| 0Rev. | Modified Chapters | Modification Description | Issued Dept. | Issued by | Revised Date |
|---|---|---|---|---|---|
| 1.00 | | First release | GRMA | Ariel_wang | May.2.2012 |
| 1.01 | | Add new P/N(YV02U2-A01) | GRMA | Ariel_wang | May.2.2012 |
| 1.02 | | Add new P/N(YV02U0-A01) | GRMA | Ariel_wang | Jun.8.2012 |
| 1.03 | | Add new P/N(YV02U3-A01) | GRMA | Ariel_wang | Jun.8.2012 |
| 1.04 | | Add new P/N(YV02U1-A11) | GRMA | Ariel_wang | Jun.8.2012 |
| 1.05 | | Add new P/N(YV02U4-A01) | GRMA | Ariel_wang | Jun.8.2012 |
| 1.06 | | Add new PCBA(YV02U0-A11) | GRMA | Ariel_wang | Jun.18.2012 |
| 1.07 | | Add new PCBA(YV02U2-A11) | GRMA | Ariel_wang | Jul.4.2012 |
| 1.08 | | Add new PCBA(YV02U5-A01) | GRMA | Ariel_wang | Aug.6.2012 |
| 1.09 | | Add new PCBA(YV02U4-U02) | GRMA | Ariel_wang | Sep.13.2012 |
| 1.10 | | Add new PCBA(YV02U3-U02) | GRMA | Ariel_wang | Sep.13.2012 |
| 1.11 | | Add new PCBA(YV02U0-U01) | GRMA | Ariel_wang | Sep.13.2012 |
| 1.12 | | Add new PCBA(YV02U1-A22) | GRMA | Ariel_wang | Sep.17.2012 |
| 1.13 | | Add new PCBA(YV02U1-U13) | GRMA | Ariel_wang | Sep.25.2012 |
| 1.14 | | Add new PCBA(YV02U5-U01) | GRMA | Ariel_wang | Sep.25.2012 |
| 1.15 | | Add new PCBA(YV02U0-A31) | GRMA | Ariel_wang | Oct.25.2012 |
| 1.16 | | Add new PCBA(YV02U5-A21) | GRMA | Ariel_wang | Oct.26.2012 |
| 1.17 | | Add new P/N(YV02U6-A12) | GRMA | Ariel_wang | Nov.9.2012 |
| 1.18 | | Add new PCBA(YV02U0-U22) | GRMA | Ariel_wang | Nov.9.2012 |
| 1.19 | | Add new PCBA(YV02U1-U24) | GRMA | Ariel_wang | Nov.19.2012 |
| 1.20 | | Add new PCBA(YV02U0-A42) | GRMA | Ariel_wang | Dec.10.2012 |
| 1.21 | | Add new PCBA(YV02U4-Q03) | GRMA | Ariel_wang | Mar.11.2013 |
| 1.22 | | Add new PCBA(YV02U3-A14) | GRMA | Ariel_wang | Mar.11.2013 |
| 1.23 | | Add new PCBA(YV02U0-Q43) | GRMA | Ariel_wang | Mar.19.2013 |
| 1.24 | | Add new P/N(YV0420-A01) | GRMA | Jory yuan | Apr.23.2013 |
| 1.25 | | Add new PCBA(YV0420-B11) | GRMA | Jory yuan | May.9.2013 |
| 1.26 | | Add new P/N(YV0421-A01) | GRMA | Jory yuan | Jul.3.2013 |
| 1.27 | | Add new PCBA(YV0420-B01) | GRMA | Jory yuan | Jul.9.2013 |
| 1.28 | | Add new PCBA(YV02U1-A35) | GRMA | Jory_yuan | Jul.10.2013 |
| 1.29 | | Add new PCBA(YV02U1-U35) | GRMA | Jory_yuan | Jul.10.2013 |
| 1.30 | | Add new P/N(YV0422-A01) | GRMA | Jory_yuan | July.31.2013 |
| 1.31 | | Add new P/N(YV0423-A01) | GRMA | Jory_yuan | July.31.2013 |
| 1.32 | | Add new PCBA(YV0420-U02) | GRMA | Jory_yuan | Aug.21.2013 |
| 1.33 | | Add new PCBA(YV0422-U01) | GRMA | Jory_yuan | Oct.9.2013 |

| **Authorize by** | | **Review by** | | **Originator By** | Ariel_wang |
|---|---|---|---|---|---|

| 1.34 | | Add new PCBA(YV0423-U01) | GRMA | Jory_yuan | Oct.9.2013 |
| --- | --- | --- | --- | --- | --- |
| 1.35 | | Add new P/N(YV0424-A01) | GRMA | Jory_yuan | Oct.9.2013 |
| 1.36 | | Add new PCBA(YV02U0-B03) | GRMA | Jory_yuan | Nov.20.2013 |
| 1.37 | | Add new PCBA(YV0423-A22) | GRMA | Jory_yuan | Nov.20.2013 |
| 1.38 | | Add new PCBA(YV0420-B22) | GRMA | Jory_yuan | Dec.4.2013 |
| 1.39 | | Add new PCBA(YV0422-A11) | GRMA | Jory_yuan | Dec.4.2013 |
| 1.40 | | Add new PCBA(YV0423-A12) | GRMA | Jory_yuan | Dec.11.2013 |
| 1.41 | | Add new PCBA(YV0422-A22) | GRMA | Jory_yuan | Dec.25.2013 |
| 1.42 | | Add new PCBA(YV02U0-R05) | GRMA | Jory_yuan | Mar.5.2014 |
| 1.43 | | Add new PCBA(YV02U0-B15) | GRMA | Jory_yuan | Mar.19.2014 |
| 1.44 | | Add new PCBA(YV0424-A11) | GRMA | Jory_yuan | Mar.19.2014 |
| 1.45 | | Add new PCBA(YV02U3-B01) | GRMA | Jory_yuan | May.7.2014 |
| 1.46 | | Add new PCBA(YV0424-Q11) | GRMA | Jory_yuan | May.28.2014 |

## 1.Objectives

Create test procedure.

## 2.Scope

Model: GT610

PN: YV02U1(A01&A11&A22&A35&U35&U13) YV02U2(A01&A11) YV02U0(A01&A11&U01&A21&A31&U22&A42&Q43&B03&B15&R05)YV02U1(A11 &A22&U24) YV02U3(A01&U02&A14&B01) YV02U4(A01&U02&Q03)YV02U5(A01&U01)YV02U6(A12) YV0420(A01&B01&B11&B22&U02)YV0421(A01)YV0422(A01&A11&A22&U01)YV0 423(A01&A11&A22&U01)YV0424(A01&A11&Q11)

## 3.Test Item

3.1 Diagnostic test in Linux system
3.2 3DMark03(**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**.**

## 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 GT610 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.



SATA1

6.2.7 Plug 4PIN 12V (1200W) power cable into CON12V.
6.2.8 Plug ATX Power (1200W) on Power Connector.
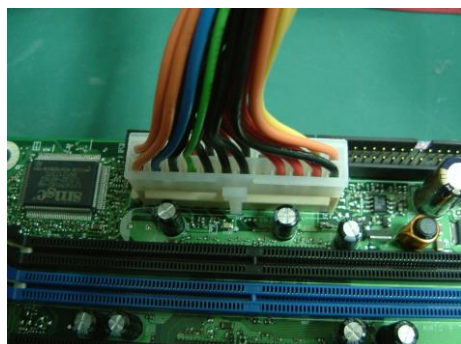
## 6.3 Diagnostic test in linux system

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



D-SUB cable
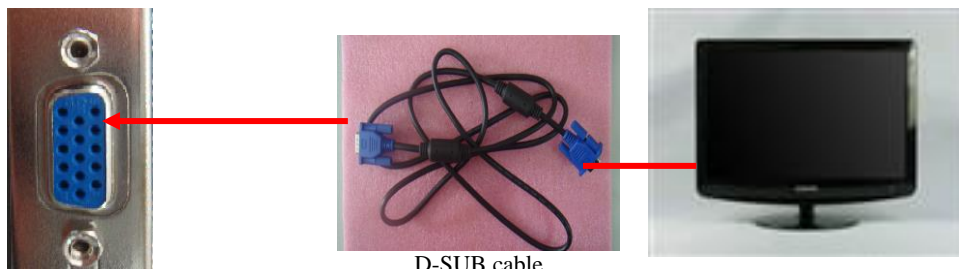
6.3.2 Press Power Switch then turn on power button.

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:GT610\yv02u1a0.sh or yv02u2a0.sh or yv02u1a1.sh or yv02u4a0.sh or yv02u4u0.sh or yv02u1a2.sh or yv02u1u1.sh or yv02u1u2.sh or yv02u4q0.sh or yv02u1a3.sh or yv02u1u3.sh

Path:GT6101\yv02u0a0.sh or yv02u3a0.sh oryv02u3u0.sh or yv02u0u0.sh or yv02u0a3.sh

Path:GT6102\yv02u0a1.sh

Path:GT6103\yv02u2a1.sh or yv02u5a0.sh or yv02u5u0.sh

Path:GT6104\yv02u0a2.sh or yv02u0u2.sh or yv02u0a4.sh or yv02u3a1.sh or yv02u0q4.sh

Path:GT6105\yv02u6a1.sh

Path:GT6106\yv0420a0.sh or yv0240b0.sh or yv0420u0.sh

Path:GT6107\ yv0420b1.sh

Path:GT6108\yv0421a0.sh

Path:GT6109\yv0422a0.sh or yv0423a0.sh or yv0423a1.sh or yv0422u0.sh or yv0423u0.sh or yv0424a0.sh or yv0423a2.sh or yv0422a1.sh or yv0422a2.shor yv0424a1.sh or yv0424q1.sh

Path:GT610A\yv02u0b0.sh or yv02u0b1.sh or yv02u3b0.sh

Path:GT610B\yv0420b2.sh

Path:GT610C\yv02u0r0.sh

Run the test program refer to the prompt.

6.3.5 Memory test

If you want to test memory, please enter the relevant directory and run ./mats –e xx.

You also can use ./mats –c xx------- only xx% of frame buffer is detected.

6.3.6 BIOS flash

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

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.



HDMI cable

HDMI CON

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

6.4.4 Please run 3DMark03 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.
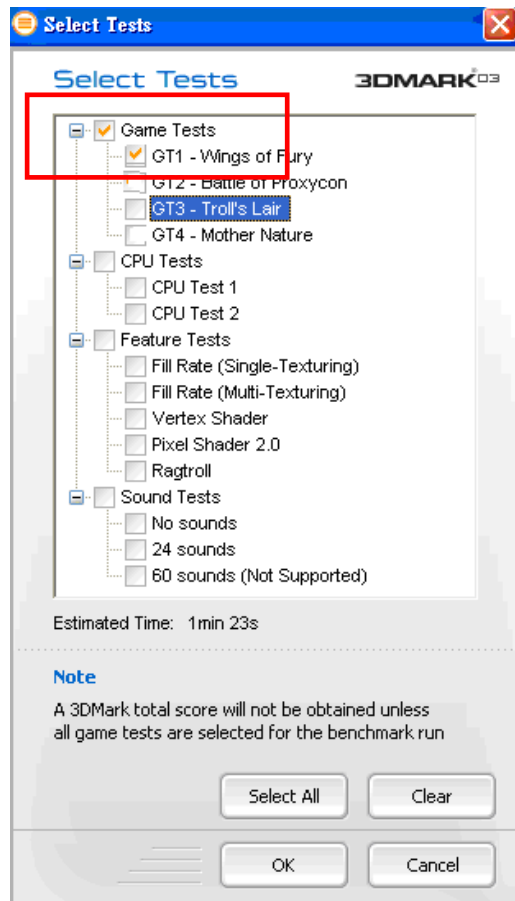


6.4.6 Press "Demo" to enter Demo menu. You can choose "Sounds" for default setting.



6.4.7 Please pay attention to check if there is flickering, discolor, crash and so on.
　　　If there's no problem, it can be judged OK!

6.4.8 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&6.4.8)



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.
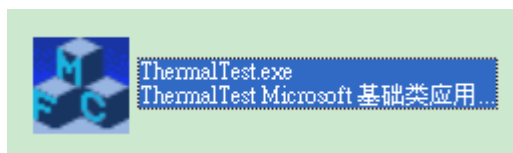


6.5.3 If test ok, show pass.
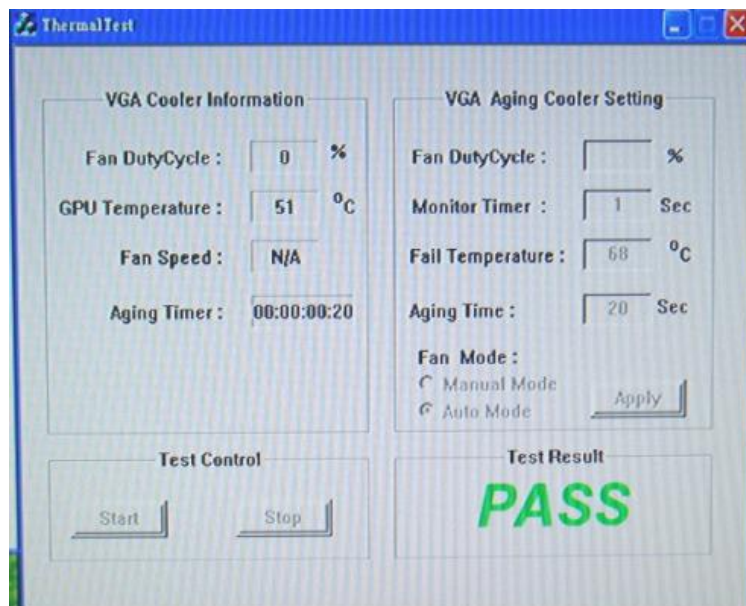
6.5.4 If test fail, show fail.
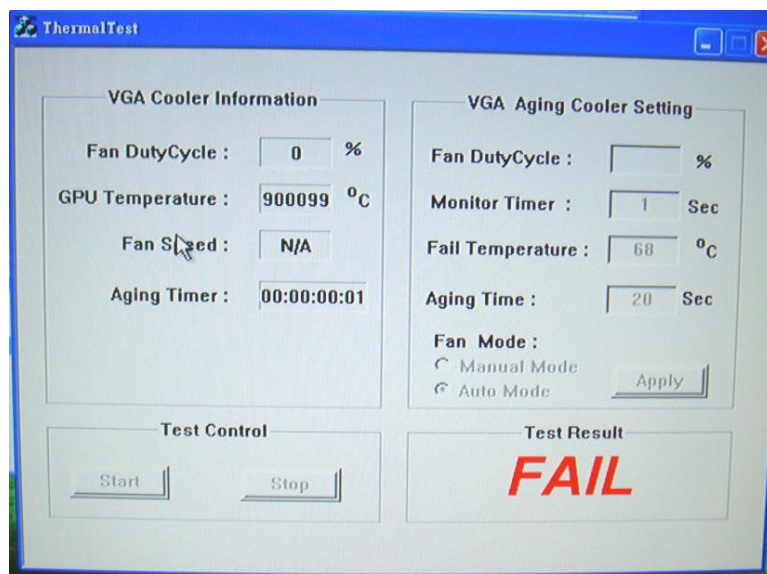


6.5.5 If test OK, NTF test.

## 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<br>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<br>(Buying a local D-SUB cable by yourself) | | | 1 |  |
| 12 | Dual link DVI cable<br>(Buying a local DVI cable by yourself) | | | 1 |  |
| 13 | HDMI extend cable<br>(Buying a local HDMI cable by yourself) | | | 1 |  |
| 14 | TV extend cable<br>(Buying a local TV cable by yourself) | | | 1 |  |
| 15 | DVI-HDMI | 04G460002400<br>/04G460002450 | | 1 |  |
| 16 | LCD "Y" Cable | 14-010230000 | | 1 |  |
| 17 | P7H55-M/USB3 | 80-MIBBKA-G0* | ASUS | 1 | |