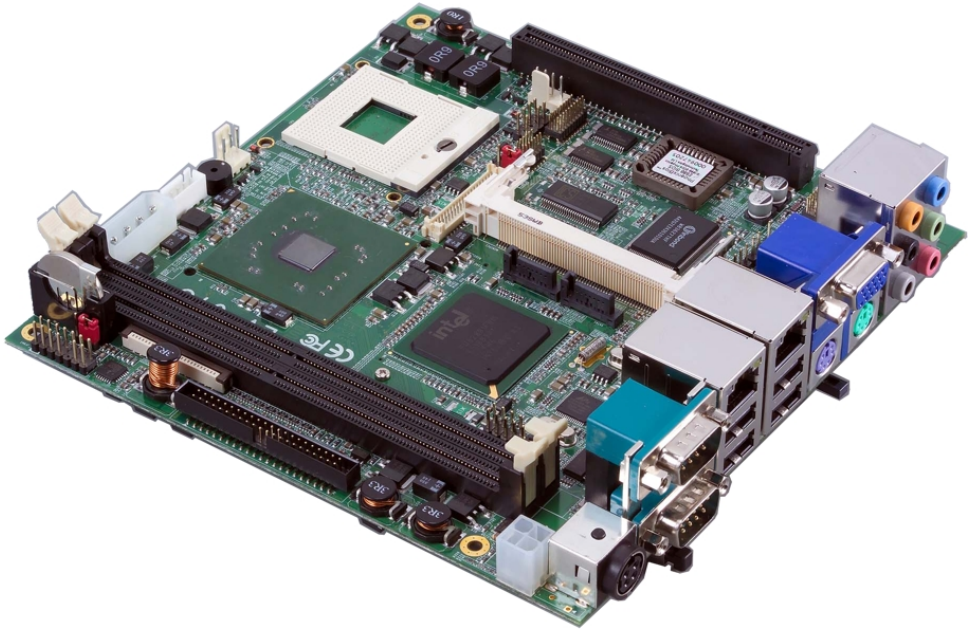


# Product Test Report



<b>Product Name</b>	<b>LV-673</b>
<b>Product Version</b>	<b>F</b>
<b>Issued Date</b>	<b>27.Jan.2010</b>
<b>Report Edition</b>	<b>1.1</b>
<b>BIOS Version</b>	<b>1.7</b>
<b>Testing Engineer</b>	<b>DYAN/RICK</b>
<b>Check Engineer</b>	<b>JAY</b>

**REVISION HISTORY**

<b>DATE</b>	<b>REVISION NO.</b>	<b>PAGE</b>	<b>DESCRIPTONS</b>
<b>25.Nov.2005</b>	<b>Ver. 1.0</b>	<b>34</b>	<b>Initial Release.</b>
<b>27.Jan.2010</b>	<b>Ver. 1.1</b>	<b>61</b>	<b>1.New BIOS &amp; hardware function. 2.Vibration test. 3.Environment test revision.</b>

# Index

<b>1.Function test.....</b>	<b>5</b>
1.1Hardware function.....	5
1.2 BIOS function .....	7
1.3 Driver .....	9
<b>2. Compatibility test .....</b>	<b>10</b>
2.1 CPU Test.....	10
2.2 Operation System Test .....	11
2.3 Memory Test .....	12
2.4 VGA Graphic Quality Test.....	13
2.5 Audio .....	14
2.6 HDD Test .....	16
2.7 CD-ROM Test .....	17
2.8 USB device Test .....	18
2.9 Serial Port Test .....	20
2.10 Floppy Drive Test .....	22
2.11 PS2 Keyboard 、 Mouse Test.....	23
2.12 LAN Test.....	25
2.13 Power Supply Test .....	26
2.14 Extended interface compatibility test .....	26
<b>3. Environmental test .....</b>	<b>27</b>
3.1 Temperature Test.....	27
3.2 Thermal measurements at various points on the board .....	30
<b>4.Reliability Test .....</b>	<b>33</b>
4.1 Power Consumption Test .....	33
<b>5. Performance Test .....</b>	<b>36</b>
5.1 Business Win Stone 2002.....	36
5.2 Business Win Stone 2004.....	38
5.3 Content Creation Winstone 2004.....	40

<b>5.4 3D MARK(2000、2001、2003、2005)</b> .....	<b>42</b>
<b>5.5 3D MARK2006</b> .....	<b>45</b>
<b>5.6 PC MARK2002</b> .....	<b>48</b>
<b>5.7 PC MARK2004</b> .....	<b>51</b>
<b>5.8 PC MARK2005</b> .....	<b>54</b>
<b>5.9 Storage Performance</b> .....	<b>57</b>
<b>5.10 Vibration Test</b> .....	<b>61</b>

# 1.Function test

## 1.1Hardware function

### Base Function Test

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

<b>25</b>	<b>IrDA</b>	<b>PASS</b>
<b>26</b>	<b>SPDIF</b>	<b>PASS</b>
<b>27</b>	<b>DC_IN</b>	<b>PASS</b>
<b>28</b>	<b>CF</b>	<b>PASS</b>
<b>29</b>	<b>CARDBUS</b>	<b>PASS</b>

## **Jumper**

<b>Item</b>	<b>Description</b>	<b>Result</b>
<b>1</b>	<b>JRTC</b>	<b>PASS</b>
<b>2</b>	<b>JVLCD</b>	<b>PASS</b>

## 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	Quick Power On Self Test	PASS	
6	Boot Device Setting	PASS	
7	Boot Up Num Lock Status	PASS	
8	ACPI Suspend Type	PASS	
9	Halt On	PASS	
10	Onboard Serial Port	PASS	
11	USB Keyboard Support	PASS	
12	Soft-Off by PWRBTN	PASS	
13	Power On Function	PASS	
14	ACPI Function	PASS	
15	Onboard FDC Controller	PASS	
16	Hot Key Password	PASS	
17	Wake-Up by PCI Card	PASS	
18	Resume by Alarm	PASS	
19	Watch Dog Timer Select	PASS	
20	Init Display First	PASS	
21	Power On by Ring	PASS	
22	PWRON After PWR-Fail	PASS	
23	Set Supervisor Password	PASS	
24	Set User password	PASS	
25	UART Mode Select	PASS	
26	RxD , Txd Active	PASS	
27	IR Transmission Delay	PASS	

<b>28</b>	<b>UR2 duplex Mode</b>	PASS	
<b>29</b>	<b>Use IR Pins</b>	PASS	
<b>30</b>	<b>CPU Warning Temperature</b>	PASS	
<b>31</b>	<b>Shutdown Temperature</b>	PASS	
<b>32</b>	<b>USB KB Wake Up by S3</b>	PASS	
<b>33</b>	<b>Smart CPUFAN Temp.</b>	PASS	
<b>34</b>	<b>Onboard LAN Control</b>	PASS	
<b>35</b>	<b>Boot Display</b>	PASS	
<b>36</b>	<b>DVMT / FIXED Memory Size</b>	PASS	
<b>37</b>	<b>On-Chip Frame Buffer Size</b>	PASS	



## 1.3 Driver

### CD Edition : IPCI 1.9

#### 1. Windows XP SP2 Driver Test

Item	Description	Result	Version
1	Chipset Driver	PASS	8.0.1.1002
2	VGA Driver	PASS	6.14.10.4363
3	Audio Driver	PASS	5.10.0.5224
4	LAN Driver	PASS	7.21.1.3

#### 2. Windows 2000 SP4 Driver Test

Item	Description	Result	Version
1	Chipset Driver	PASS	8.0.1.1002
2	VGA Driver	PASS	6.14.10.4363
3	Audio Driver	PASS	5.10.0.5464
4	LAN Driver	PASS	7.21.1.3

#### 3. Windows Server 2003 Driver Test

Item	Description	Result	Version
1	Chipset Driver	PASS	8.0.1.1002
2	Audio Driver	PASS	5.10.0.5464
3	LAN Driver	PASS	7.21.1.3

## 2. Compatibility test

### 2.1 CPU Test

Test environment:

OS Windows XP professional SP2

Test program : PC MARK 2005

Spec	CPU Spec	Family	Processor	FSB	L2 Size	Result
<u>SL7SM</u>	2.00 GHz	Pentium M	760	533 MHz	2 MB	PASS
<u>SL86G</u>	1.60 GHz	Pentium M	730	533 MHz	2 MB	PASS

## 2.2 Operation System Test

Item	Description	Result	Remark
1	Windows 7	PASS	
2	Windows Server 2008	PASS	
3	Windows Vista 32 bit	PASS	
4	Windows XP SP2	PASS	
5	Windows Server 2003	PASS	
6	Windows 2000 SP4	PASS	
7	Ubuntu 9.04 (desktop 2.6.28-4.generic)	PASS	
8	Cent OS 4.5 (2.6.9-55.EL)	PASS	
9	Red hat 7.3 (2.4.18-3)	PASS	
10	Fedora 7 (2.6.21-1.3194.fc1)	PASS	

## 2.3 Memory Test

Test environment:

OS Windows XP professional SP2

Test program : PC MARK 2005

Manufacturer	Chip	Frequency	Capacity Mbytes	Result
Kingston	D1288TPFCGL25V	DDRII 800	2 GB	PASS
Kingston	D6408TR6CGL25U	DDRII 800	1 GB	PASS
Kingston	E5108AE-6E-E	DDRII 667	1 GB	PASS
Transcend	E1108AA-5C-E	DDRII 533	2 GB	PASS
Transcend	A3R12E3HEF	DDRII 800	1 GB	PASS
Transcend	K4T51083QC	DDRII 800	1 GB	PASS
A-DATA	E5108AB-6E-E	DDRII 667	1 GB	PASS
A-DATA	K4T56083QF-GC05	DDRII 533	256 MB	PASS

## 2.4 VGA Graphic Quality Test

Test environment:

OS Windows XP professional SP2

Driver version : 6.14.10.4363

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	
1920*1080	16 /32bit	PASS	

## 2.5 Audio

Test environment:

OS Windows XP professional SP2

Driver version : 5.10.0.5224

Item	Description	Result	Remark
1	2 CH	PASS	
2	4 CH	PASS	
3	5.1 CH	PASS	
4	7.1 CH	PASS	
5	Microphone	PASS	
6	LINE	PASS	
7	SPDIF OUT	PASS	
8	CDIN	PASS	

OS Windows Server 2000 SP4

Driver version : 5.10.0.5464

Item	Description	Result	Remark
1	2 CH	PASS	
2	4 CH	PASS	
3	5.1 CH	PASS	
4	7.1 CH	PASS	
5	Microphone	PASS	
6	LINE	PASS	
7	SPDIF OUT	PASS	
8	CDIN	PASS	

## OS Windows Server 2003

Driver version : 5.10.0.5464

Item	Description	Result	Remark
1	2 CH	PASS	
2	4 CH	PASS	
3	5.1 CH	PASS	
4	7.1 CH	PASS	
5	Microphone	PASS	
6	LINE	PASS	
7	SPDIF OUT	PASS	
8	CDIN	PASS	

## 2.6 HDD Test

Test environment:

OS Windows XP professional SP2

<b>MODEL</b>	<b>INTERFACE</b>	<b>Capacity</b>	<b>Size Detect</b>	<b>Data Transfer</b>
<b>HITACHI ST320413A</b>	<b>IDE</b>	<b>20 GB</b>	<b>PASS</b>	<b>PASS</b>
<b>Western Digital WD800BB-00JKC0</b>	<b>IDE</b>	<b>80 GB</b>	<b>PASS</b>	<b>PASS</b>
<b>Western Digital WD1600AAJS-22B4A0</b>	<b>SATA</b>	<b>160 GB</b>	<b>PASS</b>	<b>PASS</b>
<b>HITACHI HDS721616PLA380</b>	<b>SATA</b>	<b>160 GB</b>	<b>PASS</b>	<b>PASS</b>
<b>HITACHI HTS543216L9A</b>	<b>SATA</b>	<b>160 GB</b>	<b>PASS</b>	<b>PASS</b>
<b>Western Digital WD10EADS-00L5B1</b>	<b>SATA</b>	<b>1000 GB</b>	<b>PASS</b>	<b>PASS</b>



## 2.7 CD-ROM Test

Test environment:

OS Windows XP professional SP2

MODEL	INTERFACE	Detect	Data Transfer	PLAY DVD
PIONEER DVD-127P	IDE	PASS	PASS	PASS
SONY CDU4811	IDE	PASS	PASS	PASS
ATAPI LH-1P52N	IDE	PASS	PASS	PASS
ATAPI DVD-ROM 5810	IDE	PASS	PASS	PASS
ASUS DVD DRW-1814BLT	SATA	PASS	PASS	PASS
LG DVD GSA-H62L	SATA	PASS	PASS	PASS
LITEON DVD SOSC-2485KX	USB	PASS	PASS	PASS
LITEON DVD SOSW-833SX	USB	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 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	

#### 6. Windows 7

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	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 Server 2008

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

### 7. Windows 7

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

## 2.10 Floppy Drive Test

Floppy	Floppy Drive Detect	Floppy Data Transfer
TEAC FD-05HG	PASS	PASS
MITSUMI D353FUE	PASS	PASS
MITSUMI D353GUE	PASS	PASS

## 2.11 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 Server 2008

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

## 7. Windows 7

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



## 2.12 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	

## 2.13 Power Supply Test

Item	TYPE	Description	Result	Remark
1	ATX Power	CHANNEL WELL TECHNOLOGY CWT-300BS 300W	PASS	
2	ATX Power	Seventeam ST-300BKV 300W	PASS	
3	ATX Power	COOBEE0 B-300ATX 300W	PASS	

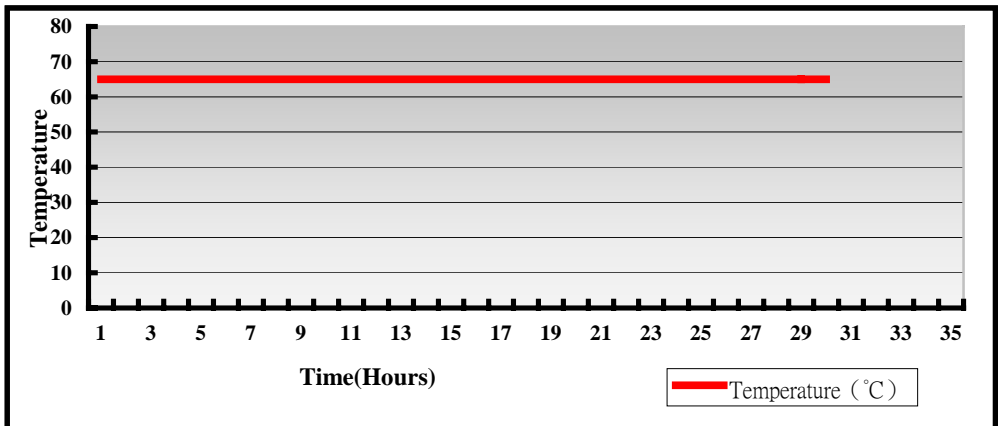
## 2.14 Extended interface compatibility test

Motherboard	PCI Express mini card	Remark
LV-673	MP-878D	PASS
LV-673	MP-323	PASS
LV-673	MP-541D	PASS
LV-673	MP-6100	PASS

### 3. Environmental test

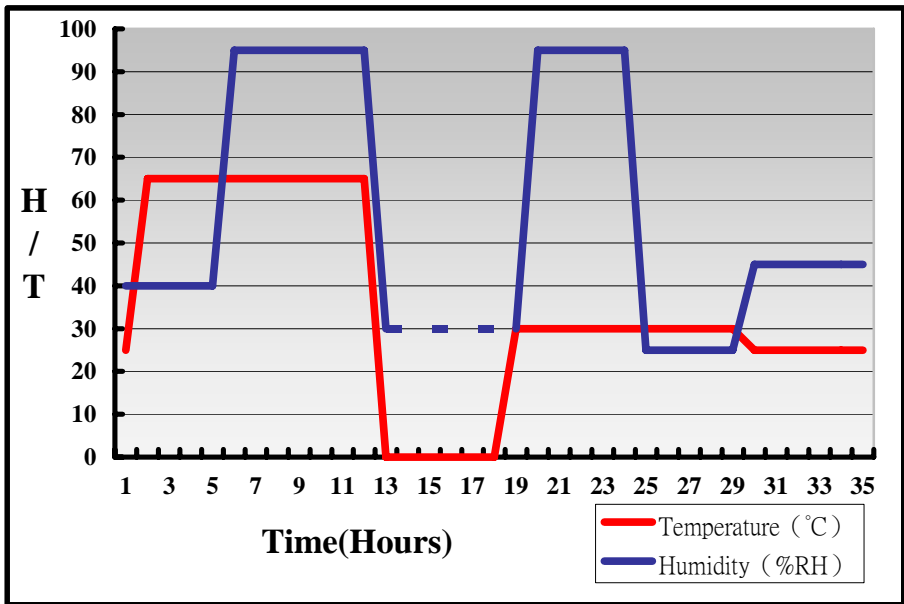
#### 3.1 Temperature Test

System Board	LV-673
CPU	Intel(R) Pentium(R) M Processor 730 1.6GHz
Memory	Transcend DDR2 533 2GB (E1108AA-5C-E)
Operating OS	Windows XP
Test Equipment	GIANT FORCE (GTH-150-60-CP-AR)
Test Program	3DMark 2003



## Hardware Device list:

System Board	LV-673
CPU	Intel(R) Pentium(R) M Processor 730 1.6GHz
Memory	Transcend DDR2 533 2GB (E1108AA-5C-E)
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:

<b>System Board</b>	<b>LV-673</b>
<b>CPU</b>	<b>Intel(R) Pentium(R) M Processor 730 1.6GHz</b>
<b>Memory</b>	<b>Transcend DDR2 533 2GB (E1108AA-5C-E)</b>
<b>HDD</b>	<b>Western Digital WD10EADS-00L5B1 1000GB</b>

<b>Temperature</b>	<b>Result</b>	<b>Remark</b>
<b>-40°C</b>	<b>PASS</b>	<b>50 Times</b>
<b>85°C</b>	<b>PASS</b>	<b>50 Times</b>

## 3.2 Thermal measurements at various points on the board

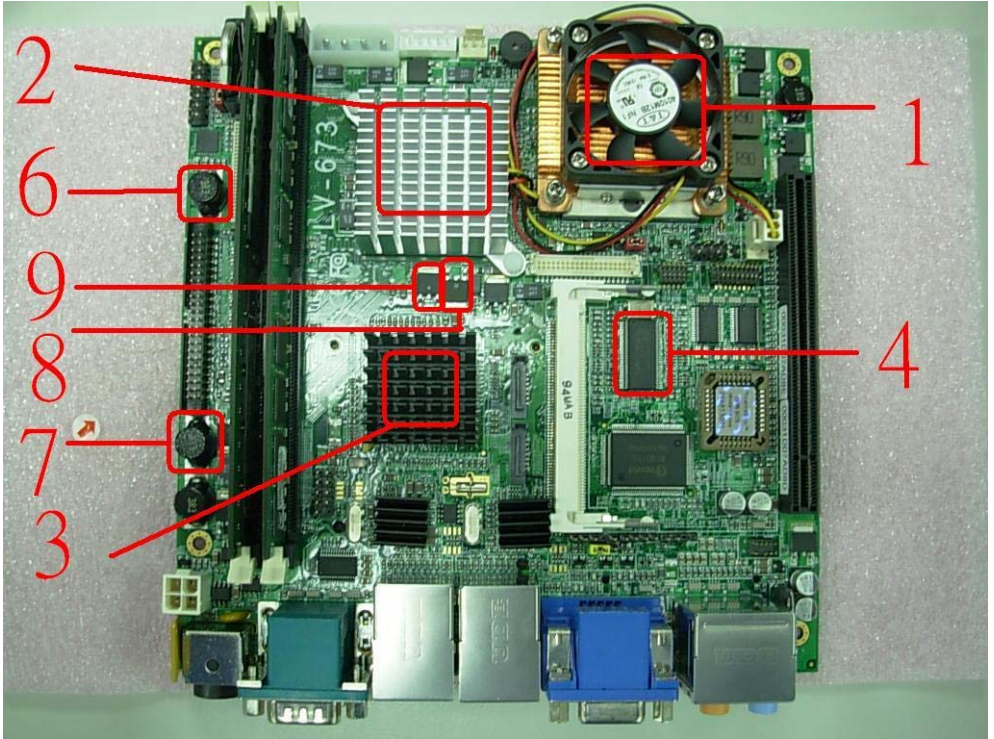
### Test Environment :

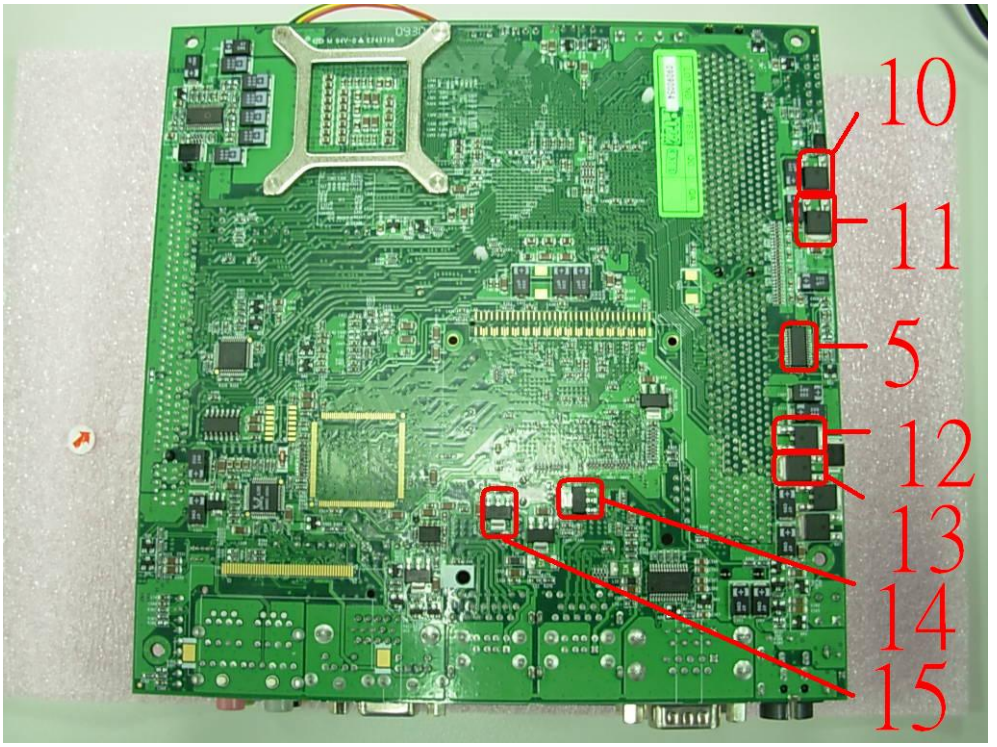
<b>CPU</b>	Intel(R) Pentium(R) M Processor 760 2GHz
<b>Memory</b>	Kingston DDR2 800 1GB (D6408TR6CGL25U) Kingston DDR2 667 1GB (E5108AE-6E-E)
<b>HDD</b>	Western Digital WD2500AAJS-00B4A0 250GB
<b>Power</b>	CHANNEL WELL TECHNOLOGY CWT-300BS
<b>Operating System</b>	Windows XP
<b>Test Program</b>	3DMARK 2003

### Test Result:

Item	Environmental temperature	22.6°C
1	CPU	40.9°C
2	915GME(Northbridge)	47.9°C
3	ICH6-M(Southbridge)	54.9°C
4	U5(ICS984128)	63.1°C
5	U16(ISL6227CAZ)	58°C
6	LC4(3R3(1311,SMD))	68.3°C
7	LC5(3R3(1311,SMD))	58.7°C
8	Q12(IRFR3711Z(TO252))	61.9°C
9	Q13(IRFR3711Z(TO252))	59.3°C
10	Q25(IRFR3711Z(TO252))	58.3°C
11	Q26(IRFR3711Z(TO252))	59.1°C
12	Q31(IRFR3711Z(TO252))	58.4°C

13	Q32(IRFR3711Z(TO252))	58.7°C
14	Q34(BCP69(SOT223))	62°C
15	Q36(BCP69(SOT223))	58.8°C





10

11

5

12

13

14

15



## 4. Reliability Test

### 4.1 Power Consumption Test

#### 1. Test Environment:

Motherboard	LV-673
CPU	Intel(R) Pentium(R) M Processor 760 2GHz
Memory	Kingston DDR2 800 1GB (D6408TR6CGL25U) Kingston DDR2 667 1GB (E5108AE-6E-E)
HDD	Western Digital WD2500AAJS-00B4A0 250GB
Test OS	Windows XP

#### DC Power Supply: GWINSTEK SPS-3610

Voltage	Boot up		3DMARK 2003	
	Current ( A )	Power ( W )	Current ( A )	Power ( W )
12V	3.74	44.88	4.24	50.88

#### 1.a. Test Environment:

The same as above but with LCD panel

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

#### DC Power Supply: GWINSTEK SPS-3610

Voltage	Boot up		3DMARK 2003	
	Current ( A )	Power ( W )	Current ( A )	Power ( W )
12V	5.23	62.76	5.81	69.72

## 2.Test Environment:

<b>Motherboard</b>	LV-673
<b>CPU</b>	Intel(R) Pentium(R) M Processor 760 2GHz
<b>Memory</b>	Transcend DDR2 800 1GB (A3R12E3HEF) Transcend DDR2 800 1GB (K4T51083QC)
<b>HDD</b>	Western Digital WD2500AAJS-00B4A0 250GB
<b>Test OS</b>	Windows XP

### DC Power Supply: GWINSTEK SPS-3610

Voltage	Boot up		3DMARK 2003	
	Current ( A )	Power ( W )	Current ( A )	Power ( W )
12V	3.68	44.16	4.11	49.32

## 2.a.Test Environment:

The same as above but with LCD panel

<b>Display Panel</b>	AUO M170EG01 17" LCD
----------------------	----------------------

### DC Power Supply: GWINSTEK SPS-3610

Voltage	Boot up		3DMARK 2003	
	Current ( A )	Power ( W )	Current ( A )	Power ( W )
12V	5.2	62.4	5.72	68.64

### 3.Test Environment:

<b>Motherboard</b>	LV-673
<b>CPU</b>	Intel(R) Pentium(R) M Processor 730 1.6GHz
<b>Memory</b>	Kingston DDR2 667 1GB (E5108AE-6E-E) Transcend DDR2 533 2GB (E1108AA-5C-E)
<b>HDD</b>	Hitachi HDS721616PLA380 160GB
<b>Test OS</b>	Windows XP

#### DC Power Supply: GWINSTEK SPS-3610

Voltage	Boot up		3DMARK 2003	
	Current ( A )	Power ( W )	Current ( A )	Power ( W )
12V	4	48	3.82	45.84

### 3.a.Test Environment:

The same as above but with LCD panel

<b>Display Panel</b>	AUO M170EG01 17" LCD
----------------------	----------------------

#### DC Power Supply: GWINSTEK SPS-3610

Voltage	Boot up		3DMARK 2003	
	Current ( A )	Power ( W )	Current ( A )	Power ( W )
12V	5.44	65.28	5.36	64.32

## 5. Performance Test

### 5.1 Business Win Stone 2002

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
<p><b>Business Win stone2002</b></p>	<p><b>Intel(R) Pentium(R) M Processor 760 2GHz Kingston DDR2 800 1GB (D6408TR6CGL25U) Kingston DDR2 667 1GB (E5108AE-6E-E) Western Digital WD10EADS-00L5B1 1000GB</b></p>	<p>PASS</p>	<p>41.9 39 42.1 41.2</p>
<p><b>Business Win stone2002</b></p>	<p><b>Intel(R) Pentium(R) M Processor 760 2GHz Transcend DDR2 800 1GB (A3R12E3HEF) Western Digital WD2500AAJS-00B4A0 250GB</b></p>	<p>PASS</p>	<p>41.2 40.2 41.2 39.7</p>
<p><b>Business Win stone2002</b></p>	<p><b>Intel(R) Pentium(R) M Processor 760 2GHz Transcend DDR2 800 1GB (K4T51083QC) A-DATA DDR2 667 1GB (E5108AB-6E-E) Western Digital WD2500AAJS-00B4A0 250GB</b></p>	<p>PASS</p>	<p>41.6 41.1 41.1 41</p>

<b>Business Win stone2002</b>	<b>Intel(R) Pentium(R) M Processor 730 1.6GHz Transcend DDR2 533 2GB (E1108AA-5C-E) Western Digital WD10EADS-00L5B1 1000GB</b>	<b>PASS</b>	<b>37.9 37.8 37.8 34.8</b>
-----------------------------------	--	-------------	--

## 5.2 Business Win Stone 2004

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
<p><b>Business Win stone2004</b></p>	<p>Intel(R) Pentium(R) M Processor 760 2GHz Kingston DDR2 800 1GB (D6408TR6CGL25U) Kingston DDR2 667 1GB (E5108AE-6E-E) Western Digital WD2500AAJS-00B4A0 250GB</p>	<p>PASS</p>	<p>21.3 21.7 21 21.6</p>
<p><b>Business Win stone2004</b></p>	<p>Intel(R) Pentium(R) M Processor 760 2GHz Transcend DDR2 800 1GB (A3R12E3HEF) Western Digital WD2500AAJS-00B4A0 250GB</p>	<p>PASS</p>	<p>22.1 21.8 21 22</p>
<p><b>Business Win stone2004</b></p>	<p>Intel(R) Pentium(R) M Processor 760 2GHz Transcend DDR2 800 1GB (K4T51083QC) A-DATA DDR2 667 1GB (E5108AB-6E-E) Western Digital WD2500AAJS-00B4A0 250GB</p>	<p>PASS</p>	<p>22.9 22.6 22.7 23.1</p>

<b>Business Win stone2004</b>	<b>Intel(R) Pentium(R) M Processor 730 1.6GHz Transcend DDR2 533 2GB (E1108AA-5C-E) Western Digital WD10EADS-00L5B1 1000GB</b>	<b>PASS</b>	20.5 20.1 20.9 19.6
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## 5.3 Content Creation Winstone 2004

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
<b>Content Creation Winstone 2004</b>	<b>Intel(R) Pentium(R) M Processor 760 2GHz Kingston DDR2 800 1GB (D6408TR6CGL25U) Kingston DDR2 667 1GB (E5108AE-6E-E) Western Digital WD2500AAJS-00B4A0 250GB</b>	<b>PASS</b>	<b>30.4 30.5 30.4 30.3</b>
<b>Content Creation Winstone 2004</b>	<b>Intel(R) Pentium(R) M Processor 760 2GHz Transcend DDR2 800 1GB (A3R12E3HEF) Western Digital WD2500AAJS-00B4A0 250GB</b>	<b>PASS</b>	<b>29.6 29.6 29.6 29.7</b>
<b>Content Creation Winstone 2004</b>	<b>Intel(R) Pentium(R) M Processor 760 2GHz Transcend DDR2 800 1GB (K4T51083QC) A-DATA DDR2 667 1GB (E5108AB-6E-E) Western Digital WD2500AAJS-00B4A0 250GB</b>	<b>PASS</b>	<b>30.2 30.2 30.1 30.2</b>



<b>Content Creation Winstone 2004</b>	<b>Intel(R) Pentium(R) M Processor 730 1.6GHz Transcend DDR2 533 2GB (E1108AA-5C-E) Western Digital WD10EADS-00L5B1 1000GB</b>	<b>PASS</b>	24.6 24.6 24.5 24.6
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## 5.4 3D MARK(2000、2001、2003、2005)

### Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2000 Scores	Intel(R) Pentium(R) M Processor 760 2GHz Kingston DDR2 800 2GB (D1288TPFCGL25V) Western Digital WD800BB-00JKC0 80GB	PASS	6269
3DMARK2001 Scores		PASS	4735
3DMARK2003 Scores		PASS	962
3DMARK2005 Scores		PASS	245

### Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2000 Scores	Intel(R) Pentium(R) M Processor 760 2GHz Kingston DDR2 800 1GB (D6408TR6CGL25U) Kingston DDR2 667 1GB (E5108AE-6E-E) Western Digital WD800BB-00JKC0 80GB	PASS	6600
3DMARK2001 Scores		PASS	5314
3DMARK2003 Scores		PASS	1030
3DMARK2005 Scores		PASS	273

**Windows XP SP2**

<b>WEIGHTED SUITE</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
<b>3DMARK2000 Scores</b>	<b>Intel(R) Pentium(R) M Processor 760 2GHz</b>	PASS	6213
<b>3DMARK2001 Scores</b>	<b>Transcend DDR2 800 1GB (A3R12E3HEF)</b>	PASS	4690
<b>3DMARK2003 Scores</b>	<b>A-DATA DDR2 533 256MB (K4T56083QF-GC05)</b>	PASS	938
<b>3DMARK2005 Scores</b>	<b>Western Digital WD2500AAJS-00B4A0 250GB</b>	PASS	243

**Windows XP SP2**

<b>WEIGHTED SUITE</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
<b>3DMARK2000 Scores</b>	<b>Intel(R) Pentium(R) M Processor 760 2GHz</b>	PASS	6591
<b>3DMARK2001 Scores</b>	<b>Transcend DDR2 800 1GB (K4T51083QC)</b>	PASS	5161
<b>3DMARK2003 Scores</b>	<b>A-DATA DDR2 667 1GB (E5108AB-6E-E)</b>	PASS	1520
<b>3DMARK2005 Scores</b>	<b>Western Digital WD2500AAJS-00B4A0 250GB</b>	PASS	265

## Windows XP SP2

<b>WEIGHTED SUITE</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
<b>3DMARK2000 Scores</b>	<b>Intel(R) Pentium(R) M Processor 730 1.6GHz Transcend DDR2 533 2GB (E1108AA-5C-E) Western Digital WD10EADS-00L5B1 1000GB</b>	PASS	6129
<b>3DMARK2001 Scores</b>		PASS	4449
<b>3DMARK2003 Scores</b>		PASS	935
<b>3DMARK2005 Scores</b>		PASS	243

## 5.5 3D MARK2006

### Windows XP SP2

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Scores	Intel(R) Pentium(R) M Processor 760 2GHz Kingston DDR2 800 2GB (D1288TPFCGL25V) Western Digital WD800BB-00JKC0 80GB	PASS	62
2	SM2.0 Scores		PASS	28
3	HDR/SM3.0 Scores		NO SUPPLY	N/A
4	CPU Scores		PASS	846

### Windows XP SP2

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Scores	Intel(R) Pentium(R) M Processor 760 2GHz Kingston DDR2 800 1GB (D6408TR6CGL25U) Kingston DDR2 667 1GB (E5108AE-6E-E) Western Digital WD800BB-00JKC0 80GB	PASS	67
2	SM2.0 Scores		PASS	31
3	HDR/SM3.0 Scores		NO SUPPLY	N/A
4	CPU Scores		PASS	846

### Windows XP SP2

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Scores	Intel(R) Pentium(R) M Processor 760 2GHz	PASS	67
2	SM2.0 Scores	Transcend DDR2 800 1GB (A3R12E3HEF)	PASS	31
3	HDR/SM3.0 Scores	A-DATA DDR2 533 256MB (K4T56083QF-GC05)	NO SUPPLY	N/A
4	CPU Scores	Western Digital WD2500AAJS-00B4A0 250GB	PASS	843

### Windows XP SP2

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Scores	Intel(R) Pentium(R) M Processor 760 2GHz	PASS	73
2	SM2.0 Scores	Transcend DDR2 800 1GB (K4T51083QC)	PASS	33
3	HDR/SM3.0 Scores	A-DATA DDR2 667 1GB (E5108AB-6E-E)	NO SUPPLY	N/A
4	CPU Scores	Western Digital WD2500AAJS-00B4A0 250GB	PASS	842

## Windows XP SP2

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Scores	<b>Intel(R) Pentium(R) M Processor 730 1.6GHz Transcend DDR2 533 2GB (E1108AA-5C-E) Western Digital WD10EADS-00L5B1 1000GB</b>	PASS	61
2	SM2.0 Scores		PASS	28
3	HDR/SM3.0 Scores		NO SUPPLY	N/A
4	CPU Scores		PASS	679

## 5.6 PC MARK2002

<b>Test Environment</b>
Intel(R) Pentium(R) M Processor 760 2GHz Kingston DDR2 800 2GB (D1288TPFCGL25V) Western Digital WD800BB-00JKC0 80GB

### Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	CPU test Scores	PASS	6795
2	Memory test Scores	PASS	12090
3	HDD test Scores	PASS	702

<b>Test Environment</b>
Intel(R) Pentium(R) M Processor 760 2GHz Kingston DDR2 800 1GB (D6408TR6CGL25U) Kingston DDR2 667 1GB (E5108AE-6E-E) Western Digital WD800BB-00JKC0 80GB

### Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	CPU test Scores	PASS	6794
2	Memory test Scores	PASS	12177
3	HDD test Scores	PASS	708



**Test Environment**

**Intel(R) Pentium(R) M Processor 760 2GHz  
Transcend DDR2 800 1GB (A3R12E3HEF)  
A-DATA DDR2 533 256MB (K4T56083QF-GC05)  
Western Digital WD2500AAJS-00B4A0 250GB**

**Windows XP SP2**

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>CPU test Scores</b>	PASS	6751
<b>2</b>	<b>Memory test Scores</b>	PASS	11952
<b>3</b>	<b>HDD test Scores</b>	PASS	2108

**Test Environment**

**Intel(R) Pentium(R) M Processor 760 2GHz  
Transcend DDR2 800 1GB (K4T51083QC)  
A-DATA DDR2 667 1GB (E5108AB-6E-E)  
Western Digital WD2500AAJS-00B4A0 250GB**

**Windows XP SP2**

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>CPU test Scores</b>	PASS	6753
<b>2</b>	<b>Memory test Scores</b>	PASS	12013
<b>3</b>	<b>HDD test Scores</b>	PASS	2006

**Test Environment**

**Intel(R) Pentium(R) M Processor 730 1.6GHz  
Transcend DDR2 533 2GB (E1108AA-5C-E)  
Western Digital WD10EADS-00L5B1 1000GB**

**Windows XP SP2**

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>CPU test Scores</b>	PASS	5411
<b>2</b>	<b>Memory test Scores</b>	PASS	10095
<b>3</b>	<b>HDD test Scores</b>	PASS	1982

## 5.7 PC MARK2004

<b>Test Environment</b>
Intel(R) Pentium(R) M Processor 760 2GHz Kingston DDR2 800 2GB (D1288TPFCGL25V) Western Digital WD800BB-00JKC0 80GB

### Windows XP PS2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Scores	PASS	3590
2	CPU test Scores	PASS	3924
3	Memory test Scores	PASS	3472
4	Graphic test Scores	PASS	913
5	HDD test Scores	PASS	3359

<b>Test Environment</b>
Intel(R) Pentium(R) M Processor 760 2GHz Kingston DDR2 800 1GB (D6408TR6CGL25U) Kingston DDR2 667 1GB (E5108AE-6E-E) Western Digital WD800BB-00JKC0 80GB

### Windows XP PS2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Scores	PASS	3588
2	CPU test Scores	PASS	3951
3	Memory test Scores	PASS	3525
4	Graphic test Scores	PASS	929
5	HDD test Scores	PASS	3365

**Test Environment**

**Intel(R) Pentium(R) M Processor 760 2GHz  
Transcend DDR2 800 1GB (A3R12E3HEF)  
A-DATA DDR2 533 256MB (K4T56083QF-GC05)  
Western Digital WD2500AAJS-00B4A0 250GB**

**Windows XP PS2**

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>PCMark Scores</b>	PASS	3539
<b>2</b>	<b>CPU test Scores</b>	PASS	3920
<b>3</b>	<b>Memory test Scores</b>	PASS	3439
<b>4</b>	<b>Graphic test Scores</b>	PASS	761
<b>5</b>	<b>HDD test Scores</b>	PASS	5464

**Test Environment**

**Intel(R) Pentium(R) M Processor 760 2GHz  
Transcend DDR2 800 1GB (K4T51083QC)  
A-DATA DDR2 667 1GB (E5108AB-6E-E)  
Western Digital WD2500AAJS-00B4A0 250GB**

**Windows XP PS2**

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>PCMark Scores</b>	PASS	N/A
<b>2</b>	<b>CPU test Scores</b>	PASS	3938
<b>3</b>	<b>Memory test Scores</b>	PASS	3479
<b>4</b>	<b>Graphic test Scores</b>	PASS	N/A
<b>5</b>	<b>HDD test Scores</b>	PASS	5464

**Test Environment**

**Intel(R) Pentium(R) M Processor 730 1.6GHz  
Transcend DDR2 533 2GB (E1108AA-5C-E)  
Western Digital WD10EADS-00L5B1 1000GB**

**Windows XP PS2**

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>PCMark Scores</b>	PASS	N/A
<b>2</b>	<b>CPU test Scores</b>	PASS	N/A
<b>3</b>	<b>Memory test Scores</b>	PASS	3070
<b>4</b>	<b>Graphic test Scores</b>	PASS	882
<b>5</b>	<b>HDD test Scores</b>	PASS	5736

## 5.8 PC MARK2005

<b>Test Environment</b>
Intel(R) Pentium(R) M Processor 760 2GHz Kingston DDR2 800 2GB (D1288TPFCGL25V) Western Digital WD800BB-00JKC0 80GB

### Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	System test Scores	PASS	2131
2	CPU test Scores	PASS	3227
3	Memory test Scores	PASS	2876
4	Graphic test Scores	PASS	823
5	HDD test Scores	PASS	2945

<b>Test Environment</b>
Intel(R) Pentium(R) M Processor 760 2GHz Kingston DDR2 800 1GB (D6408TR6CGL25U) Kingston DDR2 667 1GB (E5108AE-6E-E) Western Digital WD800BB-00JKC0 80GB

### Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	System test Scores	PASS	2158
2	CPU test Scores	PASS	3233
3	Memory test Scores	PASS	2894
4	Graphic test Scores	PASS	860
5	HDD test Scores	PASS	2899

**Test Environment**

**Intel(R) Pentium(R) M Processor 760 2GHz  
Transcend DDR2 800 1GB (A3R12E3HEF)  
A-DATA DDR2 533 256MB (K4T56083QF-GC05)  
Western Digital WD2500AAJS-00B4A0 250GB**

**Windows XP SP2**

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>System test Scores</b>	PASS	2370
<b>2</b>	<b>CPU test Scores</b>	PASS	3217
<b>3</b>	<b>Memory test Scores</b>	PASS	2859
<b>4</b>	<b>Graphic test Scores</b>	PASS	813
<b>5</b>	<b>HDD test Scores</b>	PASS	5893

**Test Environment**

**Intel(R) Pentium(R) M Processor 760 2GHz  
Transcend DDR2 800 1GB (K4T51083QC)  
A-DATA DDR2 667 1GB (E5108AB-6E-E)  
Western Digital WD2500AAJS-00B4A0 250GB**

**Windows XP SP2**

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>System test Scores</b>	PASS	N/A
<b>2</b>	<b>CPU test Scores</b>	PASS	3246
<b>3</b>	<b>Memory test Scores</b>	PASS	2889
<b>4</b>	<b>Graphic test Scores</b>	PASS	N/A
<b>5</b>	<b>HDD test Scores</b>	PASS	5878

**Test Environment**

**Intel(R) Pentium(R) M Processor 760 2GHz  
Transcend DDR2 533 2GB (E1108AA-5C-E)  
Western Digital WD10EADS-00L5B1 1000GB**

**Windows XP SP2**

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>System test Scores</b>	PASS	N/A
<b>2</b>	<b>CPU test Scores</b>	PASS	3206
<b>3</b>	<b>Memory test Scores</b>	PASS	2833
<b>4</b>	<b>Graphic test Scores</b>	PASS	821
<b>5</b>	<b>HDD test Scores</b>	PASS	5630

**Test Environment**

**Intel(R) Pentium(R) M Processor 730 1.6GHz  
Transcend DDR2 533 2GB (E1108AA-5C-E)  
Western Digital WD10EADS-00L5B1 1000GB**

**Windows XP SP2**

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>System test Scores</b>	PASS	N/A
<b>2</b>	<b>CPU test Scores</b>	PASS	2577
<b>3</b>	<b>Memory test Scores</b>	PASS	2525
<b>4</b>	<b>Graphic test Scores</b>	PASS	767
<b>5</b>	<b>HDD test Scores</b>	PASS	5584



## 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 ST320413A	IDE	20 GB	20.8 MB/sec	27 MB/sec	18.7 ms
Western Digital WD800BB-00JKC0	IDE	80 GB	27.8 MB/sec	29.3 MB/sec	13.8 ms
Western Digital WD1600AAJS-22B4A0	SATA	160 GB	83.9 MB/sec	63.2 MB/sec	15.7 ms
HITACHI HDS721616PLA380	SATA	160 GB	59.5 MB/sec	113.5 MB/sec	13.9 ms
HITACHI HTS543216L9A	SATA	160 GB	45.8 MB/sec	105.5 MB/sec	17.7 ms
Western Digital WD10EADS-00L5B1	SATA	1000 GB	69.9 MB/sec	99.7 MB/sec	14.1 ms

<b>TDK LoR Trans-It Drive</b>	<b>USB</b>	<b>4 GB</b>	16.7 MB/sec	17.8 MB/sec	0.8 ms
<b>Apacer USB FLASH DRIVE</b>	<b>USB</b>	<b>515 MB</b>	9.2 MB/sec	4.7 MB/sec	1.7 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
<b>PIONEER DVD-127P</b>	<b>IDE</b>	26.23 x	137 ms	23 MB/s	52 X CD-R
<b>SONY CDU4811</b>	<b>IDE</b>	15.67 x	124 ms	2 MB/s	52 X CD-R
<b>ATAPI LH-1P52N</b>	<b>IDE</b>	11.61 x	156 ms	2 MB/s	52 X CD-R
<b>ATAPI DVD-ROM 5810</b>	<b>IDE</b>	5.91 x	171 ms	25 MB/s	52 X CD-R
<b>LITE-ON SHW-1635S</b>	<b>IDE</b>	36.01 x	192 ms	23 MB/s	52 X CD-R
<b>ASUS DVD DRW-1814BLT</b>	<b>SATA</b>	26.21 x	172 ms	44 MB/s	52 X CD-R
<b>LG DVD GSA-H62L</b>	<b>SATA</b>	34.72 x	180 ms	39 MB/s	52 X CD-R

<b>LITEON DVD SOSC-2485KX</b>	<b>USB</b>	14.82 x	187 ms	22 MB/s	52X CD-R
<b>LITEON DVD SOSW-833SX</b>	<b>USB</b>	5.14 x	228 ms	21 MB/s	52X CD-R

## 5.10 Vibration Test

<b>Motherboard</b>	<b>LV-673</b>		
<b>Test Equipment</b>	<b>VS-5060L</b>		
<b>Amplitude</b>	<b>Frequency</b>	<b>Time (1min/1Time)</b>	<b>Result</b>
<b>0.75mm</b>	<b>5 → 55 → 5 Hz</b>	<b>10</b>	<b>PASS</b>
<b>1.00mm</b>	<b>5 → 55 → 5 Hz</b>	<b>10</b>	<b>PASS</b>
<b>1.25mm</b>	<b>5 → 55 → 5 Hz</b>	<b>10</b>	<b>PASS</b>
<b>1.5mm</b>	<b>5 → 55 → 5 Hz</b>	<b>10</b>	<b>PASS</b>
<b>1.5mm</b>	<b>5 → 55 → 5 Hz</b>	<b>120</b>	<b>PASS</b>