

Product Test Report



Product Name	FS-97E
Product Version	B
Issued Date	21.Sep.2009
Report Edition	1.1
BIOS Version	1.1
Testing Engineer	RICK
Check Engineer	LES

REVISION HISTORY

DATE	REVISION NO.	PAGE	DESCRIPTONS
20.May.2009	Ver. 1.0	66	Initial Release
21.Sep.2009	Ver. 1.1	77	1.Support 8GB memory. 2.Vibration Test 3.Support Core 2 Quad CPU

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1. Function test

1.1 Hardware function

Base Function Test

Item	Description	Result
1	Power Button	PASS
2	Reset	PASS
3	Power LED	PASS
4	HDD LED	PASS
5	SATA 1/2/3/4/5	PASS
6	USB 1/2/3/4/5/6/7/8	PASS
7	DDRII 1/2	PASS
8	Floppy	PASS
9	LPT	PASS
10	COM 1/2	PASS
11	VGA Port	PASS
12	PS2	PASS
13	AUDIO	PASS
14	CD_IN	PASS
15	Mini PCI	PASS
16	DIO	PASS
17	CPUFAN	PASS
18	SYSFAN	PASS
19	PCI 1/2/3/4	PASS
20	IDE	PASS
21	DVI	PASS
22	LVDS	PASS
23	LAN 1/2	PASS
24	IrDA	PASS

25	HDTV	PASS
26	ISA	PASS
27	CF	PASS
28	DC_IN	PASS
29	CN_ATKB	PASS

Jumper

Item	Description	Result
1	JRTC	PASS
2	JCSEL1	PASS
3	JCSEL2	PASS
4	JAT	PASS
5	JVLCD	PASS

1.2 BIOS function

Item	Description	Result	Remark
1	Press 'Del' to run Setup Utility	PASS	
2	Ctrl-Alt-Del – Soft-Reboot	PASS	
3	Save & Exit Setup	PASS	
4	Date & Time Setting	PASS	
5	Drive A	PASS	
6	Quick Power On Self Test	PASS	
7	Boot Device Setting	PASS	
8	Boot Up Floppy Seek	PASS	
9	Boot Up Num Lock Status	PASS	
10	ACPI Suspend Type	PASS	
11	Halt On	PASS	
12	Onboard Serial Port	PASS	
13	USB Controller	PASS	
14	USB Keyboard Support	PASS	
15	Onboard FDC Controller	PASS	
16	Soft-Off by PWRBTN	PASS	
17	Power On Function	PASS	
18	ACPI Function	PASS	
19	Hot Key Password	PASS	
20	Wake-up by PCI card	PASS	
21	Resume by Alarm	PASS	
22	Watch Dog Timer Select	PASS	
23	Init Display First	PASS	
24	Onboard Parallel Port	PASS	
25	PWRON After PWR-Fail	PASS	
26	Power On by Ring	PASS	
27	Set Supervisor Password	PASS	

28	Set User Password	PASS	
29	UART Mode Select	PASS	
30	RxD , Txd Active	PASS	
31	IR Transmission Delay	PASS	
32	UR2 duplex Mode	PASS	
33	Use IR Pins	PASS	
34	CPU Warning Temperature	PASS	
35	Shutdown Temperature	PASS	
36	USB KB Wake Up by S3	PASS	
37	Console Redirection	PASS	
38	Total GFX Memory	PASS	
39	LAN controller	PASS	

1.3 Driver

CD Edition : IPCi 2– 1.3

1. Windows XP SP2 Driver Test

Item	Description	Result	version
1	Chipset Driver	PASS	9.0.0.1008
2	VGA Driver	PASS	6.14.10.4990
3	Audio Driver	PASS	5.10.0.5464
4	LAN Driver	PASS	10.3.49.0

2. Windows 2000 SP4

Item	Description	Result	version
1	Chipset Driver	PASS	9.0.0.1008
2	VGA Driver	PASS	6.14.10.4990
3	Audio Driver	PASS	5.10.0.5464
4	LAN Driver	PASS	10.3.49.0

3. Windows Server 2003 Driver Test

Item	Description	Result	version
1	Chipset Driver	PASS	9.0.0.1008
2	Audio Driver	PASS	5.10.0.5464
3	LAN Driver	PASS	10.3.49.0

4. Windows Vista 32 bit Driver Test

Item	Description	Result	version
1	Chipset Driver	PASS	9.0.0.1008
2	VGA Driver	PASS	7.15.10.1518
3	Audio Driver	PASS	6.0.1.5473
4	LAN Driver	PASS	10.3.49.0

5. Windows Vista 64 bit Driver Test

Item	Description	Result	version
1	Chipset Driver	PASS	9.0.0.1008
2	VGA Driver	PASS	7.15.10.1518
3	Audio Driver	PASS	6.0.1.5473
4	LAN Driver	PASS	10.3.49.0

2. Compatibility test

2.1 CPU Test

Test environment:

OS Windows XP professional SP2

Test program : PC MARK 2005

Spec	CPU Speed	Family	Processor	FSB	L2 Size	Result
<u>SLB47</u>	2.8 GHz	Core 2 Duo	T9600	1066 MHz	6 MB	PASS
<u>SLAF8</u>	2.2 GHz	Core 2 Duo	T7500	800 MHz	4 MB	PASS
<u>SLA4A</u>	1.8 GHz	Core 2 Duo	T7100	800 MHz	2 MB	PASS
<u>SLAYQ</u>	2.4 GHz	Core 2 Duo	T8300	800 MHz	3 MB	PASS
<u>SLB3R</u>	2.26 GHz	Core 2 Duo	P8400	1066 MHz	3 MB	PASS
<u>SLB6M</u>	2 GHz	Celeron	575	667 MHz	1 MB	PASS
<u>SLB5G</u>	2.26 GHz	Core 2 Quad	Q9100	1066 MHz	12MB	PASS

2.2 Operation System Test

Item	Description	Result	Remark
1	Windows Vista 64 bit	PASS	
2	Windows Vista 32 bit	PASS	
3	Windows Server 2008	PASS	
4	Windows XP SP2	PASS	
5	Windows Server 2003	PASS	
6	Windows 2000 SP4	PASS	
7	Debian Lenny Beta2 (Kernel 2.6.24-1-amd64)	PASS	
8	Fedora Code 7 (Kernel 2.6.21-1-3194.fc7)	PASS	
9	Fedora Code 8 (Kernel 2.6.23-1-42.fc8)	PASS	
10	Cent OS 4.5 (Kernel 2.6.9-55)	PASS	

2.3 Memory Test

Test environment:

OS Windows XP professional SP2

Test program : PC MARK 2005

Manufacturer	Chip	Frequency	Capacity Mbytes	Result
A-DATA	K4B1G0846D	DDRIII 1066	2GB	PASS
A-DATA	K4B1G0846D	DDRIII 1066	1GB	PASS
A-DATA	H5TQ1G83AFP	DDRIII 1066	2GB	PASS
Transcend	K4B1G0846D	DDRIII 1066	2GB	PASS
Transcend	K4B1G0846D	DDRIII 1066	1GB	PASS
Kingston	K4B2G0846B-HCFB	DDRIII 1066	4GB	PASS

2.4 VGA Graphic Quality Test

Test environment:

OS Windows XP professional SP2

Driver version : 6.14.10.4990

Resolution	Color	Result	Remark
800*600	16 /32bit	PASS	
1024*768	16 /32bit	PASS	
1152*864	16 /32bit	PASS	
1280*600	16 /32bit	PASS	
1280*720	16 /32bit	PASS	
1280*768	16 /32bit	PASS	
1280*960	16 /32bit	PASS	
1280*1024	16 /32bit	PASS	
1400*1050	16 /32bit	PASS	
1600*900	16 /32bit	PASS	
1600*1200	16 /32bit	PASS	
1680*1050	16 /32bit	PASS	
1792*1344	16 /32bit	PASS	
1856*1392	16 /32bit	PASS	
1920*1080	16 /32bit	PASS	

2.5 Audio

Test environment:

OS Windows XP professional SP2

Driver version : 5.10.0.5464

Item	Description	Result	Remark
1	2 CH	PASS	
2	Microphone	PASS	
3	CDIN	PASS	

OS Windows 2000 SP4

Driver version : 5.10.0.5464

Item	Description	Result	Remark
1	2 CH	PASS	
2	Microphone	PASS	
3	CDIN	PASS	

OS Windows Server 2003

Driver version : 5.10.0.5464

Item	Description	Result	Remark
1	2 CH	PASS	
2	Microphone	PASS	
3	CDIN	PASS	

OS Windows Vista 32 bit

Driver version : 6.0.1.5473

Item	Description	Result	Remark
1	2 CH	PASS	
2	Microphone	PASS	
3	CDIN	PASS	

OS Windows Vista 64 bit

Driver version : 6.0.1.5473

Item	Description	Result	Remark
1	2 CH	PASS	
2	Microphone	PASS	
3	CDIN	PASS	

2.6 HDD Test

Test environment:

OS Windows XP professional SP2

MODEL	INTERFACE	capacity	Size Detect	Data Transfer
Seagate ST340016A	IDE	40 GB	PASS	PASS
Western Digital WD800BB-00JHC0	IDE	80 GB	PASS	PASS
Western Digital WD800BB-00JKC0	IDE	80 GB	PASS	PASS
Western Digital WD800BB-22JHC0	IDE	80 GB	PASS	PASS
Western Digital WD800JD-75MSA3	SATA	80 GB	PASS	PASS
Hitachi HDS728080PLA380	SATA	82.3 GB	PASS	PASS
HITACHI HDT722525DLA380	SATA	250 GB	PASS	PASS
Western Digital WD6400H1Q-00	USB	640 GB	PASS	PASS

2.7 CD-ROM Test

Test environment:

OS Windows XP professional SP2

MODEL	INTERFACE	Detect	Data Transfer	PLAY DVD
SONY CDU4811	IDE	PASS	PASS	PASS
NEC ND-3520A	IDE	PASS	PASS	PASS
ASUS CD-S520/A 2.0K	IDE	PASS	PASS	PASS
LG DVD GSA-H62L	SATA	PASS	PASS	PASS
PIONEER DVD DVR-212BK	SATA	PASS	PASS	PASS
ASUS DVD DRW-1814BLT	SATA	PASS	PASS	PASS

2.8 USB device Test

1. Windows XP SP2

Item	Result	Remark
External USB Keyboard Test	PASS	
External USB Mouse Test	PASS	
Hot plugging test	PASS	
CD ROM	PASS	
USB Mass storage	PASS	

2. Windows 2000 SP4

Item	Result	Remark
External USB Keyboard Test	PASS	
External USB Mouse Test	PASS	
Hot plugging test	PASS	
CD ROM	PASS	
USB Mass storage	PASS	

3. Windows Server 2003

Item	Result	Remark
External USB Keyboard Test	PASS	
External USB Mouse Test	PASS	
Hot plugging test	PASS	
CD ROM	PASS	
USB Mass storage	PASS	

4. Windows Vista 32 bit

Item	Result	Remark
External USB Keyboard Test	PASS	
External USB Mouse Test	PASS	
Hot plugging test	PASS	
CD ROM	PASS	
USB Mass storage	PASS	

5. Windows Vista 64 bit

Item	Result	Remark
External USB Keyboard Test	PASS	
External USB Mouse Test	PASS	
Hot plugging test	PASS	
CD ROM	PASS	
USB Mass storage	PASS	

6. Windows Server 2008

Item	Result	Remark
External USB Keyboard Test	PASS	
External USB Mouse Test	PASS	
Hot plugging test	PASS	
CD ROM	PASS	
USB Mass storage	PASS	

2.9 Serial Port Test

1. MS-DOS

Item	Description	Result	Remark
1	RS-232 Mouse Test	PASS	
2	RS-422 & RS-485	PASS	
3	PC Check	PASS	
4	TS	PASS	

2. Windows 2000 SP4

Item	Description	Result	Remark
1	Device Manager Check	PASS	
2	RS-232 Mouse Test	PASS	
3	b&b com port test	PASS	

3. Windows Server 2003

Item	Description	Result	Remark
1	Device Manager Check	PASS	
2	RS-232 Mouse Test	PASS	
3	b&b com port test	PASS	

4. Windows XP SP2

Item	Description	Result	Remark
1	Device Manager Check	PASS	
2	RS-232 Mouse Test	PASS	
3	b&b com port test	PASS	

5. Windows Vista 32 bit

Item	Description	Result	Remark
1	Device Manager Check	PASS	
2	RS-232 Mouse Test	PASS	

6. Windows Vista 64 bit

Item	Description	Result	Remark
1	Device Manager Check	PASS	
2	RS-232 Mouse Test	PASS	

7. Windows Server 2008

Item	Description	Result	Remark
1	Device Manager Check	PASS	
2	RS-232 Mouse Test	PASS	
3	b&b com port test	PASS	

2.10 Print Port Test

1. MS-DOS

Item	Description	Result	Remark
1	PC Check	PASS	
2	TS	PASS	

2. Windows 2000 SP4

Item	Description	Result	Remark
1	ECP/EPP PRINT TEST	PASS	

3. Windows Server 2003

Item	Description	Result	Remark
1	ECP/EPP PRINT TEST	PASS	

4. Windows XP SP2

Item	Description	Result	Remark
1	ECP/EPP PRINT TEST	PASS	

5. Windows Vista 32 bit

Item	Description	Result	Remark
1	ECP/EPP PRINT TEST	PASS	

6. Windows Vista 64 bit

Item	Description	Result	Remark
1	ECP/EPP PRINT TEST	PASS	

7. Windows Server 2008

Item	Description	Result	Remark
1	ECP/EPP PRINT TEST	PASS	

2.11 Floppy Drive Test

Floppy	Floppy Drive Detect	Floppy Data Transfer
MITSUMI D353M3D	PASS	PASS
MITSUMI D353T6	PASS	PASS
MITSUMI D353FUE	PASS	PASS
MITSUMI D353GUE	PASS	PASS
TEAC FD-235HF	PASS	PASS
Panasonic JU-257A606P	PASS	PASS

2.12 PS2 Keyboard 、 Mouse Test

1. MS-DOS

Item	Description	Result	Remark
1	Keyboard LED Status Test	PASS	
2	Keyboard Typing Test	PASS	
3	Mouse Detect Test	PASS	

2. Windows 2000 SP4

Item	Description	Result	Remark
1	Keyboard LED Status Test	PASS	
2	Keyboard Typing Test	PASS	
3	Mouse Detect Test	PASS	

3. Windows Server 2003

Item	Description	Result	Remark
1	Keyboard LED Status Test	PASS	
2	Keyboard Typing Test	PASS	
3	Mouse Detect Test	PASS	

4. Windows XP SP2

Item	Description	Result	Remark
1	Keyboard LED Status Test	PASS	
2	Keyboard Typing Test	PASS	
3	Mouse Detect Test	PASS	

5. Windows Vista 32 bit

Item	Description	Result	Remark
1	Keyboard LED Status Test	PASS	
2	Keyboard Typing Test	PASS	
3	Mouse Detect Test	PASS	

6. Windows Vista 64 bit

Item	Description	Result	Remark
1	Keyboard LED Status Test	PASS	
2	Keyboard Typing Test	PASS	
3	Mouse Detect Test	PASS	

7. Windows Server 2008

Item	Description	Result	Remark
1	Keyboard LED Status Test	PASS	
2	Keyboard Typing Test	PASS	
3	Mouse Detect Test	PASS	

2.13 LAN Test

Data Transfer Test environment:

-CAT 6 UTP 100M

-8 HR. continuous

1. Windows XP SP2

Item	Description	Result	Remark
1	Device Manager Check	PASS	
2	Data Transfer Test	PASS	

2. Windows 2000 SP4

Item	Description	Result	Remark
1	Device Manager Check	PASS	
2	Data Transfer Test	PASS	

3. Windows Server 2003

Item	Description	Result	Remark
1	Device Manager Check	PASS	
2	Data Transfer Test	PASS	

4. Windows Vista 64bit

Item	Description	Result	Remark
1	Device Manager Check	PASS	
2	Data Transfer Test	PASS	

5. Windows Vista 64bit

Item	Description	Result	Remark
1	Device Manager Check	PASS	
2	Data Transfer Test	PASS	

2.14 Power Supply Test

Item	TYPE	Description	Result	Remark
1	ATX Power	Seventeam ST-300WAP 300W	PASS	
2	ATX Power	COOLER MASTER RS-390-PMSR-A3 390W	PASS	
3	ATX Power	LACONIC ENTERPRISE CO.,LTD 1U150 150W	PASS	
4	ATX Power	FSP180-50PLA 180W	PASS	
5	AT Power	MAGITRONIC D-P350 200W	PASS	

2.15 PCI Express mini card

Motherboard	PCI Express mini card	Remark
FS-97EXDG2	MPX-954	PASS
FS-97EXDG2	MPX-827	PASS
FS-97EXG	MPX-SDVOD	PASS
FS-97EXG/XDG2	MPX-574D/D2	PASS

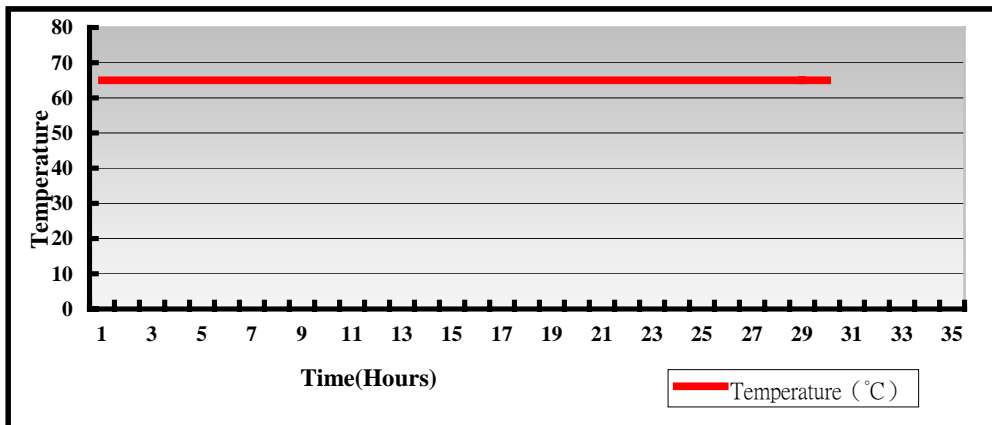
2.16 Back plane (PICMG1.3 or PICMG 1.0 or PISA)

Item	BRAND	MODEL	Result	Remark
1	Commell	CBP-8P7	PASS	
2	Commell	CBP-14P12	PASS	

3. Environmental test

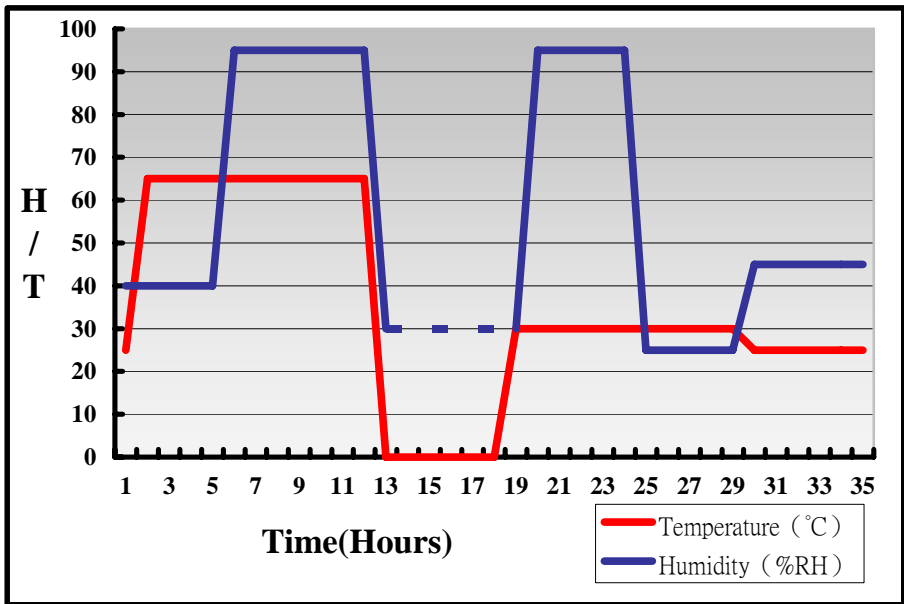
3.1 Temperature Test

System Board	FS-97E
CPU	Intel (R) Core (TM) 2 Duo CPU T9600 2.8GHz
Memory	Transcend DDR3 1066 1GB (K4B1G0846D)
Operating OS	Windows XP
Test Equipment	GIANT FORCE (GTH-150-60-CP-AR)
Test Program	3DMark 2003



Hardware Device list:

System Board	FS-97E
CPU	Intel (R) Core (TM) 2 Duo CPU P8400 2.26GHz
Memory	Transcend DDR3 1066 1GB (K4B1G0846D)
Operating OS	Windows XP
Test Equipment	GIANT FORCE (GTH-150-60-CP-AR)
Test Program	3DMark 2003



Definition : When the temperature is 30 degrees below arrive, humidity measurements have not, so by the dashed line express.

Boot Up Test:

Hardware Device list:

System Board	FS-97E
CPU	Intel (R) Core (TM) 2 Duo CPU T7100 1.8GHz
Memory	Transcend DDR3 1066 2GB (K4B1G0846D)
HDD	IBM DTTA 351010 10GB

Temperature	Result	Remark
-30°C	PASS	50 Times
85°C	PASS	50 Times

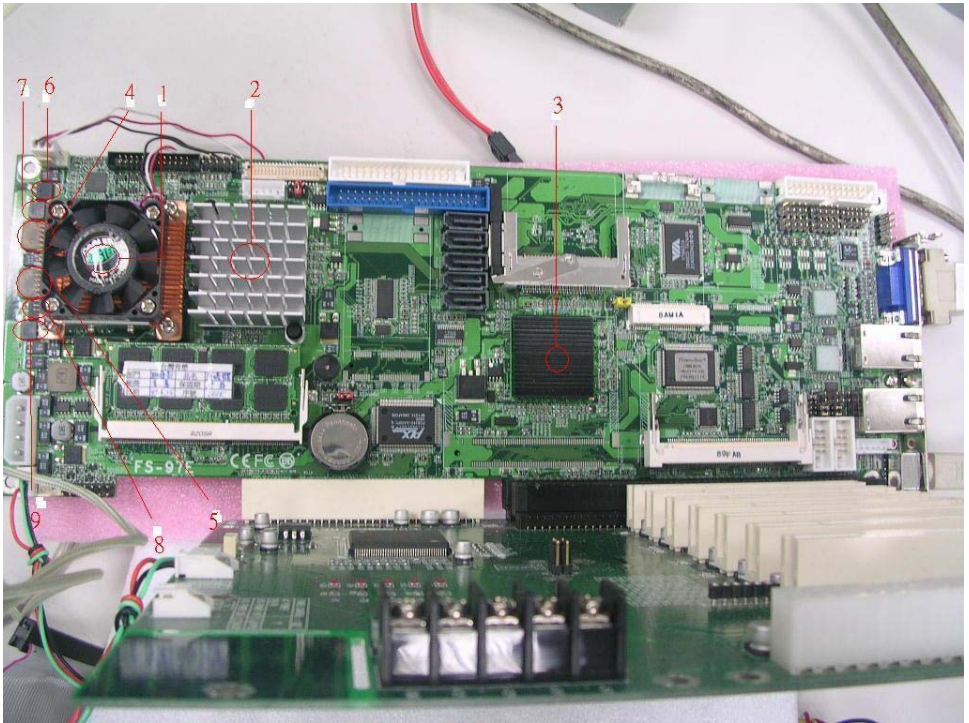
3.2 Thermal measurements at various points on the board

Test Environment :

CPU	Intel (R) Core (TM) 2 Duo CPU T7700 2.4GHz
Memory	Transcend DDR3 1066 2GB (K4B1G0846D)
HDD	IBM DTTA-351010 10GB
Power	COOLER MASTER RS-390-PMSR-A3
Operating System	Windows XP
Test Program	Burnin5.3

Test Result:

Item	Environmental temperature	27.3°C
1	CPU	50.8°C
2	GM45(Northbridge)	39.8°C
3	ICH9M(Southbridge)	44.7°C
4	L1(LLC0.56UH/0445)	53.4°C
5	L2(LLC0.56UH/0445)	54.2°C
6	Q3(TMSTRFR3709ZTRPBF)	57.9°C
7	Q5(TMSTRFR3709ZTRPBF)	60.1°C
8	Q14(TMSTRFR3709ZTRPBF)	60.5°C
9	Q16(TMSTRFR3709ZTRPBF)	58.6°C



4. Reliability Test

4.1 Power Consumption Test

1. Test Environment:

Motherboard	FS-97E
CPU	Intel (R) Core (TM)2 Duo CPU T8300 2.4GHz
Memory	Transcend DDR3 1066 2GB (K4B1G0846D)*2

Power Supply : COOLER MASTER RS-390-PMSR-A3

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	2.25	27	2.05	24.6
5V	4.1	20.5	5.21	26.05
3.3V	0.01	0.033	0.01	0.033
5VSB	0.178	0.89	0.021	0.105

1.a. Test Environment:

The same as above but with LCD panel

Display Panel	AUO M170EG01 17" LCD
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Power Supply : COOLER MASTER RS-390-PMSR-A3

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	3.99	47.88	4.72	56.64
5V	4.78	23.9	6.24	31.2
3.3V	0.01	0.033	0.01	0.033
5VSB	0.175	0.875	0.009	0.045

2.Test Environment:

Motherboard	FS-97E
CPU	Intel (R) Core (TM)2 Duo CPU T7100 1.8GHz
Memory	Transcend DDR3 1066 2GB (K4B1G0846D)*2

Power Supply : COOLER MASTER RS-390-PMSR-A3

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	1.37	16.44	1.58	18.96
5V	3.8	19	5.2	26
3.3V	0.01	0.033	0.01	0.033
5VSB	0.18	0.9	0.028	0.14

2.a.Test Environment:

The same as above but with LCD panel

Display Panel	AUO M170EG01 17" LCD
----------------------	-----------------------------

Power Supply : COOLER MASTER RS-390-PMSR-A3

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	3.45	41.4	3.53	42.36
5V	4.78	23.9	6.06	30.3
3.3V	0.01	0.033	0.01	0.033
5VSB	0.186	0.93	0.007	0.035

3.Test Environment:

Motherboard	FS-97E
CPU	Intel (R) Core (TM)2 Duo CPU T9600 2.8GHz
Memory	Transcend DDR3 1066 2GB (K4B1G0846D)*2

Power Supply : COOLER MASTER RS-390-PMSR-A3

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	1.81	21.72	2.04	24.48
5V	4.12	20.6	5.38	26.75
3.3V	0.01	0.033	0.01	0.033
5VSB	0.178	0.89	0.032	0.16

3.a.Test Environment:

The same as above but with LCD panel

Display Panel	AUO M170EG01 17" LCD
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Power Supply : COOLER MASTER RS-390-PMSR-A3

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	3.95	47.4	4.09	49.08
5V	5.11	25.55	6.23	31.15
3.3V	0.01	0.033	0.01	0.033
5VSB	0.202	1.01	0	0

4.Test Environment:

Motherboard	FS-97E
CPU	Intel (R) Core (TM)2 Duo CPU T7700 2.4GHz
Memory	Transcend DDR3 1066 2GB (K4B1G0846D)*2

Power Supply : COOLER MASTER RS-390-PMSR-A3

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	2.08	24.96	2.36	28.32
5V	3.84	19.2	5.3	26.5
3.3V	0.01	0.033	0.01	0.033
5VSB	0.164	0.82	0.009	0.045

4.a.Test Environment:

The same as above but with LCD panel

Display Panel	AUO M170EG01 17" LCD
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Power Supply : COOLER MASTER RS-390-PMSR-A3

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	4.23	50.76	4.35	52.2
5V	4.53	22.65	5.84	29.2
3.3V	0.01	0.033	0.01	0.033
5VSB	0.174	0.87	0.015	0.075

5.Test Environment:

Motherboard	FS-97E
CPU	Intel (R) Core (TM)2 Duo CPU P8400 2.26GHz
Memory	Kingston DDR3 1066 4GB (K4B2G0846B-HCFB)*2

Power Supply : COOLER MASTER RS-390-PMSR-A3

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	1.26	15.12	1.32	15.84
5V	3.96	19.8	5.14	25.7
3.3V	0.01	0.033	0.01	0.033
5VSB	0.18	0.9	0.001	0.005

5.a.Test Environment:

The same as above but with LCD panel

Display Panel	AUO M170EG01 17" LCD
----------------------	-----------------------------

Power Supply : COOLER MASTER RS-390-PMSR-A3

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	3.37	40.44	3.29	39.48
5V	4.91	24.55	6.1	30.5
3.3V	0.01	0.033	0.01	0.033
5VSB	0.2	1	0.004	0.02

6.Test Environment:

Motherboard	FS-97E
CPU	Intel (R) Core (TM)2 Duo CPU T9600 2.8GHz
Memory	Kingston DDR3 1066 4GB (K4B2G0846B-HCFB)*2

Power Supply : COOLER MASTER RS-390-PMSR-A3

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	1.86	22.32	1.98	23.76
5V	3.92	19.6	5.13	25.65
3.3V	0.01	0.033	0.01	0.033
5VSB	0.178	0.89	0.01	0.05

6.a.Test Environment:

The same as above but with LCD panel

Display Panel	AUO M170EG01 17" LCD
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Power Supply : COOLER MASTER RS-390-PMSR-A3

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	3.97	47.64	4.01	48.12
5V	4.9	24.5	6.09	30.45
3.3V	0.01	0.033	0.01	0.033
5VSB	0.166	0.83	0.006	0.03

7.Test Environment:

Motherboard	FS-97E
CPU	Intel (R) Core (TM)2 Quad CPU Q9100 2.26GHz
Memory	Kingston DDR3 1066 4GB (K4B2G0846B-HCFB)*2

Power Supply : COOLER MASTER RS-390-PMSR-A3

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	2.22	26.64	2.32	27.84
5V	4.16	20.8	4.41	22.05
3.3V	0.01	0.033	0.01	0.033
5VSB	0.182	0.91	0.006	0.03

7.a.Test Environment:

The same as above but with LCD panel

Display Panel	AUO M170EG01 17" LCD
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Power Supply : COOLER MASTER RS-390-PMSR-A3

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	4.6	55.2	4.34	52.08
5V	5.05	25.25	6.27	31.35
3.3V	0.01	0.033	0.01	0.033
5VSB	0.252	1.26	0.015	0.075

7.b.Test Environment:

The same as above but with LCD panel

Display Panel	TM150XH-L01 15" LCD
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Power Supply : COOLER MASTER RS-390-PMSR-A3

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	4.1	49.2	3.89	46.68
5V	4.54	22.7	5.8	29
3.3V	0.01	0.033	0.01	0.033
5VSB	0.174	0.87	0.009	0.045

5. Performance Test

5.1 Business Win Stone 2002

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
Business Win stone2002	Intel (R) Core (TM)2 Duo CPU T9600 2.8GHz A-DATA DDR3 1066 2GB (K4B1G0846D) Western Digital WD800BB-00JHC0 80GB	PASS	48.7 49 47.6 47.7
Business Win stone2002	Intel (R) Core (TM)2 Duo CPU T7100 1.8GHz A-DATA DDR3 1066 2GB (K4B1G0846D) IBM DTTA-351010 10GB	PASS	27.5 27.1 27.1 26.7
Business Win stone2002	Intel (R) Core (TM)2 Duo CPU T9600 2.8GHz A-DATA DDR3 1066 2GB (K4B1G0846D) IBM DTTA-351010 10GB	PASS	29 28.1 28.8 29

<p>Business Win stone2002</p>	<p>Intel (R) Core (TM)2 Duo CPU T7500 2.2GHz Transcend DDR3 1066 2GB (K4B1G0846D) IBM DTTA 351010 10GB</p>	<p>PASS</p>	<p>30.2 29.1 29.9 29.1</p>
<p>Business Win stone2002</p>	<p>Intel (R) Core (TM)2 Duo CPU T8300 2.4GHz Transcend DDR3 1066 2GB (K4B1G0846D) IBM DTTA 351010 10GB</p>	<p>PASS</p>	<p>30.5 30 29.9 29.8</p>
<p>Business Win stone2002</p>	<p>Intel(R) Celeron(R) Processor 575 2GHz Kingston DDR3 1066 4GB (K4B2G0846B-HCFB)*2 Western Digital WD800JD-75MSA3 80GB</p>	<p>PASS</p>	<p>39.7 40.6 40.2 40</p>
<p>Business Win stone2002</p>	<p>Intel(R) Celeron(R) Processor 575 2GHz Kingston DDR3 1066 4GB (K4B2G0846B-HCFB)*2 Hitachi HDS728080PLA380 82.3GB</p>	<p>PASS</p>	<p>40.4 40.3 42.2 39.8</p>

Business Win stone2002	Intel (R) Core (TM)2 Quad CPU Q9100 2.26GHz Kingston DDR3 1066 4GB (K4B2G0846B-HCFB) Western Digital WD800JD-75MSA3 80GB	PASS	42.1 42.7 41.2 42.1
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5.2 Business Win Stone 2004

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
Business Win stone2004	Intel (R) Core (TM)2 Duo CPU T9600 2.80GHz A-DATA DDR3 1066 2GB (K4B1G0846D) IBM DTTA 351010 10GB	PASS	19.4 21.4 22.8 19.7
Business Win stone2004	Intel (R) Core (TM)2 Duo CPU T7100 1.80GHz A-DATA DDR3 1066 2GB (K4B1G0846D) IBM DTTA 351010 10GB	PASS	19.3 19 12.8 14.7
Business Win stone2004	Intel (R) Core (TM)2 Duo CPU T7500 2.20GHz Transcend DDR3 1066 2GB (K4B1G0846D) IBM DTTA 351010 10GB	PASS	12.5 6.8 11 17.9
Business Win stone2004	Intel (R) Core (TM)2 Duo CPU T8300 2.40GHz Transcend DDR3 1066 2GB (K4B1G0846D) IBM DTTA 351010 10GB	PASS	9.5 20.3 20.3 18.3

<p>Business Win stone2004</p>	<p>Intel(R) Celeron(R) Processor 575 2GHz Kingston DDR3 1066 4GB (K4B2G0846B-HCFB)*2 Western Digital WD800JD-75MSA3 80GB</p>	<p>PASS</p>	<p>22.7 23.2 23 22.9</p>
<p>Business Win stone2004</p>	<p>Intel(R) Celeron(R) Processor 575 2GHz Kingston DDR3 1066 4GB (K4B2G0846B-HCFB)*2 Hitachi HDS728080PLA380 82.3GB</p>	<p>PASS</p>	<p>25 23.9 23.1 19.5</p>
<p>Business Win stone2004</p>	<p>Intel (R) Core (TM)2 Quad CPU Q9100 2.26GHz Kingston DDR3 1066 4GB (K4B2G0846B-HCFB) Western Digital WD800JD-75MSA3 80GB</p>	<p>PASS</p>	<p>24.7 24.3 24.4 24.2</p>

5.3 Content Creation Winstone 2004

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
Content Creation Winstone 2004	Intel (R) Core (TM)2 Duo CPU T9600 2.8GHz A-DATA DDR3 1066 2GB (K4B1G0846D) IBM DTTA 351010 10GB	PASS	29.4 29.3 29.6 29.1
Content Creation Winstone 2004	Intel (R) Core (TM)2 Duo CPU T7100 1.8GHz A-DATA DDR3 1066 2GB (K4B1G0846D) IBM DTTA 351010 10GB	PASS	24 24.3 24 23.7
Content Creation Winstone 2004	Intel (R) Core (TM)2 Duo CPU T7500 2.2GHz Transcend DDR3 1066 2GB (K4B1G0846D) IBM DTTA 351010 10GB	PASS	23.8 23.5 22.9 23.3
Content Creation Winstone 2004	Intel (R) Core (TM)2 Duo CPU T8300 2.4GHz Transcend DDR3 1066 2GB (K4B1G0846D) IBM DTTA 351010 10GB	PASS	24.9 26.9 26.7 26.5

<p>Content Creation Winstone 2004</p>	<p>Intel(R) Celeron(R) Processor 575 2GHz Kingston DDR3 1066 4GB (K4B2G0846B-HCFB)*2 Western Digital WD800JD-75MSA3 80GB</p>	<p>PASS</p>	<p>34.3 34.4 34.3 34.3</p>
<p>Content Creation Winstone 2004</p>	<p>Intel(R) Celeron(R) Processor 575 2GHz Kingston DDR3 1066 4GB (K4B2G0846B-HCFB)*2 Hitachi HDS728080PLA380 82.3GB</p>	<p>PASS</p>	<p>34.8 34.6 34.6 34.7</p>
<p>Content Creation Winstone 2004</p>	<p>Intel (R) Core (TM)2 Quad CPU Q9100 2.26GHz Kingston DDR3 1066 4GB (K4B2G0846B-HCFB) Western Digital WD800JD-75MSA3 80GB</p>	<p>PASS</p>	<p>40.3 40.5 40.5 40.4</p>

5.4 3D MARK(2001、2003、2005)

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Scores	Intel (R) Core (TM)2 Duo CPU T7100 1.8GHz A-DATA DDR3 1066 2GB (K4B1G0846D) Western Digital WD800BB-00JHC0 80GB	PASS	8504
3DMARK2003 Scores		PASS	2320
3DMARK2005 Scores		PASS	1702

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Scores	Intel (R) Core (TM)2 Duo CPU T9600 2.8GHz A-DATA DDR3 1066 2GB (K4B1G0846D) Western Digital WD800BB-00JHC0 80GB	PASS	6943
3DMARK2003 Scores		PASS	2194
3DMARK2005 Scores		PASS	1237

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Scores	Intel (R) Core (TM)2 Duo CPU T8300 2.4GHz Transcend DDR3 1066 2GB (K4B1G0846D) IBM DTTA-351010 10GB	PASS	5535
3DMARK2003 Scores		PASS	1888
3DMARK2005 Scores		PASS	1108

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Scores	Intel (R) Core (TM)2 Duo CPU T7500 2.2GHz Transcend DDR3 1066 2GB (K4B1G0846D) IBM DTTA-351010 10GB	PASS	9522
3DMARK2003 Scores		PASS	2387
3DMARK2005 Scores		PASS	1276

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Scores	Intel (R) Core (TM)2 Duo CPU P8400 2.26GHz Transcend DDR3 1066 1GB (K4B1G0846D) IBM DTTA-351010 10GB	PASS	6460
3DMARK2003 Scores		PASS	2138
3DMARK2005 Scores		PASS	1172

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Scores	Intel(R) Celeron(R) Processor 575 2GHz Kingston DDR3 1066 4GB (K4B2G0846B-HCFB)*2 Hitachi HDS728080PLA380 82.3GB	PASS	8660
3DMARK2003 Scores		PASS	2596
3DMARK2005 Scores		PASS	1357

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Scores	Intel(R) Celeron(R) Processor 575 2GHz Kingston DDR3 1066 4GB (K4B2G0846B-HCFB)*2 Western Digital WD800JD-75MSA3 80GB	PASS	8536
3DMARK2003 Scores		PASS	2616
3DMARK2005 Scores		PASS	1727

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Scores	Intel (R) Core (TM)2 Quad CPU Q9100 2.26GHz Kingston DDR3 1066 4GB (K4B2G0846B-HCFB) Western Digital WD800JD-75MSA3 80GB	PASS	10553
3DMARK2003 Scores		PASS	2704
3DMARK2005 Scores		PASS	1786

5.5 3D MARK2006

Windows XP SP2

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Scores	Intel (R) Core (TM)2 Duo CPU T7100 1.8GHz A-DATA DDR3 1066 2GB (K4B1G0846D) Western Digital WD800BB-00JHC0 80GB	PASS	220
2	SM2.0 Scores		PASS	67
3	HDR/SM3.0 Scores		PASS	85
4	CPU Scores		PASS	1538

Windows XP SP2

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Scores	Intel (R) Core (TM)2 Duo CPU T9600 2.8GHz A-DATA DDR3 1066 2GB (K4B1G0846D) Western Digital WD800BB-00JHC0 80GB	PASS	286
2	SM2.0 Scores		PASS	86
3	HDR/SM3.0 Scores		PASS	110
4	CPU Scores		PASS	2501

Windows XP SP2

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Scores	Intel (R) Core (TM)2 Duo CPU T7500 2.2GHz Transcend DDR3 1066 2GB (K4B1G0846D) IBM DTTA-351010 10GB	PASS	96
2	SM2.0 Scores		PASS	65
3	HDR/SM3.0 Scores		PASS	N/A
4	CPU Scores		PASS	1317

Windows XP SP2

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Scores	Intel (R) Core (TM)2 Duo CPU T8300 2.4GHz Transcend DDR3 1066 2GB (K4B1G0846D) IBM DTTA-351010 10GB	PASS	230
2	SM2.0 Scores		PASS	69
3	HDR/SM3.0 Scores		PASS	68
4	CPU Scores		PASS	2095

Windows XP SP2

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Scores	Intel (R) Core (TM)2 Duo CPU P8400 2.26GHz Transcend DDR3 1066 1GB (K4B1G0846D) IBM DTTA-351010 10GB	PASS	249
2	SM2.0 Scores		PASS	75
3	HDR/SM3.0 Scores		PASS	96
4	CPU Scores		PASS	2007

Windows XP SP2

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Scores	Intel(R) Celeron(R) Processor 575 2GHz Kingston DDR3 1066 4GB (K4B2G0846B-HCFB)*2 Hitachi HDS728080PLA380 82.3GB	PASS	981
2	SM2.0 Scores		PASS	281
3	HDR/SM3.0 Scores		PASS	434
4	CPU Scores		PASS	876

Windows XP SP2

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Scores	Intel(R) Celeron(R) Processor 575 2GHz Kingston DDR3 1066 4GB (K4B2G0846B-HCFB)*2 Western Digital WD800JD-75MSA3 80GB	PASS	979
2	SM2.0 Scores		PASS	280
3	HDR/SM3.0 Scores		PASS	433
4	CPU Scores		PASS	874

Windows XP SP2

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Scores	Intel (R) Core (TM)2 Quad CPU Q9100 2.26GHz Kingston DDR3 1066 4GB (K4B2G0846B-HCFB) Western Digital WD800JD-75MSA3 80GB	PASS	1024
2	SM2.0 Scores		PASS	277
3	HDR/SM3.0 Scores		PASS	433
4	CPU Scores		PASS	3179

5.6 PC MARK2002

Test Environment
Intel (R) Core (TM)2 Duo CPU T7100 1.8GHz A-DATA DDR3 1066 2GB (K4B1G0846D) Western Digital WD800BB-00JHC0 80GB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	CPU test Scores	PASS	7079
2	Memory test Scores	PASS	15089
3	HDD test Scores	PASS	744

Test Environment
Intel (R) Core (TM)2 Duo CPU T9600 2.8GHz A-DATA DDR3 1066 2GB (K4B1G0846D) Western Digital WD800BB-00JHC0 80GB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	CPU test Scores	PASS	11027
2	Memory test Scores	PASS	34181
3	HDD test Scores	PASS	749

Test Environment

**Intel (R) Core (TM)2 Duo CPU T7500 2.2GHz
Transcend DDR3 1066 2GB (K4B1G0846D)
IBM DTTA-351010 10GB**

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	CPU test Scores	PASS	8624
2	Memory test Scores	PASS	27400
3	HDD test Scores	PASS	199

Test Environment

**Intel (R) Core (TM)2 Duo CPU T8300 2.4GHz
Transcend DDR3 1066 2GB (K4B1G0846D)
IBM DTTA-351010 10GB**

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	CPU test Scores	PASS	9398
2	Memory test Scores	PASS	28306
3	HDD test Scores	PASS	204

Test Environment

**Intel (R) Core (TM)2 Duo CPU P8400 2.26GHz
Transcend DDR3 1066 1GB (K4B1G0846D)
IBM DTTA-351010 10GB**

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	CPU test Scores	PASS	8832
2	Memory test Scores	PASS	26954
3	HDD test Scores	PASS	215

Test Environment

**Intel(R) Celeron(R) Processor 575 2GHz
Kingston DDR3 1066 4GB (K4B2G0846B-HCFB)*2
Hitachi HDS728080PLA380 82.3GB**

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	CPU test Scores	PASS	7774
2	Memory test Scores	PASS	10135
3	HDD test Scores	PASS	1342

Test Environment

**Intel(R) Celeron(R) Processor 575 2GHz
Kingston DDR3 1066 4GB (K4B2G0846B-HCFB)*2
Western Digital WD800JD-75MSA3 80GB**

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	CPU test Scores	PASS	7761
2	Memory test Scores	PASS	10088
3	HDD test Scores	PASS	1307

Test Environment

**Intel (R) Core (TM)2 Quad CPU Q9100 2.26GHz
Kingston DDR3 1066 4GB (K4B2G0846B-HCFB)
Western Digital WD800JD-75MSA3 80GB**

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	CPU test Scores	PASS	8923
2	Memory test Scores	PASS	27583
3	HDD test Scores	PASS	1410

5.7 PC MARK2004

Test Environment
Intel (R) Core (TM)2 Duo CPU T7100 1.8GHz A-DATA DDR3 1066 2GB (K4B1G0846D) Western Digital WD800BB-00JHC0 80GB

Windows XP PS2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Scores	PASS	5730
2	CPU test Scores	PASS	6087
3	Memory test Scores	PASS	5196
4	Graphic test Scores	PASS	1442
5	HDD test Scores	PASS	3485

Test Environment
Intel (R) Core (TM)2 Duo CPU T9600 2.8GHz A-DATA DDR3 1066 2GB (K4B1G0846D) Western Digital WD800BB-00JHC0 80GB

Windows XP PS2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Scores	PASS	N/A
2	CPU test Scores	PASS	N/A
3	Memory test Scores	PASS	10263
4	Graphic test Scores	PASS	1675
5	HDD test Scores	PASS	3489

Test Environment

**Intel (R) Core (TM)2 Duo CPU T7500 2.2GHz
Transcend DDR3 1066 2GB (K4B1G0846D)
IBM DTTA-351010 10GB**

Windows XP PS2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Scores	PASS	6195
2	CPU test Scores	PASS	5702
3	Memory test Scores	PASS	5144
4	Graphic test Scores	PASS	1472
5	HDD test Scores	PASS	1294

Test Environment

**Intel (R) Core (TM)2 Duo CPU T8300 2.4GHz
Transcend DDR3 1066 2GB (K4B1G0846D)
IBM DTTA-351010 10GB**

Windows XP PS2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Scores	PASS	N/A
2	CPU test Scores	PASS	N/A
3	Memory test Scores	PASS	6376
4	Graphic test Scores	PASS	1580
5	HDD test Scores	PASS	N/A

Test Environment

**Intel (R) Core (TM)2 Duo CPU P8400 2.26GHz
Transcend DDR3 1066 1GB (K4B1G0846D)
IBM DTTA-351010 10GB**

Windows XP PS2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Scores	PASS	N/A
2	CPU test Scores	PASS	N/A
3	Memory test Scores	PASS	6897
4	Graphic test Scores	PASS	1632
5	HDD test Scores	PASS	N/A

Test Environment

**Intel(R) Celeron(R) Processor 575 2GHz
Kingston DDR3 1066 4GB (K4B2G0846B-HCFB)*2
Hitachi HDS728080PLA380 82.3GB**

Windows XP PS2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Scores	PASS	4209
2	CPU test Scores	PASS	4493
3	Memory test Scores	PASS	4703
4	Graphic test Scores	PASS	N/A
5	HDD test Scores	PASS	4948

Test Environment

**Intel(R) Celeron(R) Processor 575 2GHz
Kingston DDR3 1066 4GB (K4B2G0846B-HCFB)*2
Western Digital WD800JD-75MSA3 80GB**

Windows XP PS2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Scores	PASS	4259
2	CPU test Scores	PASS	4472
3	Memory test Scores	PASS	4722
4	Graphic test Scores	PASS	N/A
5	HDD test Scores	PASS	N/A

Test Environment

**Intel (R) Core (TM)2 Quad CPU Q9100 2.26GHz
Kingston DDR3 1066 4GB (K4B2G0846B-HCFB)
Western Digital WD800JD-75MSA3 80GB**

Windows XP PS2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Scores	PASS	N/A
2	CPU test Scores	PASS	N/A
3	Memory test Scores	PASS	8939
4	Graphic test Scores	PASS	N/A
5	HDD test Scores	PASS	4649

5.8 PC MARK2005

Test Environment
Intel (R) Core (TM)2 Duo CPU T7100 1.8GHz A-DATA DDR3 1066 2GB (K4B1G0846D) Western Digital WD800BB-00JHC0 80GB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	System test Scores	PASS	3517
2	CPU test Scores	PASS	4630
3	Memory test Scores	PASS	3967
4	Graphic test Scores	PASS	1581
5	HDD test Scores	PASS	3074

Test Environment
Intel (R) Core (TM)2 Duo CPU T9600 2.8GHz A-DATA DDR3 1066 2GB (K4B1G0846D) Western Digital WD800BB-00JHC0 80GB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	System test Scores	PASS	4527
2	CPU test Scores	PASS	7147
3	Memory test Scores	PASS	5824
4	Graphic test Scores	PASS	1700
5	HDD test Scores	PASS	3080

Test Environment

**Intel (R) Core (TM)2 Duo CPU T7500 2.2GHz
Transcend DDR3 1066 2GB (K4B1G0846D)
IBM DTTA-351010 10GB**

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	System test Scores	PASS	N/A
2	CPU test Scores	PASS	3176
3	Memory test Scores	PASS	3112
4	Graphic test Scores	PASS	1120
5	HDD test Scores	PASS	1339

Test Environment

**Intel (R) Core (TM)2 Duo CPU T8300 2.4GHz
Transcend DDR3 1066 2GB (K4B1G0846D)
IBM DTTA-351010 10GB**

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	System test Scores	PASS	N/A
2	CPU test Scores	PASS	6123
3	Memory test Scores	PASS	4732
4	Graphic test Scores	PASS	1637
5	HDD test Scores	PASS	1345

Test Environment

**Intel (R) Core (TM)2 Duo CPU T9600 2.8GHz
Transcend DDR3 1066 1GB (K4B1G0846D)
IBM DTTA-351010 10GB**

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	System test Scores	PASS	N/A
2	CPU test Scores	PASS	7143
3	Memory test Scores	PASS	5793
4	Graphic test Scores	PASS	N/A
5	HDD test Scores	PASS	1369

Test Environment

**Intel (R) Core (TM)2 Duo CPU T7100 1.8GHz
A-DATA DDR3 1066 1GB (K4B1G0846D)
IBM DTTA-351010 10GB**

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	System test Scores	PASS	N/A
2	CPU test Scores	PASS	4623
3	Memory test Scores	PASS	3958
4	Graphic test Scores	PASS	N/A
5	HDD test Scores	PASS	1366

Test Environment

**Intel (R) Core (TM)2 Duo CPU P8400 2.26GHz
Transcend DDR3 1066 1GB (K4B1G0846D)
IBM DTTA-351010 10GB**

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	System test Scores	PASS	N/A
2	CPU test Scores	PASS	5789
3	Memory test Scores	PASS	4971
4	Graphic test Scores	PASS	1638
5	HDD test Scores	PASS	1382

Test Environment

**Intel (R) Core (TM)2 Duo CPU P8400 2.26GHz
Kingston DDR3 1066 4GB (K4B2G0846B-HCFB)*2
IBM DTTA-351010 10GB**

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	System test Scores	PASS	N/A
2	CPU test Scores	PASS	5812
3	Memory test Scores	PASS	5002
4	Graphic test Scores	PASS	1857
5	HDD test Scores	PASS	1379

Test Environment

**Intel (R) Core (TM)2 Duo CPU P8400 2.26GHz
Kingston DDR3 1066 4GB (K4B2G0846B-HCFB)*2
IBM DTTA-351010 10GB**

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	System test Scores	PASS	N/A
2	CPU test Scores	PASS	5812
3	Memory test Scores	PASS	5002
4	Graphic test Scores	PASS	1857
5	HDD test Scores	PASS	1379

Test Environment

**Intel(R) Celeron(R) Processor 575 2GHz
Kingston DDR3 1066 4GB (K4B2G0846B-HCFB)*2
Hitachi HDS728080PLA380 82.3GB**

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	System test Scores	PASS	N/A
2	CPU test Scores	PASS	3643
3	Memory test Scores	PASS	3860
4	Graphic test Scores	PASS	N/A
5	HDD test Scores	PASS	5305

Test Environment

**Intel(R) Celeron(R) Processor 575 2GHz
Kingston DDR3 1066 4GB (K4B2G0846B-HCFB)*2
Western Digital WD800JD-75MSA3 80GB**

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	System test Scores	PASS	N/A
2	CPU test Scores	PASS	3637
3	Memory test Scores	PASS	3861
4	Graphic test Scores	PASS	N/A
5	HDD test Scores	PASS	4491

Test Environment

**Intel (R) Core (TM)2 Duo CPU P8400 2.26GHz
A-DATA DDR3 1066 2GB (H5TQ1G83AFP)
Hitachi HDS728080PLA380 82.3GB**

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	System test Scores	PASS	3892
2	CPU test Scores	PASS	5625
3	Memory test Scores	PASS	4961
4	Graphic test Scores	PASS	1364
5	HDD test Scores	PASS	4426

Test Environment

**Intel (R) Core (TM)2 Quad CPU Q9100 2.26GHz
Kingston DDR3 1066 4GB (K4B2G0846B-HCFB)
Western Digital WD800JD-75MSA3 80GB**

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	System test Scores	PASS	4943
2	CPU test Scores	PASS	7295
3	Memory test Scores	PASS	5063
4	Graphic test Scores	PASS	1623
5	HDD test Scores	PASS	4850

5.9 Storage Performance

5.9.1 HDD

Test environment:

OS Windows XP professional SP2

Program (HD Tune)

HDD MODEL	INTERFACE	capacity	Average	Burst Rate	Access time
IBM DTTA 351010	IDE	10 GB	9.5 MB/sec	29.8 MB/sec	15.7ms
Seagate ST33221A	IDE	3 GB	7.7 MB/sec	21.9 MB/sec	16.2ms
Seagate ST320413A	IDE	20 GB	22.5 MB/sec	27 MB/sec	18.5ms
Seagate ST340016A	IDE	40 GB	35.8 MB/sec	52.5 MB/sec	14.4 ms
Western Digital WD800BB-00JHC0	IDE	80 GB	26.9 MB/sec	29.3 MB/sec	14.1ms
Western Digital WD800BB-00JKC0	IDE	80 GB	49.4 MB/sec	76.9 MB/sec	13.7 ms
Western Digital WD800BB-22JHC0	IDE	80 GB	49.5 MB/sec	77 MB/sec	14 ms

Western Digital WD800JD-75MSA3	SATA	80 GB	47.5 MB/sec	136.8 MB/sec	18.6 ms
Hitachi HDS728080PLA380	SATA	82.3 GB	48 MB/sec	114.2 MB/sec	13.1 ms
HITACHI HDT722525DLA380	SATA	250 GB	53.1 MB/sec	80.6 MB/sec	13 ms
Western Digital WD6400H1Q-00	USB	640 GB	27.5 MB/sec	27.8 MB/sec	14.6 ms
TDK LoR Trans-I t Drive	USB	4 GB	16.6 MB/sec	17.8 MB/sec	0.8 ms
Apacer USB FLASH DRIVE	USB	515 MB	9.1 MB/sec	4.9 MB/sec	1.7 ms
ACTIONS USB DISK DEVICE	USB	261 MB	0.5 MB/sec	0.5 MB/sec	5.9 ms

5.9.2 CD-ROM

Test environment:

OS Windows XP professional SP2

Program (NERO)

CD-ROM MODEL	INTERFACE	Average speed	Fill READ	Burst Rate	CD
SONY CDU4811	IDE	27.32 x	103 ms	21 MB/s	52 X CD-R
NEC ND-3520A	IDE	27.95 x	148 ms	23 MB/s	52 X CD
ASUS CD-S520/A 2.0K	IDE	30.96 x	103 ms	23 MS/s	52 X CD
LG DVD GSA-H62L	SATA	27.92 x	166 ms	37 MB/s	52 X CD
PIONEER DVD DVR-212BK	SATA	24.03 x	140 ms	46 MB/s	52 X CD
ASUS DVD DRW-1814BLT	SATA	23.76 x	114 ms	44 MB/s	52 X CD
LITEON DVD SOSC-2485KX	USB	14.37 x	121 ms	21 MB/s	52X CD-R

LITEON DVD SOSW-833XS	USB	14.26 x	128 ms	21 MB/s	52X CD-R
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5.10 Vibration Test

Motherboard	FS-97E		
Test Equipment	VS-5060L		
Amplitude	Frequency	Time (1min/1Time)	Result
0.75mm	5 → 55 → 5 Hz	10	PASS
1.00mm	5 → 55 → 5 Hz	10	PASS
1.25mm	5 → 55 → 5 Hz	10	PASS
1.5mm	5 → 55 → 5 Hz	10	PASS
1.5mm	5 → 55 → 5 Hz	120	PASS