

ASUSTeK COMPUTER INC.	GTX640 Standard Operation Procedure	Doc. No:	
		Date: Jun. 22. 2016 Revision:1.00	
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0Rev .	Modified Chapters	Modification Description	Issued Dept.	Issued by	Revised Date
1.00		First release	GRTD	Maico_Zhang	Jun.22.2016

Authorize by		Review by		Originator By	Maico
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1.Objectives

Create test procedure.

2.Scope

Model: GTX640
PN: PA0510(A12)

3.Test Item

- 3.1 Diagnostic test in Tiny Linux system
- 3.2 3DMark11(**contain HDMI&DVI test**)
- 3.3 Temperature test

4.Relevant Document

None.

5.Definition : 1. If the model name contains P, please test HDCP function.

Ex: EAH***/HTDP/512M/A

2. If you test HDMI already, it's unnecessary to test HDCP. The HDMI contains HDCP function.

3. Please use platform (**P7H55-M/USB3**) to test in LINUX or Windows.

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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 7 test environment by yourself).

6.2 Fixture connect

6.2.1 Install Intel P7 CPU & CPU Fan.

6.2.2 Install DDR3 Memory to DIMM1~4.

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

6.2.4 Plug VGA Card GTX640 into PCIEX16.

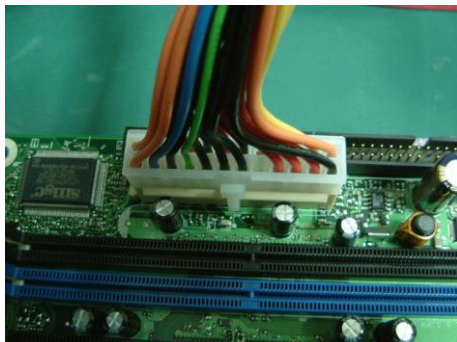
6.2.5 Connect power con of VGA card & Power supply via bundled power cable.

6.2.6 Connect SATA HDD with SATA CON.



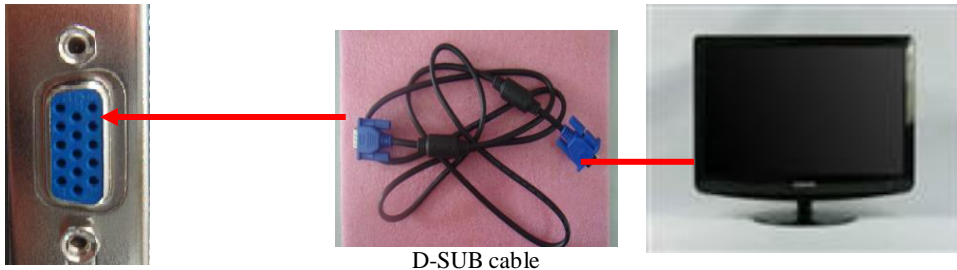
6.2.7 Plug 4PIN 12V (1200W) power cable into CON12V.

6.2.8 Plug ATX Power (1200W) on Power Connector.



6.3 Diagnostic test in linux system

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



6.3.2 Press Power Switch then turn on power button.

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

EXIT -> Load Setup Defaults.



6.3.4 System will reboot, select linux to run test program.

Path: GTX6407\pa0510a1.sh

Run the test program refer to the prompt.

6.3.5 Memory test

If you want to test memory, please run `./mats -e xx` or `./mats -c xx`

Where, -c xx----- only xx% of frame buffer is detected.

Path: GTX6407\

6.3.6 BIOS flash

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

Path: GTX6407\

Command: `./nvflash xxx.rom -4 -5 -6 -A -y`

Notice:

If you can not flash bios because of the bios locked, please use `./nvflash.exe /r` or `./nvflash -r` to unlock bios. And then, please use `./nvflash.exe /w` or `./nvflash -w` to lock bios after updating latest bios.

6.3.7 After finish linux testing, please enter Windows 7 environment to test 3DMark.

6.4 3DMark test(contain HDMI test)

6.4.1 Please install 3DMark program by yourself.

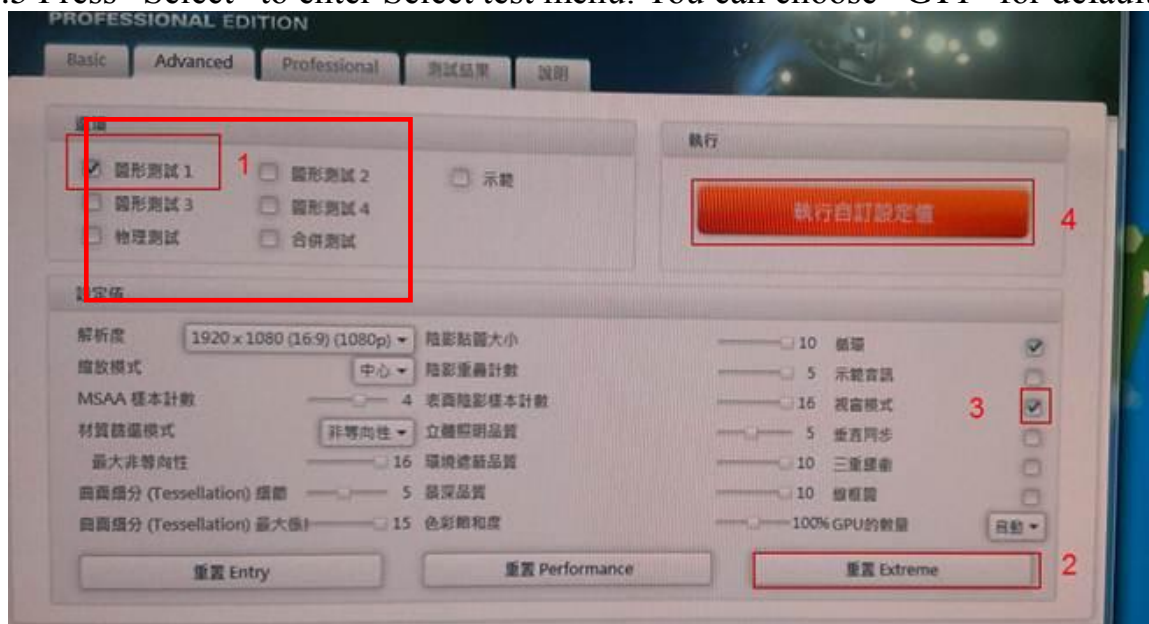
6.4.2 Please connect VGA card to LCD via HDMI cable.



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

6.4.4 Please run 3DMark11 base on this card (please test 1 cycle).

6.4.5 Press “Select” to enter Select test menu. You can choose “GT1” for default setting.



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

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

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



6.4.9 Please connect LCD monitor & card's DVI CON via a DVI cable.
(Please refer to step 6.4.4&6.4.5&6.4.6&6.4.7)



Dual link DVI cable

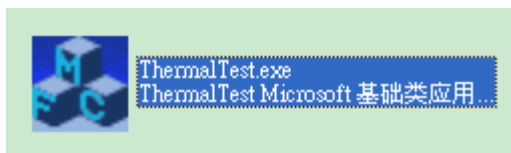


6. 4.10 If test OK, please test **Temperature test**.

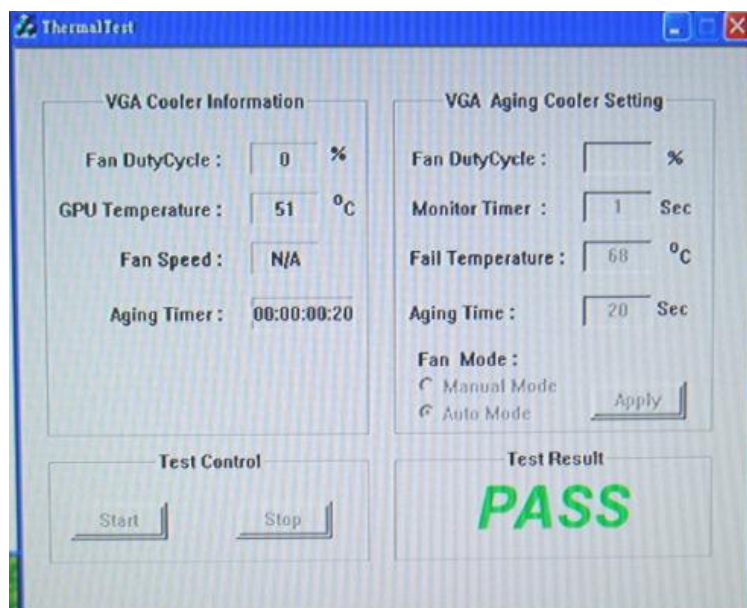
6.5 Temperature test

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

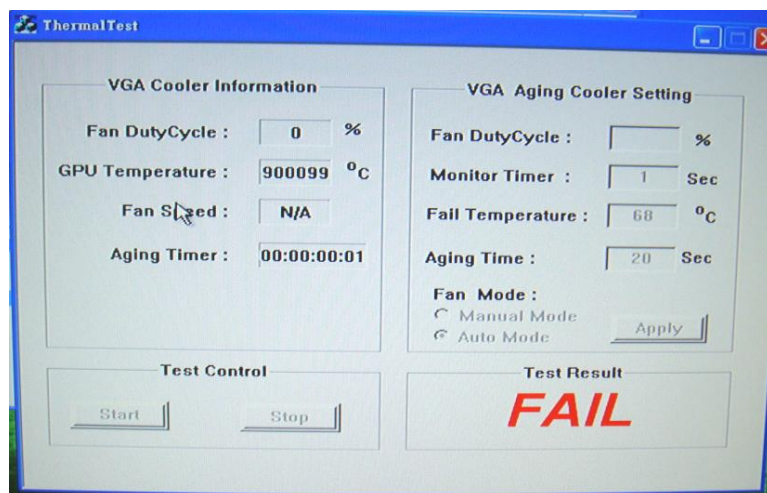
6.5.2 Please run ThermalTest.exe.



6.5.3 If test ok, show pass.



6.5.4 If test fail, show fail.



6.5.5 If test OK, 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 (1200W)			1	
5	Intel CPU Intel(R) Core(TM)2 CPU		local	1	
6	Heat sink + FAN	22-240000160	local	1	
7	DDR3 1333 2G	20-TT2605618	local	4	
8	SATA HDD			1	
9	SATA HDD Cable	14-000107070		1	
10	PCIEX16 VGA CARD			1	
11	D-SUB extend cable (Buying a local D-SUB cable by yourself)			1	
13	HDMI extend cable (Buying a local HDMI cable by yourself)			1	
15	DVI-HDMI	04G460002400 /04G460002450		1	
17	P7H55-M/USB3	80-MIBBKA-G0*	ASUS	1	