

ASUSTeK COMPUTER INC.	R9NANO Standard Operation Procedure	Doc. No:	
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Rev.	Modified Chapters	Modification Description	Issued Dept.	Issued by	Revised Date
1.00		First Release	GTSD	Mao Lu	Sep.1.2015
1.01		Add new PN (YV08Z0-A01)	GTRD	Xiaoming Lu	Nov.4.2015

Authorize by		Review by		Originator By	Mao
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1.Objectives

Create test procedure.

2.Scope

Model: R9NANO

PN:YV08Y0(A01) YV08Z0(A01)

3.Test Items

1. Diagnostic test in 12_04_64-bit Linux
- 2 .3DMark11(contain HDMI test)
- 3.Thermal& Fan Test

Please download test tool from below link:

Public Folder → GRMA → Test Program (Main Program & Utilities) → VGA

4.Relevant Document

None.

5.Definition :1. R9NANO Test Program in 64-bit Linux system.

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).

6.2 Fixture connect

6.2.1 Install 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 R9NANO into PCIEX16_1.

6.2.5 If this card has 6 PIN or 8 PIN of Power supply, please connect power con of VGA card & Power supply via bundled power cable.

(6 PIN of Power supply to 6 PIN of VGA card)

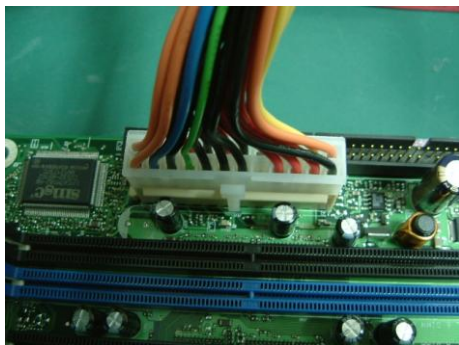
(8 PIN of Power supply to 8 PIN of VGA card)

6.2.6 Connect SATA HDD & SATA con via SATA cable



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

6.2.8 Plug ATX Power on Power(a minimum power of 1200W) Connector.



6.3 Certain test.

6.3.1 Diagnostic test in **64-bit LINUX system**

6.3.1.1 Please connect LCD monitor & card's HDMI CON via a HDMI 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 64-bit linux system.

Path:R9NANO\ yv08y0a0.sh

Path:R9NANO1\ yv08z0a0.sh

6.3.1.5 Memory test

If you want to test memory, please run `./tserver -boardtest=memfa` or `./memtest.sh`

Path:R9NANO\

Path:R9NANO1\

6.3.1.6 BIOS Version

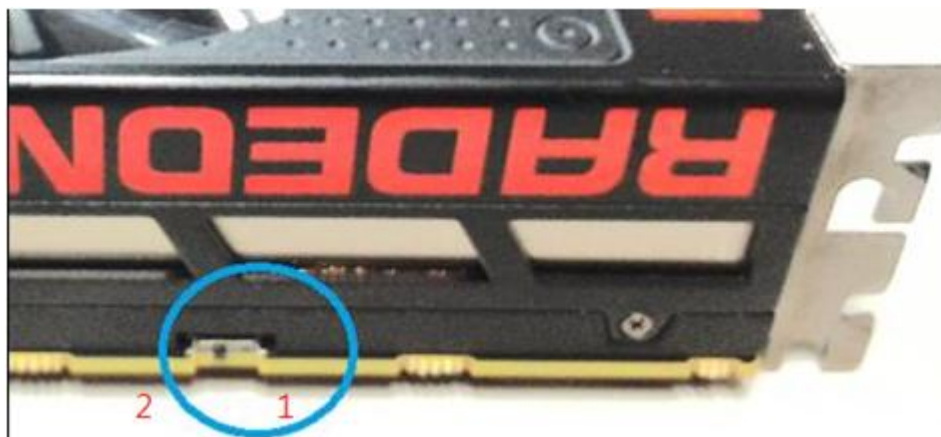
If you want to see the version of bios,please run `./atiflash -ai 0` or `./biosinfo`.

Path:R9NANO\

6.3.1.7 BIOS flash

We need flash the same BIOS twice on this card. Please turn the switch to “1” flash the VBIOS,

Then turn the switch to “2” and flash the same BIOS. **Please set the switch to “1” before return cards to customer**



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

Path:R9NANO\

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.

6.3.1.8 FAN Test

Please run `./aft2fan..`

Path:R9NANO\AFT

6.3.1.9 After finishing 64-bit 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 or MINI Display Port or Display Port to HDMI cable or Display Port cable or D-SUB cable.



HDMI Port



HDMI cable

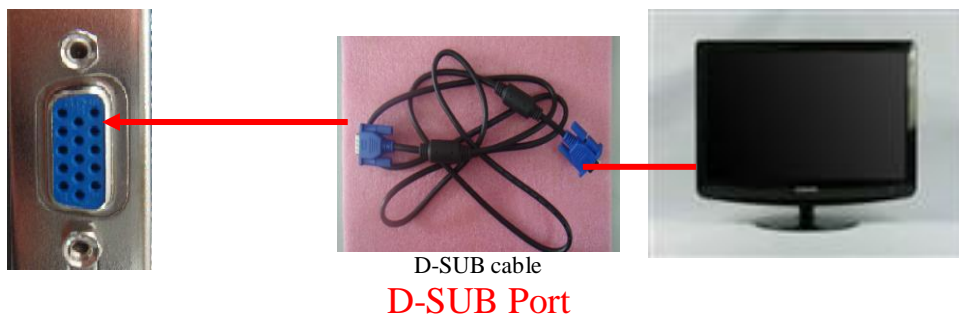


Display Port CON



DISPLAY cable

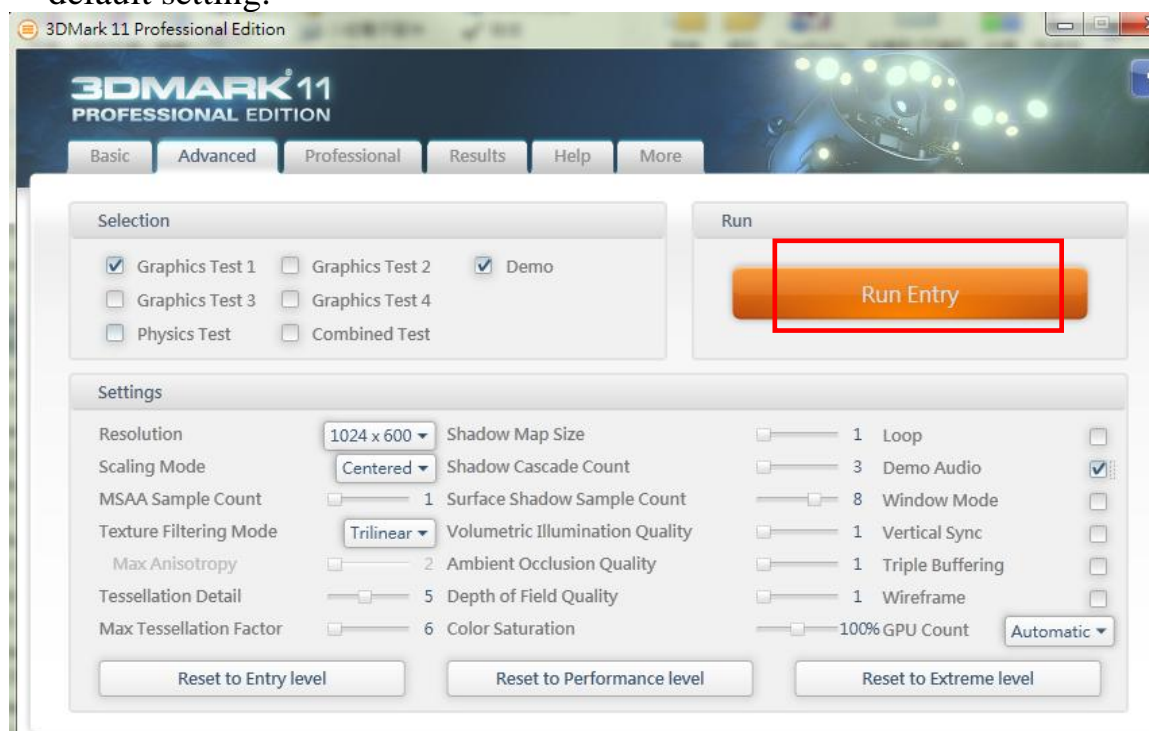




6.3.2.3 Please install VGA card driver in Windows(You must use individual driver of this card).

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

6.3.2.5 Press “Advanced” to enter Select test menu. You can choose “Graphics Test ” for default setting.



6.3.2.6 Press “Run Entry” to start testing.

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.

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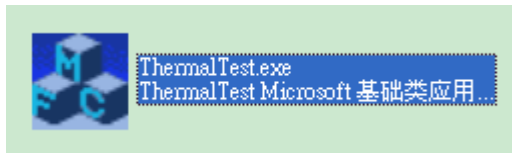


6. 3.2.9 If test OK, please test temperature test.

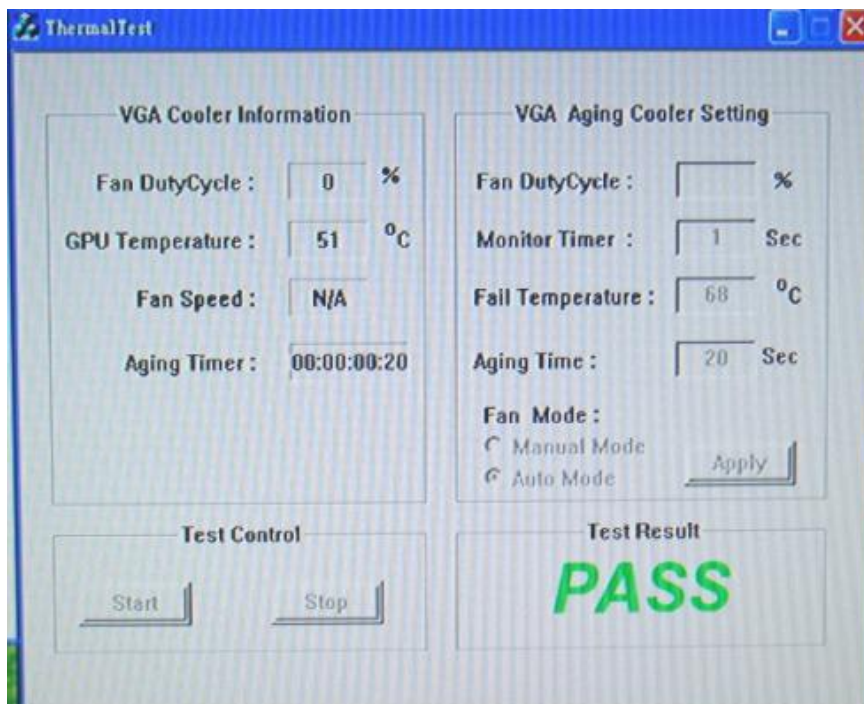
6.4 Thermal& Fan Test (85℃)

6.4.1 Please copy Thermaltool to Windows by yourself.

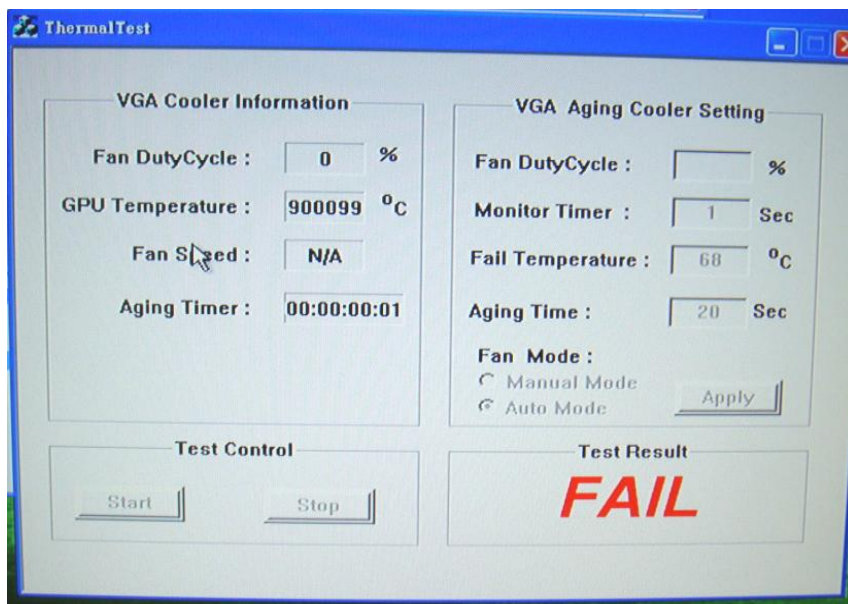
6.4.2 Please run ThermalTest.exe.



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	Dell 30 inches (3008WFP) (Buying a local LCD by yourself)			1	
2	USB MOUSE			1	

3	PS/2 KEYBOARD			1	
4	ATX POWER SUPPLY(a minimum power of 500W)			1	
5	Intel CPU Intel(R) Core(TM)2 CPU		local	1	
6	Heat sink + FAN	22-240000160		1	
7	DDR3 1333 2G	20-TT2605618	local	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	P7H55-M/USB3 MB	80- MIBBKA-*		1	
14	Display port cable (Buying a local Display port cable by yourself)			1	
15	Mini Display port to HDMI cable (Buying a local Mini Display port to HDMI cable by yourself)			1	
16	D-SUB extend cable (Buying a local D-SUB cable by yourself)			1	