Rev.	Modified Chapters	Modification Description	Issued Dept.	Issued by	Revised Date
1.00		First Release(YV0441-A01)	GRMA	Ariel_wang	Apr.12,2013
1.01		Add new P/N(YV0440-A01)	GRMA	Ariel_wang	Apr.12,2013
1.02		Add new P/N(YV0400-A03)	GRMA	Ariel_wang	Apr.12,2013
1.03		Add new P/N(YV0401-A03)	GRMA	Ariel_wang	Apr.12,2013
1.04		Add new P/N(YV03T0-A03)	GRMA	Ariel_wang	Apr.16,2013
1.05		Add new P/N(YV03T1-A02)	GRMA	Ariel_wang	Apr.16,2013
1.06		Add new P/N(YV0400-U04)	GRMA	Jory_yuan	July.18.2013
1.07		Add new P/N(YV0401-U04)	GRMA	Jory_yuan	July.18.2013

Authorize by		Review by		Originator By	Ariel

1.Objectives

Create test procedure.

2.Scope

Model: HD7790
PN: YV0441(A01) YV0440(A01) YV0400(A03) YV0401(A03)YV03T0(A03) YV03T1(A02)YV0400(U04)YV0401(U04)

3.Test Item

3.1 Diagnostic test in Ubuntu 12.04 64-bit Linux
3.2 3DMark06(contain HDMI test)
3.3 Temperature test
3.4 FAN 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. System Memory: 2GB for a single GPU test station; please add an additional 512MB of system memory for each additional GPU used for the test configuration
4. HD7790 Test Program in Ubuntu 12.04 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 Intel P7 CPU & CPU Fan.

6.2.2 Install DDR3 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 HD7790 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.

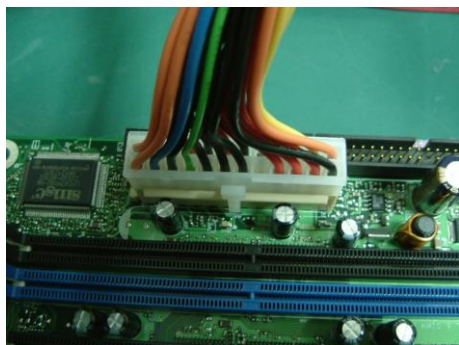(6 PIN of Power supply to 6 PIN of VGA card)

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

6.2.6 Connect SATA HDD & SATA con via SATA cable

SATA

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 Ubuntu 12.04 64-bit LINUX system

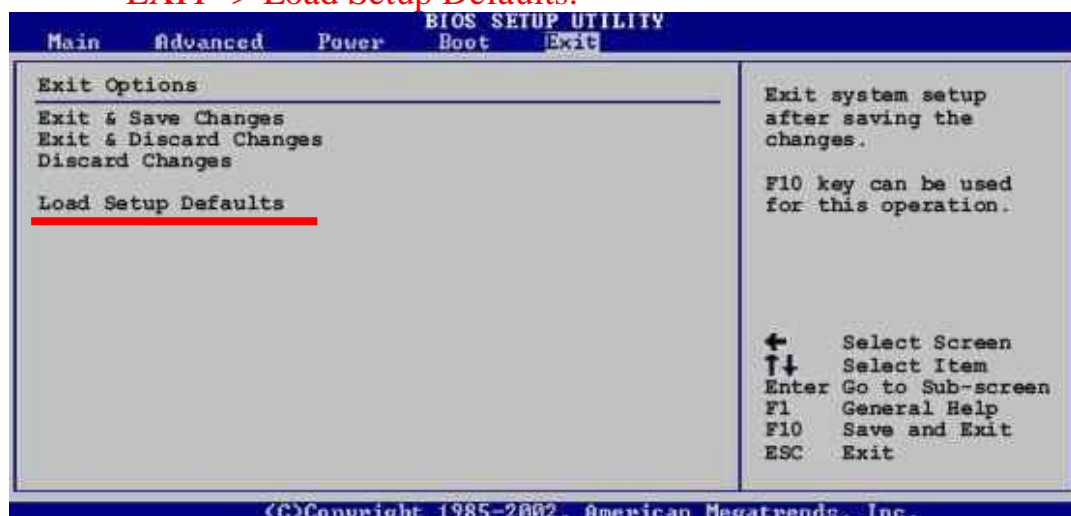6.3.1.1 Please connect LCD monitor & card's DVI CON via a DVI cable.

Dual link DVI 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 Ubuntu 12.04 64-bit linux system.

Path:hd7790\yv0441a0.sh or yv0440a0.sh

Path:hd77901\yv0400a0.sh or yv0401a0.sh

Path:hd77902\yv03t0a0.sh or yv03t1a0.sh

Path:hd77903\yv0400u0.sh or yv0401u0.sh

Please enter into the file of hd7790*   enter the following command: cd ./hd7790*

Then, please run ./yv0441a0.sh ./yv0440a0.sh ./yv0400a0.sh ./yv0401a0.sh

./yv03t0a0.sh ./yv03t1a0.sh yv0400u0.sh or yv0401u0.sh

6.3.1.5 Memory test

If you want to test memory,

please run ./0441a0memtest.sh or ./0440a0memtest.sh

Path:hd7790\

please run ./0400a0memtest.sh or ./0401a0memtest.sh

Path:hd77901\

please run ./03t0a0memtest.sh or ./03t1a0memtest.sh

Path:hd77902\

6.3.1.6 BIOS Version

If you want to see the version of bios, please run ./biosinfo

Path:hd7790\

Path:hd77901\

Path:hd77902\

6.3.1.7 BIOS flash

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

Path:hd7790\

Path:hd77901\

Path:hd77902\

Path:hd77903\

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

If you want to test FAN, please run ./aft2fan.

Path: Path:hd7790\AFT2FAN

Notice:

./aft2fan apply the following Part Number

YV0441-A01/ YV0440-A01

Path: Path:hd77901\AFT2FAN

Notice:

./aft2fan apply the following Part Number

YV0400-A03/ YV0401-A03

If you want to test FAN, please run ./ATFBN

Path: Path:hd77902\AFT

Notice:

./ATFBN apply the following Part Number

YV03T1-A02/ YV03T0-A03

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 to HDMI cable .
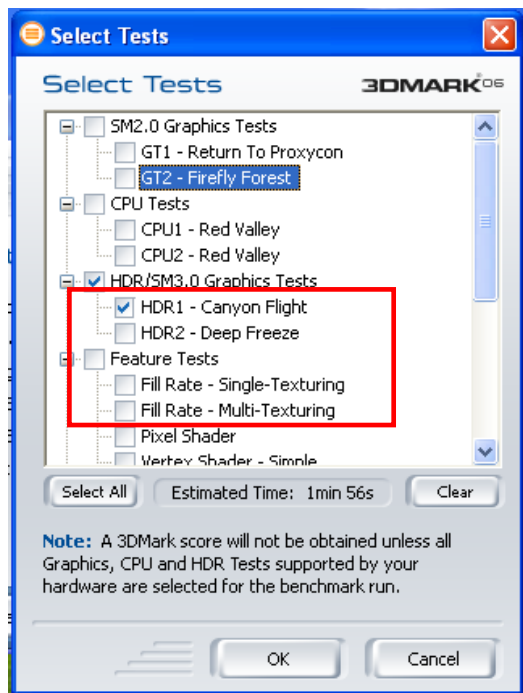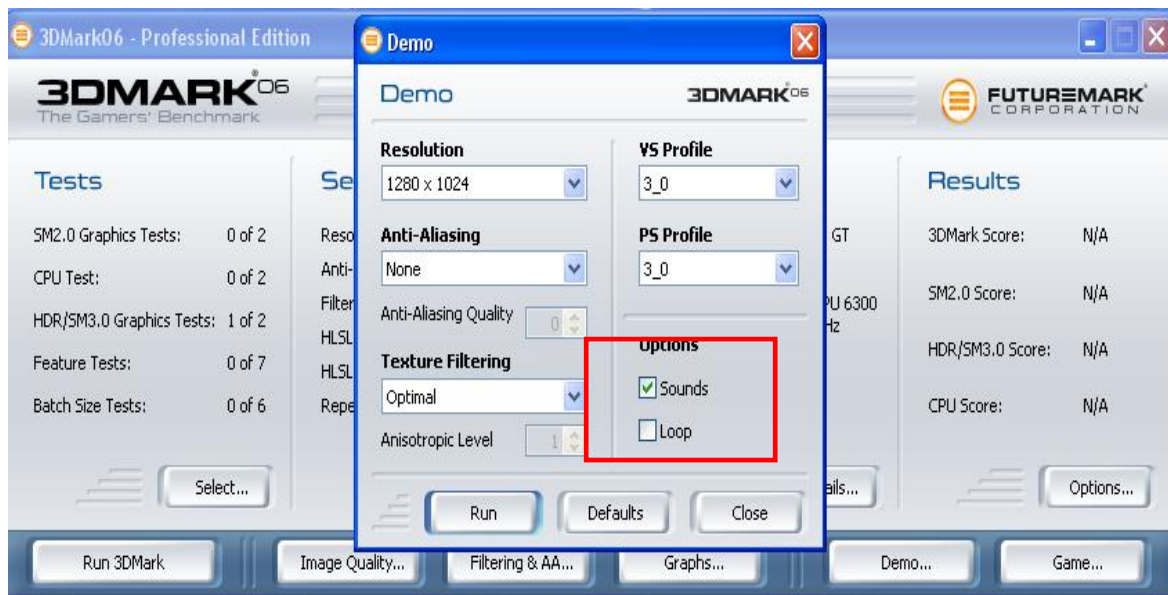

HDMI cable

HDMI Port

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 3DMark06 base on this card (please test 1 cycle).

6.3.2.5 Press "Select" to enter Select test menu. You can choose "HDR1" 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.

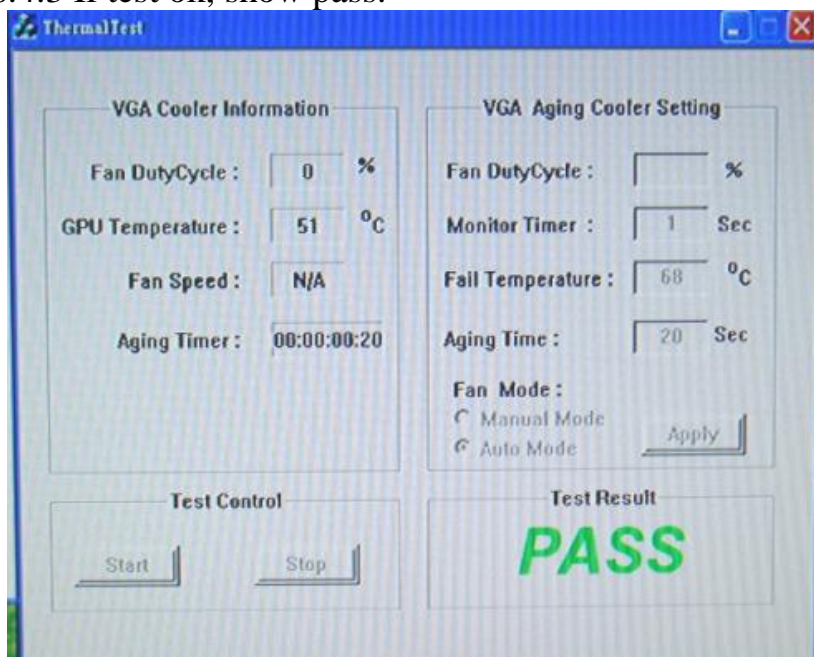6. 3.2.9 If test OK, please test temperature test.

6.4 Temperature test

6.4.1 Please copy Thermaltool(1.0.05) to Windows by yourself.
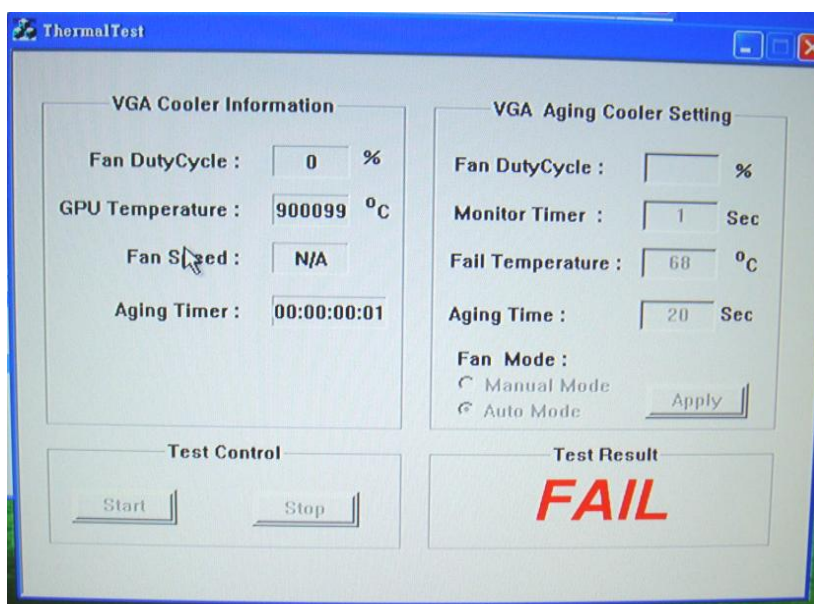6.4.2 Please run ThermalTest.exe.

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	**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	**Mini Display port to HDMI cable** **(Buying a local Mini Display port to HDMI cable by yourself)**			**1**	
15	**Display port cable** **(Buying a local Display port cable by yourself)**			**1**	