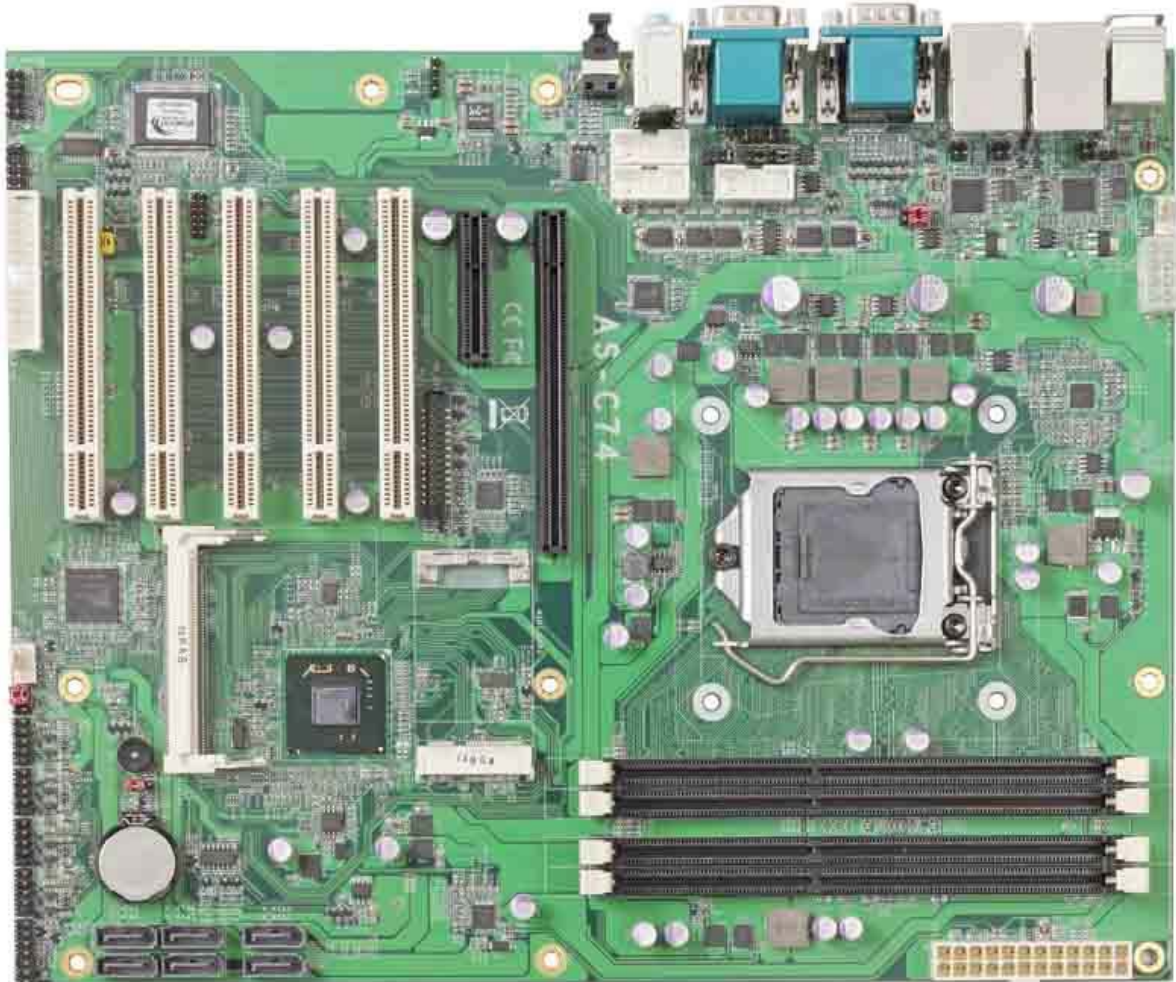


# Product Test Report



<b>Product Name</b>	<b>AS-C74</b>
<b>Product Version</b>	<b>A</b>
<b>Issued Date</b>	<b>2016.03.02</b>
<b>Report Edition</b>	<b>1.1</b>
<b>BIOS Version</b>	<b>2.0</b>
<b>Testing Engineer</b>	<b>PERRY</b>

<b>REVISION HISTORY</b>			
<b>DATE</b>	<b>REVISION NO.</b>	<b>PAGE</b>	<b>DESCRIPTONS</b>
<b>2011.09.28</b>	<b>Ver. 1.0</b>	<b>68</b>	<b>Initial Release</b>
<b>2016.03.02</b>	<b>Ver. 1.1</b>	<b>68</b>	<b>Add CPU Test (i7-3770&amp;i7-2600)</b>

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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	CPUFAN	Pass
6	SYSFAN	Pass
7	AUDIO	Pass
8	CN_AUDIO	Pass
9	LAN1	Pass
10	LAN2	Pass
11	DDRIII	Pass
12	SATA1/2/3/4/5/6	Pass
13	USB1/2/3/4/5/6/7/8	Pass
14	SPDIF	Pass
15	CN_DIO	Pass
16	CN_SMBUS	Pass
17	COM1/2/3/4/5/6	Pass
18	CD_IN	Pass
19	MINI_CRAD	Pass
20	MINIPCI	Pass
21	PCIEX16	Pass
22	PCIEX4	Pass

<b>23</b>	<b>CN_DVI</b>	Pass
<b>24</b>	<b>LPT</b>	Pass
<b>25</b>	<b>PCI</b>	Pass

### Jumper

<b>Item</b>	<b>Description</b>	<b>Result</b>
<b>1</b>	<b>JRTC</b>	Pass
<b>2</b>	<b>JAT</b>	Pass
<b>4</b>	<b>JP1</b>	Pass
<b>5</b>	<b>JP2</b>	Pass
<b>6</b>	<b>JCSEL1</b>	Pass
<b>7</b>	<b>JCSEL2</b>	Pass
<b>8</b>	<b>JVUSB1/2</b>	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	Halt On	Pass	
6	Boot priority order	Pass	
7	Keyboard Features Num Lock	Pass	
8	Console Redirection	Pass	
9	Shutdown Temperature	Pass	
10	CPU Warning Temperature	Pass	(BISO.Ver1.3)
11	Watch Dog Timer	Pass	
12	Set Supervisor Password	Pass	
13	Set User Password	Pass	
14	Diagnostic Splash Screen	Pass	
15	Diagnostic Summary Screen	Pass	
16	Active Processor Cores	Pass	
17	SATA Device	Pass	
18	DVMT Total GFX MEM	Pass	
19	IGD-Boot Type	Pass	
20	Power Control	Pass	
21	Memory Frequency	Pass	
22	HDD(AHCI)(XP)	Pass	
23	HDD(AHCI)(Win 7)	Pass	
24	HDD(RAID)(XP)	Pass	

Item	Description	Result	Remark
25	HDD(RAID)(Win 7)	Pass	
26	Power Loss	Pass	



## 1.3 Driver

### CD diction : IPCI4-1.0

#### 1. Windows XP 32 bit Driver Test

Item	Description	Result	version
1	Chipset Driver	Pass	9.2.0.1030
2	VGA Driver	Pass	6.14.10.5374
3	Audio Driver	Pass	6.0.1.6449
4	LAN Driver	Pass	11.7.32.0

#### 2. Windows XP 64 bit Driver Test

Item	Description	Result	version
1	Chipset Driver	Pass	9.2.0.1030
2	VGA Driver	Pass	6.14.10.5374
3	Audio Driver	Pass	6.0.1.6449
4	LAN Driver	Pass	11.11.43.0

#### 3. Windows 7 32 bit Driver Test

Item	Description	Result	version
1	Chipset Driver	Pass	9.2.0.1030
2	VGA Driver	Pass	8.15.10.2509
3	Audio Driver	Pass	6.0.1.6449
4	LAN Driver	Pass	11.11.43.0

#### 4. Windows 7 64 bit Driver Test

Item	Description	Result	version
1	Chipset Driver	Pass	9.2.0.1030
2	VGA Driver	Pass	8.15.10.2509
3	Audio Driver	Pass	6.0.1.6449
4	LAN Driver	Pass	11.11.43.0

#### 5. Windows Vista 32 bit Driver Test

Item	Description	Result	version
1	Chipset Driver	Pass	9.2.0.1030
2	VGA Driver	Pass	15.22.50.2509
3	Audio Driver	Pass	6.0.1.6449
4	LAN Driver	Pass	11.4.7.0

#### 6. Windows Vista 64 bit Driver Test

Item	Description	Result	version
1	Chipset Driver	Pass	9.2.0.1030
2	VGA Driver	Pass	8.15.10.2509
3	Audio Driver	Pass	6.0.1.6449
4	LAN Driver	Pass	11.4.7.0

#### 7. Windows 2008 32 bit Driver Test

Item	Description	Result	Version
1	Chipset Driver	Pass	9.2.0.1030
2	VGA Driver		
3	Audio Driver	Pass	6.0.1.6449
4	LAN Driver	Pass	11.11.43.0

## 8. Windows 2008 64 bit Driver Test

Item	Description	Result	Version
1	Chipset Driver	Pass	9.2.0.1030
2	VGA Driver		
3	Audio Driver	Pass	6.0.1.6449
4	LAN Driver	Pass	11.11.43.0

## 9. Windows Server 2003 32 bit Driver Test

Item	Description	Result	version
1	Chipset Driver	Pass	9.2.0.1030
2	VGA Driver		
3	Audio Driver	Pass	6.0.1.6449
4	LAN Driver	Pass	11.7.32.0

## 10. Windows Server 2003 64 bit Driver Test

Item	Description	Result	version
1	Chipset Driver	Pass	9.2.0.1030
2	VGA Driver		
3	Audio Driver	Pass	6.0.1.6449
4	LAN Driver	Pass	11.7.32.0

## 2. Compatibility test

### 2.1 CPU Test

Test environment:

OS: Windows XP professional SP2

Test program : PC MARK 2005

Spec	Clock Speed	Family	Processor	DMI	Cache Size	Result
<u>SR00Q</u>	3.10 GHz	Core	i5-2400	5 GT/s	6 MB	Pass
<u>SR02K</u>	2.9 GHz	Core	i5-2310	5 GT/s	6 MB	Pass
<u>SR00P</u>	3.40 GHz	Xeon	E31275	5 GT/s	8 MB	Pass
<u>SR05J</u>	2.5 GHz	Celeron	G540	5 GT/s	2 MB	Pass
<b><u>SR0PK</u></b>	<b>3.40 GHz</b>	<b>Core</b>	<b>i7-3770</b>	<b>5 GT/s</b>	<b>8 MB</b>	<b>PASS</b>
<b><u>SR00B</u></b>	<b>3.80 GHz</b>	<b>Core</b>	<b>i7-2600</b>	<b>5 GT/s</b>	<b>8 MB</b>	<b>PASS</b>

## 2.2 Memory Test

Test environment:

OS: Windows XP professional SP2

Test program : PC MARK 2005

Manufacturer	Chip	DDRII frequency	Capacity Mbytes	Memory test Source
Kingston	KHX1600 C9D3P1K2	DDRIII 1600	4GB	Pass
Kingston	KVR1333 D3N9	DDRIII 1333	4GB	Pass
Transcend	DIMM CL9	DDRIII 1333	2GB	Pass

## 2.3 VGA Graphic Quality Test

Test environment:

OS Windows XP professional SP2

Driver version : 6.14.10.5374

Resolution	Color	Result	Remark
800 x 600	16 /32bit	Pass	
1024 x 768	16 /32bit	Pass	
1152 x 864	16 /32bit	Pass	
1280 x 600	16 /32bit	Pass	
1280 x 720	16 /32bit	Pass	
1280 x 768	16 /32bit	Pass	
1280 x 800	16 /32bit	Pass	
1280 x 960	16 /32bit	Pass	
1280 x 1024	16 /32bit	Pass	
1360 x 768	16 /32bit	Pass	
1366 x 768	16 /32bit	Pass	
1400 x 1050	16 /32bit	Pass	
1440 x 900	16 /32bit	Pass	
1600 x 900	16 /32bit	Pass	
1600 x 1200	16 /32bit	Pass	
1600 x 1050	16 /32bit	Pass	
1792 x 1344	16 /32bit	Pass	
1920 x 1080	16 /32bit	Pass	

## 2.4 Audio

Test environment:

**OS Windows XP professional SP2**

**Driver version : 6.0.1.6449**

Item	Description	Result	Remark
1	2.1CH	Pass	
2	Microphone	Pass	
3	LINE	Pass	
4	CDIN	Pass	
5	SPDIF	Pass	

**OS Windows XP professional x64 Edition**

**Driver version : 6.0.1.6449**

Item	Description	Result	Remark
1	2.1CH	Pass	
2	Microphone	Pass	
3	LINE	Pass	
4	CDIN	Pass	
5	SPDIF	Pass	

## OS Windows 7 32 bit

Driver version : 6.0.1.6449

Item	Description	Result	Remark
1	2.1CH	Pass	
2	Microphone	Pass	
3	LINE	Pass	
4	CDIN	Pass	
5	SPDIF	Pass	

## OS Windows 7 64 bit

Driver version : 6.0.1.6449

Item	Description	Result	Remark
1	2.1CH	Pass	
2	Microphone	Pass	
3	LINE	Pass	
4	CDIN	Pass	
5	SPDIF	Pass	

## OS Windows Vista 32 bit

Driver version : 6.0.1.6449

Item	Description	Result	Remark
1	2.1CH	Pass	
2	Microphone	Pass	
3	LINE	Pass	
4	CDIN	Pass	
5	SPDIF	Pass	



## OS Windows Vista 64 bit

Driver version : 6.0.1.6449

Item	Description	Result	Remark
1	2.1CH	Pass	
2	Microphone	Pass	
3	LINE	Pass	
4	CDIN	Pass	
5	SPDIF	Pass	

## OS Windows 2008 32 bit

Driver version : 6.0.1.6449

Item	Description	Result	Remark
1	2.1CH	Pass	
2	Microphone	Pass	
3	LINE	Pass	
4	CDIN	Pass	
5	SPDIF	Pass	

## OS Windows 2008 64 bit

Driver version : 6.0.1.6449

Item	Description	Result	Remark
1	2.1CH	Pass	
2	Microphone	Pass	
3	LINE	Pass	
4	CDIN	Pass	
5	SPDIF	Pass	

## OS Windows SERVER 2003 32 bit

Driver version : 6.0.1.6449

Item	Description	Result	Remark
1	2.1CH	Pass	
2	Microphone	Pass	
3	LINE	Pass	
4	CDIN	Pass	
5	SPDIF	Pass	

## OS Windows SERVER 2003 64bit

Driver version : 6.0.1.6449

Item	Description	Result	Remark
1	2.1CH	Pass	
2	Microphone	Pass	
3	LINE	Pass	
4	CDIN	Pass	
5	SPDIF	Pass	

## 2.5 HDD Test

Test environment:

OS Windows XP professional SP2

HDD MODEL	INTERFACE	capacity	HDD Size Detect	HDD Data Transfer	HDD LED Check
Western Digital WD3200BEKT	2.5 SATA	320GB	Pass	Pass	Pass
Western Digital WD5000AAKS	3.5 SATA	500GB	Pass	Pass	Pass
Western Digital WD10EALX	3.5 SATA	1.0TB	Pass	Pass	Pass

## 2.6 CD-ROM Test

Test environment:

OS Windows XP professional SP2

<b>CD-ROM MODEL</b>	<b>INTERFACE</b>	<b>CD-ROM Detect</b>	<b>CD-ROM Data Transfer</b>	<b>PLAY DVD</b>
<b>PIONEER DVR-S19LBK</b>	<b>SATA</b>	Pass	Pass	Pass
<b>LG GH20NS15</b>	<b>SATA</b>	Pass	Pass	Pass
<b>LITEON DVD ETAU108</b>	<b>USB</b>	Pass	Pass	Pass

## 2.7 USB 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 XP 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 7 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	

#### 4. Windows 7 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 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	

#### 6. Windows Vista 64 bit

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

## 7. Windows 2008 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	

## 8. Windows 2008 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	

## 9. Windows Server 2003 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	

## 10. Windows Server 2003 64bit

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



## 2.8 Serial Port Test

### 1. MS-DOS

Item	Description	Result	Remark
1	RS-422	Pass	
2	RS-485	Pass	
3	CHKIT	Pass	

### 2. 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	

### 3. Windows XP 64 bit

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

### 4. Windows 7 32 bit

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

### 5. Windows 7 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 2008 32 bit

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

### 9. Windows 2008 64 bit

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

### 10. 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	

### 11. Windows Server 2003 64 bit

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

## 2.9 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

Item	Description	Result	Remark
1	Device Manager Check	Pass	
2	Keyboard Typing Test	Pass	
3	Mouse Detect Test	Pass	

### 3. Windows XP 64 bit

Item	Description	Result	Remark
1	Device Manager Check	Pass	
2	Keyboard Typing Test	Pass	
3	Mouse Detect Test	Pass	

### 4. Windows 7 32 bit

Item	Description	Result	Remark
1	Device Manager Check	Pass	
2	Keyboard Typing Test	Pass	
3	Mouse Detect Test	Pass	

### 5. Windows 7 64 bit

Item	Description	Result	Remark
1	Device Manager Check	Pass	
2	Keyboard Typing Test	Pass	
3	Mouse Detect Test	Pass	

### 6. Windows Vista 32 bit

Item	Description	Result	Remark
1	Device Manager Check	Pass	
2	Keyboard Typing Test	Pass	
3	Mouse Detect Test	Pass	

### 7. Windows Vista 64 bit

Item	Description	Result	Remark
1	Device Manager Check	Pass	
2	Keyboard Typing Test	Pass	
3	Mouse Detect Test	Pass	

### 8. Windows 2008 32 bit

Item	Description	Result	Remark
1	Device Manager Check	Pass	
2	Keyboard Typing Test	Pass	
3	Mouse Detect Test	Pass	

### 9. Windows 2008 64 bit

Item	Description	Result	Remark
1	Device Manager Check	Pass	
2	Keyboard Typing Test	Pass	
3	Mouse Detect Test	Pass	

### 10. Windows Server 2003 32 bit

Item	Description	Result	Remark
1	Device Manager Check	Pass	
2	Keyboard Typing Test	Pass	
3	Mouse Detect Test	Pass	

### 11. Windows Server 2003 64 bit

Item	Description	Result	Remark
1	Device Manager Check	Pass	
2	Keyboard Typing Test	Pass	
3	Mouse Detect Test	Pass	

## 2.10 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	(IPERF)
2	Data Transfer Test	PASS	(IPERF)

### 2. Windows XP 64 bit

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

### 3. Windows 7 32 bit

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

### 4. Windows 7 64 bit

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

## 5. Windows Vista 32 bit

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

## 6. Windows Vista 64 bit

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

## 7. Windows 2008 32 bit

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

## 8. Windows 2008 64 bit

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

## 9. Windows Server 2003

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



## 10. Windows Server 2003 64 bit

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

## 2.11 Power Supply Test

Item	TYPE	Description	Result	Remark
1	Snake	PK-350W	Pass	
2	High Power	250W	Pass	
3	Seven team	ST-300WAP	Pass	

## 2.12 Os Install

Item	Description	Result	Remark
1	Windows Server 2003	Pass	
2	Windows Server 2003 64 bit	Pass	
3	Windows XP SP2	Pass	
4	Windows XP 64 bit	Pass	
5	Windows Vista 32 bit	Pass	
6	Windows Vista 64 bit	Pass	
7	Windows 7 32 bit	Pass	
8	Windows 7 64 bit	Pass	
9	Windows 2008 32 bit	Pass	
10	Windows 2008 64 bit	Pass	
11	Fedora 15	Pass	
12	Fedora 13	Pass	
13	Ubuntu10.10	Pass	
14	Ubuntu11.04	Pass	

## 2.13 PCI Express Mini Card

Motherboard	PCI Express mini card	Remark
AS-C74	MPX-574D	PASS
AS-C74	MPX-3132	PASS(Diagnostic Summary Screen[Enabled]&PCIE Port7[Gn1])
AS-C74	MPX-643	PASS
AS-C74	MPX-954	PASS
AS-C74	MPX-954E	PASS
AS-C74	MPX-TOUCH	PASS
AS-C74	MPX-1040	PASS
AS-C74	MPX-827	PASS
AS-C74	MPX-7202	PASS
AS-C74	MPX-885	PASS
AS-C74	MPX-SDVOD	PASS

## 2.14 Mini PCI Card

<b>Motherboard</b>	<b>PCI Express mini card</b>	<b>Remark</b>
<b>AS-C74</b>	<b>MP-6816D2</b>	PASS
<b>AS-C74</b>	<b>MP-6816D</b>	PASS
<b>AS-C74</b>	<b>MP-954</b>	PASS
<b>AS-C74</b>	<b>MP-6100</b>	PASS
<b>AS-C74</b>	<b>MP-840</b>	PASS
<b>AS-C74</b>	<b>MP-6010</b>	PASS
<b>AS-C74</b>	<b>MP-541D</b>	PASS
<b>AS-C74</b>	<b>MP-541D2</b>	PASS
<b>AS-C74</b>	<b>MP-878D</b>	PASS
<b>AS-C74</b>	<b>MP-6802</b>	PASS
<b>AS-C74</b>	<b>MP-323</b>	PASS

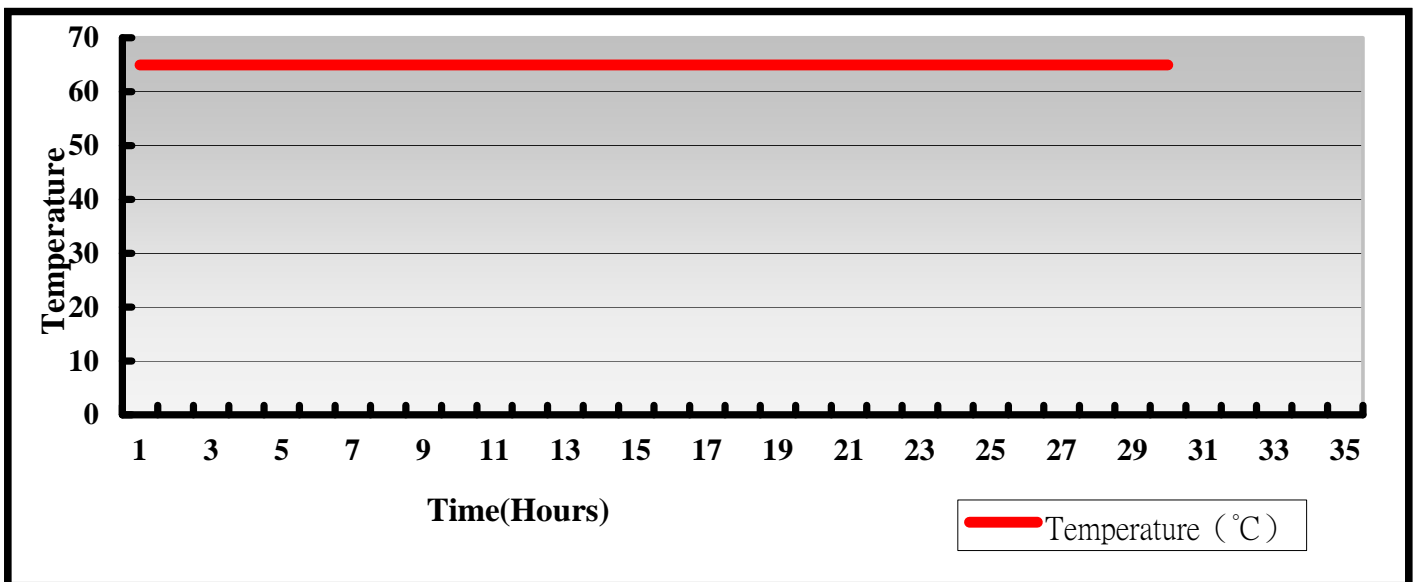
### 3. Environmental test

#### 3.1 Temperature Test

Hardware Device list:

System Board	AS – C74
CPU	Intel(R) Core(TM) CPU i5- 2310 2.90GHz
Memory	Kingston DDRIII 1600(KHX1600C9D3P1K2)8G
HDD	Western Digital 500GB (WD5000BEKT)
Operating OS	Windows XP SP2
Test Equipment	THERMOTRON 2800 Programmer/Controller
Test Program	3DMark 2003 + Prime95

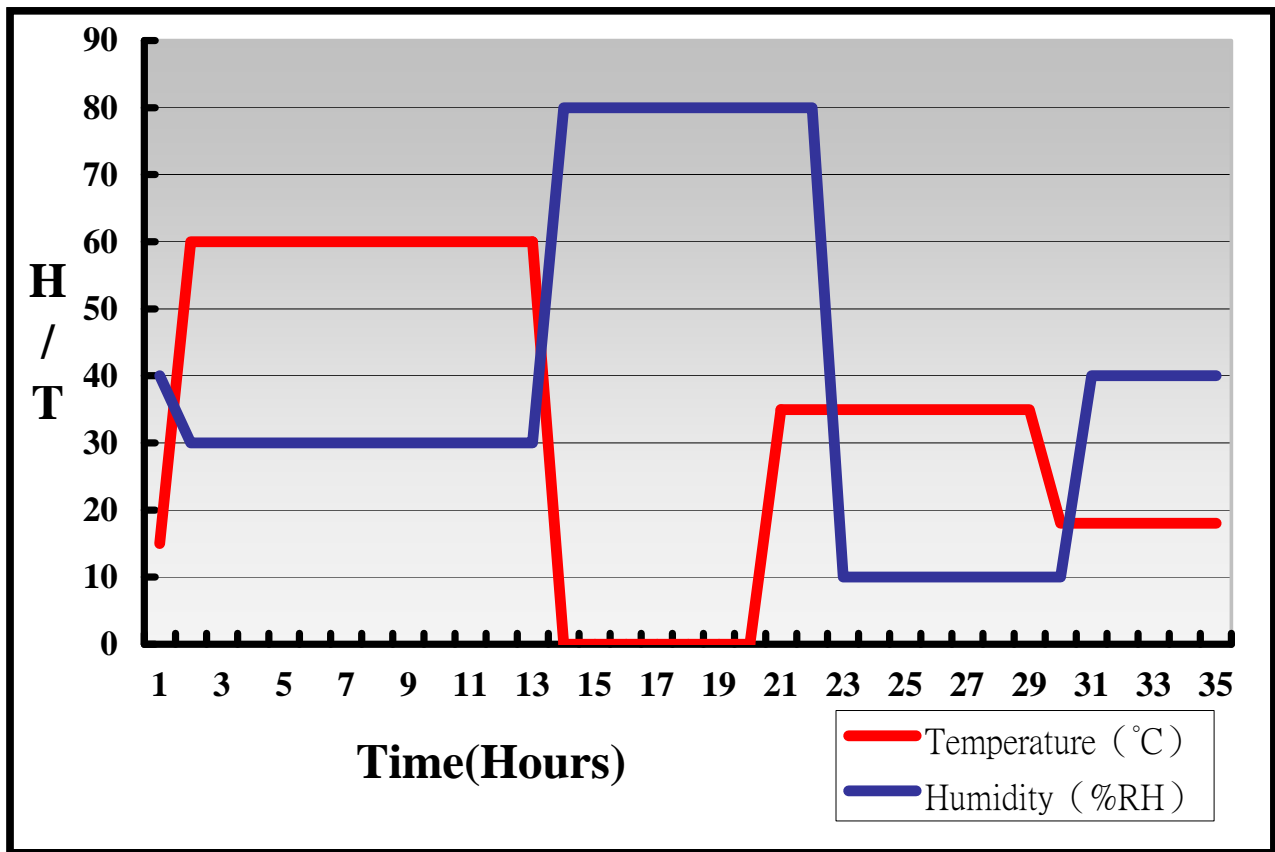
Test Result:



**Hardware Device list:**

<b>System Board</b>	<b>AS – C74</b>
<b>CPU</b>	<b>Intel(R) Core(TM) CPU i5- 2310 2.90GHz</b>
<b>Memory</b>	<b>Kingston DDRIII 1600(KHX1600C9D3P1K2)8G</b>
<b>HDD</b>	<b>Western Digital 500GB (WD5000BEKT)</b>
<b>Operating OS</b>	<b>Windows XP SP2</b>
<b>Test Equipment</b>	<b>THERMOTRON 2800 Programmer/Controller</b>
<b>Test Program</b>	<b>3DMark 2003 + Prime95</b>

**Test Result:**



## Boot up Test:

### Hardware Device list:

<b>System Board</b>	<b>AS – C74</b>
<b>CPU</b>	<b>Intel(R) Core(TM) CPU i5- 2310 2.90GHz</b>
<b>Memory</b>	<b>Kingston DDRIII 1600(KHX1600C9D3P1K2)8G</b>
<b>HDD</b>	<b>Western Digital 500GB (WD5000BEKT)</b>

<b>Temperature</b>	<b>Result</b>	<b>Remark</b>
<b>-40°C</b>	Pass	50 Times.
<b>65°C</b>	Pass	50 Times



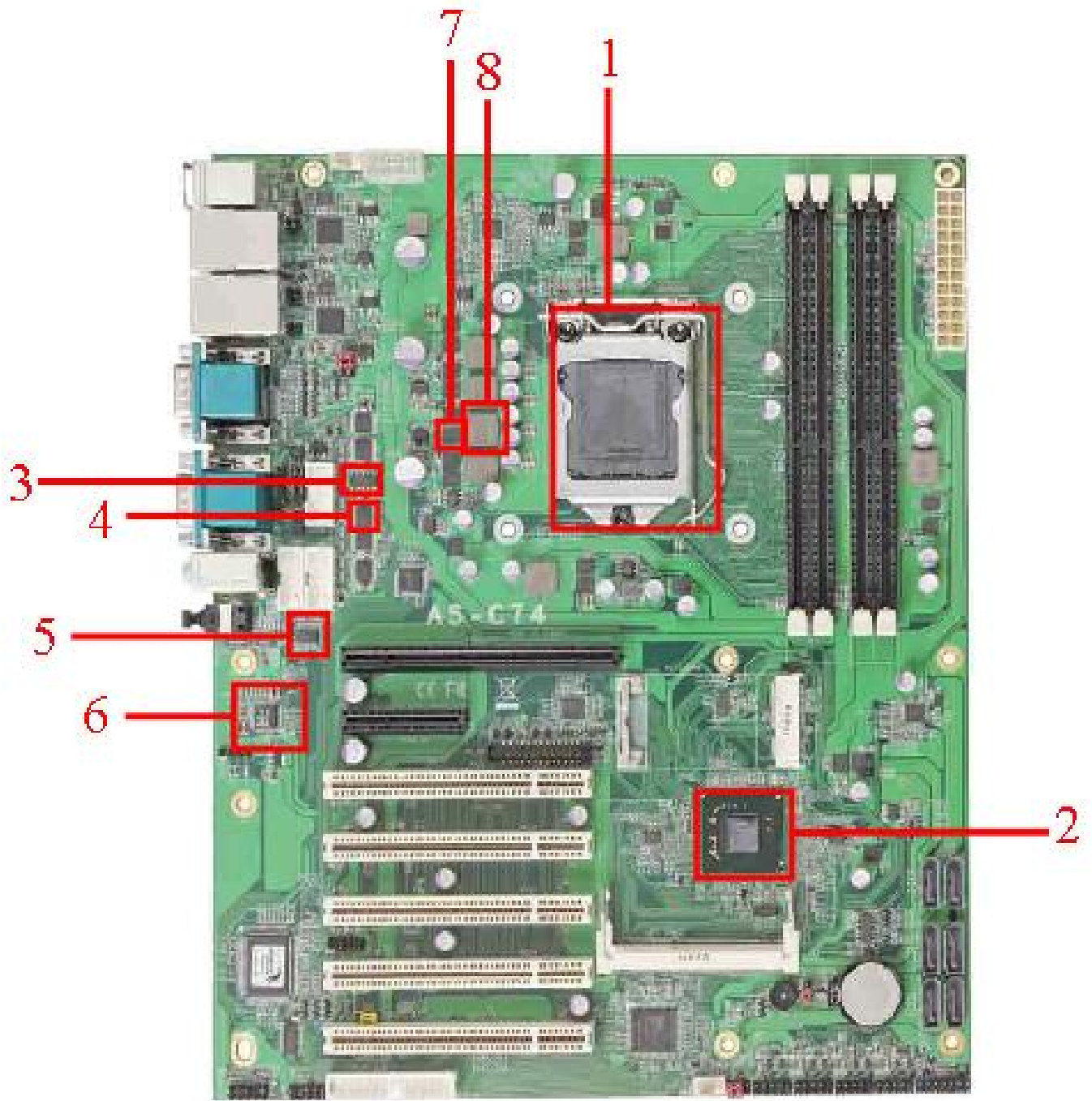
## 3.2 Thermal measurements at various points on the board

### Test Environment:

<b>CPU</b>	<b>Intel(R) Core(TM) CPU i5- 2310 2.90GHz</b>
<b>Memory</b>	<b>Kingston DDRIII 1600(KHX1600C9D3P1K2)8G</b>
<b>HDD</b>	<b>Western Digital 500GB (WD5000BEKT)</b>
<b>Power</b>	<b>SNAKE 350W (PK-350)</b>
<b>Operating System</b>	<b>Windows XP SP2</b>
<b>Test Program</b>	<b>3DMARK2003,Prime95</b>

### Test Result:

<b>Item</b>	<b>name</b>	<b>temperature</b>
<b>1</b>	<b>CPU</b>	<b>43.5°C</b>
<b>2</b>	<b>PCH</b>	<b>44.3°C</b>
<b>3</b>	<b>U20</b>	<b>46.6°C</b>
<b>4</b>	<b>U22</b>	<b>45.3°C</b>
<b>5</b>	<b>U28</b>	<b>46.7°C</b>
<b>6</b>	<b>U31</b>	<b>46.1°C</b>
<b>7</b>	<b>Q18</b>	<b>45.6°C</b>
<b>8</b>	<b>L7</b>	<b>52.7°C</b>



## 4. Reliability Test

### 4.1 Power Consumption Test

#### 1. Test Environment:

<b>Motherboard</b>	<b>AS-C74</b>
<b>CPU</b>	<b>Intel(R) Celeron (R) CPU G540 2.5 GHz</b>
<b>Memory</b>	<b>Kingston DDR3 1333 4G (KVR1333D3N9)x1</b>
<b>HDD</b>	<b>Western Digital 500GB (WD5000AAKS)</b>

#### (A) Power Supply: snake 350W

<b>Voltage</b>	<b>MS-DOS Boot up</b>		<b>Windows XP SP2 BurnIn6.0 + p64v266</b>	
	<b>Current ( A )</b>	<b>Power ( W )</b>	<b>Current ( A )</b>	<b>Power ( W )</b>
<b>12V</b>	<b>1.97</b>	<b>23.64</b>	<b>2.52</b>	<b>30.24</b>
<b>5V</b>	<b>1.14</b>	<b>5.7</b>	<b>1.78</b>	<b>8.9</b>
<b>3.3V</b>	<b>0.71</b>	<b>2.343</b>	<b>2.52</b>	<b>8.316</b>
<b>5VSB</b>	<b>0.269</b>	<b>1.345</b>	<b>0.005</b>	<b>0.025</b>

## 1. a. Test Environment:

The same as above but with PCI-E Graphics card

Graphics card	GIGABYTE 7600GS 256MB
---------------	-----------------------

(A) Power Supply: snake 350W

Voltage	MS-DOS Boot up		Windows XP SP2 BurnIn6.0 + p64v266	
	Current ( A )	Power ( W )	Current ( A )	Power ( W )
12V	2.92	35.04	3.91	46.92
5V	1.11	5.55	1.49	7.45
3.3V	4.69	15.477	3.3	10.89
5VSB	0.268	1.34	0.009	0.045

## 2. Test Environment:

<b>Motherboard</b>	<b>AS-C74</b>
<b>CPU</b>	<b>Intel(R) Xeon(R) E31275 CPU 3.40 GHz</b>
<b>Memory</b>	<b>Kingston DDR3 1333 4G (KVR1333D3N9)x1</b>
<b>HDD</b>	<b>Western Digital 500GB (WD5000AAKS)</b>

### (A) Power Supply: snake 350W

Voltage	MS-DOS Boot up		Windows XP SP2 BurnIn6.0 + p64v266	
	Current ( A )	Power ( W )	Current ( A )	Power ( W )
<b>12V</b>	<b>4.75</b>	<b>57</b>	<b>7.55</b>	<b>90.6</b>
<b>5V</b>	<b>1.02</b>	<b>5.1</b>	<b>1.98</b>	<b>9.9</b>
<b>3.3V</b>	<b>2.97</b>	<b>9.801</b>	<b>2.94</b>	<b>9.702</b>
<b>5VSB</b>	<b>0.268</b>	<b>1.34</b>	<b>0.003</b>	<b>0.015</b>

### 3. Test Environment:

<b>Motherboard</b>	<b>AS-C74</b>
<b>CPU</b>	<b>Intel(R) Core(TM) i5-2400 CPU 3.10 GHz</b>
<b>Memory</b>	<b>Kingston DDR3 1333 4G (KVR1333D3N9)x1</b>
<b>HDD</b>	<b>Western Digital 500GB (WD5000AAKS)</b>

#### (A) Power Supply: snake 350W

Voltage	MS-DOS Boot up		Windows XP SP2 BurnIn6.0 + p64v266	
	Current ( A )	Power ( W )	Current ( A )	Power ( W )
<b>12V</b>	<b>3.53</b>	<b>42.36</b>	<b>7.05</b>	<b>84.6</b>
<b>5V</b>	<b>0.61</b>	<b>3.05</b>	<b>1.98</b>	<b>9.9</b>
<b>3.3V</b>	<b>2.98</b>	<b>9.834</b>	<b>3.23</b>	<b>10.659</b>
<b>5VSB</b>	<b>0.278</b>	<b>1.39</b>	<b>0.003</b>	<b>0.015</b>

### 3. a. Test Environment:

The same as above but with PCI-E Graphics card

Graphics card	GIGABYTE 7600GS 256MB
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(A) Power Supply: snake 350W

Voltage	MS-DOS Boot up		Windows XP SP2 BurnIn6.0 + p64v266	
	Current ( A )	Power ( W )	Current ( A )	Power ( W )
12V	4.5	54	8.12	97.44
5V	0.7	3.5	2.11	10.55
3.3V	3.19	10.527	4.52	14.916
5VSB	0.264	1.32	0.004	0.02

## 5. Performance Test

### 5.1 3D MARK(2001、2003、2005)

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Scores	<b>Intel(R) Celeron (R) CPU G540 2.5 GHz Kingston DDR3 1600 4G (KHX1600C9D3P1K2)x1 Western Digital 500GB (WD5000AAKS)</b>	Pass	10986
3DMARK2003 Scores		Pass	5698
3DMARK2005 Scores		Pass	3168

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Scores	<b>Intel(R) Celeron (R) CPU G540 2.5 GHz Kingston DDR3 1333 4G (KVR1333D3N9)x1 Western Digital 500GB (WD5000AAKS)</b>	Pass	10851
3DMARK2003 Scores		Pass	3682
3DMARK2005 Scores		Pass	3844



<b>WEIGHTED SUITE</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
<b>3DMARK2001 Scores</b>	<b>Intel(R) Core(TM) i5-2310</b> <b>CPU 2.90 GHz</b> <b>Kingston DDR3 1600 4G</b> <b>(KHX1600C9D3P1K2)x1</b> <b>Western Digital</b> <b>500GB</b> <b>(WD5000AAKS)</b>	Pass	14826
<b>3DMARK2003 Scores</b>		Pass	3079
<b>3DMARK2005 Scores</b>		Pass	2592

<b>WEIGHTED SUITE</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
<b>3DMARK2001 Scores</b>	<b>Intel(R) Core(TM) i5-2310</b> <b>CPU 2.90 GHz</b> <b>Kingston DDR3 1333 4G</b> <b>(KVR1333D3N9)x1</b> <b>Western Digital</b> <b>500GB</b> <b>(WD5000AAKS)</b>	Pass	14818
<b>3DMARK2003 Scores</b>		Pass	6721
<b>3DMARK2005 Scores</b>		Pass	4659

<b>WEIGHTED SUITE</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
<b>3DMARK2001 Scores</b>	<b>Intel(R) Core(TM) i5-2400 CPU 3.10 GHz Kingston DDR3 1600 4G (KHX1600C9D3P1K2)x1 Western Digital 500GB (WD5000AAKS)</b>	Pass	14999
<b>3DMARK2003 Scores</b>		Pass	6824
<b>3DMARK2005 Scores</b>		Pass	4728

<b>WEIGHTED SUITE</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
<b>3DMARK2001 Scores</b>	<b>Intel(R) Core(TM) i5-2400 CPU 3.10 GHz Kingston DDR3 1333 4G (KVR1333D3N9)x1 Western Digital 500GB (WD5000AAKS)</b>	Pass	14905
<b>3DMARK2003 Scores</b>		Pass	6751
<b>3DMARK2005 Scores</b>		Pass	4661

## 5.2 3D MARK2006

### Windows XP SP2

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Source	<b>Intel(R) Celeron (R) CPU G540 2.5 GHz Kingston DDR3 1600 4G (KHX1600C9D3P1K2) X1 Western Digital 500GB (WD5000AAKS)</b>	Pass	2070
2	SM2.0 Source		Pass	719
3	HDR/SM3.0 Source		Pass	768
4	CPU Source		Pass	2355

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Source	<b>Intel(R) Celeron (R) CPU G540 2.5 GHz Kingston DDR3 1333 4G (KVR1333D3N9)x1 Western Digital 500GB (WD5000AAKS)</b>	Pass	2348
2	SM2.0 Source		Pass	833
3	HDR/SM3.0 Source		Pass	863
4	CPU Source		Pass	2394

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Source	<b>Intel(R) Core(TM) i5-2310 CPU 2.90 GHz Kingston DDR3 1600 4G (KHX1600C9D3P1K2) X1 Western Digital 500GB (WD5000AAKS)</b>	Pass	1674
2	SM2.0 Source		Pass	595
3	HDR/SM3.0 Source		Pass	598
4	CPU Source		Pass	2190

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Source	<b>Intel(R) Core(TM) i5-2310 CPU 2.90 GHz Kingston DDR3 1333 4G (KVR1333D3N9)x1 Western Digital 500GB (WD5000AAKS)</b>	Pass	2201
2	SM2.0 Source		Pass	719
3	HDR/SM3.0 Source		Pass	818
4	CPU Source		Pass	5037

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Source	<b>Intel(R) Core(TM) i5-2400 CPU 3.10 GHz Kingston DDR3 1600 4G (KHX1600C9D3P1K2) X1 Western Digital 500GB (WD5000AAKS)</b>	Pass	2230
2	SM2.0 Source		Pass	727
3	HDR/SM3.0 Source		Pass	829
4	CPU Source		Pass	5297

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Source	<b>Intel(R) Core(TM) i5-2400 CPU 3.10 GHz Kingston DDR3 1333 4G (KVR1333D3N9)x1 Western Digital 500GB (WD5000AAKS)</b>	Pass	2938
2	SM2.0 Source		Pass	1004
3	HDR/SM3.0 Source		Pass	1063
4	CPU Source		Pass	5294

### 5.3 PC MARK2002

Test Environment
<b>Intel(R) Celeron (R) CPU G540 2.5 GHz Kingston DDR3 1600 (KHX1600C9D3P1K2) 4G Western Digital 500GB (WD5000AAKS)</b>

#### Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	CPU test Source	Pass	9959
2	Memory test Source	Pass	26506
3	HDD test Source	Pass	2541

Test Environment
<b>Intel(R) Celeron (R) CPU G540 2.5 GHz Kingston DDR3 1333 (KVR1333D3N9) 4G Western Digital 500GB (WD5000AAKS)</b>

#### Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	CPU test Source	Pass	10000
2	Memory test Source	Pass	27158
3	HDD test Source	Pass	2590

<b>Test Environment</b>
<b>Intel(R) Core(TM) CPU i5-2310 2.90 GHz Kingston DDR3 1600 (KHX1600C9D3P1K2) 4G Western Digital 500GB (WD5000AAKS)</b>

**Windows XP SP2**

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>CPU test Source</b>	Pass	12788
<b>2</b>	<b>Memory test Source</b>	Pass	50774
<b>3</b>	<b>HDD test Source</b>	Pass	2419

<b>Test Environment</b>
<b>Intel(R) Core(TM) CPU i5-2310 2.90 GHz Kingston DDR3 1333 (KVR1333D3N9) 4G Western Digital 500GB (WD5000AAKS)</b>

**Windows XP SP2**

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>CPU test Source</b>	Pass	12722
<b>2</b>	<b>Memory test Source</b>	Pass	51085
<b>3</b>	<b>HDD test Source</b>	Pass	2583

<b>Test Environment</b>
<b>Intel(R) Core(TM) CPU i5-2400 3.10 GHz Kingston DDR3 1600 (KHX1600C9D3P1K2) 4G Western Digital 500GB (WD5000AAKS)</b>

**Windows XP SP2**

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>CPU test Source</b>	Pass	13547
<b>2</b>	<b>Memory test Source</b>	Pass	54257
<b>3</b>	<b>HDD test Source</b>	Pass	2454

<b>Test Environment</b>
<b>Intel(R) Core(TM) CPU i5-2400 3.10 GHz Kingston DDR3 1333 (KVR1333D3N9) 4G Western Digital 500GB (WD5000AAKS)</b>

**Windows XP SP2**

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>CPU test Source</b>	Pass	13548
<b>2</b>	<b>Memory test Source</b>	Pass	53892
<b>3</b>	<b>HDD test Source</b>	Pass	2487



## 5.4 PC MARK2004

<b>Test Environment</b>
<b>Intel(R) Celeron (R) CPU G540 2.5 GHz Kingston DDR3 1600 (KHX1600C9D3P1K2) 4G Western Digital 500GB (WD5000AAKS)</b>

### Windows XP SP2

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>Memory test Source</b>	Pass	6793
<b>2</b>	<b>Graphic test Source</b>	Pass	2795
<b>3</b>	<b>HDD test Source</b>	Pass	5727

<b>Test Environment</b>
<b>Intel(R) Celeron (R) CPU G540 2.5 GHz Kingston DDR3 1333 (KVR1333D3N9) 4G Western Digital 500GB (WD5000AAKS)</b>

### Windows XP SP2

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>Memory test Source</b>	Pass	6793
<b>2</b>	<b>Graphic test Source</b>	Pass	2795
<b>3</b>	<b>HDD test Source</b>	Pass	5727

**Test Environment**

**Intel(R) Core(TM) CPU i5-2310 2.90 GHz  
Kingston DDR3 1600 (KHX1600C9D3P1K2) 4G  
Western Digital 500GB (WD5000AAKS)**

**Windows XP SP2**

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>Memory test Source</b>	Pass	10958
<b>2</b>	<b>Graphic test Source</b>	Pass	2345
<b>3</b>	<b>HDD test Source</b>	Pass	5678

**Test Environment**

**Intel(R) Core(TM) CPU i5-2310 2.90 GHz  
Kingston DDR3 1333 (KVR1333D3N9) 4G  
Western Digital 500GB (WD5000AAKS)**

**Windows XP SP2**

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>Memory test Source</b>	Pass	12246
<b>2</b>	<b>Graphic test Source</b>	Pass	3395
<b>3</b>	<b>HDD test Source</b>	Pass	5790

**Test Environment**

**Intel(R) Core(TM) CPU i5-2400 3.10 GHz  
Kingston DDR3 1600 (KHX1600C9D3P1K2) 4G  
Western Digital 500GB (WD5000AAKS)**

**Windows XP SP2**

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>Memory test Source</b>	Pass	12849
<b>2</b>	<b>Graphic test Source</b>	Pass	3687
<b>3</b>	<b>HDD test Source</b>	Pass	5853

**Test Environment**

**Intel(R) Core(TM) CPU i5-2400 3.10 GHz  
Kingston DDR3 1333 (KVR1333D3N9) 4G  
Western Digital 500GB (WD5000AAKS)**

**Windows XP SP2**

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>Memory test Source</b>	Pass	12744
<b>2</b>	<b>Graphic test Source</b>	Pass	3563
<b>3</b>	<b>HDD test Source</b>	Pass	5894

## 5.5 PC MARK2005

<b>Test Environment</b>
<b>Intel(R) Celeron (R) CPU G540 2.5 GHz Kingston DDR3 1600 (KHX1600C9D3P1K2) 4G Western Digital 500GB (WD5000AAKS)</b>

### Windows XP SP2

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
1	System test Source	Pass	5576
2	CPU test Source	Pass	6997
3	Memory test Source	Pass	6932
4	Graphic test Source	Pass	2527
5	HDD test Source	Pass	6778

<b>Test Environment</b>
<b>Intel(R) Celeron (R) CPU G540 2.5 GHz Kingston DDR3 1333 (KVR1333D3N9) 4G Western Digital 500GB (WD5000AAKS)</b>

### Windows XP SP2

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
1	System test Source	Pass	5379
2	CPU test Source	Pass	6993
3	Memory test Source	Pass	6868
4	Graphic test Source	Pass	2536
5	HDD test Source	Pass	6617

<b>Test Environment</b>
<b>Intel(R) Core(TM) CPU i5-2310 2.90 GHz Kingston DDR3 1600 (KHX1600C9D3P1K2) 4G Western Digital 500GB (WD5000AAKS)</b>

**Windows XP SP2**

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>System test Source</b>	Pass	4931
<b>2</b>	<b>CPU test Source</b>	Pass	7070
<b>3</b>	<b>Memory test Source</b>	Pass	8665
<b>4</b>	<b>Graphic test Source</b>	Pass	1701
<b>5</b>	<b>HDD test Source</b>	Pass	6963

<b>Test Environment</b>
<b>Intel(R) Core(TM) CPU i5-2310 2.90 GHz Kingston DDR3 1333 (KVR1333D3N9) 4G Western Digital 500GB (WD5000AAKS)</b>

**Windows XP SP2**

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>System test Source</b>	Pass	6893
<b>2</b>	<b>CPU test Source</b>	Pass	10963
<b>3</b>	<b>Memory test Source</b>	Pass	9236
<b>4</b>	<b>Graphic test Source</b>	Pass	3043
<b>5</b>	<b>HDD test Source</b>	Pass	6813

<b>Test Environment</b>
<b>Intel(R) Core(TM) CPU i5-2400 3.10 GHz Kingston DDR3 1600 (KHX1600C9D3P1K2) 4G Western Digital 500GB (WD5000AAKS)</b>

**Windows XP SP2**

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>System test Source</b>	Pass	6833
<b>2</b>	<b>CPU test Source</b>	Pass	11661
<b>3</b>	<b>Memory test Source</b>	Pass	9613
<b>4</b>	<b>Graphic test Source</b>	Pass	2814
<b>5</b>	<b>HDD test Source</b>	Pass	6873

<b>Test Environment</b>
<b>Intel(R) Core(TM) CPU i5-2400 3.10 GHz Kingston DDR3 1333 (KVR1333D3N9) 4G Western Digital 500GB (WD5000AAKS)</b>

**Windows XP SP2**

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>System test Source</b>	Pass	6883
<b>2</b>	<b>CPU test Source</b>	Pass	11665
<b>3</b>	<b>Memory test Source</b>	Pass	9555
<b>4</b>	<b>Graphic test Source</b>	Pass	2840
<b>5</b>	<b>HDD test Source</b>	Pass	6909

## 5.6 AQUAMARK3

<b>Test Environment</b>
<b>Intel(R) Celeron (R) CPU G540 2.5 GHz Kingston DDR3 1333 (KVR1333D3N9) 4G Western Digital 500GB (WD5000AAKS)</b>

Windows XP SP2

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>GFX</b>	Pass	3951
<b>2</b>	<b>CPU</b>	Pass	12692
<b>3</b>	<b>AquaMark3 TRISCORE</b>	Pass	34196

<b>Test Environment</b>
<b>Intel(R) Core(TM) CPU i5-2310 2.90 GHz Kingston DDR3 1600 (KHX1600C9D3P1K2) 4G Western Digital 500GB (WD5000AAKS)</b>

Windows XP SP2

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>GFX</b>	Pass	2034
<b>2</b>	<b>CPU</b>	Pass	13639
<b>3</b>	<b>AquaMark3 TRISCORE</b>	Pass	18927

**Test Environment**

**Intel(R) Core(TM) CPU i5-2400 3.10 GHz  
Kingston DDR3 1600 (KHX1600C9D3P1K2) 4G  
Western Digital 500GB (WD5000AAKS)**

**Windows XP SP2**

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>GFX</b>	Pass	5007
<b>2</b>	<b>CPU</b>	Pass	18551
<b>3</b>	<b>AquaMark3 TRISCORE</b>	Pass	44115



## 5.7 CINEBENCH

<b>Test Environment</b>
<b>Intel(R) Celeron (R) CPU G540 2.5 GHz Kingston DDR3 1600 (KHX1600C9D3P1K2) 4G Western Digital 500GB (WD5000AAKS)</b>

**Windows XP SP2**

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>GFX</b>	Pass	1.44 fps
<b>2</b>	<b>CPU</b>	Pass	1.74 pts

<b>Test Environment</b>
<b>Intel(R) Core(TM) CPU i5-2310 2.90 GHz Kingston DDR3 1600 (KHX1600C9D3P1K2) 4G Western Digital 500GB (WD5000AAKS)</b>

**Windows XP SP2**

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>OpenGL</b>	Pass	1.42 fps
<b>2</b>	<b>CPU</b>	Pass	1.61 pts

**Test Environment**

**Intel(R) Core(TM) CPU i5-2400 3.10 GHz  
Kingston DDR3 1600 (KHX1600C9D3P1K2) 4G  
Western Digital 500GB (WD5000AAKS)**

**Windows XP SP2**

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>GFX</b>	Pass	2.02 fps
<b>2</b>	<b>CPU</b>	Pass	4.62 pts

## 5.8 ZD CPUMARK

<b>Test Environment</b>
<b>Intel(R) Celeron (R) CPU G540 2.5 GHz Kingston DDR3 1333 (KVR1333D3N9) 4G Western Digital 500GB (WD5000AAKS)</b>

**Windows XP SP2**

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
1	SCORE	Pass	383

<b>Test Environment</b>
<b>Intel(R) Core(TM) CPU i5-2310 2.90 GHz Kingston DDR3 1600 (KHX1600C9D3P1K2) 4G Western Digital 500GB (WD5000AAKS)</b>

**Windows XP SP2**

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
1	SCORE	Pass	489

<b>Test Environment</b>
<b>Intel(R) Core(TM) CPU i5-2400 3.10 GHz Kingston DDR3 1600 (KHX1600C9D3P1K2) 4G Western Digital 500GB (WD5000AAKS)</b>

**Windows XP SP2**

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Result</b>	<b>Remark</b>
1	SCORE	Pass	520

## 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
Memoright STM-25 MRSAJ6C064GC125C00	SATA	64GB	152.7MB/sec	56.8MB/sec	0.2ms
Western Digital WD5000AAKS	SATA	500GB	88.9MB/sec	94.0MB/sec	15.5ms
Western Digital WD10EARS	SATA	1.0TB	80.1MB/sec	149.8MB/sec	15.9ms

## 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
CODE DVR-212BK	SATA	21.13x	93ms	39 MB/s	52X CD-R
LG GH20NS15	SATA	23.88x	101ms	40 MB/s	52X CD-R
LITEON DVD ETAU108	USB	12.36x	109ms	17 MB/s	52X CD-R