

ASUSTeK COMPUTER INC.	MARS GTX295 Standard Operation Procedure	Doc. No:	
		Date: AUG. 21, 2009 Revision:1.00	
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Rev.	Modified Chapters	Modification Description	Issued Dept.	Issued by	Revised Date
1.00		First release	GTC	Janice_Pang	AUG.21,2009

Authorize by		Review by		Originator By	Janice
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1.Objectives

Create test procedure.

2.Scope

Model: MARS GTX295

PN: C1CN30

3.Test Item

3.1 Diagnostic test in DOS

3.2 3DMark06

4.Relevant Document

None.

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

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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).

6.2 Fixture connect

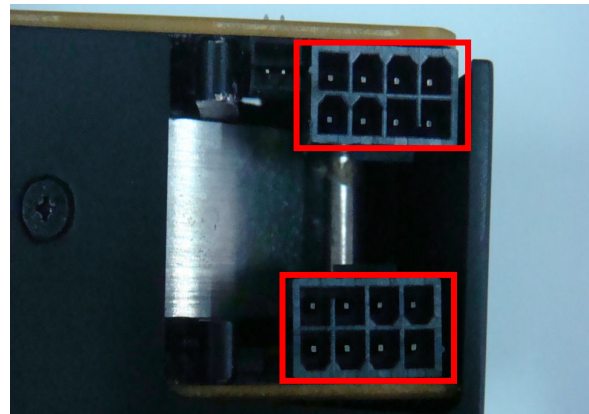
6.2.1 Install Intel P5 CPU & CPU Fan.

6.2.2 Install DDR2 667/800 2GB Memory to DIMM1~2.

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

6.2.4 Plug VGA Card MARS GTX295 into PCIEX16.

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



6.2.6 Connect SATA HDD & SATA con via SATA cable

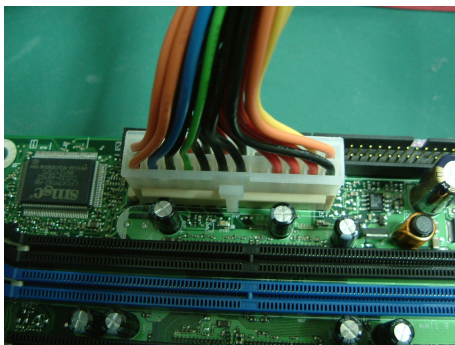


SATA



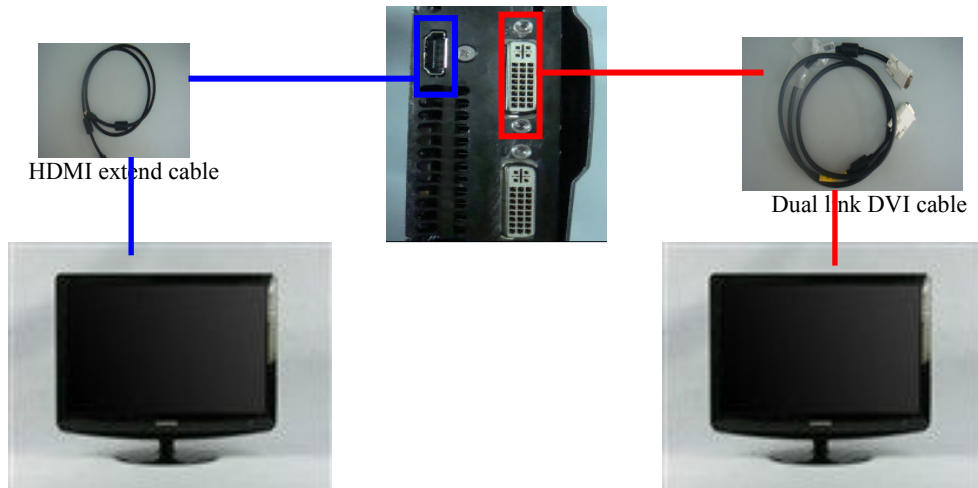
6.2.7 Plug 4PIN 12V power(1200W) cable into CON12V.

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



6.3 Diagnostic test in DOS (Test 35 minutes)

6.3.1 Please connect LCD monitor & card's DVI CON via a DVI cable and connect LCD monitor & card's HDMI CON via a HDMI 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.



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

Path: VBAT\MARS295\BATCH\C1CN30.BAT

Select "1"

```
Select the following options:
1) Set SVOP to "0" For GPU 0 And 1
   Note: Make sure to verify the device number assigned to each gpu.
        Make sure to reboot when finish.
2) Screen Test For GPU 0 (SCREEN_0)
3) Screen Test For GPU 1 (SCREEN_1)
4) Functional Test (FCT)
D) Quit
```

Press "Y" to continue.

```
...tuning register 0x00001538: (0x00011101&0xFFFFFCF):(0x000011
0x00001538=0x00011101 SUCCESS.
.. tuning SUCCESS.
Flashing ROM image...
NVIDIA Firmware Update Utility (Version 5.72)

Checking for matches between display adapter(s) and image(s)..
Adapter: GeForce GT200-400      (10DE,05E0,1043,82FA) H:02:SP0 B

Current      - Version:62.00.52.00.00 ID:10DE:05E0:1043:82FA
              GT200 Board - 06560000 (Switch Port 0)
Replace with - Version:62.00.52.00.00 ID:10DE:05E0:1043:82FA
              GT200 Board - 06560000 (Switch Port 0)
Update display adapter firmware?
Press 'y' to confirm (any other key to abort): y
```

```
Current      - Version:62.00.52.00.00 ID:10DE:05E0:
              GT200 Board - 06570000 (Switch Port
Replace with - Version:62.00.52.00.00 ID:10DE:05E0:
              GT200 Board - 06570000 (Switch Port
Update display adapter firmware?
Press 'y' to confirm (any other key to abort): y
The display may go *BLANK* on and off for up to 10 s
Update process depending on your display adapter and o

Identifying EEPROM...
EEPROM ID (9D,007C) : PMC Pm25LV010 2.7-3.6V 1024Kx1
Clearing original firmware image...
.
Storing updated firmware image...
```


Press "Y" to continue.

```
...tuning register 0x00001538: (0x00011101&0xFFFFFCF):(0x000011
    0x00001538=0x00011101 SUCCESS.
...tuning SUCCESS.
Flashing ROM image...
NVIDIA Firmware Update Utility (Version 5.72)

Checking for matches between display adapter(s) and image(s)..

Adapter: GeForce GT200-400      (10DE,05E0,1043,82FA) H:02:SP0 B

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              GT200 Board - 06560000 (Switch Port 0)
Replace with - Version:62.00.52.00.00 ID:10DE:05E0:1043:82FA
              GT200 Board - 06560000 (Switch Port 0)
Update display adapter firmware?
Press 'y' to confirm (any other key to abort): y
```

```
Current      - Version:62.00.52.00.00 ID:10DE:05E0:
              GT200 Board - 06570000 (Switch Port
Replace with - Version:62.00.52.00.00 ID:10DE:05E0:
              GT200 Board - 06570000 (Switch Port
Update display adapter firmware?
Press 'y' to confirm (any other key to abort): y
The display may go *BLANK* on and off for up to 10 s
Update process depending on your display adapter and c

Identifying EEPROM...
EEPROM ID (9D,007C) : PMC Pm25LV010 2.7-3.6V 1024Kx1
Clearing original firmware image...
.
Storing updated firmware image...
```

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The computer will reboot and run C1CN30.BAT
Path:VBAT\MARS295\BATCH\C1CN30.BAT

Select "2"

```
Select the following options:
1) Set SVOP to "0" For GPU 0 And 1
   Note: Make sure to verify the device number assigned to each gpu.
       Make sure to reboot when finish.
2) Screen Test For GPU 0 (SCREEN_0)
3) Screen Test For GPU 1 (SCREEN_1)
4) Functional Test (FCT)
D) Quit
```

If GPU 0 tests OK, select "3"

```
Select the following options:
1) Set SVOP to "0" For GPU 0 And 1
   Note: Make sure to verify the device number assigned to each gpu.
       Make sure to reboot when finish.
2) Screen Test For GPU 0 (SCREEN_0)
3) Screen Test For GPU 1 (SCREEN_1)
4) Functional Test (FCT)
D) Quit
```

If GPU 1 tests OK, select "4"

```
Select the following options:
1) Set SVOP to "0" For GPU 0 And 1
   Note: Make sure to verify the device number assigned to each gpu.
       Make sure to reboot when finish.
2) Screen Test For GPU 0 (SCREEN_0)
3) Screen Test For GPU 1 (SCREEN_1)
4) Functional Test (FCT)
D) Quit
```

If function tests OK, select "d"

```
Select the following options:
1) Set SVOP to "0" For GPU 0 And 1
   Note: Make sure to verify the device number assigned to each gpu.
       Make sure to reboot when finish.
2) Screen Test For GPU 0 (SCREEN_0)
3) Screen Test For GPU 1 (SCREEN_1)
4) Functional Test (FCT)
D) Quit
```


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6.3.5 Memory test

If you want to test memory, please run mats.exe.

Path: VBAT\MARS295\177HX4\

6.3.6 BIOS flash

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

Path: VBAT\MARS295\BIOS

This card has 3 bios.

Flash first bios(bios name cn30a0)

Command: nvflash cn30a0.rom -4 -5 -6 -i 0

Flash Second bios(bios name cn30a0m)

Command: nvflash cn30a0m.rom -4 -5 -6 -i 1

Flash third bios(bios name cn30a0s)

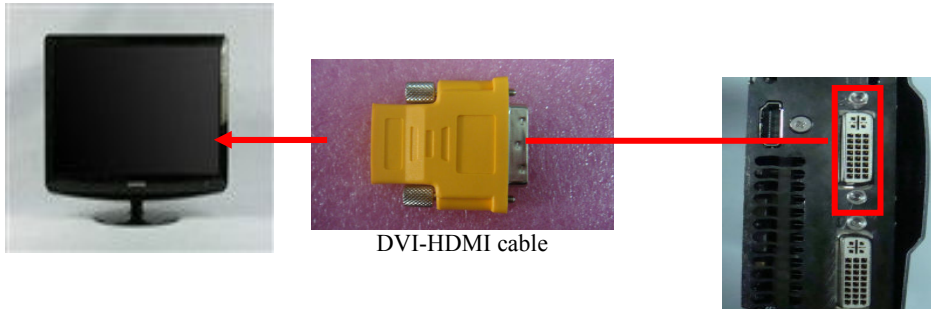
Command: nvflash cn30a0s.rom -4 -5 -6 -i 2

6.3.7 After finish DOS testing, please enter Windows 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.

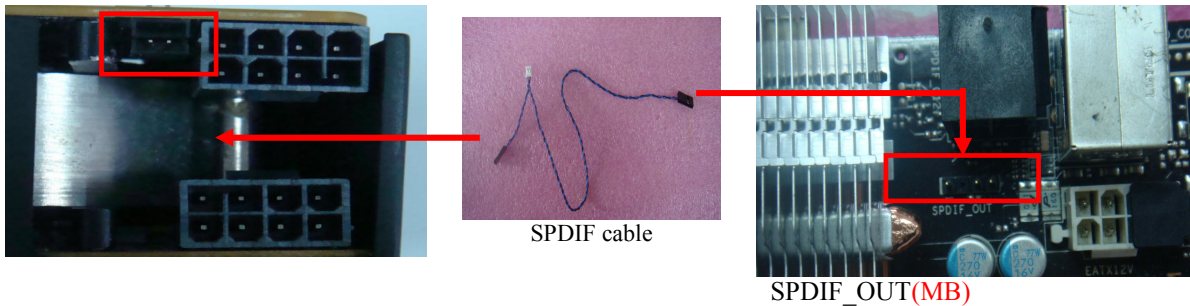


DVI-HDMI cable

White DVI CON

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

6.4.4 Plug 4 Pin black cable into SPDIF_OUT of MB. Plug another 2 Pin white cable into SPDIF_IN of VGA card.



SPDIF cable

SPDIF_OUT(MB)

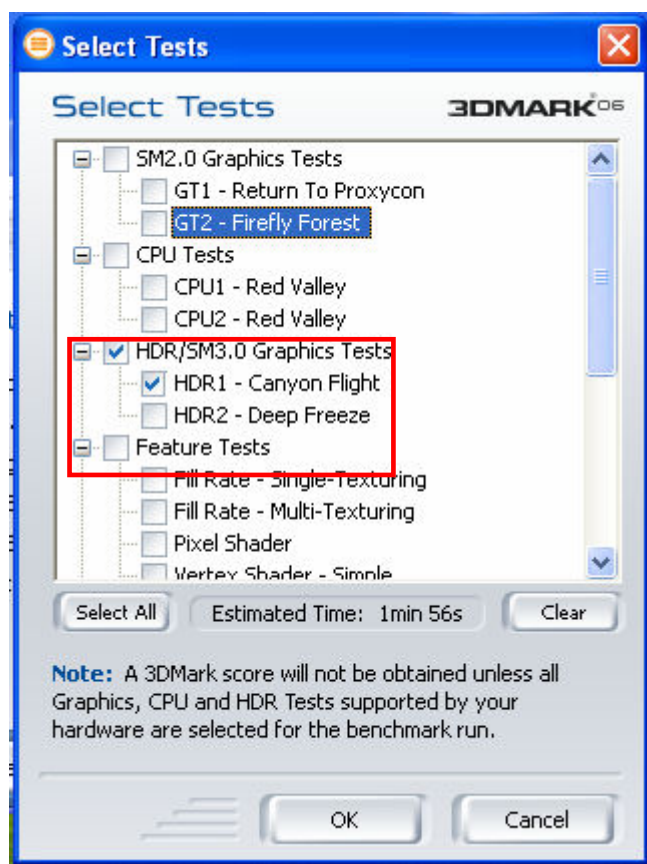
6.4.5 Plug SUPREME FX II card into PCIEX1 of MB.



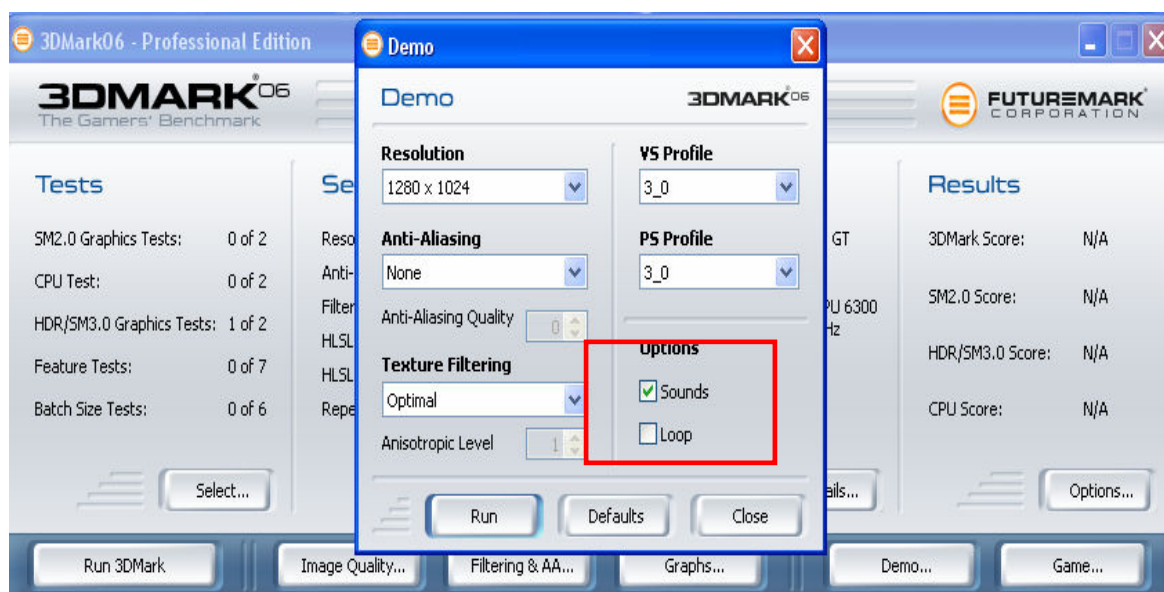
6.4.6 Please install SUPREME FX II card driver in Windows and enter Windows to test HDMI.

6.4.7 Please run 3DMark06 base on this card (**please test 1 cycle**).

6.4.8 Press “Select” to enter Select test menu. You can choose “HDR1” for default setting.



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



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

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

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



6.4.12 If HDMI test OK, please test other HDMI CON.

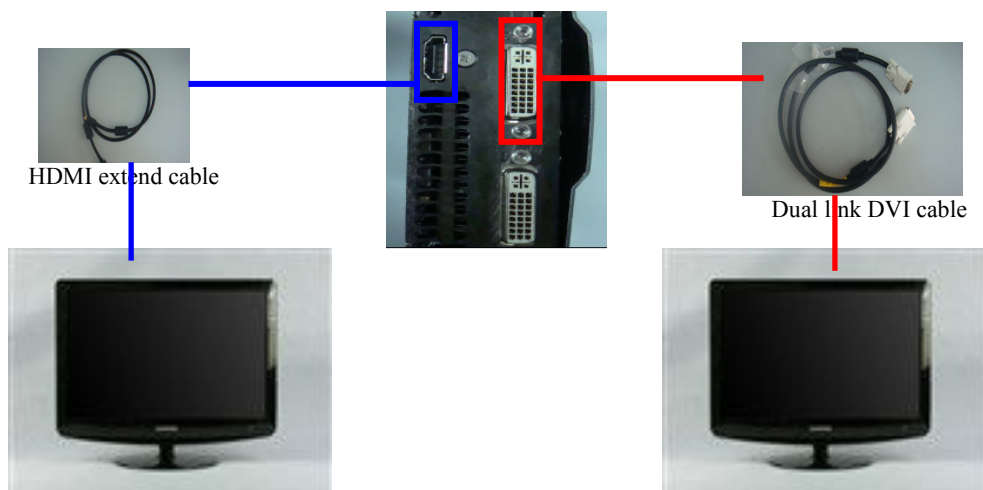
6.4.13 Connect VGA card to LCD via HDMI cable test HDMI function.

(Please refer to step 6.4.2&6.4.3&6.4.4&6.4.5&6.4.6&6.4.7&6.4.9&6.4.10)



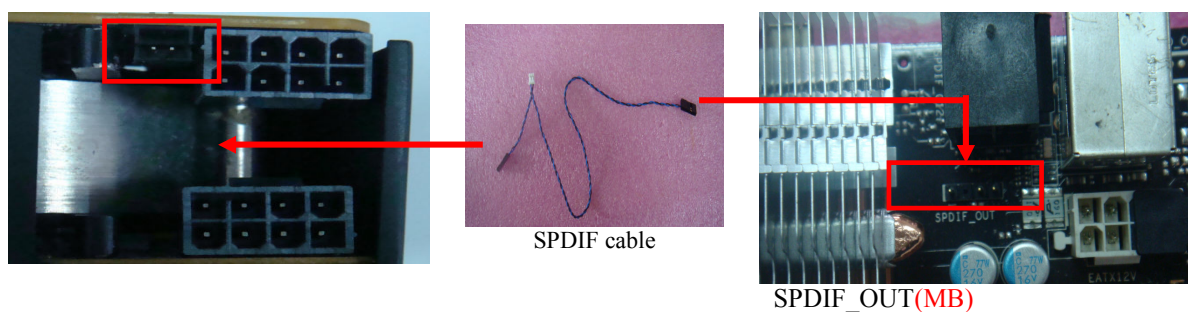
6.4.14 If HDMI test OK, please test other HDMI CON.

6.4.15 Please connect LCD monitor & card's DVI CON via a DVI cable and connect LCD monitor & card's HDMI CON via a HDMI cable.



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

6.4.17 Plug 4 Pin black cable into SPDIF_OUT of MB. Plug another 2 Pin white cable into SPDIF_IN of VGA card.



6.4.18 Plug SUPREME FX II card into PCIEX1 of MB.

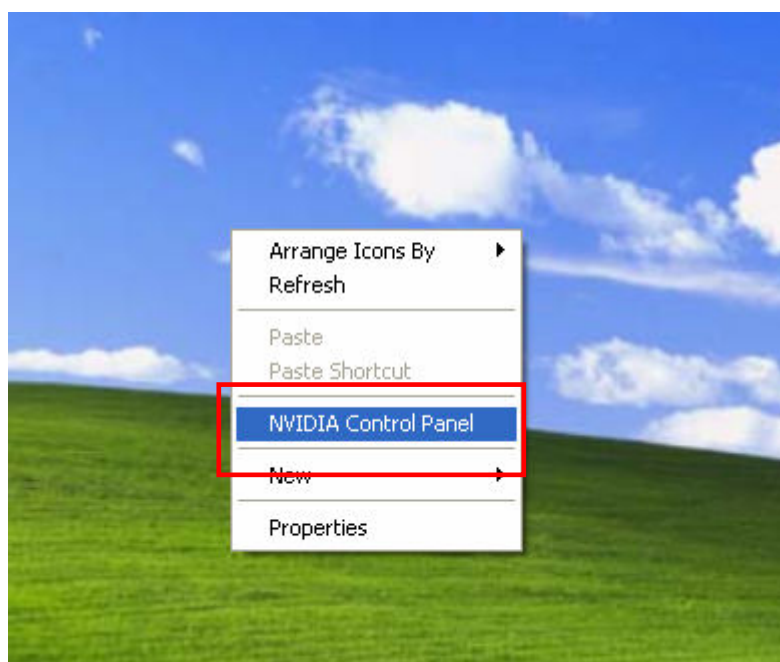


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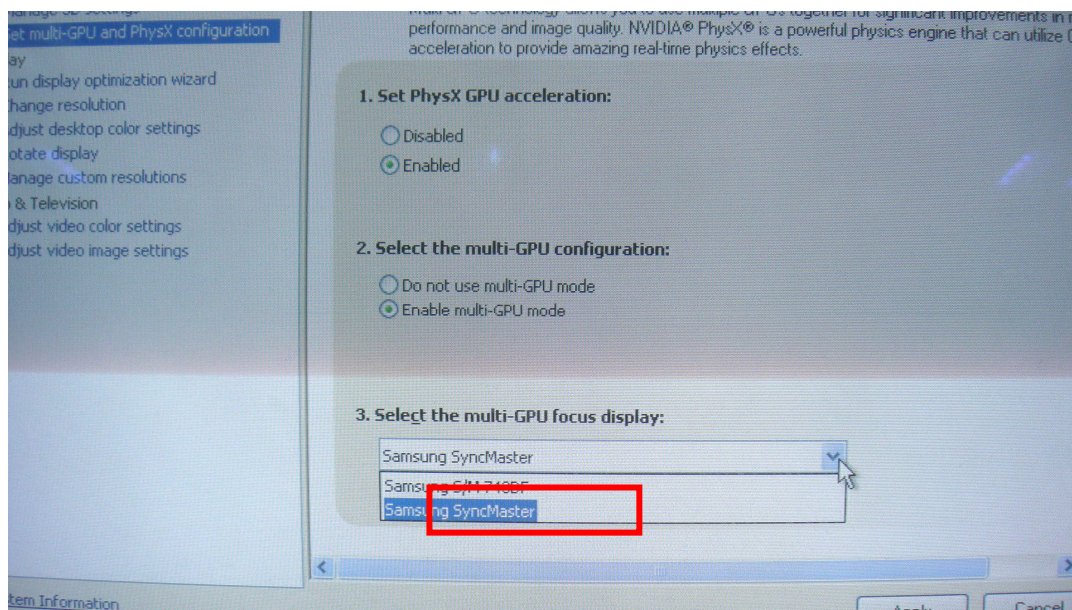
6.4.19 Please install SUPREME FX II card driver in Windows and enter Windows to test HDMI.

6.4.20 Please enter Windows environment.

Select NVIDIA Control Panel

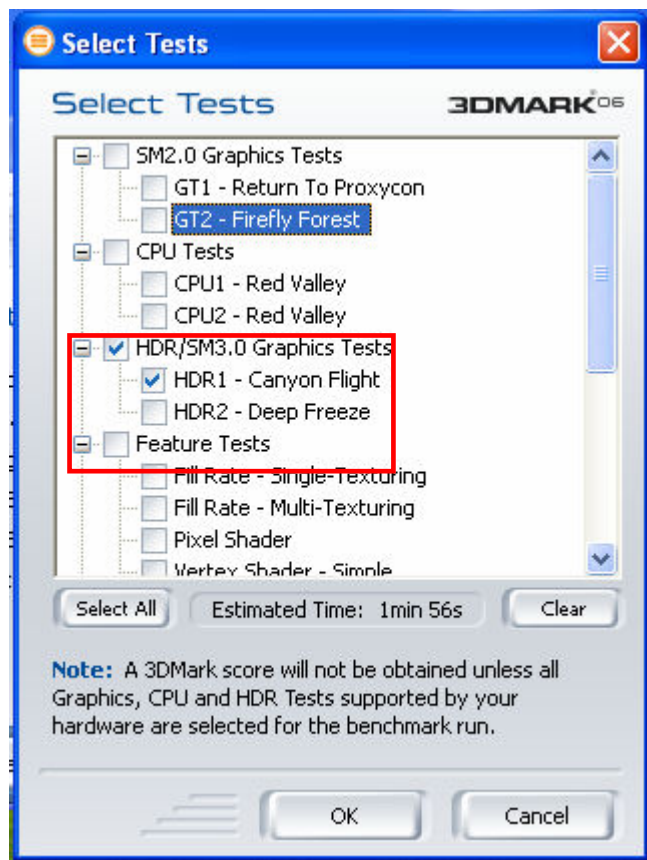


Select "Samsung SyndMaster" and press "apply"

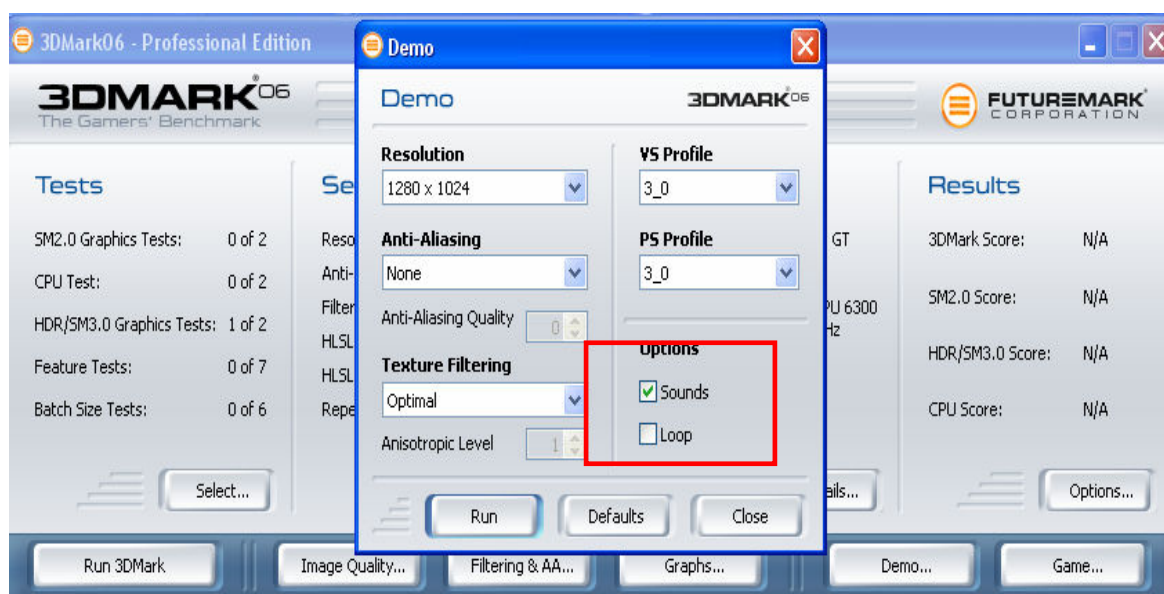


6.4.21 Please run 3DMark06 base on this card (**please test 1 cycle**).

6.4.22 Press “Select” to enter Select test menu. You can choose “HDR1” for default setting.



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



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

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






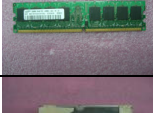








6.4.25 Please listen to voice carefully to check whether it outputs sounds. If not, HDMI test fail.



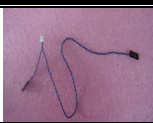
6.4.26 If test OK, NTF test.

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7 Appendix

NO#	Equipment Description	ASUS Part#	Supplier	Quantity	Remarks
1	SAMSUNG 2232MW			2	
2	USB / PS/2 MOUSE				
3	PS/2 KEYBOARD			1	
4	ATX POWER SUPPLY(1200W)			1	
5	INTEL Celeron E1200			1	
6	Heat sink + FAN	22-240000160		1	
7	APACER 800MHz 512M or 800MHz 1G			512M 2 or 1G 1	
8	SATA HDD			1	
9	SATA HDD Cable	14-000107070	ASUS	1	
10	PCIEX16 VGA CARD			1	
11	D-SUB extend cable (Buying a local D-SUB cable by yourself)			1	
12	DVI-HDMI	04G460002400 /04G460002450		1	
13	Dual link DVI cable (Buying a local DVI cable by yourself)			1	
14	HDMI extend cable (Buying a local HDMI cable by yourself)			1	
15	SUPREME FX II	80-C1BHK5-0C01		1	
16	LCD "Y" Cable	14-010230000		1	

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17	SPDIF CABLE	14G003200813 /14G003200810		1	
18	PSE	80-MBB7X0-G0A01		1	