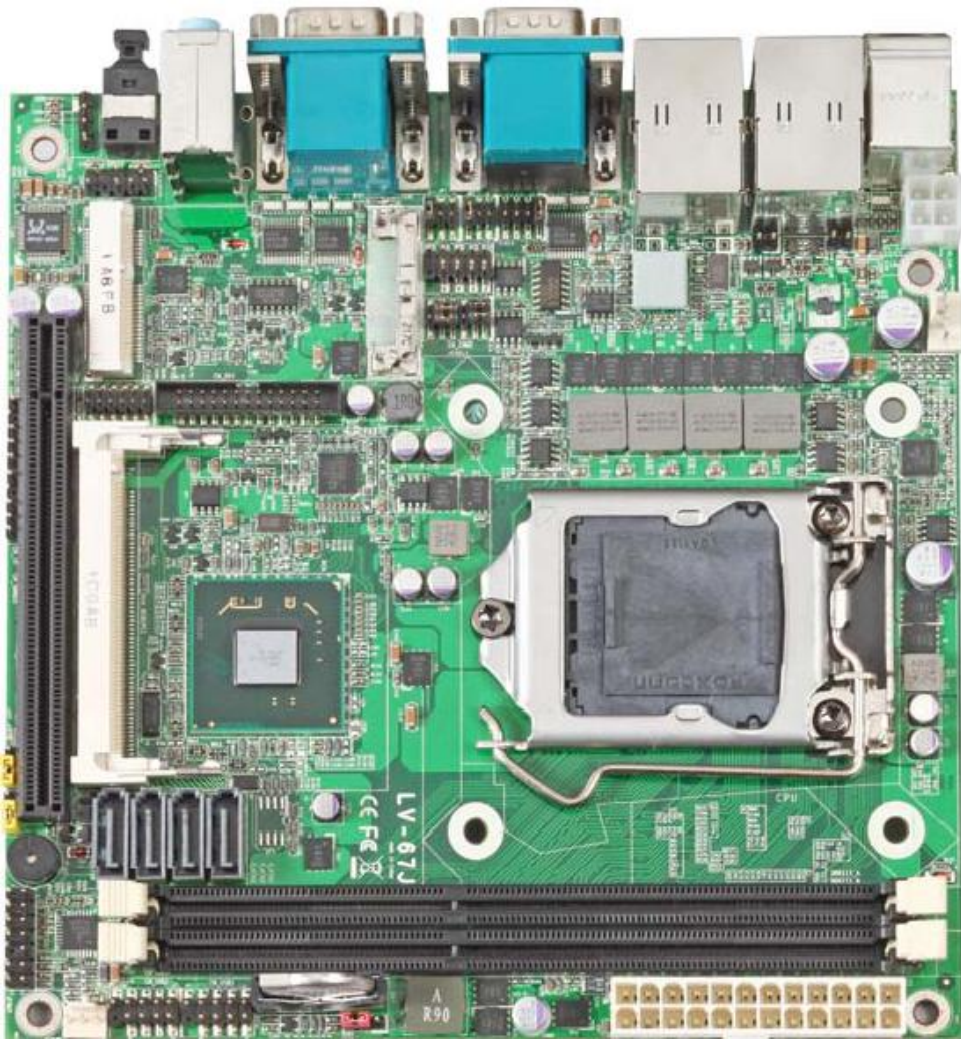


Product Test Report



Product Name	LV-67J
Product Version	A
Issued Date	2013.05.06
Report Edition	1.0
BIOS Version	1.1
Testing Engineer	PERRY
Check Engineer	Gary

REVISION HISTORY

DATE	REVISION NO.	PAGE	DESCRIPTONS
2013.05.06	Ver. 1.1	79	Initial Release

Index

1. Function test	5
1.1 Hardware function.....	5
1.2 BIOS function	7
1.3 Driver	9
2. Compatibility test	13
2.1 CPU Test.....	13
2.2 Operation System Test	14
2.3 Memory Test	15
2.4 VGA Graphic Quality Test.....	16
2.5 Audio	17
2.6 HDD Test	21
2.7 CD-ROM Test	22
2.8 USB device Test	23
2.9 Serial Port Test	25
2.10 PS2 Keyboard 、 Mouse Test.....	28
2.11 LAN Test	30
2.12 Power Supply Test	32
2.13 PCI Express mini card	33
2.14 Mini PCI card.....	34
3. Environmental test	35
3.1 Temperature Test.....	35
3.2 Thermal measurements at various points on the board	38
4. Reliability Test	40
4.1 Power Consumption Test	40
5. Performance Test	47
5.1 Performance Test 8.0	47

5.2 3D MARK(2001 、 2003 、 2005) 53

5.3 3D MARK2006 56

5.4 PC MARK2002..... 59

5.5 PC MARK2004..... 62

5.6 PC MARK2005..... 65

5.7 AQUAMARK3 68

5.8 CINEBENCH 71

5.9 ZD CPUMARK 74

5.10 Storage Performance 77

1. Function test

1.1 Hardware function

Base Function Test

Item	Description	Result	Remark
1	Power Button	PASS	
2	Reset	PASS	
3	Power LED	PASS	
4	HDD LED	PASS	
5	SATA 1/2/3/4	PASS	
6	USB3.0 1/2/3/4	PASS	USB3.0 x4 : 平均 282MB/S (HD Tune 5.0)(DDTHX64G)
7	CN_USB 1/2	PASS	
8	DDRIII A/B	PASS	
9	COM 1/3/4	PASS	(B&B mouse)
10	CN_COM 2	PASS	(B&B mouse)
11	VGA Port	PASS	
12	PS2	PASS	
13	AUDIO	PASS	
14	CN_AUDIO	PASS	
15	CD_IN	PASS	
16	CN_DIO	PASS	(DOS)
17	CPUFAN	PASS	
18	SYSFAN	PASS	
19	MINICard	PASS	(MPX-574D2)
20	MINIPCI	PASS	(MP-541D2)
21	CN_DVI	PASS	

22	LAN1/2	PASS	
23	IrDA	PASS	
24	DC_IN	PASS	
25	ATX	PASS	
26	RS422-485	PASS	
27	SPDIF	PASS	
28	PCIE_16X	PASS	

Jumper

Item	Description	Result
1	JRTC	PASS
2	JCSEL1	PASS
3	JCSEL2	PASS
4	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	Quick Boot	PASS	
7	Diagnostic Splash Screen	PASS	
8	Diagnostic Summary Screen	PASS	
9	Console Redirection	PASS	Com1 v
10	UEFI Boot	PASS	
11	View Error Manager Log	PASS	
12	Clear Error Manager Log	PASS	
13	Active Processor Cores	PASS	
14	Intel(R) HT Technology	PASS	
15	SATA Device	PASS	
16	Interface Combination	PASS	(IDE v AHCI v RAID v)
17	Max TOLUD	PASS	
18	DVMT Total Gfx Mem	PASS	
19	Boot Type	PASS	(CRT v DVI v)
20	USB Per-Port Disable Control	PASS	
21	Azalia	PASS	
22	PCH Internal LAN	PASS	
23	LAN OPROM Selection	PASS	82579LM v 82574L v
24	Wake on PCH LAN	PASS	82579LM : Shutdown v

			Sleep(Stand by) √ Hibernate √ S3 wake √
25	Intel(R) AMT	PASS	
26	Serial Port	PASS	
27	IR Func.	PASS	
28	Watch Dog Timer	PASS	
29	PowerLoss	PASS	Power on √ Power off √
30	CPU Warning Temperature	PASS	60°C
31	CPU Smart Fan	PASS	Target Temp 50°C Tolerance Temp 1°C
32	Set Supervisor Password	PASS	
33	Set User password	PASS	
34	TPM	PASS	XP √ WIN7 √

1.3 Driver

CD Edition : IPCI5-1.0

1. Windows XP SP2 32-bit driver test

Item	Description	Result	version
1	Chipset Driver	PASS	9.3.0.1011
2	VGA Driver	PASS	6.14.10.5421
3	Audio Driver	PASS	5.10.0.6083
4	LAN Driver	PASS	82579LM : 11.15.12.0 82574L : 11.14.48.0

2. Windows XP SP2 64-bit driver test

Item	Description	Result	version
1	Chipset Driver	PASS	9.3.0.1011
2	VGA Driver	PASS	6.14.10.5421
3	Audio Driver (Need UAA bus driver)	PASS	5.10.0.6083
4	LAN Driver	PASS	82579LM : 11.15.12.0 82574L : 11.14.48.0

3. Windows Server 2003 32-bit Driver Test

Item	Description	Result	version
1	Chipset Driver	PASS	9.3.0.1011
2	VGA Driver	PASS	6.14.10.5421
3	Audio Driver	PASS	5.10.0.6083
4	LAN Driver	PASS	82579LM : 11.15.12.0 82574L : 11.14.48.0

4. Windows Server 2003 64-bit driver test

Item	Description	Result	Version
1	Chipset Driver	PASS	9.3.0.1011
2	VGA Driver	PASS	6.14.10.5421
3	Audio Driver	PASS	5.10.0.6083
4	LAN Driver	PASS	82579LM : 11.15.12.0 82574L : 11.14.48.0

5. Windows Vista 32-bit driver test

Item	Description	Result	version
1	Chipset Driver	PASS	9.3.0.1011
2	VGA Driver	PASS	9.17.10.2875
3	Audio Driver	PASS	6.0.1.6662
4	LAN Driver	PASS	82579LM : 12.2.45.0 82574L : 11.17.27.0

6. Windows Vista 64-bit driver test

Item	Description	Result	version
1	Chipset Driver	PASS	9.3.0.1011
2	VGA Driver	PASS	9.17.10.2875
3	Audio Driver	PASS	6.0.1.6662
4	LAN Driver	PASS	82579LM : 12.2.45.0 82574L : 11.17.27.0

7. Windows Server 2008 32-bit driver test

Item	Description	Result	version
1	Chipset Driver	PASS	9.3.0.1011
2	VGA Driver	PASS	9.17.10.2875
3	Audio Driver	PASS	6.0.1.6662
4	LAN Driver	PASS	82579LM : 12.2.45.0 82574L : 11.17.27.0

8. Windows Server 2008 64-bit driver test

Item	Description	Result	version
1	Chipset Driver	PASS	9.3.0.1011
2	VGA Driver	PASS	9.17.10.2875
3	Audio Driver	PASS	6.0.1.6662
4	LAN Driver	PASS	82579LM : 12.2.45.0 82574L : 11.17.27.0

9. Windows 7 32-bit Driver Test

Item	Description	Result	version
1	Chipset Driver	PASS	9.3.0.1011
2	VGA Driver	PASS	9.17.10.2875
3	Audio Driver	PASS	6.0.1.6662
4	LAN Driver	PASS	82579LM : 12.2.45.0 82574L : 11.17.27.0
5	USB 3.0 Driver	PASS	1.0.5.235

10. Windows 7 64-bit Driver Test

Item	Description	Result	version
1	Chipset Driver	PASS	9.3.0.1011
2	VGA Driver	PASS	9.17.10.2875
3	Audio Driver	PASS	6.0.1.6662
4	LAN Driver	PASS	82579LM : 12.2.45.0 82574L : 11.17.27.0
5	USB 3.0 Driver	PASS	1.0.5.235

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
<u>SR0PK</u>	3.40 GHz	Core	i7-3770	5 GT/s	8 MB	PASS
<u>SR0P3</u>	3.0 GHz	Core	i5-3550S	5 GT/s	6 MB	PASS
<u>SR02K</u>	2.90 GHz	Core	i5-2310	5 GT/s	6 MB	PASS
<u>SR05Q</u>	2.90 GHz	Pentium	G850	5 GT/s	3 MB	PASS
<u>SR05J</u>	2.50 GHz	Celeron	G540	5 GT/s	2 MB	PASS
<u>SR0UF</u>	3.10 GHz	Pentium	G2120	5 GT/s	3 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	Ubuntu 12.04	PASS	
12	Debian-6.0.2.1	PASS	Set AHCI

2.3 Memory Test

Test environment:

OS Windows XP professional SP2

Test program : PC MARK 2005

Manufacturer	Chip	Frequency	Capacity Mbytes	Result
Kingston	ELPIDA J4208BBBG-GN-F	DDR3 1600	8 GB	PASS
Kingston	ELPIDA J2108BCSE-DJ-F	DDR3 1333	4 GB	PASS
Kingston	Kingston D1288J MFPGD9U	DDR3 1333	2GB	PASS
Kingston	SAMSUNG K4B2G0846B-HCF8	DDR3 1066	4 GB	PASS
Kingston	Kingston D1288JPPDPGD9U	DDR3 1333	2GB	PASS
Transcend	SEC 849 HCH9 K4B1G0846D	DDR3 1333	2GB	PASS
ADATA	ADATA AD30908C8D-15HG	DDR3 1333	1GB	PASS

2.4 VGA Graphic Quality Test

Test environment:

OS Windows XP professional SP2 32

Driver version : 6.14.10.5421

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	
1680*1050	16 / 32bit	PASS	
1920*1080	16 / 32bit	PASS	

2.5 Audio

Test environment:

OS Windows XP professional SP2 32-bit

Driver version : 5.10.0.6083

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 : 5.10.0.6083

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 : 5.10.0.6083

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 : 5.10.0.6083

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 : 6.0.1.6662

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 : 6.0.1.6662

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 : 6.0.1.6662

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 :

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 : 6.0.1.6662

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 : 6.0.1.6662

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

2.6 HDD Test

Test environment:

OS Windows 7 (x32)

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
Western Digital WD5000AAKS-00V1A0	SATA	500 GB	PASS	PASS

2.7 CD-ROM Test

Test environment:

OS Windows 7 (x32)

Model	Interface	Detect	Data Transfer	Play CD
ASUS DRW-24D1ST	SATA	PASS	PASS	PASS
BUFFALD DVSM-PC58U2VB	USB	PASS	PASS	PASS
LITEON DVD ETAU108	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	
USB 3.0	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	

2.11 LAN Test

Data Transfer Test environment:

-CAT 6 UTP 100M

-8 HR. continuous

1. Windows XP SP2 32/64-bit (82579LM)

32-bit driver version : 11.15.12.0 ; 64-bit driver version : 11.15.12.0

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

2. Windows Server 2003 32/64-bit (82579LM)

32-bit driver version : 11.15.12.0 ; 64-bit driver version : 11.15.12.0

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

3. Windows Vista 32/64-bit (82579LM)

32-bit driver version : 12.2.45.0 ; 64-bit driver version : 12.2.45.0

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

4. Windows Server 2008 32/64-bit (82579LM)

32-bit driver version : 12.2.45.0 ; 64-bit driver version : 12.2.45.0

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

5. Windows Server 7 32/64-bit (82579LM)

32-bit driver version : 12.2.45.0 ; 64-bit driver version : 12.2.45.0

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

2.12 Power Supply Test

Item	TYPE	Description	Result	Remark
1	ATX Power	SWITCHING POWER SUPPLY MC-B350ATX	PASS	
2	ATX Power	snake PK-350W 350W	PASS	
3	ATX Power	AcBel 350W ATX-350P-DNSS(API3PC50)	PASS	

2.13 PCI Express mini card

Motherboard	PCI Express mini card	Result	Remark
LV-67J	MPX-574D	PASS	XP & Win7
	MPX-574D2	PASS	XP & Win7
	MPX-885	PASS	XP
	MPX-3132	PASS	Win7
	MPX-6864	PASS	XP
	MPX-9125	PASS	Win7
	MPX-25858	PASS	XP
	MPX-827	PASS	XP & Win7
	MPX-643	PASS	XP & Win7
	MPX-750	PASS	XP
	MPX-5201	PASS	XP
	MPX-7202	PASS	XP & Win7
	MPX-SDVOD	PASS	XP & Win7
	MPX-TP4R	PASS	XP
	MPX-954	PASS	XP & Win7
MPX-954E	PASS	XP & Win7	

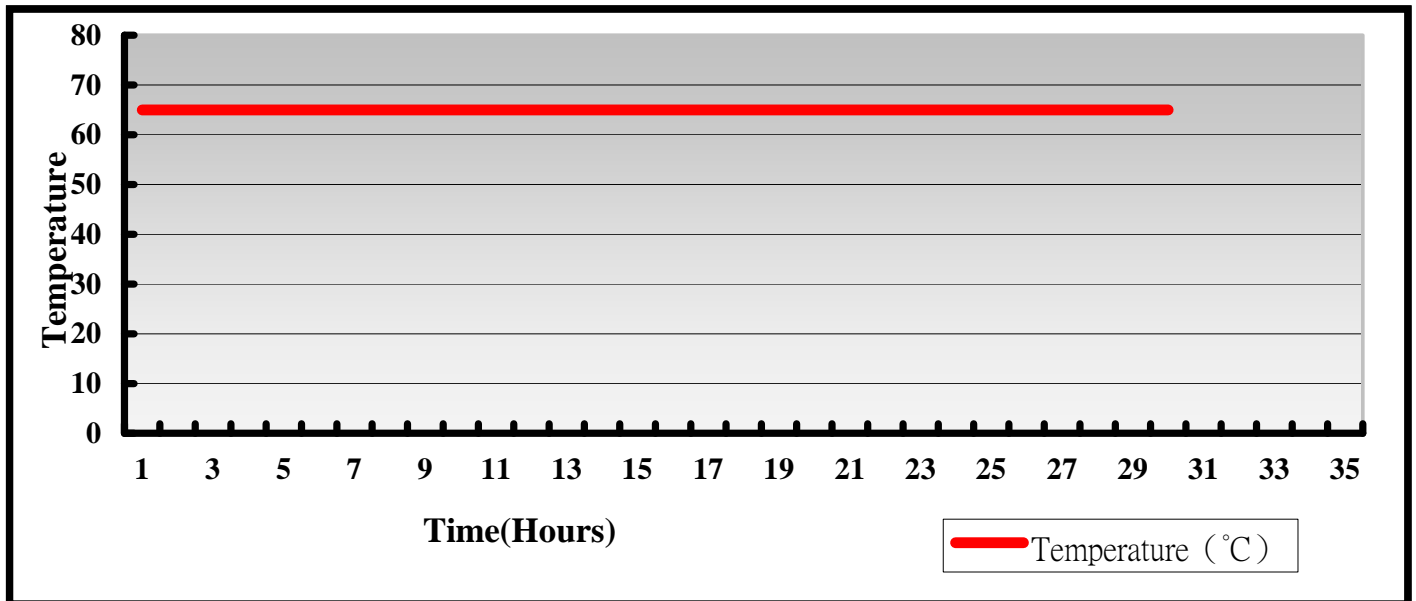
2.14 Mini PCI card

Motherboard	Mini PCI card	Remark	Remark
LV-67J	MP-6816D4	PASS	XP
	MP-6421	PASS	Win7
	MP-954	PASS	XP
	MP-6100	PASS	XP
	MP-840	PASS	XP
	MP-60102	PASS	XP
	MP-541D2	PASS	XP & Win7
	MP-878D	PASS	XP
	MP-6802	PASS	XP
	MP-323	PASS	XP

3. Environmental test

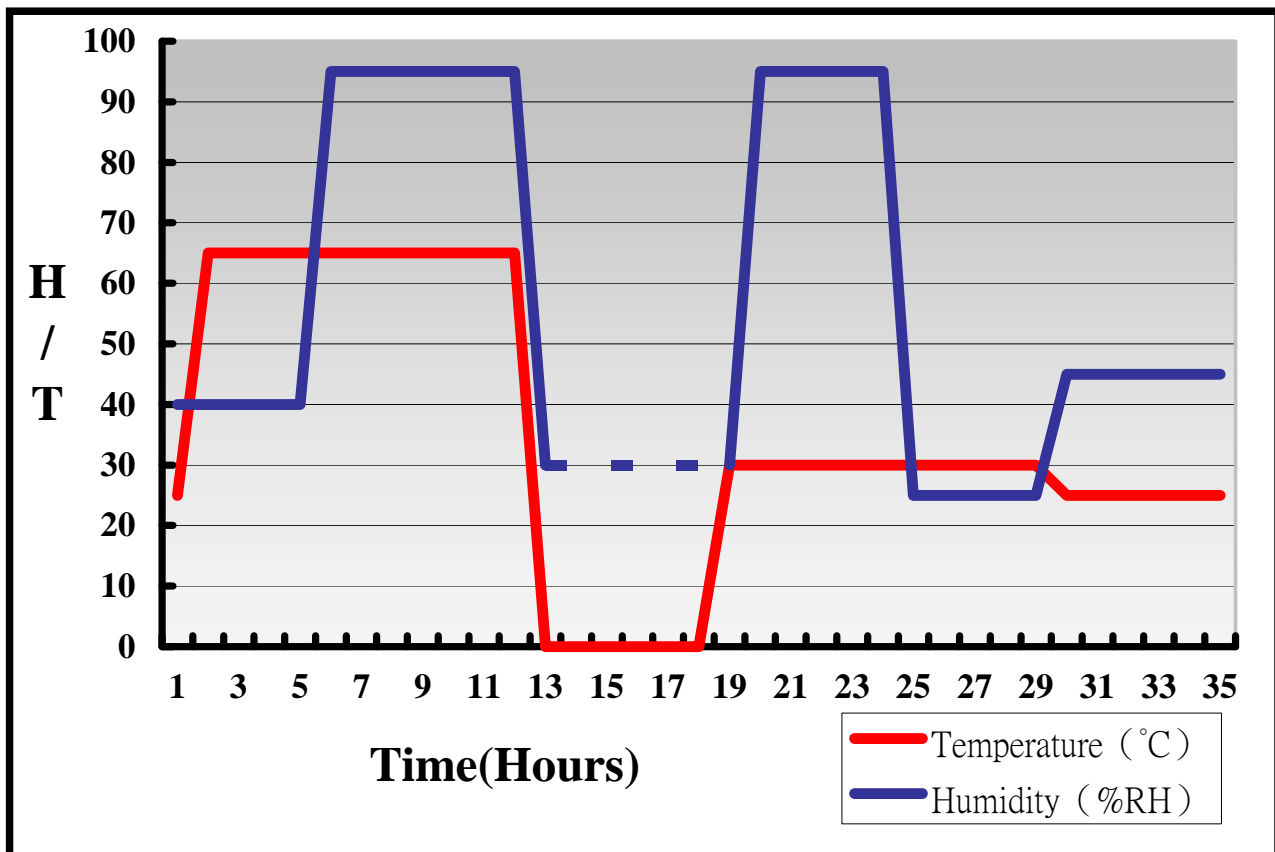
3.1 Temperature Test

System Board	LV-67J
CPU	Intel® Core™ i5-3550S 3.0GHz
Memory	Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F)
HDD	Western Digital WD10EALX-009BA0 1.0TB
Operating OS	Windows XP
Test Equipment	GIANT FORCE (GTH-150-60-CP-AR)
Test Program	3DMark 2003+Prime95-266



Hardware Device list:

System Board	LV-67J
CPU	Intel® Core™ i5-3550S 3.0GHz
Memory	Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F)
HDD	Western Digital WD10EALX-009BA0 1.0TB
Operating OS	Windows XP
Test Equipment	GIANT FORCE (GTH-150-60-CP-AR)
Test Program	3DMark 2003+Prime95-266



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-67J
CPU	Intel® Core™ i7-3770 3.40GHz
Memory	Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F)
HDD	Western Digital WD10EALX-009BA0 1.0TB
Operating OS	Windows XP

Temperature	Result	Remark
65°C	PASS	50 Times
-40°C	PASS	50 Times

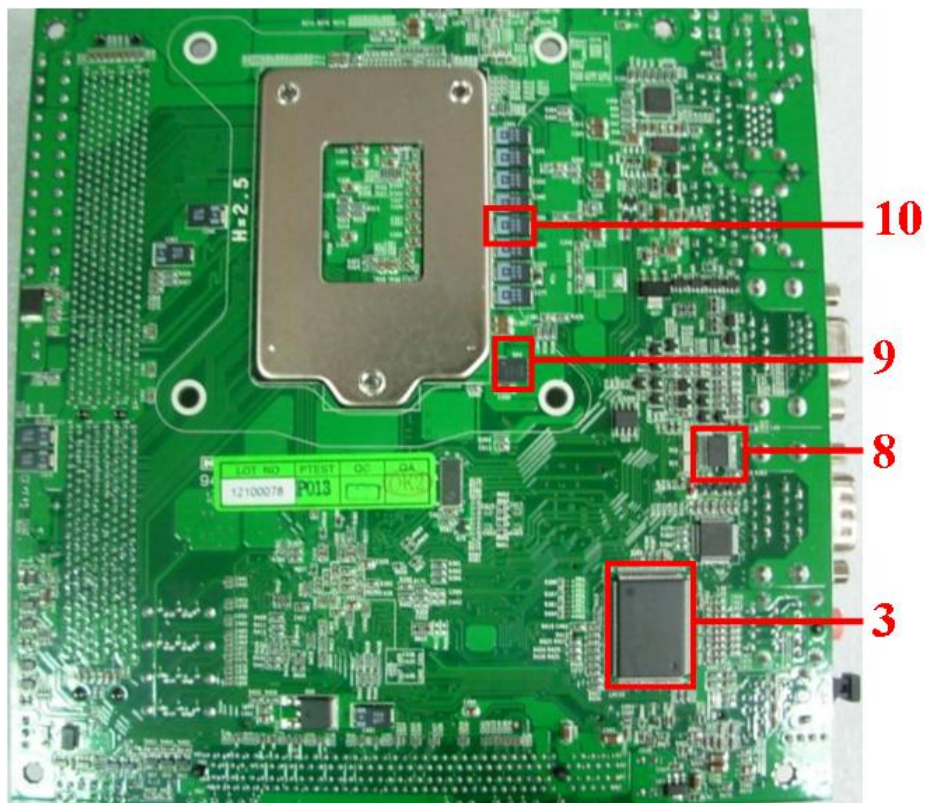
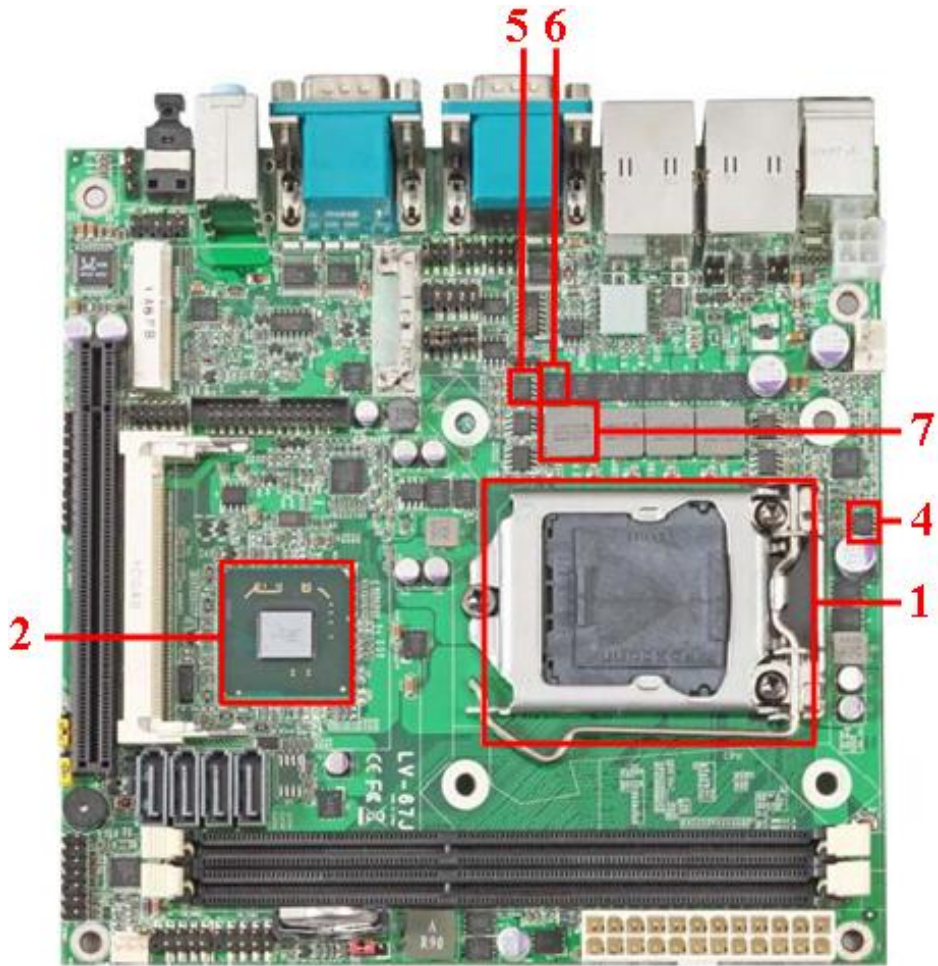
3.2 Thermal measurements at various points on the board

Test Environment :

CPU	Intel® Core™ i5-3550S 3.0GHz
Memory	Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F)
HDD	Western Digital WD10EALX-009BA0 1.0TB
Power	snake 350W
Operating System	Windows XP SP2 32-bit
Test Program	3DMark 2003 + Prime 95-266

Test Result:

Item	Environmental temperature	26°C
1	CPU	58.5
2	PCH(Q77)	42.6°C
3	LPCIO	38.8°C
4	U1	52.8°C
5	U11	56.2°C
6	Q10	65.6°C
7	L15	56.7°C
8	U34	53.5°C
9	Q44	49.7°C
10	C350	49.9°C



4. Reliability Test

4.1 Power Consumption Test

1. Test Environment:

Motherboard	LV-67J
CPU	Intel® Core™ i7-3770 3.40GHz
Memory	Kingston DDR3 1600 8GBx2 (J4208BBBG-GN-F)
HDD	Western Digital 1.0TB (WD10EALX-009BA0)

Power Supply : snake 350W

Voltage	MS-DOS Boot up		Win7(32Bit) 3DMARK 2003(once) + PRIME 95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	4.15	49.8	5.94	71.28
5V	2.05	10.25	2.35	11.75
3.3V	2.29	7.557	2.35	7.755
5VSB	0.66	3.3	0.62	3.1

1. a. Test Environment:

The same as above but with PCI-E Graphics card

Graphics card	GeForce 8600GT
---------------	----------------

(A) Power Supply: snake 350W

Voltage	MS-DOS Boot up		Win7(32Bit) 3DMARK 2003(once) + PRIME 95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	6.58	78.96	11.42	137.04
5V	2.34	11.7	3.21	16.05
3.3V	3.10	10.23	3.48	11.484
5VSB	0.61	3.05	0.62	3.1

2. Test Environment:

Motherboard	LV-67J
CPU	Intel® Core™ i5-3550S 3.0GHz
Memory	Kingston DDR3 1600 8GBx2 (J4208BBBG-GN-F)
HDD	Western Digital 1.0TB (WD10EALX-009BA0)

Power Supply : snake 350W

Voltage	MS-DOS Boot up		Win7(32Bit) 3DMARK 2003(once) + PRIME 95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	3.96	47.52	5.28	63.36
5V	2.08	10.4	3.18	15.9
3.3V	2.10	6.93	2.57	8.481
5VSB	0.59	2.95	0.57	2.85

2. a. Test Environment:

The same as above but with PCI-E Graphics card

Graphics card	GeForce 8600GT
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(A) Power Supply: snake 350W

Voltage	MS-DOS Boot up		Win7(32Bit) 3DMARK 2003(once) + PRIME 95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	6.39	76.68	10	120
5V	2.12	10.6	3	15
3.3V	3.17	10.461	3.31	10.923
5VSB	0.60	3	0.63	3.15

3. Test Environment:

Motherboard	LV-67J
CPU	Intel® Core™ i5-2310 2.90GHz
Memory	Kingston DDR3 1600 8GBx2 (J4208BBBG-GN-F)
HDD	Western Digital 1.0TB (WD10EALX-009BA0)

Power Supply : snake 350W

Voltage	MS-DOS Boot up		Win7(32Bit) 3DMARK 2003(once) + PRIME 95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	4.62	55.44	7.05	84.6
5V	2.12	10.6	3.26	16.3
3.3V	2.24	7.392	2.53	8.349
5VSB	0.62	3.1	0.63	3.15

3. a. Test Environment:

The same as above but with PCI-E Graphics card

Graphics card	GeForce 8600GT
----------------------	-----------------------

(A) Power Supply: snake 350W

Voltage	MS-DOS Boot up		Win7(32Bit) 3DMARK 2003(once) + PRIME 95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	6.80	81.6	11.50	138
5V	2.13	10.65	2.86	14.3
3.3V	3.03	9.999	3.08	10.164
5VSB	0.61	3.05	0.66	3.3

4. Test Environment:

Motherboard	LV-67J
CPU	Intel® Pentium® Processor G850 2.90GHz
Memory	Kingston DDR3 1600 8GBx2 (J4208BBBG-GN-F)
HDD	Western Digital 1.0TB (WD10EALX-009BA0)

Power Supply : snake 350W

Voltage	MS-DOS Boot up		Win7(32Bit) 3DMARK 2003(once) + PRIME 95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	3.64	43.68	3.73	44.76
5V	2.04	10.2	2.89	14.45
3.3V	2.20	7.26	2.42	7.986
5VSB	0.59	2.95	0.58	2.9

4. a. Test Environment:

The same as above but with PCI-E Graphics card

Graphics card	GeForce 8600GT
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(A) Power Supply: snake 350W

Voltage	MS-DOS Boot up		Win7(32Bit) 3DMARK 2003(once) + PRIME 95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	6.14	73.68	8.1	97.2
5V	2.11	10.55	2.39	11.95
3.3V	2.90	9.57	2.90	9.57
5VSB	0.66	3.3	0.63	3.15

5. Test Environment:

Motherboard	LV-67J
CPU	Intel® Celeron® Processor G540 2.50GHz
Memory	Kingston DDR3 1600 8GBx2 (J4208BBBG-GN-F)
HDD	Western Digital 1.0TB (WD10EALX-009BA0)

Power Supply : snake 350W

Voltage	MS-DOS Boot up		Win7(32Bit) 3DMARK 2003(once) + PRIME 95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	3.20	38.4	3.33	39.96
5V	2.07	10.35	2.87	14.35
3.3V	1.96	6.468	2.19	7.227
5VSB	0.62	3.1	0.59	2.95

5. a. Test Environment:

The same as above but with PCI-E Graphics card

Graphics card	GeForce 8600GT
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(A) Power Supply: snake 350W

Voltage	MS-DOS Boot up		Win7(32Bit) 3DMARK 2003(once) + PRIME 95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	5.68	68.16	7.24	86.88
5V	2.03	10.15	2.42	12.1
3.3V	2.71	8.943	2.80	9.24
5VSB	0.61	3.05	0.66	3.3

6. Test Environment:

Motherboard	LV-67J
CPU	Intel® Pentium® Processor G2120 3.10GHz
Memory	Kingston DDR3 1600 8GBx2 (J4208BBBG-GN-F)
HDD	Western Digital 1.0TB (WD10EALX-009BA0)

Power Supply : snake 350W

Voltage	MS-DOS Boot up		Win7(32Bit) 3DMARK 2003(once) + PRIME 95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	3.52	42.24	3.54	42.48
5V	2.22	11.1	3.01	15.05
3.3V	2.33	7.689	2.38	7.854
5VSB	0.63	3.15	0.64	3.2

6. a. Test Environment:

The same as above but with PCI-E Graphics card

Graphics card	GeForce 8600GT
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(A) Power Supply: snake 350W

Voltage	MS-DOS Boot up		Win7(32Bit) 3DMARK 2003(once) + PRIME 95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	4.23	50.76	7.57	90.84
5V	2.13	10.65	2.54	12.7
3.3V	2.95	9.735	2.96	9.768
5VSB	0.58	2.9	0.61	3.05

5. Performance Test

5.1 Performance Test 8.0

Windows 7 x32

WEIGHTED SUITE	Test Environment	Result	Remark
Performance Test 8.0	Intel® Core™ I7-3770 3.40GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB	PASS	Summary 1861.2 CPU Mark 7314 2D Graphics Mark 630 3D Graphics Mark 491.5 Memory Mark 1712 Disk Mark 851

Windows 7 x32

WEIGHTED SUITE	Test Environment	Result	Remark
<p>Performance Test 8.0</p>	<p>Intel® Core™ i5-3550S 3.0GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB</p>	<p>PASS</p>	<p>Summary 1485.4 CPU Mark 5190 2D Graphics Mark 544 3D Graphics Mark 310.4 Memory Mark 1728 Disk Mark 860</p>

Windows 7 x32

WEIGHTED SUITE	Test Environment	Result	Remark
<p>Performance Test 8.0</p>	<p>Intel® Core™ i5-2310 2.90GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB</p>	<p>PASS</p>	<p>Summary 1194.7 CPU Mark 4458 2D Graphics Mark 466.1 3D Graphics Mark 207.5 Memory Mark 1556 Disk Mark 894</p>

Windows 7 x32

WEIGHTED SUITE	Test Environment	Result	Remark
<p>Performance Test 8.0</p>	<p>Intel® Pentium® Processor G850 2.90GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB</p>	<p>PASS</p>	<p>Summary 1053.8 CPU Mark 2215 2D Graphics Mark 454.7 3D Graphics Mark 212.1 Memory Mark 1457 Disk Mark 914</p>

Windows 7 x32

WEIGHTED SUITE	Test Environment	Result	Remark
<p>Performance Test 8.0</p>	<p>Intel® Celeron® Processor G540 2.50GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB</p>	<p>PASS</p>	<p>Summary 950.3 CPU Mark 1872 2D Graphics Mark 391.0 3D Graphics Mark 199.6 Memory Mark 1282 Disk Mark 879</p>

Windows 7 x32

WEIGHTED SUITE	Test Environment	Result	Remark
<p>Performance Test 8.0</p>	<p>Intel® Pentium® Processor G2120 3.10GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB</p>	<p>PASS</p>	<p>Summary 1197.9 CPU Mark 2502 2D Graphics Mark 499.6 3D Graphics Mark 265.2 Memory Mark 1552 Disk Mark 886</p>

5.2 3D MARK(2001、2003、2005)

Windows XP SP2 32-bit

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Score	Intel® Core™ i7-3770 3.40GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB	PASS	25622
3DMARK2003 Score		PASS	4604
3DMARK2005 Score		PASS	8882

Windows XP SP2 32-bit

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Score	Intel® Core™ i5-3550 3.0GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB	PASS	22715
3DMARK2003 Score		PASS	13057
3DMARK2005 Score		PASS	6313

Windows XP SP2 32-bit

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Score	Intel® Core™ i5-2310 2.9GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB	PASS	17795
3DMARK2003 Score		PASS	7657
3DMARK2005 Score		PASS	5543

Windows XP SP2 32-bit

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Score	Intel® Pentium® Processor G850 2.90GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB	PASS	13514
3DMARK2003 Score		PASS	7643
3DMARK2005 Score		PASS	5524

Windows XP SP2 32-bit

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Score	Intel® Celeron® Processor G540 2.50GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB	PASS	13911
3DMARK2003 Score		PASS	6753
3DMARK2005 Score		PASS	4921

Windows XP SP2 32-bit

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Score	Intel® Pentium® Processor G2120 3.10GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB	PASS	18866
3DMARK2003 Score		PASS	8983
3DMARK2005 Score		PASS	5834

5.3 3D MARK2006

Windows XP SP2 32-bit

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Score	Intel® Core™ i7-3770 3.40GHz Kingston DDR3 1600 8GBx1 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB	PASS	6433
2	SM2.0 Score		PASS	1907
3	HDR/SM3.0 Score		PASS	2714
4	CPU Score		PASS	7228

Windows XP SP2 32-bit

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Score	Intel® Core™ i5-3550 3.0GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB	PASS	4536
2	SM2.0 Score		PASS	1346
3	HDR/SM3.0 Score		PASS	1890
4	CPU Score		PASS	5800

Windows XP SP2 32-bit

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Score	Intel® Core™ i5-2310 2.9GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB	PASS	3574
2	SM2.0 Score		PASS	1076
3	HDR/SM3.0 Score		PASS	1462
4	CPU Score		PASS	5066

Windows XP SP2 32-bit

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Score	Intel® Pentium® Processor G850 2.90GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB	PASS	2710
2	SM2.0 Score		PASS	865
3	HDR/SM3.0 Score		PASS	1088
4	CPU Score		PASS	2882

Windows XP SP2 32-bit

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Score	Intel® Celeron® Processor G540 2.50GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB	PASS	3037
2	SM2.0 Score		PASS	963
3	HDR/SM3.0 Score		PASS	1267
4	CPU Score		PASS	2467

Windows XP SP2 32-bit

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Score	Intel® Pentium® Processor G2120 3.10GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB	PASS	4137
2	SM2.0 Score		PASS	1328
3	HDR/SM3.0 Score		PASS	1728
4	CPU Score		PASS	3126

5.4 PC MARK2002

Test Environment
Intel® Core™ i7-3770 3.40GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB

Windows XP SP2 32-bit

Item	Weighted Suite	Result	Remark
1	CPU Score	PASS	16557
2	Memory Score	PASS	65046
3	HDD Score	PASS	2669

Test Environment
Intel® Core™ i5-3550S 3.0GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB

Windows XP SP2 32-bit

Item	Weighted Suite	Result	Remark
1	CPU Score	PASS	15648
2	Memory Score	PASS	61493
3	HDD Score	PASS	2882

Test Environment
Intel® Core™ i5-2310 2.90GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB

Windows XP SP2 32-bit

Item	Weighted Suite	Result	Remark
1	CPU Score	PASS	12989
2	Memory Score	PASS	51449
3	HDD Score	PASS	2708

Test Environment
Intel® Pentium® Processor G850 2.90GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB

Windows XP SP2 32-bit

Item	Weighted Suite	Result	Remark
1	CPU Score	PASS	11782
2	Memory Score	PASS	42339
3	HDD Score	PASS	2824

Test Environment
Intel® Celeron® Processor G540 2.50GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB

Windows XP SP2 32-bit

Item	Weighted Suite	Result	Remark
1	CPU Score	PASS	10183
2	Memory Score	PASS	32242
3	HDD Score	PASS	3015

Test Environment
Intel® Pentium® Processor G2120 3.10GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB

Windows XP SP2 32-bit

Item	Weighted Suite	Result	Remark
1	CPU Score	PASS	13216
2	Memory Score	PASS	49685
3	HDD Score	PASS	2898

5.5 PC MARK2004

Test Environment
Intel® Core™ i7-3770 3.40GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) 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	19522
4	Graphic Score	PASS	7387
5	HDD Score	PASS	8160

Test Environment
Intel® Core™ i5-3550S 3.0GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) 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	17378
4	Graphic Score	PASS	5550
5	HDD Score	PASS	8027

Test Environment
Intel® Core™ i5-2310 2.90GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) 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	13878
4	Graphic Score	PASS	3778
5	HDD Score	PASS	8124

Test Environment
Intel® Pentium® Processor G850 2.90GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) 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	10991
4	Graphic Score	PASS	3684
5	HDD Score	PASS	8066

Test Environment

Intel® Celeron® Processor G540 2.50GHz
Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F)
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	9145
4	Graphic Score	PASS	3315
5	HDD Score	PASS	8103

Test Environment

Intel® Pentium® Processor G2120 3.10GHz
Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F)
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	13236
4	Graphic Score	PASS	5038
5	HDD Score	PASS	8014

5.6 PC MARK2005

Test Environment
Intel® Core™ i7-3770 3.40GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB

Windows XP SP2 32-bit

Item	Weighted Suite	Result	Remark
1	PCMark Score	PASS	10440
2	CPU Score	PASS	14406
3	Memory Score	PASS	14900
4	Graphic Score	PASS	6808
5	HDD Score	PASS	7628

Test Environment
Intel® Core™ i5-3550S 3.0GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB

Windows XP SP2 32-bit

Item	Weighted Suite	Result	Remark
1	PCMark Score	PASS	8422
2	CPU Score	PASS	13309
3	Memory Score	PASS	13285
4	Graphic Score	PASS	4240
5	HDD Score	PASS	8245

Test Environment
Intel® Core™ i5-2310 2.90GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB

Windows XP SP2 32-bit

Item	Weighted Suite	Result	Remark
1	PCMark Score	PASS	7069
2	CPU Score	PASS	11006
3	Memory Score	PASS	10465
4	Graphic Score	PASS	3104
5	HDD Score	PASS	8430

Test Environment
Intel® Pentium® Processor G850 2.90GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB

Windows XP SP2 32-bit

Item	Weighted Suite	Result	Remark
1	PCMark Score	PASS	6833
2	CPU Score	PASS	8146
3	Memory Score	PASS	9441
4	Graphic Score	PASS	3440
5	HDD Score	PASS	8351

Test Environment

Intel® Celeron® Processor G540 2.50GHz
Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F)
Western Digital WD10EALX-009BA0 1.0TB

Windows XP SP2 32-bit

Item	Weighted Suite	Result	Remark
1	PCMark Score	PASS	5754
2	CPU Score	PASS	7027
3	Memory Score	PASS	8115
4	Graphic Score	PASS	2770
5	HDD Score	PASS	8356

Test Environment

Intel® Pentium® Processor G2120 3.10GHz
Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F)
Western Digital WD10EALX-009BA0 1.0TB

Windows XP SP2 32-bit

Item	Weighted Suite	Result	Remark
1	PCMark Score	PASS	7353
2	CPU Score	PASS	9276
3	Memory Score	PASS	11077
4	Graphic Score	PASS	4221
5	HDD Score	PASS	8202

5.7 AQUAMARK3

Test Environment
Intel® Core™ i7-3770 3.40GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	GFX	PASS	7173
2	CPU	PASS	24503
3	AquaMark3 TRISCORE	PASS	62581

Test Environment
Intel® Core™ i5-3550S 3.0GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	GFX	PASS	6069
2	CPU	PASS	23395
3	AquaMark3 TRISCORE	PASS	53731

Test Environment

Intel® Core™ i5-2310 2.90GHz
Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F)
Western Digital WD10EALX-009BA0 1.0TB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	GFX	PASS	5358
2	CPU	PASS	19859
3	AquaMark3 TRISCORE	PASS	47208

Test Environment

Intel® Pentium® Processor G850 2.90GHz
Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F)
Western Digital WD10EALX-009BA0 1.0TB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	GFX	PASS	5118
2	CPU	PASS	17419
3	AquaMark3 TRISCORE	PASS	44629

Test Environment

Intel® Celeron® Processor G540 2.50GHz
Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F)
Western Digital WD10EALX-009BA0 1.0TB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	GFX	PASS	4527
2	CPU	PASS	14814
3	AquaMark3 TRISCORE	PASS	39284

Test Environment

Intel® Pentium® Processor G2120 3.10GHz
Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F)
Western Digital WD10EALX-009BA0 1.0TB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	GFX	PASS	5307
2	CPU	PASS	19008
3	AquaMark3 TRISCORE	PASS	46582

5.8 CINEBENCH

Test Environment
Intel® Core™ i7-3770 3.40GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	OpenGL	PASS	12.73 fps
2	CPU	PASS	7.03 pts

Test Environment
Intel® Core™ i5-3550S 3.0GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	OpenGL	PASS	9.13 fps
2	CPU	PASS	5.00 pts

Test Environment

Intel® Core™ i5-2310 2.90GHz
Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F)
Western Digital WD10EALX-009BA0 1.0TB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	OpenGL	PASS	6.24 fps
2	CPU	PASS	4.31 pts

Test Environment

Intel® Pentium® Processor G850 2.90GHz
Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F)
Western Digital WD10EALX-009BA0 1.0TB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	OpenGL	PASS	6.24 fps
2	CPU	PASS	2.06 pts

Test Environment

**Intel® Celeron® Processor G540 2.50GHz
Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F)
Western Digital WD10EALX-009BA0 1.0TB**

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	OpenGL	PASS	5.51 fps
2	CPU	PASS	1.76 pts

Test Environment

**Intel® Pentium® Processor G2120 3.10GHz
Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F)
Western Digital WD10EALX-009BA0 1.0TB**

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	OpenGL	PASS	8.32 fps
2	CPU	PASS	2.33 pts

5.9 ZD CPUMARK

Test Environment
Intel® Core™ i7-3770 3.40GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	SCORE	PASS	610

Test Environment
Intel® Core™ i5-3550S 3.0GHz Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F) Western Digital WD10EALX-009BA0 1.0TB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	SCORE	PASS	578

Test Environment

Intel® Core™ i5-2310 2.90GHz
Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F)
Western Digital WD10EALX-009BA0 1.0TB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	SCORE	PASS	489

Test Environment

Intel® Pentium® Processor G850 2.90GHz
Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F)
Western Digital WD10EALX-009BA0 1.0TB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	SCORE	PASS	445

Test Environment

Intel® Celeron® Processor G540 2.50GHz
Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F)
Western Digital WD10EALX-009BA0 1.0TB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	SCORE	PASS	382

Test Environment

Intel® Pentium® Processor G2120 3.10GHz

Kingston DDR3 1600 8GBx2 (ELPIDA J4208BBBG-GN-F)

Western Digital WD10EALX-009BA0 1.0TB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	SCORE	PASS	487

5.10 Storage Performance

5.10.1 HDD

Test environment:

OS Windows XP professional SP2

Program (HD Tune)

HDD Model	Interface	Capacity	Average	Burst Rate	Access time
Western Digital WD5000AAKS-00V1A0	SATA	500 GB	100.6 MB/sec	196.9 MB/sec	15.4 ms
Western Digital WD10EALX-009BA0	SATA	1.0TB	99.8 MB/sec	147.9 MB/sec	13.4 ms
Solid State Disk 2.5" SATAII 32G (BIWIN)	SATA	32 GB	134.0 MB/sec	101.4 MB/sec	0.142 ms
USB 2.0 Flash Disk	USB	2 GB	15.7 MB/sec	16.4 MB/sec	7.46 ms
JetFlash Transcend	USB	16 GB	21.0 MB/sec	26.3 MB/sec	0.997 ms

OS Windows 7 (32Bit)

Program (HD Tune)

HDD Model	Interface	Capacity	Average	Burst Rate	Access time
Western Digital WD5000AAKS-00V1A0	SATA	500 GB	99.8 MB/sec	254.6 MB/sec	15.5 ms
Western Digital WD10EALX-009BA0	SATA	1.0TB	104.1 MB/sec	165.6 MB/sec	13.1 ms
Solid State Disk 2.5" SATAII 32G (BIWIN)	SATA	32 GB	143.0 MB/sec	101.4 MB/sec	0.120 ms
USB 2.0 Flash Disk	USB	2 GB	16.7 MB/sec	17.0 MB/sec	0.485 ms
JetFlash Transcend	USB	16 GB	23.9 MB/sec	31.6 MB/sec	0.698 ms
Kingston DT HyperX3.0(64GB)	USB3.0	64 GB	279.6 MB/sec	120.2 MB/sec	0.453 ms

5.10.2 CD-ROM

Test environment:

OS Windows XP professional SP2

Program (NERO)

CD-ROM Model	Interface	Average Speed	Full Read	Burst Rate	CD
ASUS DRW-24D1ST	SATA	30.79 x	159 ms	38 MB/s	52 X CD-R
LITEON iHES312-33 3	SATA	35.80 x	162 ms	51 MB/s	X CD-R
BUFFALD DVSM-PC58U2VB	USB	18.58x	270ms	17 MB/s	52X CD-R
LITEON DVD ETAU108	USB	18.52 x	245 ms	16 MB/s	52X CD-R