Rev.	Modified Chapters	Modification Description	Issued Dept.	Issued by	Revised Date
1.00		First release	GTC	Janice_Pang	
1.01		Add New P/N (C1CMM0)	GTC	Janice_Pang	
1.02		Add New P/N (C1CML5)	GTC	Janice_Pang	
1.03		Add New P/N (C1CMLA)	GTC	Janice_Pang	
1.04		Add New P/N (C1CMR5)	GTC	Janice_Pang	
1.05		Add New PCBA(C1CMLA-A12)	GTC	Janice_Pang	
1.06		Add New PCBA(C1CMM0-A03)	GTC	Janice_Pang	
1.07		Add New PCBA (C1CML5-A03)	GTC	Janice_Pang	
1.08		Add New P/N (C1CMU0)	GTC	Janice_Pang	APR.28,2009
1.09		Add New P/N (C1CMRA)	GTC	Janice_Pang	JUL.23,2009
1.10		Add New P/N (C1CMRF)	GTC	Janice_Pang	AUG.04,2009
1.11		Add New P/N (C1CMLK)	GTC	Janice_Pang	AUG.14,2009
1.12		Add New PCBA(C1CMRA-A12)	GTC	Janice_Pang	AUG.20,2009
1.13		Add New P/N (C1CMLF)	GTC	Janice_Pang	AUG.20,2009
1.14		Add FAN Test	GTC	Janice_Pang	Sep.29,2009
1.15		Add New PCBA (C1CMRF-A13)	GTC	Ariel_wang	Dec.04,2009
1.16		Add New PCBA(C1CMRA-A24)	GTC	Ariel_wang	Dec.09,2009
1.17		Add New PCBA(C1CMRA-A34)	GTC	Ariel_wang	Dec.23,2009
1.18		Add New PCBA (C1CMLF-A34)	GTC	Ariel_wang	Jan.14,2010
1.19		Add New PCBA (C1CMLF-A03)	GTC	Ariel_wang	Feb.5,2010
1.20		Add New PCBA (C1CMLF-A45)	GTC	Ariel_wang	Mar.3,2010
1.21		Add New PCBA(C1CMRA-A55)	GTC	Ariel_wang	Mar.23,2010
1.22		Add New P/N (C1CMU5-A04)	GTC	Ariel_wang	Apr.6,2010
1.23		Add New P/N (C1CMRK-A02)	GTC	Ariel_wang	Apr.7,2010
1.24		Add New P/N (C1CMLP-A02)	GTC	Ariel_wang	Apr.7,2010
1.25		Add New P/N (C1CMRP-A02)	GTC	Chongling	Apr.13,2010
1.26		Add New P/N (C1CMLU-A01)	GTC	Chongling	Apr.13,2010
1.27		Add New P/N (C1CMRZ-A01)	GTC	Ariel_wang	Apr.20,2010
1.28		Add New PCBA (C1CMRP-A12)	GTC	Ariel_wang	Apr.26,2010
1.29		Add New PCBA(C1CMLU-A11)	GTC	Ariel_wang	May.11,2010
1.30		Add New PCBA(C1CMRU-A01)	GTC	Chongling	May.24,2010

Authorize by		Review by		Originator By	Janice

1.31		Add New PCBA(C1CMRU-A14)	GTC	Chongling	Jun.4,2010
1.32		Add New PCBA(C1CMRZ-A24)	GTC	Chongling	Jun.4,2010
1.33		Add New PCBA(C1CMRU-A24)	GTC	Ariel_wang	Jun.22,2010
1.34		Add New PCBA(C1CMRZ-A12)	GTC	Chongling	Jul.23,2010
1.35		Add New PCBA(C1CMLU-A25)	GTC	Chongling	Jul.29,2010
1.36		Add New PCBA (C1CMRP-A26)	GTC	Chongling	Aug.16,2010

1.Objectives

Create test procedure.

2.Scope

Model: ENGTS250
PN: C1CMM5 C1CML0   C1CMM0 C1CML5 C1CMLA
   C1CMR5 C1CMLA-A12 C1CMM0-A03   C1CML5-A03
   C1CMU0 C1CMRA   C1CMRF C1CMLK C1CMRA-A12
   C1CMLF(A11& A34& A03&A45) C1CMRF(A13) C1CMRA(A24&
   A34&A55) C1CMU5(A04) C1CMRK(A02) C1CMLP(A02)
   C1CMRP(A02&A12&A26) C1CMLU(A01&A11&A25)
   C1CMRZ(A01&A24&A12) C1CMRU(A01&A14&A24)

3.Test Item

3.1 Diagnostic test in DOS
3.2 3DMark06/05
3.3 Temperature test

4.Relevant Document

None.

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

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 1GB Memory to DIMM1~2.
6.2.3 Plug PS/2 Mouse and PS/2 Keyboard into MB.
6.2.4 Plug VGA Card ENGTS250 into PCIEX16.
6.2.5 Connect power con of VGA card & Power supply via bundled power cable.
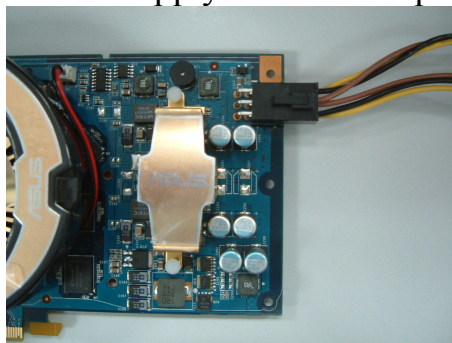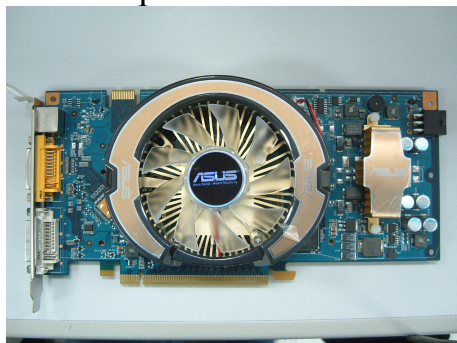
6.2.6 Connect SATA HDD & SATA con via SATA cable

SATA

6.2.7 Plug 4PIN 12V power(600W) cable into CON12V.
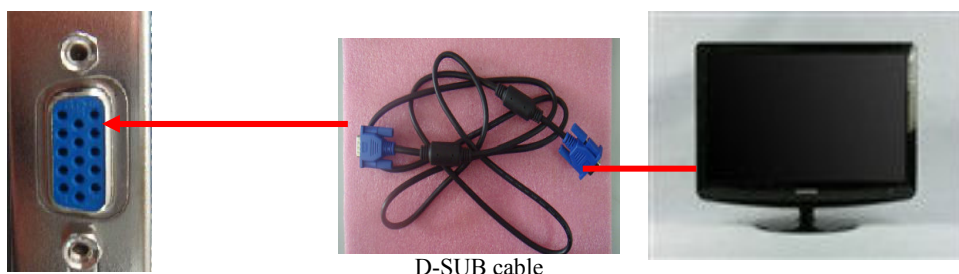6.2.8 Plug ATX Power on Power(600W) Connector.
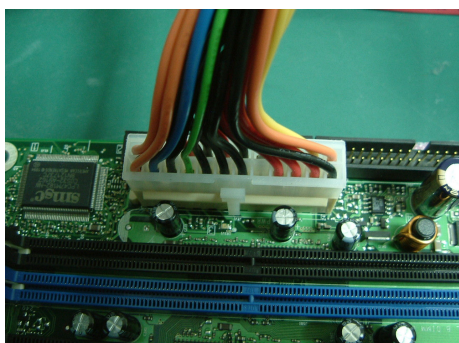
6.3 Diagnostic test in DOS

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

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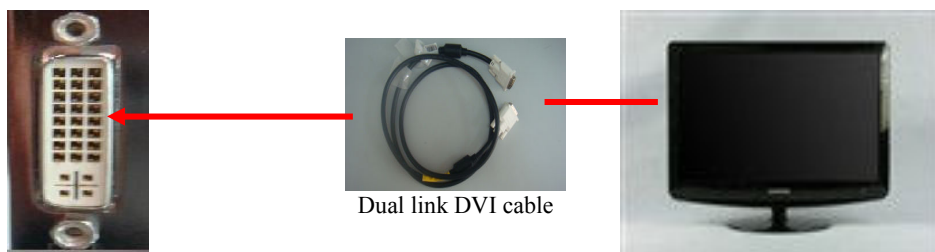
Please connect LCD monitor & card's D-SUB CON via a D-SUB cable.

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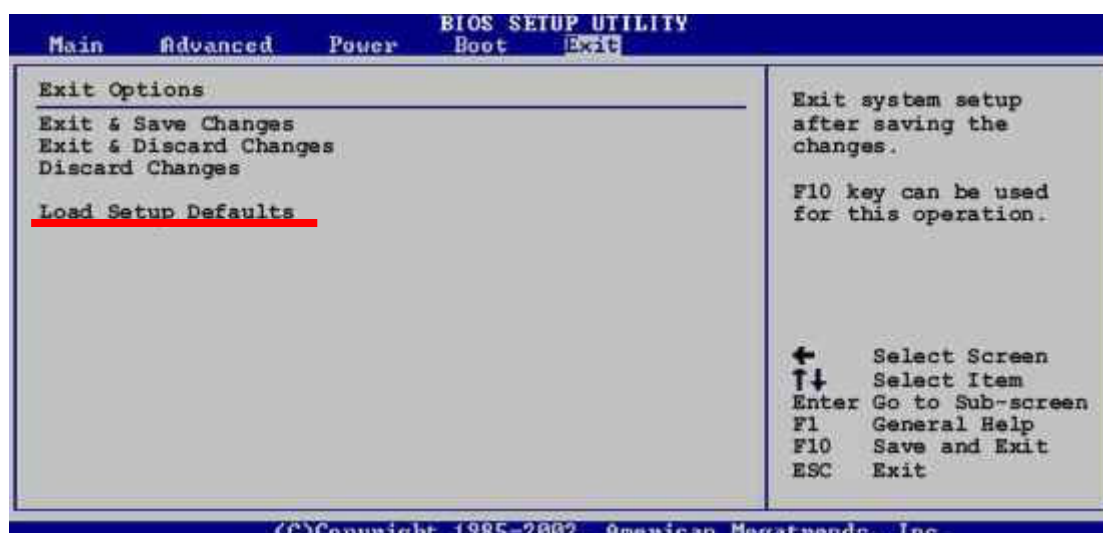
6.3.4 System will reboot, select DOS to run test program.

        Path:VBAT\ENGTS250\BATCH\
        Run the test program refer to the prompt.

6.3.5 Memory test

   If you want to test memory, please run mats.exe.
   Path:VBAT\ENGTS250\DIAG\

6.3.6   FAN test
   If you want to test FAN, please run fantest1.bat or fantest2
   Path:VBAT\ENGTS250\BATCH\FANTEST1.BAT
   Path:VBAT\ENGTS250\BATCH\FANTEST2.BAT

   Notice:
   FANTEST1.BAT apply the following Part Number
   C1CMLF-A02/A11   C1CMLK-A02

   FANTEST2.BAT apply the following Part Number
   C1CMR5-A01   C1CMRA-A02/A12   C1CMRFA03

6.3.7 BIOS flash

   Please use the following command to flash bios and notice the size of character.
   Path:VBAT\ENGTS250\BIOS
   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 to
   unlock bios. And then, please use nvflash.exe /w to lock bios after updating latest
   bios.

6.3.8 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.
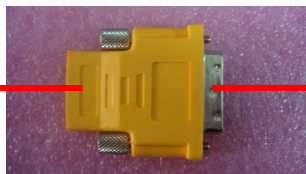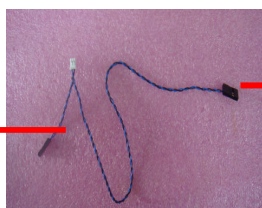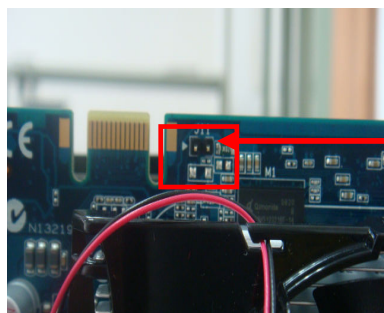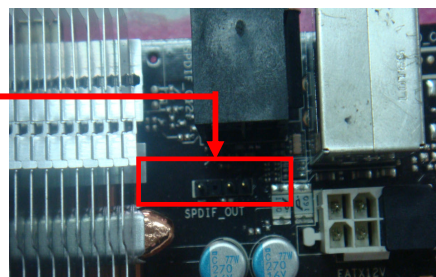

DVI-HDMI cable
YELLOW DVI CON
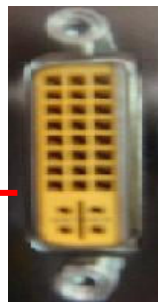
HDMI cable
HDMI CON

6.4.3 Please install VGA card driver in Windows(You must use individual driver of this card).
6.4.4 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).
　　Please run 3DMark05 base on this card (please test 1 cycle).(For C1CMLF-A03)

6.4.8 Press "Select" to enter Select test menu. You can choose "HDR1" for default setting.
　　Press "Select" to enter Select test menu. You can choose "GT3" for default setting (For C1CMLF-A03)
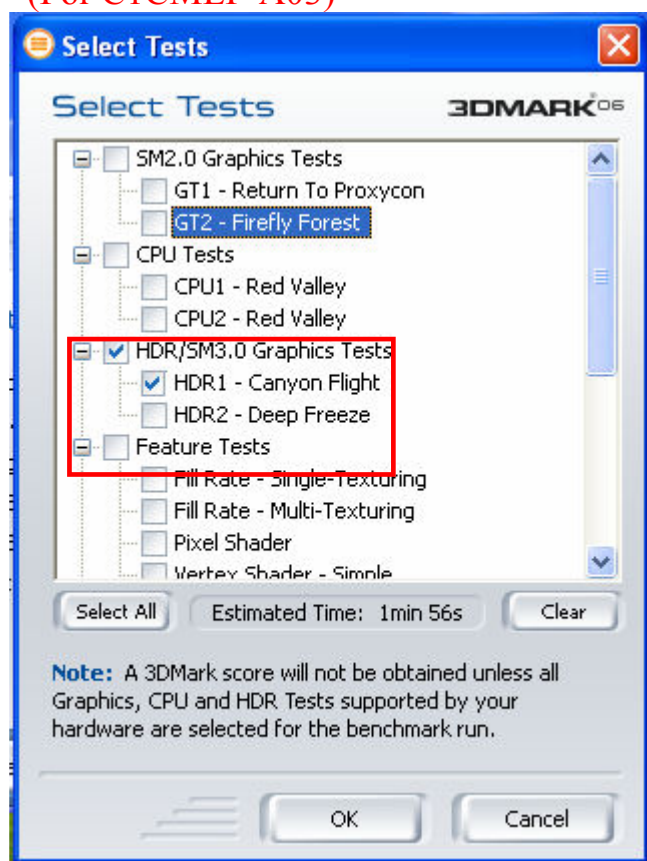
6.4.9 Press "Demo" to enter Demo menu. You can choose "Sounds" for default setting.
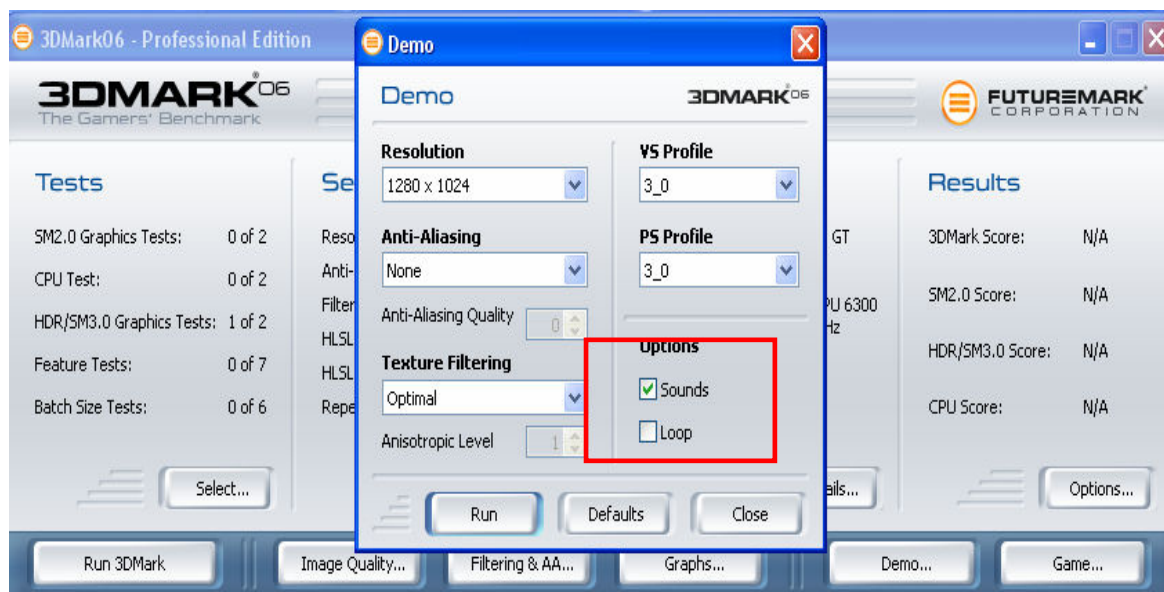
6.4.10 Please pay attention to check if there is flickering, discolor, crash and so on. If there's no problem, it can be judged OK!

6.4.11 Please listen to voice carefully to check whether it outputs sounds. If not, HDMI test fail.
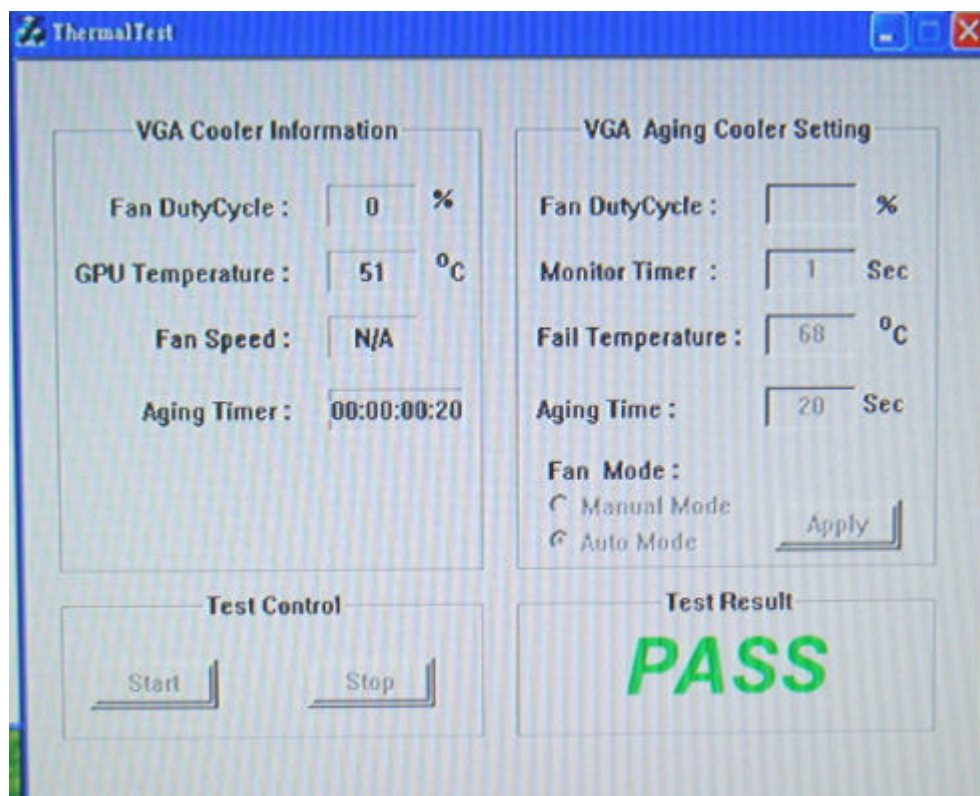
6.5 Temperature test
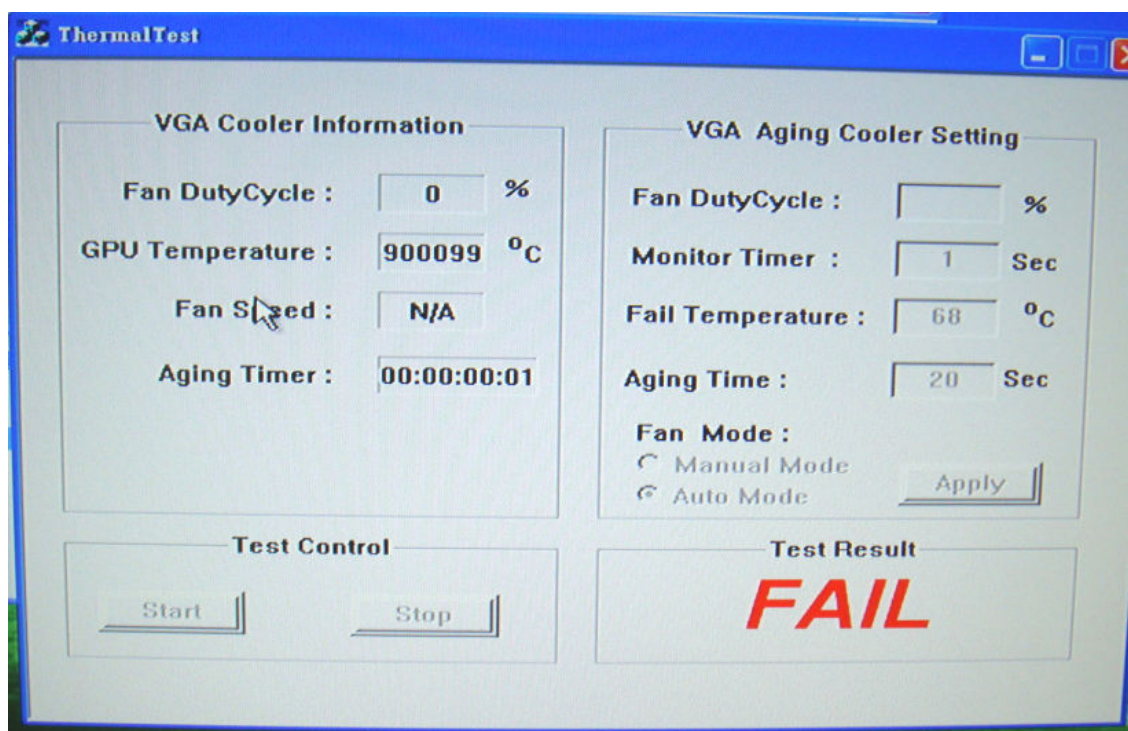
6.5.1 Please copy Thermaltool(1.0.05) to Windows by yourself.
6.5.2 Please run ThermalTest.exe.

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	**PS/2 MOUSE**			**1**	
3	**PS/2 KEYBOARD**			**1**	
4	**ATX POWER SUPPLY(600W)**			**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	**S CABLE(NVDIA)**	**14G010005113 /14G010005100**		**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	**TV extend cable** **(Buying a local TV cable by yourself)**			**1**	

16	DVI-HDMI	04G460002400 /04G460002450		1		
17	Power Cable	14G000602510 /14G000602502		1		
18	SPDIF CABLE	14G003200813 /14G003200810		1		
19	SUPREME FX II	80-C1BHK5-0C01		1		
20	LCD "Y" Cable	14-010230000		1		
21	P5E	80-MBB7X0-G0A01		1		