

Product Test Report



Product Name	LV-67H
Product Version	A
Issued Date	2012.08.17
Report Edition	1.4
BIOS Version	1.1
Testing Engineer	RICK
Check Engineer	JEFF

REVISION HISTORY			
DATE	REVISION NO.	PAGE	DESCRIPTONS
2011.12.15	Ver. 1.0	70	Initial Release
2011.12.22	Ver. 1.1	74	Add Vibration Test, LAN Test, etc.
2012.03.01	Ver. 1.2	74	Change Power Consumption data
2012.04.10	Ver. 1.3	77	Add 16GB Power Consumption
2012.08.17	Ver. 1.4	78	Add CPU(i3) 3D/PCMARK results

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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 / 6	PASS
6	DDR3 A / B	PASS
7	USB 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10	PASS
8	COM 1 / 2 / 3 / 4 / 5 / 6	PASS
9	VGA Port	PASS
10	PS2	PASS
11	AUDIO	PASS
12	CD_IN	PASS
13	CN_AUDIO	PASS
14	DIO	PASS
15	DVI	PASS
16	LVDS	PASS
17	CPUFAN	PASS
18	SYSFAN	PASS
19	SPDIF	PASS
20	MINI CARD 1 / 2	PASS
21	PCIE 16x	PASS
22	LAN_1 / 2	PASS

23	IrDA	PASS
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Jumper

Item	Description	Result
1	JRTC	PASS
2	JCSEL1	PASS
3	JCSEL2	PASS
4	JVLCD	PASS
5	JAT	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	NumLock	PASS	
6	Select Language	PASS	
7	Quick Boot	PASS	
8	Console Redirection	PASS	
9	Active Processor Cores	PASS	
10	Interface Combination	PASS	
11	DVMT Total Gfx Mem	PASS	
12	IGD-Boot Type (No includes SDVOD/X)	PASS	
13	IGD-LCD Panel type	PASS	
14	Panel Color Depth	PASS	
15	USB Per-Port Disabled Control	PASS	
16	SB Azalia Config	PASS	
17	LAN OPROM Selection	PASS	
18	Wake on PCH LAN	PASS	
19	Serial Port	PASS	
20	IR Func.	PASS	
21	Watch Dog Timer Select	PASS	
22	Power Control	PASS	
23	Power On By RTC Alarm	PASS	
24	Set Supervisor Password	PASS	
25	Set User Password	PASS	

1.3 Driver

CD Edition : IPCi4-1.0

1. Windows XP SP2 32-bit driver test

Item	Description	Result	version
1	Chipset Driver	PASS	9.2.0.1025
2	VGA Driver	PASS	6.14.10.5337
3	Audio Driver	PASS	5.10.0.6101
4	LAN Driver	PASS	10.3.49.0

2. Windows XP SP2 64-bit driver test

Item	Description	Result	version
1	Chipset Driver	PASS	9.2.0.1025
2	VGA Driver	PASS	6.14.10.5337
3	Audio Driver (Need UAA bus driver)	PASS	5.10.0.6101
4	LAN Driver	PASS	11.7.32.0

3. Windows Server 2003 32-bit Driver Test

Item	Description	Result	version
1	Chipset Driver	PASS	9.2.0.1025
2	Audio Driver	PASS	5.10.0.6101
3	LAN Driver	PASS	10.3.49.0

4. Windows Server 2003 64-bit driver test

Item	Description	Result	Version
1	Chipset Driver	PASS	9.2.0.1025
2	Audio Driver	PASS	5.10.0.6101
3	LAN Driver	PASS	11.7.32.0

5. Windows Vista 32-bit driver test

Item	Description	Result	version
1	Chipset Driver	PASS	9.2.0.1025
2	VGA Driver	PASS	8.15.10.2321
3	Audio Driver	PASS	6.0.1.6101
4	LAN Driver	PASS	10.3.49.0

6. Windows Vista 64-bit driver test

Item	Description	Result	version
1	Chipset Driver	PASS	9.2.0.1025
2	VGA Driver	PASS	8.15.10.2321
3	Audio Driver	PASS	6.0.1.6101
4	LAN Driver	PASS	10.3.49.0

7. Windows Server 2008 32-bit driver test

Item	Description	Result	version
1	Chipset Driver	PASS	9.2.0.1025
2	Audio Driver	PASS	6.0.1.6101
3	LAN Driver	PASS	10.3.49.0

8. Windows Server 2008 64-bit driver test

Item	Description	Result	version
1	Chipset Driver	PASS	9.2.0.1025
2	Audio Driver	PASS	6.0.1.6101
3	LAN Driver	PASS	10.3.49.0

9. Windows 7 32-bit Driver Test

Item	Description	Result	version
1	Chipset Driver	PASS	9.2.0.1025
2	VGA Driver	PASS	8.15.10.2321
3	Audio Driver	PASS	6.0.1.6101

10. Windows 7 64-bit Driver Test

Item	Description	Result	version
1	Chipset Driver	PASS	9.2.0.1025
2	VGA Driver	PASS	8.15.10.2321
3	Audio Driver	PASS	6.0.1.6101

2. Compatibility test

2.1 CPU Test

Test environment:

OS Windows XP professional SP2

Test program : PC MARK 2005

Spec Code	CPU Speed	Family	Processor	DMI	Smart Cache	Result
SR02T	2.10 GHz	Core	i7-2710QE	5 GT/s	6 MB	PASS
SR02V	2.20 GHz	Core	i3-2330E	5 GT/s	3 MB	PASS
SR04B	2.30 GHz	Core	i5-2410M	5 GT/s	3 MB	PASS
SR088	1.60 GHz	Celeron	B810	5 GT/s	2 MB	PASS

2.2 Operation System Test

Item	Description	Result	Remark
1	Windows 7 64-bit	PASS	
2	Windows 7 32-bit	PASS	
3	Windows Server 2008 64-bit	PASS	
4	Windows Server 2008 32-bit	PASS	
5	Windows Vista 64-bit	PASS	
6	Windows Vista 32-bit	PASS	
7	Windows XP SP2 64-bit	PASS	
8	Windows XP SP2 32-bit	PASS	
9	Windows Server 2003 64-bit	PASS	
10	Windows Server 2003 32-bit	PASS	
11	RED HAT 6 (2.6.32.el6.x86_64)	PASS	

2.3 Memory Test

Test environment:

OS Windows XP professional SP2

Test program : PC MARK 2005

Manufacturer	Chip	Frequency	Capacity Mbytes	Result
TLA	H5TQ1G83BFR	DDR3 1333	1 GB	PASS
Transcend	K4B1G0846D	DDR3 1066	1 GB	PASS
Transcend	K4B1G0846D	DDR3 1066	2 GB	PASS
A-DATA	K4B1G0846D	DDR3 1066	1 GB	PASS
A-DATA	K4B1G0846D	DDR3 1066	2 GB	PASS
Kingston	K4B2G0846B-HCFB	DDR3 1066	4 GB	PASS
Kingston	D2568JENC PGD9U	DDR3 1333	4 GB	PASS
A-DATA	J2108BCSE-GN-F	DDR3 1600	4 GB	PASS
Kingston	J4208BASE-DJ-F	DDR3 1333	8 GB	PASS
INNODISK	H5TQ2G83CFR	DDR3 1333	4 GB	PASS
INNODISK	H5TQ2G83CFR	DDR3 1333	2 GB	PASS

2.4 VGA Graphic Quality Test

Test environment:

OS Windows XP professional SP2 32/64-bit

Driver version : 6.14.10.5337

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*800	16 / 32bit	PASS	
1280*960	16 / 32bit	PASS	
1280*1024	16 / 32bit	PASS	
1360*768	16 / 32bit	PASS	
1366*768	16 / 32bit	PASS	
1400*1050	16 / 32bit	PASS	
1440*900	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	
1920*1200	16 / 32bit	PASS	

2.5 Audio

Test environment:

OS Windows XP professional SP2 32-bit

Driver version : 5.10.0.6101

Item	Description	Result	Remark
1	2 CH	PASS	
2	Microphone	PASS	
3	LINE-IN	PASS	
4	CDIN	PASS	
5	SPDIF	PASS	

OS Windows XP professional SP2 64-bit

Driver version : 5.10.0.6101

Item	Description	Result	Remark
1	2 CH	PASS	
2	Microphone	PASS	
3	LINE-IN	PASS	
4	CDIN	PASS	
5	SPDIF	PASS	

OS Windows Server 2003 32-bit

Driver version : 5.10.0.6101

Item	Description	Result	Remark
1	2 CH	PASS	
2	Microphone	PASS	
3	LINE-IN	PASS	
4	CDIN	PASS	
5	SPDIF	PASS	

OS Windows Server 2003 64-bit**Driver version : 5.10.0.6101**

Item	Description	Result	Remark
1	2 CH	PASS	
2	Microphone	PASS	
3	LINE-IN	PASS	
4	CDIN	PASS	
5	SPDIF	PASS	

OS Windows Vista 32 bit**Driver version : 6.0.1.6101**

Item	Description	Result	Remark
1	2 CH	PASS	
2	Microphone	PASS	
3	LINE-IN	PASS	
4	CDIN	PASS	
5	SPDIF	PASS	

OS Windows Vista 64 bit**Driver version : 6.0.1.6101**

Item	Description	Result	Remark
1	2 CH	PASS	
2	Microphone	PASS	
3	LINE-IN	PASS	
4	CDIN	PASS	
5	SPDIF	PASS	

OS Windows Server 2008 32-bit**Driver version : 6.0.1.6101**

Item	Description	Result	Remark
1	2 CH	PASS	
2	Microphone	PASS	
3	LINE-IN	PASS	
4	CDIN	PASS	
5	SPDIF	PASS	

OS Windows Server 2008 64-bit**Driver version : 6.0.1.6101**

Item	Description	Result	Remark
1	2 CH	PASS	
2	Microphone	PASS	
3	LINE-IN	PASS	
4	CDIN	PASS	
5	SPDIF	PASS	

OS Windows 7 32-bit**Driver version : 6.0.1.6101**

Item	Description	Result	Remark
1	2 CH	PASS	
2	Microphone	PASS	
3	LINE-IN	PASS	
4	CDIN	PASS	
5	SPDIF	PASS	

OS Windows 7 64-bit
Driver version : 6.0.1.6101

Item	Description	Result	Remark
1	2 CH	PASS	
2	Microphone	PASS	
3	LINE-IN	PASS	
4	CDIN	PASS	
5	SPDIF	PASS	

OS RED HAT 6

Item	Description	Result	Remark
1	2 CH	PASS	

2.6 HDD Test

Test environment:

OS Windows XP professional SP2

Model	Interface	Capacity	Size Detect	Data Transfer
Western Digital WD10EALX-009BA0	SATA	1.0 TB	PASS	PASS
Western Digital WD3200AAJS-00YZCA0	SATA	320 GB	PASS	PASS
Western Digital WD5000AAKX-001CA0	SATA	500 GB	PASS	PASS
Hitachi HTS543216L9A300	SATA	160 GB	PASS	PASS
Western Digital WD5000AAKS-00V1A0	SATA	500 GB	PASS	PASS
Western Digital WD10EALX-009BA0	SATA	1.0 TB	PASS	PASS

2.7 CD-ROM Test

Test environment:

OS Windows XP professional SP2

Model	Interface	Detect	Data Transfer	Play CD
LG DVD GH20NS15	SATA	PASS	PASS	PASS
PIONEER DVD DVR-S19LBK	SATA	PASS	PASS	PASS
PIONEER DVD DVR-212BK	SATA	PASS	PASS	PASS
LITEON DVD SOSC-2485KX	USB	PASS	PASS	PASS
LITEON DVD SOSW-833XS	USB	PASS	PASS	PASS
MATSHITA BD-CMB UJ-120	USB	PASS	PASS	PASS

2.8 USB device Test

1. Windows XP SP2 32/64-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	

2. Windows Server 2003 32/64-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	

3. Windows Vista 32/64-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	

4. Windows Server 2008 32/64-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	

5. Windows 7 32/64-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. RED HAT 6

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-422 & RS-485	PASS	
2	CHKIT	PASS	

2. Windows XP SP2 32-bit

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

3. Windows XP SP2 64-bit

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

4. Windows Server 2003 32-bit

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

5. Windows Server 2003 64-bit

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

6. Windows Vista 32-bit

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

7. Windows Vista 64-bit

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

8. Windows Server 2008 32-bit

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

9. Windows Server 2008 64-bit

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

10. Windows 7 32-bit

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

11. Windows 7 64-bit

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

2.10 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 XP SP2 32/64-bit

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

3. Windows Server 2003 32/64-bit

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

4. Windows Vista 32/64-bit

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

5. Windows server 2008 32/64-bit

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

6. Windows 7 32/64-bit

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

7. RED HAT 6

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

2.11 LAN Test

Data Transfer Test environment:

-CAT 6 UTP 100M

-8 HR. continuous

1. Windows XP SP2 32/64-bit

32-bit driver version : 10.3.49.0 ; 64-bit driver version : 11.7.32.0

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

2. Windows Server 2003 32/64-bit

32-bit driver version : 10.3.49.0 ; 64-bit driver version : 11.7.32.0

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

3. Windows Vista 32/64-bit

32/64-bit driver version : 10.3.49.0

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

4. Windows Server 2008 32/64-bit

32/64-bit driver version : 10.3.49.0

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

5. Windows Server 7 32/64-bit (System's original driver)

32-bit driver version : 11.0.5.21 ; 64-bit driver version : 11.0.5.22

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

6. RED HAT 6

Item	Description	Result	Remark
1	Device Manager Check	PASS	

2.12 Power Supply Test

Item	TYPE	Description	Result	Remark
1	Adapter	LI SHIN 0219B1280 80W	PASS	
2	Adapter	LI SHIN 0227B19120 120W	PASS	
3	ATX Power	Seventeam ST-400EAG-05F 385W	PASS	
4	ATX Power	SWITCHING POWER SUPPLY MC-B350ATX	PASS	
5	ATX Power	snake PT-300W 300W	PASS	
6	ATX Power	CHANNEL WELL TECHNOLOGY SFX-200CPS3C-TL 200W	PASS	
7	DC Power	GWINSTEK SPS-3610	PASS	

2.13 PCI Express mini card

Motherboard	PCI Express mini card	Remark
LV-67H	MPX-954	PASS
	MPX-954E	PASS
	MPX-827	PASS
	MPX-574D	PASS
	MPX-574D2	PASS
	MPX-643	PASS
	MPX-885	PASS
	MPX-3132	PASS
	MPX-7202	PASS
	MPX-TP4R	PASS
	MPX-1040	PASS
	MPX-6864	PASS

Attention: MPX-3132 needs to into BIOS setting

=> Advanced => South Bridge Configuration

=> SB PCI Express Config

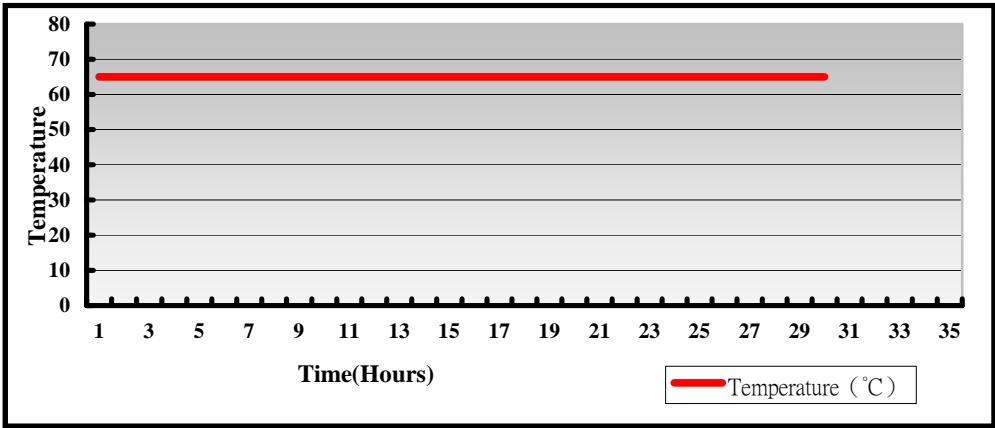
=> PCI Express Root Port 3 & 5

=> PCIe Speed [Gen1]

3. Environmental test

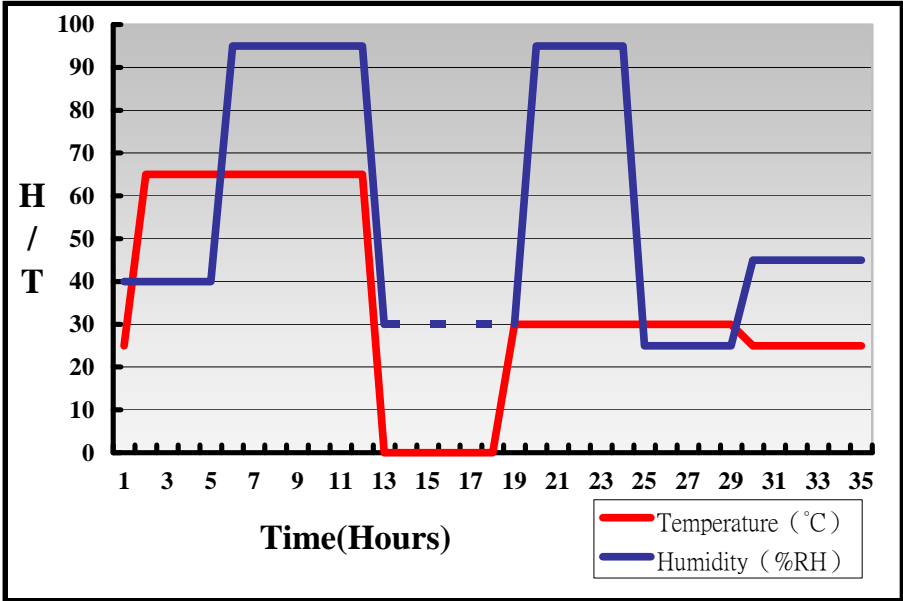
3.1 Temperature Test

System Board	LV-67H
CPU	Intel® Core™ i3-2330E 2.20GHz
Memory	A-DATA DDR3 1600 4GB (J2108BCSE-GN-F)
HDD	Western Digital WD5000AAKS-00V1A0 500GB
Operating OS	Windows XP
Test Equipment	GIANT FORCE (GTH-150-60-CP-AR)
Test Program	3DMark 2003



Hardware Device list:

System Board	LV-67H
CPU	Intel® Core™ i3-2330E 2.20GHz
Memory	Kingston DDR3 1333 4GB (D2568JENCPGD9U)
HDD	HITACHI HTS543216L9A300 160GB
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	LV-67H
CPU	Intel® Celeron™ B810 1.60GHz
Memory	Kingston DDR3 1333 4GB (D2568JENCPGD9U)
HDD	Western Digital WD5000AAKS-00V1A0 500GB

Temperature	Result	Remark
65°C	PASS	50 Times
0°C	PASS	50 Times

3.2 Thermal measurements at various points on the board

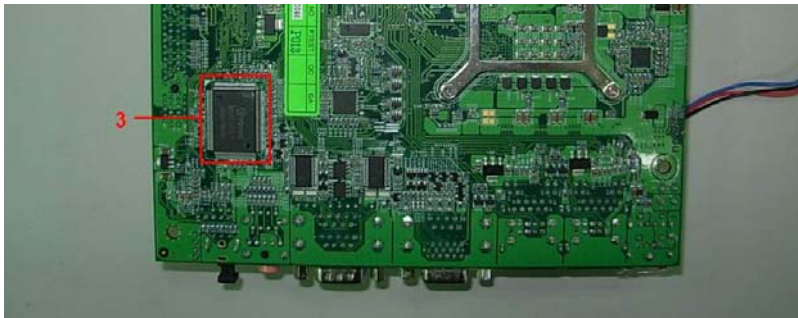
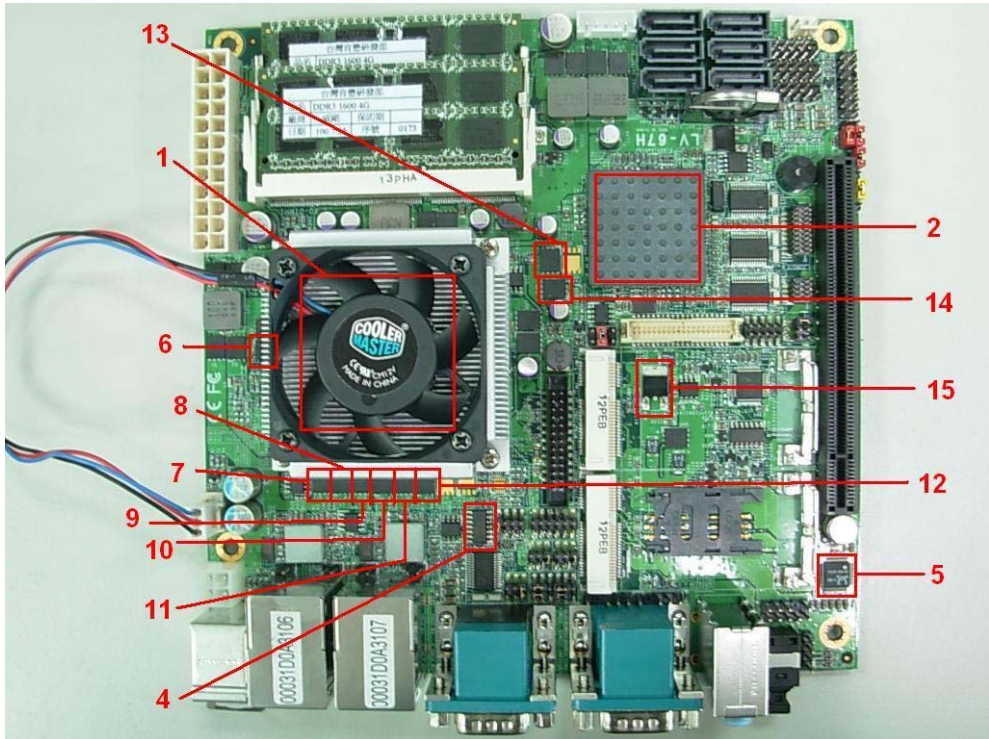
Test Environment :

CPU	Intel® Core™ i7-2710QE 2.10GHz
Memory	A-DATA DDR3 1600 4GB*2 (J2108BCSE-GN-F)
HDD	HITACHI HTS543216L9A300 160GB
Power	SWITCHING POWER SUPPLY MC-B350ATX
Operating System	Windows XP SP2 64-bit
Test Program	BurnIn 6.0

Test Result:

Item	Environmental temperature	26.6°C
1	CPU	71°C
2	PCH(QM67)	48°C
3	LPCIO	37.4°C
4	U8	50.4°C
5	U19	46°C
6	Q5	45.8°C
7	Q11	47.1°C
8	Q14	50.6°C
9	Q15	55.1°C
10	Q16	59.5°C
11	Q17	57.3°C

12	Q19	59°C
13	Q28	57.6°C
14	Q29	51.3°C
15	Q38	53.8°C



4. Reliability Test

4.1 Power Consumption Test

1. Test Environment:

Motherboard	LV-67H
CPU	Intel® Core™ i5-2410M 2.30GHz
Memory	ADATA DDR3 1600 4GB*2 (J2108BCSE-GN-F)
HDD	HITACHI HTS543216L9A300 160GB

(A) Power Supply : SWITCHING POWER SUPPLY MC-B350ATX

Voltage	MS-DOS Boot up		Windows XP SP2 64-bit 3DMARK 2003 +PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	1.35	16.2	3.84	46.08
5V	2.46	12.3	3.22	16.1
3.3V	2.02	6.666	1.7	5.61
5VSB	0.789	3.945	0.01	0.05

(B) DC Power Supply: GWINSTEK SPS-3610

Voltage	MS-DOS Boot up		Windows XP SP2 64-bit 3DMARK 2003 +PRIME95	
	Current(A)	Power (W)	Current(A)	Power (W)
12V	2.96	35.52	5.23	62.76
19V	1.87	35.53	3.08	58.52
24V	1.48	35.52	2.54	60.96

1.a.Test Environment:

The same as above but with LCD panel

Display Panel	AUO M170EG01 17”LCD
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Power Supply : SWITCHING POWER SUPPLY MC-B350ATX

Voltage	MS-DOS Boot up		Windows XP SP2 64-bit 3DMARK 2003 +PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	3.12	37.44	3.64	43.68
5V	2.62	13.1	3.41	17.05
3.3V	2.34	7.722	2.12	6.996
5VSB	0.45	2.25	0.009	0.045

2.Test Environment:

Motherboard	LV-67H
CPU	Intel® Core™ i5-2410M 2.30GHz
Memory	Kingston DDR3 1333 4GB*2 (D2568JENC PGD9U)
HDD	HITACHI HTS543216L9A300 160GB

(A)Power Supply : SWITCHING POWER SUPPLY MC-B350ATX

Voltage	MS-DOS Boot up		Windows XP SP2 64-bit 3DMARK 2003 +PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	1.32	15.84	3.77	45.24
5V	2.45	12.25	3.2	16
3.3V	1.45	4.785	1.09	3.597
5VSB	0.718	3.59	0.012	0.06

(B)DC Power Supply: GWINSTEK SPS-3610

Voltage	MS-DOS Boot up		Windows XP SP2 64-bit 3DMARK 2003 +PRIME95	
	Current(A)	Power (W)	Current(A)	Power (W)
12V	2.82	33.84	5.03	60.36
19V	1.78	33.82	3.13	59.47
24V	1.43	34.32	2.49	59.76

2.a.Test Environment:

The same as above but with LCD panel

Display Panel	AUO M170EG01 17"LCD
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Power Supply : SWITCHING POWER SUPPLY MC-B350ATX

Voltage	MS-DOS Boot up		Windows XP SP2 64-bit 3DMARK 2003 +PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	3.38	40.56	3.65	43.8
5V	3.47	17.35	3.84	19.2
3.3V	2.66	2.778	2.1	6.93
5VSB	0.432	2.16	0.01	0.05

3.Test Environment:

Motherboard	LV-67H
CPU	Intel® Core™ i7-2710QE 2.10GHz
Memory	ADATA DDR3 1600 4GB*2 (J2108BCSE-GN-F)
HDD	HITACHI HTS543216L9A300 160GB

(A)Power Supply : SWITCHING POWER SUPPLY MC-B350ATX

Voltage	MS-DOS Boot up		Windows XP SP2 64-bit 3DMARK 2003 +PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	2.7	32.4	6.17	74.04
5V	2.64	13.2	5.35	26.75
3.3V	2.59	8.547	2.43	8.019
5VSB	0.427	2.135	0.011	0.055

(B)DC Power Supply: GWINSTEK SPS-3610

Voltage	MS-DOS Boot up		Windows XP SP2 64-bit 3DMARK 2003 +PRIME95	
	Current(A)	Power (W)	Current(A)	Power (W)
12V	3.97	47.64	6.12	73.44
19V	2.51	47.69	3.83	72.77
24V	2.08	49.92	3.03	72.72

3.a.Test Environment:

The same as above but with LCD panel

Display Panel	AUO M170EG01 17”LCD
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Power Supply : SWITCHING POWER SUPPLY MC-B350ATX

Voltage	MS-DOS Boot up		Windows XP SP2 64-bit 3DMARK 2003 +PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	4.49	53.88	7.67	92.04
5V	2.65	13.25	6.22	31.1
3.3V	2.59	8.547	2.45	8.085
5VSB	0.465	2.325	0.013	0.065

4.Test Environment:

Motherboard	LV-67H
CPU	Intel® Core™ i7-2710QE 2.10GHz
Memory	Kingston DDR3 1333 4GB*2 (D2568JENC PGD9U)
HDD	HITACHI HTS543216L9A300 160GB

(A)Power Supply : SWITCHING POWER SUPPLY MC-B350ATX

Voltage	MS-DOS Boot up		Windows XP SP2 64-bit 3DMARK 2003 +PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	2.4	28.8	6.28	75.36
5V	2.13	10.65	5.06	25.3
3.3V	2.49	8.217	2.48	8.184
5VSB	0.448	2.24	0.016	0.08

(B)DC Power Supply: GWINSTEK SPS-3610

Voltage	MS-DOS Boot up		Windows XP SP2 64-bit 3DMARK 2003 +PRIME95	
	Current(A)	Power (W)	Current(A)	Power (W)
12V	3.95	47.4	6.18	74.16
19V	2.46	46.74	3.88	73.72
24V	1.94	46.56	2.97	71.28

4.a.Test Environment:

The same as above but with LCD panel

Display Panel	AUO M170EG01 17”LCD
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Power Supply : SWITCHING POWER SUPPLY MC-B350ATX

Voltage	MS-DOS Boot up		Windows XP SP2 64-bit 3DMARK 2003 +PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	4.55	54.6	7.28	87.36
5V	2.62	13.1	6.13	30.65
3.3V	2.58	8.514	2.42	7.986
5VSB	0.435	2.175	0.006	0.03

5.Test Environment:

Motherboard	LV-67H
CPU	Intel® Celeron™ B810 1.60GHz
Memory	ADATA DDR3 1600 4GB*2 (J2108BCSE-GN-F)
HDD	HITACHI HTS543216L9A300 160GB

(A)Power Supply : SWITCHING POWER SUPPLY MC-B350ATX

Voltage	MS-DOS Boot up		Windows XP SP2 64-bit 3DMARK 2003 +PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	1.17	14.04	2.44	29.28
5V	2.12	10.6	2.95	14.75
3.3V	2.23	7.359	1.92	6.336
5VSB	0.444	2.22	0.015	0.075

(B)DC Power Supply: GWINSTEK SPS-3610

Voltage	MS-DOS Boot up		Windows XP SP2 64-bit 3DMARK 2003 +PRIME95	
	Current(A)	Power (W)	Current(A)	Power (W)
12V	3.06	36.72	3.4	40.8
19V	1.98	37.62	2.2	41.8
24V	1.6	38.4	1.71	41.24

5.a.Test Environment:

The same as above but with LCD panel

Display Panel	AUO M170EG01 17”LCD
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(A)Power Supply : SWITCHING POWER SUPPLY MC-B350ATX

Voltage	MS-DOS Boot up		Windows XP SP2 64-bit 3DMARK 2003 +PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	2.98	35.76	4	48
5V	3.21	16.05	3.98	19.9
3.3V	2.23	7.359	1.93	6.369
5VSB	0.426	2.13	0.027	0.135

6.Test Environment:

Motherboard	LV-67H
CPU	Intel® Celeron™ B810 1.60GHz
Memory	Kingston DDR3 1333 4GB*2 (D2568JENC PGD9U)
HDD	HITACHI HTS543216L9A300 160GB

(A)Power Supply : SWITCHING POWER SUPPLY MC-B350ATX

Voltage	MS-DOS Boot up		Windows XP SP2 64-bit 3DMARK 2003 +PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	1.16	13.92	2.43	29.16
5V	2.13	10.65	2.3	11.5
3.3V	2.2	7.26	1.88	6.204
5VSB	0.459	2.295	0.01	0.05

(B)DC Power Supply: GWINSTEK SPS-3610

Voltage	MS-DOS Boot up		Windows XP SP2 64-bit 3DMARK 2003 +PRIME95	
	Current(A)	Power (W)	Current(A)	Power (W)
12V	3.13	37.56	3.4	40.8
19V	1.96	37.24	2.15	40.85
24V	1.52	36.48	1.67	40.08

6.a.Test Environment:

The same as above but with LCD panel

Display Panel	AUO M170EG01 17”LCD
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Power Supply : SWITCHING POWER SUPPLY MC-B350ATX

Voltage	MS-DOS Boot up		Windows XP SP2 64-bit 3DMARK 2003 +PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	2.87	34.44	4.15	49.8
5V	2.6	13	3.82	19.1
3.3V	2.23	7.359	1.89	6.237
5VSB	0.457	2.285	0.02	0.1

7.Test Environment:

Motherboard	LV-67H
CPU	Intel® Core™ i3-2330E 2.20GHz
Memory	ADATA DDR3 1600 4GB*2 (J2108BCSE-GN-F)
HDD	HITACHI HTS543216L9A300 160GB

(A)Power Supply : SWITCHING POWER SUPPLY MC-B350ATX

Voltage	MS-DOS Boot up		Windows XP SP2 64-bit 3DMARK 2003 +PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	2.72	32.64	4.01	48.12
5V	2.14	10.7	4.97	24.85
3.3V	2.68	8.844	2.64	8.712
5VSB	0.407	2.035	0.012	0.06

(B)DC Power Supply: GWINSTEK SPS-3610

Voltage	MS-DOS Boot up		Windows XP SP2 64-bit 3DMARK 2003 +PRIME95	
	Current(A)	Power (W)	Current(A)	Power (W)
12V	3.45	41.4	5.65	67.8
19V	2.14	40.66	3.5	66.5
24V	1.73	41.52	2.78	66.72

7.a.Test Environment:

The same as above but with LCD panel

Display Panel	AUO M170EG01 17”LCD
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Power Supply : SWITCHING POWER SUPPLY MC-B350ATX

Voltage	MS-DOS Boot up		Windows XP SP2 64-bit 3DMARK 2003 +PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	3.97	47.64	5.84	70.08
5V	2.37	11.85	5.64	28.2
3.3V	2.81	9.273	2.65	8.745
5VSB	0.379	1.895	0.012	0.06

8.Test Environment:

Motherboard	LV-67H
CPU	Intel® Core™ i3-2330E 2.20GHz
Memory	Kingston DDR3 1333 4GB*2 (D2568JENCPCGD9U)
HDD	HITACHI HTS543216L9A300 160GB

(A)Power Supply : SWITCHING POWER SUPPLY MC-B350ATX

Voltage	MS-DOS Boot up		Windows XP SP2 64-bit 3DMARK 2003 +PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	2.51	30.12	4.06	48.72
5V	2.19	10.95	4.69	56.28
3.3V	2.46	8.118	2.35	7.755
5VSB	0.584	2.92	0.011	0.055

(B)DC Power Supply: GWINSTEK SPS-3610

Voltage	MS-DOS Boot up		Windows XP SP2 64-bit 3DMARK 2003 +PRIME95	
	Current(A)	Power (W)	Current(A)	Power (W)
12V	3.27	39.24	5.36	64.32
19V	2.02	38.38	3.27	62.13
24V	1.59	38.16	2.64	63.36

8.a.Test Environment:

The same as above but with LCD panel

Display Panel	AUO M170EG01 17”LCD
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Power Supply : SWITCHING POWER SUPPLY MC-B350ATX

Voltage	MS-DOS Boot up		Windows XP SP2 64-bit 3DMARK 2003 +PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	3.88	46.56	5.82	69.84
5V	3.22	16.1	5.42	27.1
3.3V	2.41	7.953	2.36	7.788
5VSB	0.559	2.795	0.013	0.065

9.Test Environment:

Motherboard	LV-67H
CPU	Intel® Core™ i7-2710QE 2.10GHz
Memory	Kingston DDR3 1333 8GB*2 (J4208BASE-DJ-F)
HDD	Western Digital WD1600AAJS-00B4A0 160GB

Power Supply : SWITCHING POWER SUPPLY MC-B350ATX

Voltage	MS-DOS Boot up		Windows XP SP2 64-bit 3DMARK 2003 +PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	2.93	35.16	7.49	89.88
5V	2.32	11.6	5.78	28.9
3.3V	2.25	7.425	1.77	5.841
5VSB	0.79	3.95	0.471	2.355

9.a.Test Environment:

The same as above but with LCD panel

Display Panel	AUO M170EG01 17”LCD
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Power Supply : SWITCHING POWER SUPPLY MC-B350ATX

Voltage	MS-DOS Boot up		Windows XP SP2 64-bit 3DMARK 2003 +PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	4.34	52.08	8.89	106.68
5V	3.38	16.9	6.59	32.95
3.3V	2.42	7.986	1.8	5.94
5VSB	0.731	3.655	0.592	2.96

5. Performance Test

5.1 Business Win Stone 2002

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
Business Win stone2002	Intel® Core™ i7-2710QE 2.10GHz TLA DDR3 1333 1GB (H5TQ1G83BFR) Western Digital WD10EALX-009BA0 1.0TB	PASS	44.9 43.3 43.2 43
Business Win stone2002	Intel® Core™ i3-2330E 2.20GHz A-DATA DDR3 1066 1GB (K4B1G0846D) Transcend DDR3 1066 1GB (K4B1G0846D) HITACHI HTS543216L9A300 160GB	PASS	44.5 44.3 44.5 43.9
Business Win stone2002	Intel® Celeron™ B810 1.60GHz A-DATA DDR3 1600 4GB (J2108BCSE-GN-F) Western Digital WD5000AAKX-001CA0 500GB	PASS	41.6 41.5 41.7 41.1

5.2 Business Win Stone 2004

Windows XP SP2

Weighted Suite	Test Environment	Result	Remark
Business Win stone2004	Intel® Core™ i7-2710QE 2.10GHz A-DATA DDR3 1600 4GB*2 (J2108BCSE-GN-F) HITACHI HTS543216L9A300 160GB	PASS	26.9 26.6 25.9 25.7
Business Win stone2004	Intel® Core™ i3-2330E 2.20GHz A-DATA DDR3 1066 1GB (K4B1G0846D) Transcend DDR3 1066 1GB (K4B1G0846D) HITACHI HTS543216L9A300 160GB	PASS	25.4 25 25.4 25.6
Business Win stone2004	Intel® Celeron™ B810 1.60GHz A-DATA DDR3 1600 4GB (J2108BCSE-GN-F) Western Digital WD5000AAKX-001CA0 500GB	PASS	22.7 22 22.3 22.4

5.3 Content Creation Winstone 2004

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
Content Creation Winstone 2004	Intel® Core™ i7-2710QE 2.10GHz TLA DDR3 1333 1GB (H5TQ1G83BFR) Western Digital WD10EALX-009BA0 1.0TB	PASS	53.4 53.9 53.2 31.1
Content Creation Winstone 2004	Intel® Core™ i3-2330E 2.20GHz A-DATA DDR3 1066 1GB (K4B1G0846D) Transcend DDR3 1066 1GB (K4B1G0846D) HITACHI HTS543216L9A300 160GB	PASS	42.4 42.2 42.6 42.6
Content Creation Winstone 2004	Intel® Celeron™ B810 1.60GHz A-DATA DDR3 1600 4GB (J2108BCSE-GN-F) Western Digital WD5000AAKX-001CA0 500GB	PASS	38.8 38.6 37.8 38.3

5.4 3D MARK(2001、2003、2005)

Windows XP SP2 32-bit

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Score	Intel® Core™ i7-2710QE 2.10GHz TLA DDR3 1333 1GB (H5TQ1G83BFR) Western Digital WD10EALX-009BA0 1.0TB	PASS	7273
3DMARK2003 Score		PASS	7127
3DMARK2005 Score		PASS	3417

Windows XP SP2 64-bit

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Score	Intel® Core™ i5-2410M 2.30GHz Kingston DDR3 1333 4GB*2 (D2568JENC PGD9U) HITACHI HTS543216L9A300 160GB	NO SUPPLY	N/A
3DMARK2003 Score		PASS	6838
3DMARK2005 Score		PASS	4533

Windows XP SP2 32-bit

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Score	Intel® Core™ i5-2410M 2.30GHz DDR3 1600 4GB*2 (J2108BCSE-GN-F) HITACHI HTS543216L9A300 160GB	PASS	17885
3DMARK2003 Score		PASS	10164
3DMARK2005 Score		PASS	7248

Windows XP SP2 64-bit

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Score	Intel® Core™ i5-2410M 2.30GHz ADATA DDR3 1600 4GB*2 (J2108BCSE-GN-F) HITACHI HTS543216L9A300 160GB	N/A	NO SUPPLY
3DMARK2003 Score		PASS	10378
3DMARK2005 Score		PASS	7225

Windows XP SP2 32-bit

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Score	Intel® Celeron™ B810 1.60GHz A-DATA DDR3 1600 4GB (J2108BCSE-GN-F) Western Digital WD5000AAKX-001CA0 500GB	PASS	9752
3DMARK2003 Score		PASS	5595
3DMARK2005 Score		PASS	3819

Windows XP SP2 32-bit

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Score	Intel® Core™ i3-2330E 2.20GHz Kingston DDR3 1066 4GB (K4B2G0846B-HCFB) Western Digital WD3200AAKS-00B3A0 320GB	PASS	10384
3DMARK2003 Score		PASS	4611
3DMARK2005 Score		PASS	791

5.5 3D MARK2006

Windows XP SP2 32-bit

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Score	Intel® Core™ i7-2710QE 2.10GHz TLA DDR3 1333 1GB (H5TQ1G83BFR) Western Digital WD10EALX-009BA0 1.0TB	PASS	2682
2	SM2.0 Score		PASS	790
3	HDR/SM3.0 Score		PASS	1098
4	CPU Score		PASS	4705

Windows XP SP2 32-bit

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Score	Intel® Core™ i5-2410M 2.30GHz A-DATA DDR3 1600 4GB*2 (J2108BCSE-GN-F) HITACHI HTS543216L9A300 160GB	PASS	4365
2	SM2.0 Score		PASS	1664
3	HDR/SM3.0 Score		PASS	1578
4	CPU Score		PASS	3099

Windows XP SP2 32-bit

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Score	Intel® Celeron™ B810 1.60GHz A-DATA DDR3 1600 4GB (J2108BCSE-GN-F) Western Digital WD5000AAKX-001CA0 500GB	PASS	2312
2	SM2.0 Score		PASS	860
3	HDR/SM3.0 Score		PASS	863
4	CPU Score		PASS	1580

Windows XP SP2 32-bit

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Score	Intel® Core™ i3-2330E 2.20GHz Kingston DDR3 1066 4GB (K4B2G0846B-HCFB) Western Digital WD3200AAKS-00B3A0 320GB	PASS	2386
2	SM2.0 Score		PASS	829
3	HDR/SM3.0 Score		PASS	890
4	CPU Score		PASS	2567

5.6 PC MARK2002

Test Environment
Intel® Core™ i7-2710QE 2.10GHz TLA DDR3 1333 1GB (H5TQ1G83BFR) Western Digital WD10EALX-009BA0 1.0TB

Windows XP SP2 32-bit

Item	Weighted Suite	Result	Remark
1	CPU Score	PASS	11927
2	Memory Score	PASS	47724
3	HDD Score	PASS	2058

Test Environment
Intel® Core™ i5-2410M 2.30GHz A-DATA DDR3 1600 4GB*2 (J2108BCSE-GN-F) HITACHI HTS543216L9A300 160GB

Windows XP SP2 32-bit

Item	Weighted Suite	Result	Remark
1	CPU Score	PASS	11564
2	Memory Score	PASS	42073
3	HDD Score	PASS	1331

Test Environment
Intel® Celeron™ B810 1.60GHz A-DATA DDR3 1600 4GB (J2108BCSE-GN-F) Western Digital WD5000AAKX-001CA0 500GB

Windows XP SP2 32-bit

Item	Weighted Suite	Result	Remark
1	CPU Score	PASS	6412
2	Memory Score	PASS	21258
3	HDD Score	PASS	2587

Test Environment
Intel® Core™ i3-2330E 2.20GHz Kingston DDR3 1066 4GB (K4B2G0846B-HCFB) Western Digital WD3200AAKS-00B3A0 320GB

Windows XP SP2 32-bit

Item	Weighted Suite	Result	Remark
1	CPU Score	PASS	8975
2	Memory Score	PASS	30495
3	HDD Score	PASS	2430

5.7 PC MARK2004

Test Environment
Intel® Core™ i7-2710QE 2.10GHz TLA DDR3 1333 1GB (H5TQ1G83BFR) Western Digital WD10EALX-009BA0 1.0TB

Windows XP PS2 32-bit

Item	Weighted Suite	Result	Remark
1	PCMark Score	PASS	N/A
2	CPU Score	PASS	N/A
3	Memory Score	PASS	11550
4	Graphic Score	PASS	4409
5	HDD Score	PASS	6642

Test Environment
Intel® Core™ i5-2410M 2.30GHz Kingston DDR3 1333 4GB (D2568JENC PGD9U) HITACHI HTS543216L9A300 160GB

Windows XP PS2 64-bit

Item	Weighted Suite	Result	Remark
1	PCMark Score	PASS	N/A
2	CPU Score	PASS	N/A
3	Memory Score	PASS	7635
4	Graphic Score	PASS	3891
5	HDD Score	PASS	3866

Test Environment
Intel® Core™ i5-2410M 2.30GHz A-DATA DDR3 1600 4GB*2 (J2108BCSE-GN-F) HITACHI HTS543216L9A300 160GB

Windows XP PS2 32-bit

Item	Weighted Suite	Result	Remark
1	PCMark Score	PASS	N/A
2	CPU Score	PASS	N/A
3	Memory Score	PASS	11071
4	Graphic Score	PASS	4758
5	HDD Score	PASS	3911

Test Environment
Intel® Celeron™ B810 1.60GHz A-DATA DDR3 1600 4GB (J2108BCSE-GN-F) Western Digital WD5000AAKX-001CA0 500GB

Windows XP PS2 32-bit

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Score	PASS	5632
2	CPU Score	PASS	5884
3	Memory Score	PASS	6023
4	Graphic Score	PASS	2751
5	HDD Score	PASS	6201

Test Environment
Intel® Core™ i3-2330E 2.20GHz Kingston DDR3 1066 4GB (K4B2G0846B-HCFB) Western Digital WD3200AAKS-00B3A0 320GB

Windows XP PS2 32-bit

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Score	PASS	N/A
2	CPU Score	PASS	N/A
3	Memory Score	PASS	6486
4	Graphic Score	PASS	3671
5	HDD Score	PASS	N/A

5.8 PC MARK2005

Test Environment
Intel® Core™ i7-2710QE 2.10GHz TLA DDR3 1333 1GB (H5TQ1G83BFR) Western Digital WD10EALX-009BA0 1.0TB

Windows XP SP2 32-bit

Item	Weighted Suite	Result	Remark
1	PCMark Score	PASS	6302
2	CPU Score	PASS	9978
3	Memory Score	PASS	8753
4	Graphic Score	PASS	3448
5	HDD Score	PASS	7237

Test Environment
Intel® Core™ i7-2710QE 2.10GHz A-DATA DDR3 1066 2GB (K4B1G0846D) HITACHI HTS543216L9A300 160GB

Windows XP SP2 32-bit

Item	Weighted Suite	Result	Remark
1	PCMark Score	PASS	N/A
2	CPU Score	PASS	9890
3	Memory Score	PASS	7818
4	Graphic Score	PASS	N/A
5	HDD Score	PASS	4169

Test Environment
Intel® Core™ i7-2710QE 2.10GHz Kingston DDR3 1066 4GB (K4B2G0846B-HCFB) HITACHI HTS543216L9A300 160GB

Windows XP SP2 32-bit

Item	Weighted Suite	Result	Remark
1	PCMark Score	PASS	N/A
2	CPU Score	PASS	9785
3	Memory Score	PASS	7184
4	Graphic Score	PASS	N/A
5	HDD Score	PASS	4024

Test Environment
Intel® Core™ i3-2330E 2.20GHz Kingston DDR3 1066 4GB (K4B2G0846B-HCFB) HITACHI HTS543216L9A300 160GB

Windows XP SP2 32-bit

Item	Weighted Suite	Result	Remark
1	PCMark Score	PASS	N/A
2	CPU Score	PASS	6523
3	Memory Score	PASS	6355
4	Graphic Score	PASS	N/A
5	HDD Score	PASS	4096

Test Environment
Intel® Core™ i3-2330E 2.20GHz A-DATA DDR3 1066 2GB (K4B1G0846D) HITACHI HTS543216L9A300 160GB

Windows XP SP2 32-bit

Item	Weighted Suite	Result	Remark
1	PCMark Score	PASS	N/A
2	CPU Score	PASS	6547
3	Memory Score	PASS	6395
4	Graphic Score	PASS	N/A
5	HDD Score	PASS	4132

Test Environment
Intel® Core™ i5-2410M 2.30GHz Kingston DDR3 1333 4GB (D2568JENC PGD9U) HITACHI HTS543216L9A300 160GB

Windows XP SP2 64-bit

Item	Weighted Suite	Result	Remark
1	PCMark Score	PASS	5767
2	CPU Score	PASS	8299
3	Memory Score	PASS	7482
4	Graphic Score	PASS	3511
5	HDD Score	PASS	3655

Test Environment
Intel® Core™ i5-2410M 2.30GHz A-DATA DDR3 1600 4GB*2 (J2108BCSE-GN-F) HITACHI HTS543216L9A300 160GB

Windows XP SP2 32-bit

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Score	PASS	N/A
2	CPU Score	PASS	8132
3	Memory Score	PASS	9444
4	Graphic Score	PASS	N/A
5	HDD Score	PASS	4119

Test Environment
Intel® Core™ i5-2410M 2.30GHz A-DATA DDR3 1600 4GB*2 (J2108BCSE-GN-F) HITACHI HTS543216L9A300 160GB

Windows XP SP2 64-bit

Item	Weighted Suite	Result	Remark
1	PCMark Score	PASS	6342
2	CPU Score	PASS	8314
3	Memory Score	PASS	9639
4	Graphic Score	PASS	4815
5	HDD Score	PASS	3637

Test Environment
Intel® Celeron™ B810 1.60GHz Kingston DDR3 1333 4GB*2 (D2568JENC PGD9U) HITACHI HTS543216L9A300 160GB

Windows XP SP2 32-bit

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Score	PASS	N/A
2	CPU Score	PASS	4467
3	Memory Score	PASS	5775
4	Graphic Score	PASS	N/A
5	HDD Score	PASS	4131

Test Environment
Intel® Celeron™ B810 1.60GHz Kingston DDR3 1333 4GB*2 (D2568JENC PGD9U) HITACHI HTS543216L9A300 160GB

Windows XP SP2 64-bit

Item	Weighted Suite	Result	Remark
1	PCMark Score	PASS	4061
2	CPU Score	PASS	4501
3	Memory Score	PASS	5765
4	Graphic Score	PASS	2638
5	HDD Score	PASS	3646

Test Environment
Intel® Celeron™ B810 1.60GHz A-DATA DDR3 1066 1GB (K4B1G0846D) Transcend DDR3 1066 1GB (K4B1G0846D) HITACHI HTS543216L9A300 160GB

Windows XP SP2 32-bit

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Score	PASS	N/A
2	CPU Score	PASS	3123
3	Memory Score	PASS	4721
4	Graphic Score	PASS	N/A
5	HDD Score	PASS	4121

Test Environment
Intel® Celeron™ B810 1.60GHz A-DATA DDR3 1066 1GB (K4B1G0846D) Transcend DDR3 1066 1GB (K4B1G0846D) HITACHI HTS543216L9A300 160GB

Windows XP SP2 64-bit

Item	Weighted Suite	Result	Remark
1	PCMark Score	PASS	3124
2	CPU Score	PASS	3184
3	Memory Score	PASS	4700
4	Graphic Score	PASS	1915
5	HDD Score	PASS	3635

Test Environment
Intel® Celeron™ B810 1.60GHz Transcend DDR3 1066 2GB (K4B1G0846D) Western Digital WD3200AAJS-00YZCA0 320GB

Windows XP SP2 32-bit

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Score	PASS	N/A
2	CPU Score	PASS	4488
3	Memory Score	PASS	5323
4	Graphic Score	PASS	2301
5	HDD Score	PASS	6446

Test Environment
Intel® Celeron™ B810 1.60GHz Transcend DDR3 1066 2GB (K4B1G0846D) Western Digital WD5000AAKS-00V1A0 500GB

Windows XP SP2 64-bit

Item	Weighted Suite	Result	Remark
1	PCMark Score	PASS	4227
2	CPU Score	PASS	4488
3	Memory Score	PASS	5325
4	Graphic Score	PASS	2395
5	HDD Score	PASS	7118

Test Environment
Intel® Core™ i7-2710QE 2.10GHz Kingston DDR3 1333 8GB*2 (J4208BASE-DJ-F) Western Digital WD1600AAJS-00B4A0 160GB

Windows XP SP2 64-bit

Item	Weighted Suite	Result	Remark
1	PCMark Score	PASS	6943
2	CPU Score	PASS	9927
3	Memory Score	PASS	9785
4	Graphic Score	PASS	4583
5	HDD Score	PASS	6391

Test Environment
Intel® Core™ i7-2710QE 2.10GHz INNODISK DDR3 1333 4GB (H5TQ2G83CFR) INNODISK DDR3 1333 2GB (H5TQ2G83CFR) Western Digital WD10EALX-009BA0 1.0TB

Windows XP SP2 64-bit

Item	Weighted Suite	Result	Remark
1	PCMark Score	PASS	7500
2	CPU Score	PASS	9336
3	Memory Score	PASS	9738
4	Graphic Score	PASS	4191
5	HDD Score	PASS	8040

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
Hitachi HTS543216L9A300	SATA	160 GB	46.2 MB/sec	112.8 MB/sec	18.8 ms
Western Digital WD3200AAJS-00YZCA0	SATA	320 GB	83.9 MB/sec	88.0 MB/sec	15.4 ms
Western Digital WD5000AAKX-001CA0	SATA	500 GB	100.1 MB/sec	103.1 MB/sec	15.7 ms
Western Digital WD5000AAKS-00V1A0	SATA	500 GB	103.9 MB/sec	123.5 MB/sec	14.7 ms
Western Digital WD10EALX-009BA0	SATA	1.0 TB	91.9 MB/sec	128.0 MB/sec	13.1 ms
TDK LoR Trans-It Drive	USB	4 GB	14.9 MB/sec	15.9 MB/sec	1.0 ms
Apacer USB FLASH DRIVE	USB	515 MB	8.3 MB/sec	4.4 MB/sec	2.0 ms

5.9.2 CD-ROM

Test environment:

OS Windows XP professional SP2

Program (NERO)

CD-ROM Model	Interface	Average Speed	Full Read	Burst Rate	CD
LG DVD GH20NS15	SATA	34.05 x	183 ms	37 MB/s	52 X CD-R
PIONEER DVD DVR-S19LBK	SATA	28.94 x	162 ms	31 MB/s	52 X CD-R
PIONEER DVD DVR-212BK	SATA	29.88 x	192 ms	40 MB/s	52X CD-R
LITEON DVD SOSC-2485KX	USB	15.38 x	315 ms	21 MB/s	52 X CD-R
LITEON DVD SOSW-833XS	USB	17.95 x	193 ms	20 MB/s	52X CD-R
MATSHITA BD-CMB UJ-120	USB	18.08 x	263 ms	17 MB/s	52X CD-R

5.10 Vibration Test

Motherboard	LV-67H_D			
Test Equipment	VS-5060L			
Amplitude	Degree	Frequency	Time (1min/1Time)	Result
0.75mm	40	5 → 55 → 5 Hz	10	PASS
1.00mm	55	5 → 55 → 5 Hz	10	PASS
1.25mm	70	5 → 55 → 5 Hz	10	PASS
1.5mm	90	5 → 55 → 5 Hz	10	PASS
1.5mm	90	5 → 55 → 5 Hz	120	PASS