox="304 730 1355 770">3.4 Fan test (For C1CNZ0-A01/ C1CNZ5-A01/A11 / C1CNZA-A01)</div> <div data-bbox="86 822 480 871"><b>4.Relevant Document</b></div> <div data-bbox="304 871 395 911">None.</div> <div data-bbox="86 956 1497 1261"><b>5.Definition :</b> <ol style="list-style-type: none"> <li>1. If the model name contains P, please test HDCP function. Ex: EAH***/HTDP/512M/A</li> <li>2. If you test HDMI already, it's unnecessary to test HDCP. The HDMI contains HDCP function.</li> <li>3. System Memory: 1GB for a single GPU test station; please add an additional 512MB of system memory for each additional GPU used for the test configuration</li> </ol> </div>		

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## 6. Operation Procedures:

### 6.1 Attention

- 6.1.1 To avoid damaging devices or M/B, please turn off A/C power then unplug VGA card.
- 6.1.2 While unplugging the card, do it in upright direction to avoid damaging slot & golden finger.
- 6.1.3 If any problem happens, please inform test supervisor. Base on ATX power specification, +5V standby voltage is existed while AC power is connecting. For safety reason, please turn off main power during break time or idling test.
- 6.1.4 Some test items should be tested under Windows environment. (Please install windows test environment by yourself).

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## 6.2 Fixture connect

6.2.1 Install Intel P5 CPU & CPU Fan.

6.2.2 Install DDR2 1GB Memory to DIMM1~4. (a minimum memory of 2GB for Linux test)

6.2.3 Plug USB Mouse and PS/2 Keyboard into MB.

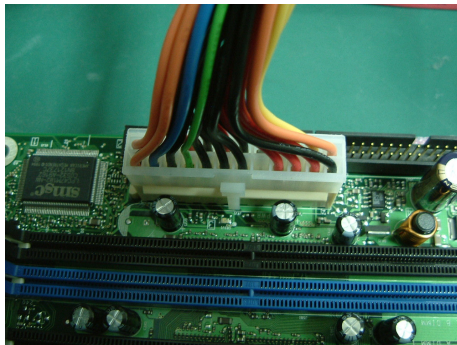
6.2.4 Plug VGA Card EAH5670 into PCIEX16\_1.

6.2.5 Connect SATA HDD & SATA con via SATA cable



6.2.6 Plug 4PIN 12V power(a minimum power of 600W) cable into CON12V.

6.2.7 Plug ATX Power on Power(a minimum power of 600W) Connector.

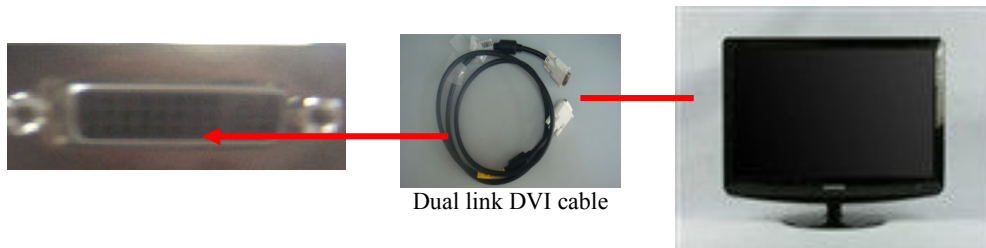


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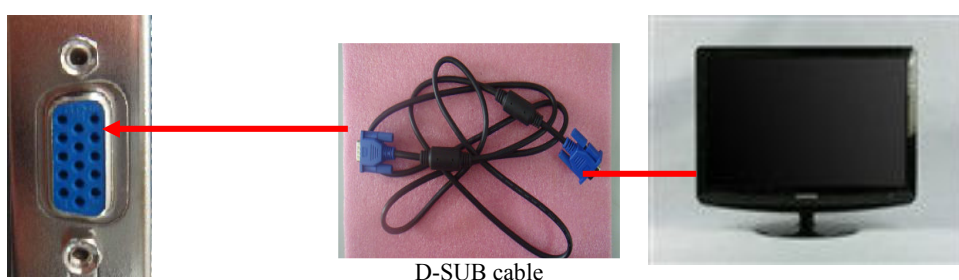
## 6.3 Certain test.

### 6.3.1 Diagnostic test in **LINUX**

6.3.1.1 Please connect LCD monitor & card's DVI CON via a DVI cable.



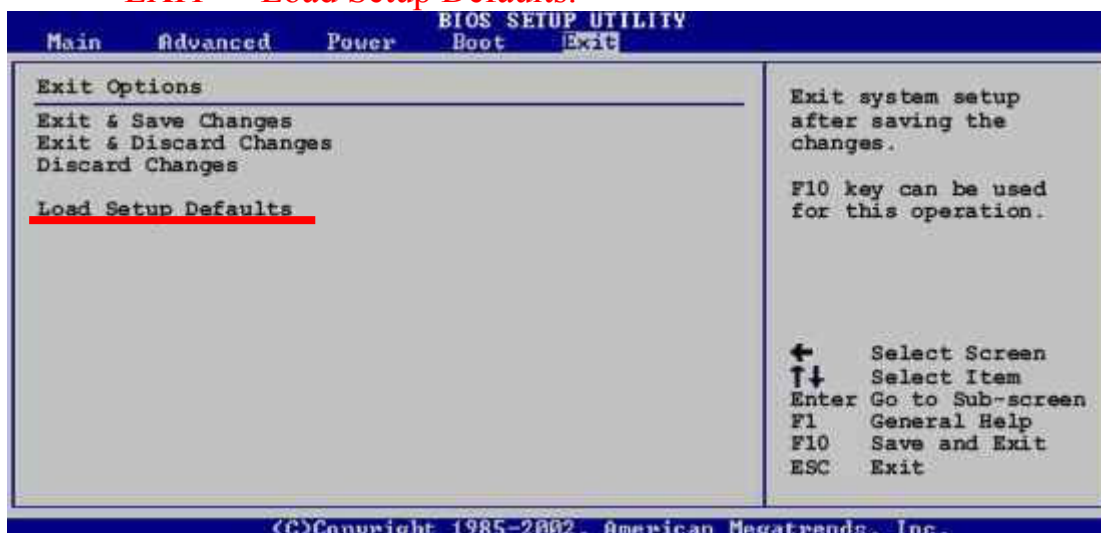
Please connect LCD monitor & card's D-SUB CON via a D-SUB cable.



6.3.1.2 Press Power Switch then turn on power button.

6.3.1.3 Press "Del" to enter CMOS setup menu while boot screen is displaying.

**EXIT -> Load Setup Defaults.**



6.3.1.4 Run test program in linux.

Path: eah5670\c1cnz0a0.sh /c1cnz0b0.sh /c1cnz0b1.sh /c1cnz5a0.sh /c1cnz5a1.sh  
/c1cnz0b2.sh / c1cnz0b3.sh

Please enter into the file of eah5670, enter the following command: **cd ./eah5670**  
Then, please

run ./c1cnz0a0.sh ./c1cnz0b0.sh ./c1cnz0b1.sh ./c1cnz5a0.sh ./c1cnz5a1.sh ./c1cnz0b2.sh ./c1cnz0b3.sh

Path: eah56701\c1cnzaa0.sh /c1cnzaa1.sh /c1cnzaa2.sh

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Please enter into the file of eah56701, enter the following command:**cd ./eah56701**

Then, please run **./c1cnzaa0.sh ./ c1cnzaa1.sh ./ c1cnzaa2.sh**

Path: eah56702\**c1cnz0b4.sh or ./c1cnzaa3.sh or ./c1cnzfa0.sh or ./c1cnzfa1.sh or ./c1cnzka0.sh or ./c1cnzka1.sh**

Please enter into the file of eah56702, enter the following command:**cd ./eah56702**

Then, please run **./c1cnz0b4.sh or ./c1cnzaa3.sh or ./c1cnzfa0.sh or ./c1cnzfa1.sh or ./c1cnzka0.sh or ./c1cnzka1.sh**

#### 6.3.1.5 Memory test

If you want to test memory, please run **./tserver-exec -test=memfa1.1**

Path: eah5670\

Path: eah56701\ (for c1cnza-a01&A11&A21)

If you want to test memory, please run **./tserver -test=memfa**

Path: eah56702\

(For C1CNZ0-B45&C1CNZA-A34&C1CNZF-A01/A12&C1CNZK-A01/A11)

#### 6.3.1.6 BIOS Version

If you want to see the version of bios, please run **./atiflash -ai 0.**

Path: eah5670\

Path: eah56701\ (c1cnza-a01&A11&A21)

Path: eah56702\

(For C1CNZ0-B45&C1CNZA-A34&C1CNZF-A01/A12&C1CNZK-A01/A11)

#### 6.3.1.7 FAN test

If you want to test FAN, please run **./aft**

Path: eah5670/aft101

**Notice:**

**./aft apply the following Part Number**

**C1CNZ0-A01 /C1CNZ5-A01/A11**

Path: eah56701/aft

**./aft apply the following Part Number C1CNZA-A01&A11&A21**

Path: eah56702/aft

**./aft apply the following Part Number C1CNZ0-B45&C1CNZA-A34**

#### 6.3.1.8 BIOS flash

Please use the following command to flash bios and notice the size of character.

Path: eah5670\ or eah56701\ or eah56702\

Command: **./atiflash -p -f 0 xxx.rom**

**Notice:**

**If you can not flash bios because of the bios locked, please use ./atiflash -unlockrom 0 to unlock bios. And then, please use ./atiflash -lockrom 0 to lock bios after updating latest bios.**

#### 6.3.1.9 After finish Linux testing, please enter Windows environment to test 3DMark.

### 6.3.2 3DMark test(contain HDMI test)

6.3.2.1 Please install 3DMark program by yourself.

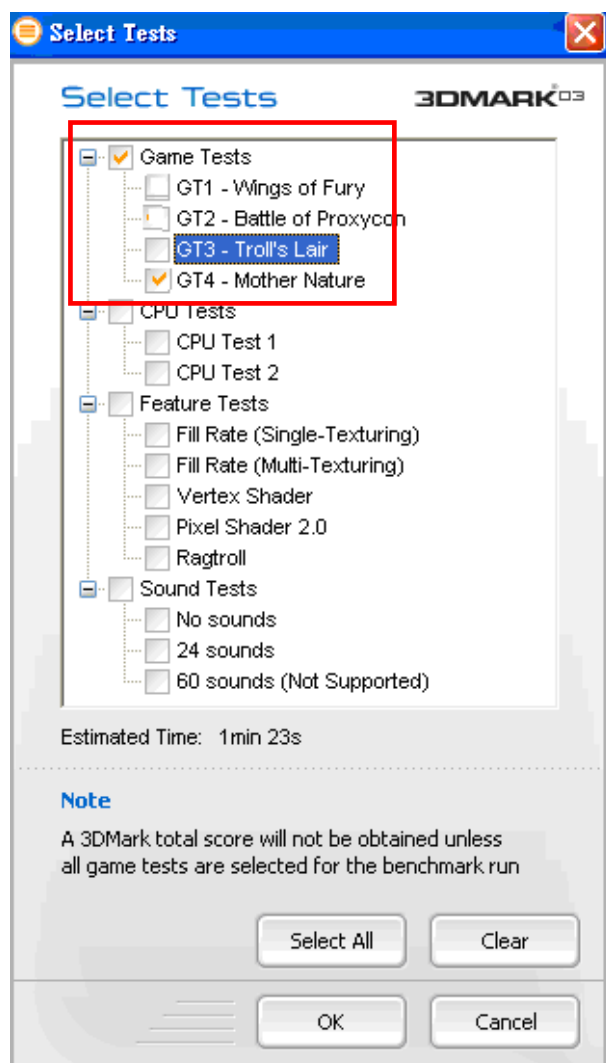
6.3.2.2 Please connect VGA card to LCD via HDMI cable.



6.3.2.3 Please install VGA card driver in Windows(You must use individual driver of this card).

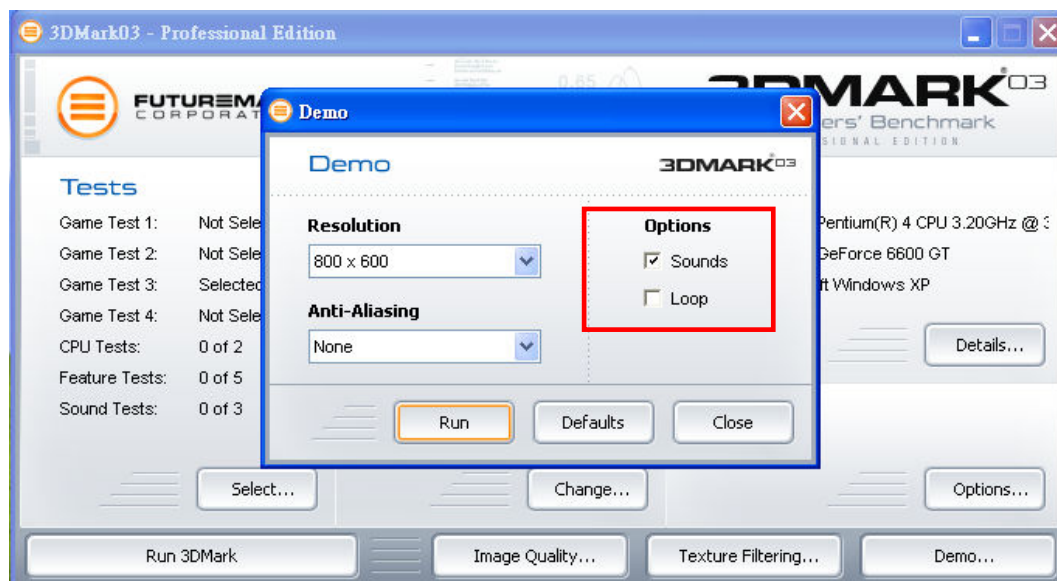
6.3.2.4 Please run 3DMark03 base on this card (please test 1 cycle).

6.3.2.5 Press “Select” to enter Select test menu. You can choose “Mother Nature” for default setting.





6.3.2.6 Press “Demo” to enter Demo menu. You can choose “Sounds” for default setting.



6.3.2.7 Please pay attention to check if there is flickering, discolor, crash and so on.

If there's no problem, it can be judged OK!

6.3.2.8 Please listen to voice carefully to check whether it outputs sounds. If not, HDMI test fail.

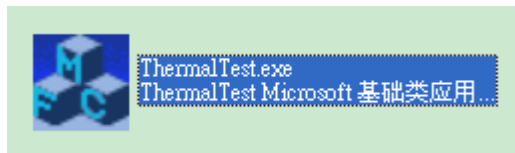




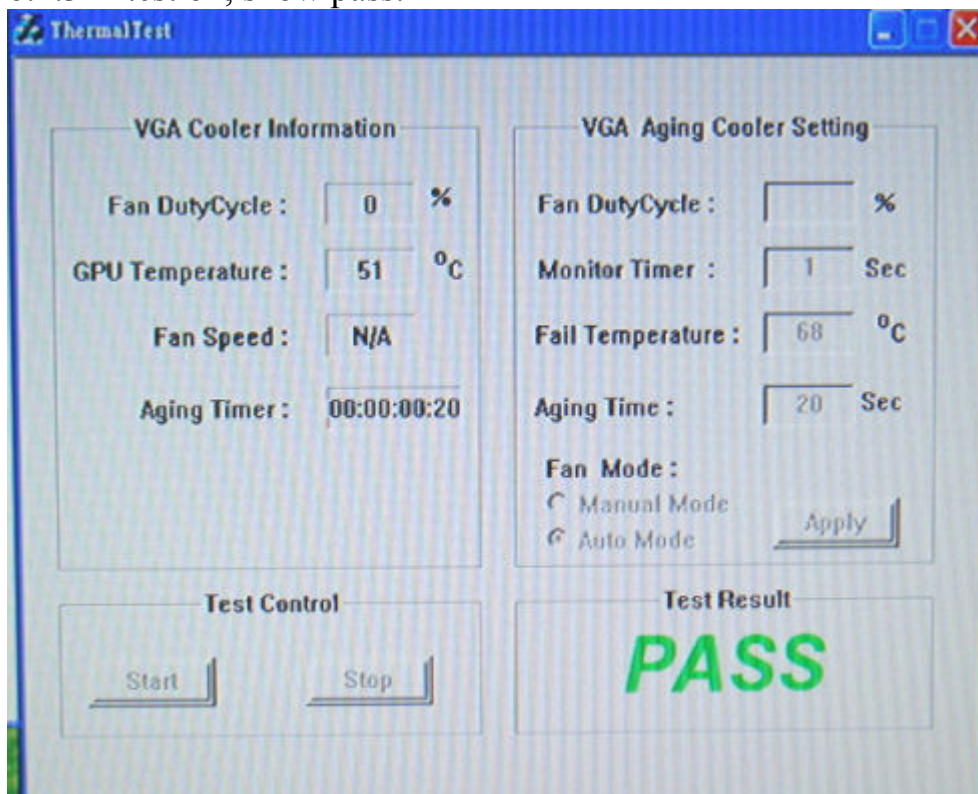
## 6.4 Temperature test

6.4.1 Please copy Thermaltool(1.0.05) to Windows by yourself.

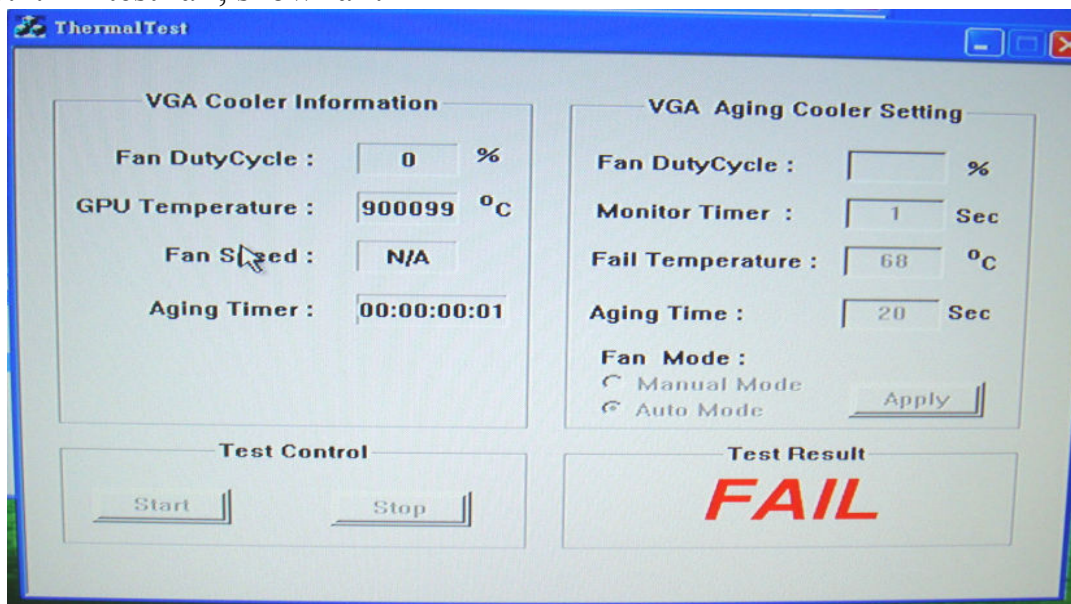
6.4.2 Please run ThermalTest.exe.



6.4.3 If test ok, show pass.



6.4.4 If test fail, show fail.



6.4.5 If test OK, please NTF test.

## 7.Appendix

NO#	Equipment Description	ASUS Part#	Supplier	Quantity	Remarks
1	SAMSUNG 2232MW			1	
2	USB MOUSE			1	
3	PS/2 KEYBOARD			1	
4	ATX POWER SUPPLY(a minimum power of 500W)			1	
5	INTEL Celeron E1200			1	
6	Heat sink + FAN	22-240000160		1	
7	DDR2(667/800) 1G	04G0016169A9NE /22-T00642404		4	
8	TEST HDD			1	
9	SATA HDD Cable	14-000107070	ASUS	1	
10	PCIEX16 VGA CARD			1	
11	Dual link DVI cable (Buying a local DVI cable by yourself)			1	
12	HDMI extend cable (Buying a local HDMI cable by yourself)			1	
13	P5E MB	80- MBB7X0-*		1	