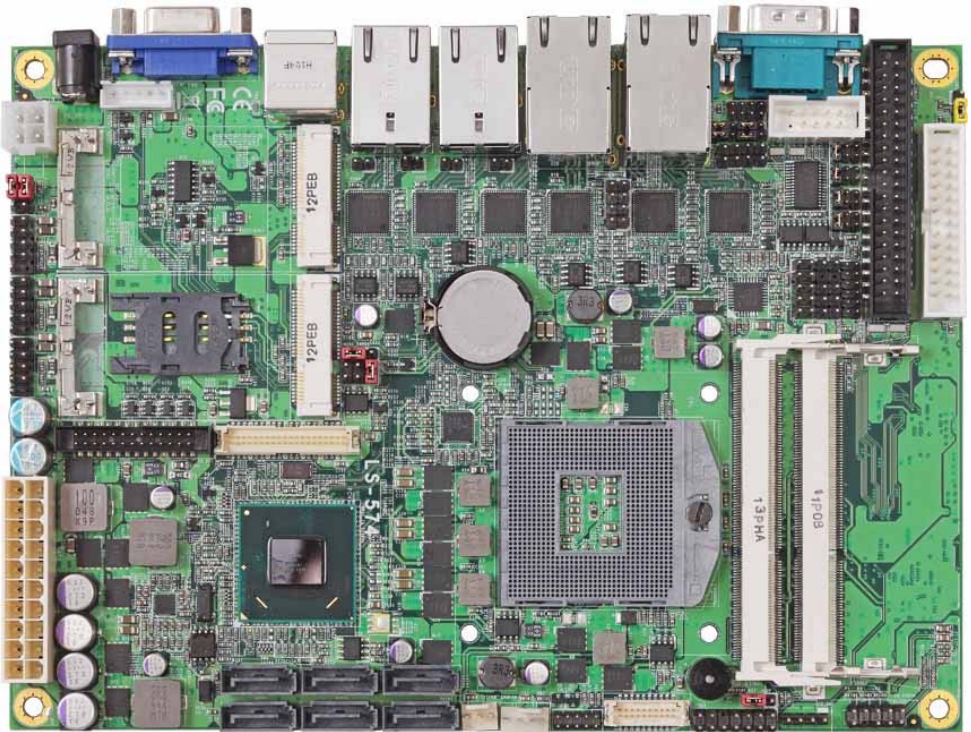


# Product Test Report



<b>Product Name</b>	<b>LS-574</b>
<b>Product Version</b>	<b>A</b>
<b>Issued Date</b>	<b>2013.9.04</b>
<b>Report Edition</b>	<b>1.1</b>
<b>BIOS Version</b>	<b>1.1</b>
<b>Testing Engineer</b>	<b>Brendan</b>
<b>Check Engineer</b>	<b>Jeff</b>

**REVISION HISTORY**

<b>DATE</b>	<b>REVISION NO.</b>	<b>PAGE</b>	<b>DESCRIPTONS</b>
<b>2011.11.04</b>	<b>Ver. 1.0</b>	<b>51</b>	<b>Initial Release</b>
<b>2013.9.04</b>	<b>Ver. 1.1</b>	<b>52</b>	<b>Change mini cards' data</b>

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# 1. Function test

## 1.1 Hardware function

Item	Description	Result
1	Power Button	PASS
2	Reset	PASS
3	Power LED	PASS
4	HDD LED	PASS
5	VGA	PASS
6	CN_PS2	PASS
7	SATA 1 / 2 / 3 / 4 / 5 / 6	PASS
8	DDR3 1 / 2	PASS
9	LAN 1 / 2 / 3 / 4 / 5 / 6	PASS
10	USB 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8	PASS
11	COM port 1 / 2 / 3 / 4 / 5 / 6	PASS
12	CPU Fan	PASS
13	System Fan	PASS
14	DVI	PASS
15	LVDS	PASS
16	CN_AUDIO	PASS
17	CD_IN	PASS
18	MINI_CARD 1 / 2	PASS
19	Printer	PASS
20	IrDA	PASS
21	DIO	PASS
22	DC_IN	PASS
23	DC_2P	PASS

## Jumper

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

## 1.2 BIOS function

Item	Description	Result
1	Press 'Del' to run Setup Utility	PASS
2	Ctrl-Alt-Del – Soft-Reboot	PASS
3	Save & Exit Setup	PASS
4	Date & Time Setting	PASS
5	NumLock	PASS
6	Select Language	PASS
7	Quick Boot	PASS
8	Console Redirection	PASS
9	Active Processor Cores	PASS
10	Interface Combination	PASS
11	DVMT Total Gfx Mem	PASS
12	IGD-Boot Type(No include MPX-SDVOD/SDVOX)	NC
13	IGD-LCD Panel type	PASS
14	Panel Color Depth	PASS
15	USB Per-Port Disabled Control	PASS
16	SB Azalia Config	PASS
17	LAN OPROM Selection	ONLY LAN 1-3
18	Wake on PCH LAN	Disabled=Enabled
19	Serial Port	PASS
20	IR Func.	PASS
21	Paraller Port	PASS
22	Watch Dog Timer Select	PASS
23	CPU Fan Control (Up to 92°C)	PASS
24	Power Control	PASS
25	Power On By RTC Alarm	PASS

<b>26</b>	<b>Set Supervisor Password</b>	PASS
<b>27</b>	<b>Set User Password</b>	PASS



## 1.3 Driver

### CD Edition : IPCi4-1.0

#### Windows XP SP2 32-bit driver test

Item	Description	Result	version
1	Chipset Driver	PASS	9.2.0.1016
2	VGA Driver	PASS	6.14.10.5337
3	Audio Driver	PASS	5.10.0.6083
4	LAN Driver	PASS	11.4.7.0

#### 2. Windows XP SP2 64-bit driver test

Item	Description	Result	version
1	Chipset Driver	PASS	9.2.0.1016
2	VGA Driver	PASS	614.10.5337
3	Audio Driver (Need UAA bus driver)	PASS	5.10.0.6083
4	LAN Driver	PASS	11.4.7.0

#### 3. Windows Server 2003 32-bit Driver Test

Item	Description	Result	version
1	Chipset Driver	PASS	9.2.0.1016
2	Audio Driver	PASS	5.10.0.6083
3	LAN Driver	PASS	11.4.7.0

#### 4. Windows Server 2003 64-bit driver test

Item	Description	Result	Version
1	Chipset Driver	PASS	9.2.0.1016
2	Audio Driver	PASS	5.10.0.6083
3	LAN Driver	PASS	11.4.7.0

#### 5. Windows Vista 32-bit driver test

Item	Description	Result	version
1	Chipset Driver	PASS	9.2.0.1016
2	VGA Driver	PASS	8.15.10.2321
3	Audio Driver	PASS	6.0.1.6083
4	LAN Driver	PASS	11.4.7.0

#### 6. Windows Vista 64-bit driver test

Item	Description	Result	version
1	Chipset Driver	PASS	9.2.0.1016
2	VGA Driver	PASS	8.15.10.2321
3	Audio Driver	PASS	6.0.1.6083
4	LAN Driver	PASS	11.4.7.0

#### 7. Windows Server 2008 32-bit driver test

Item	Description	Result	version
1	Chipset Driver	PASS	9.2.0.1016
2	Audio Driver	PASS	6.0.1.6083
3	LAN Driver	PASS	11.4.7.0

## 8. Windows Server 2008 64-bit driver test

Item	Description	Result	version
1	Chipset Driver	PASS	9.2.0.1016
2	Audio Driver	PASS	6.0.1.6083
3	LAN Driver	PASS	11.0.5.22

## 9. Windows 7 32-bit Driver Test

Item	Description	Result	version
1	Chipset Driver	PASS	9.2.0.1016
2	VGA Driver	PASS	8.15.10.2321
3	Audio Driver	PASS	6.0.1.6083

## 10. Windows 7 64-bit Driver Test

Item	Description	Result	version
1	Chipset Driver	PASS	9.2.0.1016
2	VGA Driver	PASS	8.15.10.2321
3	Audio Driver	PASS	6.0.1.6083

## 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
<a href="#">SR02T</a>	2.1 GHz	Core	i7-2710QE	5 GT/s	6 MB	PASS
<a href="#">SR02U</a>	2.5 GHz	Core	i5-2510E	5 GT/s	3 MB	PASS
<a href="#">SR02V</a>	2.2 GHz	Core	i3-2330E	5 GT/s	3 MB	PASS
<a href="#">SR088</a>	1.6 GHz	Celeron	B810	2 GT/s	2 MB	PASS

### 2.2 Operation System Test

Item	Description	Result	Remark
1	Windows 7 64-bit	PASS	
2	Windows 7 32-bit	PASS	
3	Windows Server 2008 64-bit	PASS	
4	Windows Server 2008 32-bit	PASS	
5	Windows Vista 64-bit	PASS	
6	Windows Vista 32-bit	PASS	
7	Windows XP SP2 64-bit	PASS	
8	Windows XP SP2 32-bit	PASS	
9	Windows Server 2003 64-bit	PASS	
10	Windows Server 2003 32-bit	PASS	
11	Ubuntu 11.04	PASS	

## 2.3 Memory Test

Test environment:

OS Windows XP professional SP2

Test program : PC MARK 2005

Manufacturer	Chip	Frequency	Capacity Mbytes	Result
A-DATA	J2108BCSE-GN-F	DDR3 1600	4 GB	PASS
Kingston	D1288JEMFPGD9V	DDR3 1333	1 GB	PASS
Transcend	K4B1G0846U	DDR3 1066	1 GB	PASS

## 2.4 VGA Graphic Quality Test

Test environment:

OS Windows XP professional SP2 32/64-bit

Driver version : 6.14.10.5337

Resolution	Color	Result	Remark
800*600	16 / 32bit	PASS	
1024*768	16 / 32bit	PASS	
1152*864	16 / 32bit	PASS	
1280*600	16 / 32bit	PASS	
1280*720	16 / 32bit	PASS	
1280*768	16 / 32bit	PASS	
1280*800	16 / 32bit	PASS	
1280*960	16 / 32bit	PASS	
1280*1024	16 / 32bit	PASS	
1360*768	16 / 32bit	PASS	
1366*768	16 / 32bit	PASS	
1400*1050	16 / 32bit	PASS	
1440*900	16 / 32bit	PASS	
1600*900	16 / 32bit	PASS	
1600*1200	16 / 32bit	PASS	
1680*1050	16 / 32bit	PASS	
1792*1344	16 / 32bit	PASS	
1856*1392	16 / 32bit	PASS	
1920*1080	16 / 32bit	PASS	
1920*1200	16 / 32bit	PASS	

## 2.5 Audio

Test environment:

**OS Windows XP professional SP2 32-bit**

**Driver version : 5.10.0.6083**

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

## OS Windows Vista 32 bit

Driver version : 6.0.1.6083

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

## OS Windows Vista 64 bit

Driver version : 6.0.1.6083

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

## OS Windows Server 2008 32-bit

Driver version : 6.0.1.6083

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



## OS Windows Server 2008 64-bit

Driver version : 6.0.1.6083

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

## OS Windows 7 32-bit

Driver version : 6.0.1.6083

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

## OS Windows 7 64-bit

Driver version : 6.0.1.6083

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

## 2.6 HDD Test

Test environment:

OS Windows XP professional SP2

Model	Interface	Capacity	Size Detect	Data Transfer
Western Digital WD10EALX-009BA0	SATA	1.0 TB	PASS	PASS
Western Digital WD10EARS-00Y5B1	SATA	1.0 TB	PASS	PASS
Western Digital WD5000AAKX-221CA0	SATA	500 GB	PASS	PASS
Western Digital WD3200AAJS-00YZCA0	SATA	320 GB	PASS	PASS
Western Digital WD3200BEKT-22F3T0	SATA	320 GB	PASS	PASS
Memoright	SATA	64 GB	PASS	PASS

## 2.7 CD-ROM Test

Test environment:

OS Windows XP professional SP2

Model	Interface	Detect	Data Transfer	Play CD
<b>LG DVD GH20NS15</b>	<b>SATA</b>	PASS	PASS	PASS
<b>LITEON DVD SOSC-2485KX</b>	<b>USB</b>	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	

## 2.9 Serial Port Test

### 1. MS-DOS

Item	Description	Result	Remark
1	RS-232 Mouse Test	PASS	
2	RS-422 & RS-485	PASS	
3	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	
3	b&b com port test	PASS	

### 11. Windows 7 64-bit

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

#### 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

-Program (Iperf)

### 1. Windows XP SP2 32/64-bit

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

### 2. Windows Server 2003 32/64-bit

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

### 3. Windows Vista 32/64-bit

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

#### 4. Windows Server 2008 32/64-bit

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

#### 5. Windows 7 32/64-bit

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

## 2.12 Power Supply Test

<b>Item</b>	<b>TYPE</b>	<b>Description</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>ADAPTER</b>	<b>LI SHIN 0219B1280 80W</b>	PASS	
<b>2</b>	<b>ATX Power</b>	<b>SEASONIC SS-430HB</b>	PASS	
<b>3</b>	<b>ATX Power</b>	<b>Seventeam ST-300WAP</b>	PASS	
<b>4</b>	<b>ATX Power</b>	<b>AcBel ATX-350P-DNSS</b>	PASS	

## 2.13 PCI Express mini card

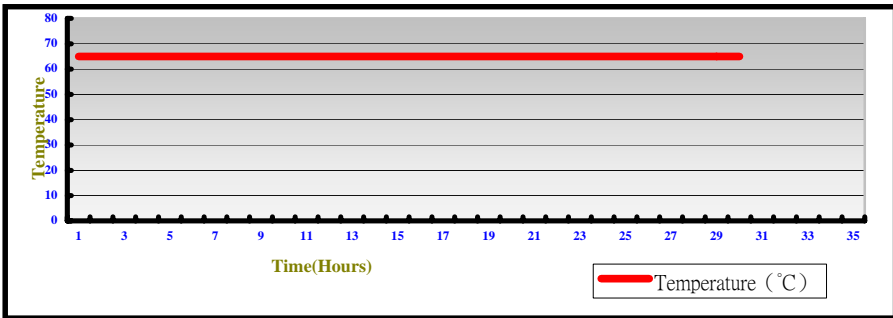
Motherboard	PCI Express mini card	Remark
LS-574	MPX-954	PASS
	MPX-954E	PASS
	MPX-827	PASS
	MPX-574D	PASS
	MPX-574D2	ONLY MINI CARD 2
	MPX-SDVOD	PASS
	MPX-SDVOX	PASS
	MPX-643	PASS
	MPX-3132	PASS
	MPX-885	PASS
	MPX-7202	PASS
	MPX-9125	PASS
	MPX-TP4R	PASS
	MPX-1040	PASS
	MPX-6864	PASS
	MPX-24794G2	PASS
MPX-25858	PASS	

### 3. Environmental test

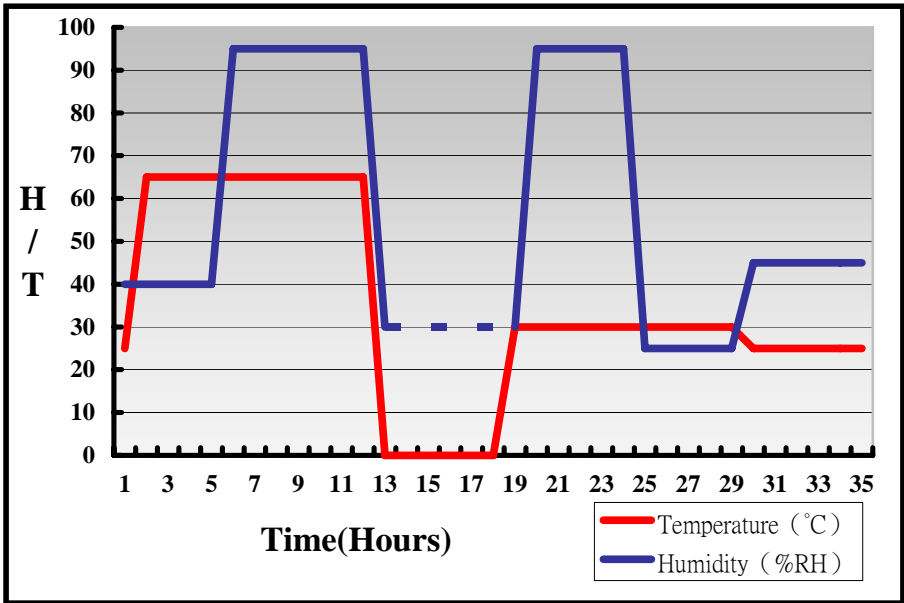
#### 3.1 Temperature Test

System Board	LS-574
CPU	Intel® Core™ i7-2710QE 2.10 GHz
Memory	A-DATA DDR3 1600 4GB*2 (J2108BCSE-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

#### Hardware Device list:



System Board	LS-574
CPU	Intel® Core™ i7-2710QE 2.10 GHz
Memory	A-DATA DDR3 1600 4GB*2 (J2108BCSE-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



**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>	LS-574
<b>CPU</b>	Intel® Core™ i7-2710QE 2.10 GHz
<b>Memory</b>	Kingston DDR3 1333 1GB (D1288JEMFPGD9V)
<b>HDD</b>	Western Digital WD10EALX-009BA0 1.0TB

Temperature	Result	Remark
-10°C	PASS	
65°C	PASS	



## 3.2 Thermal measurements at various points on the board

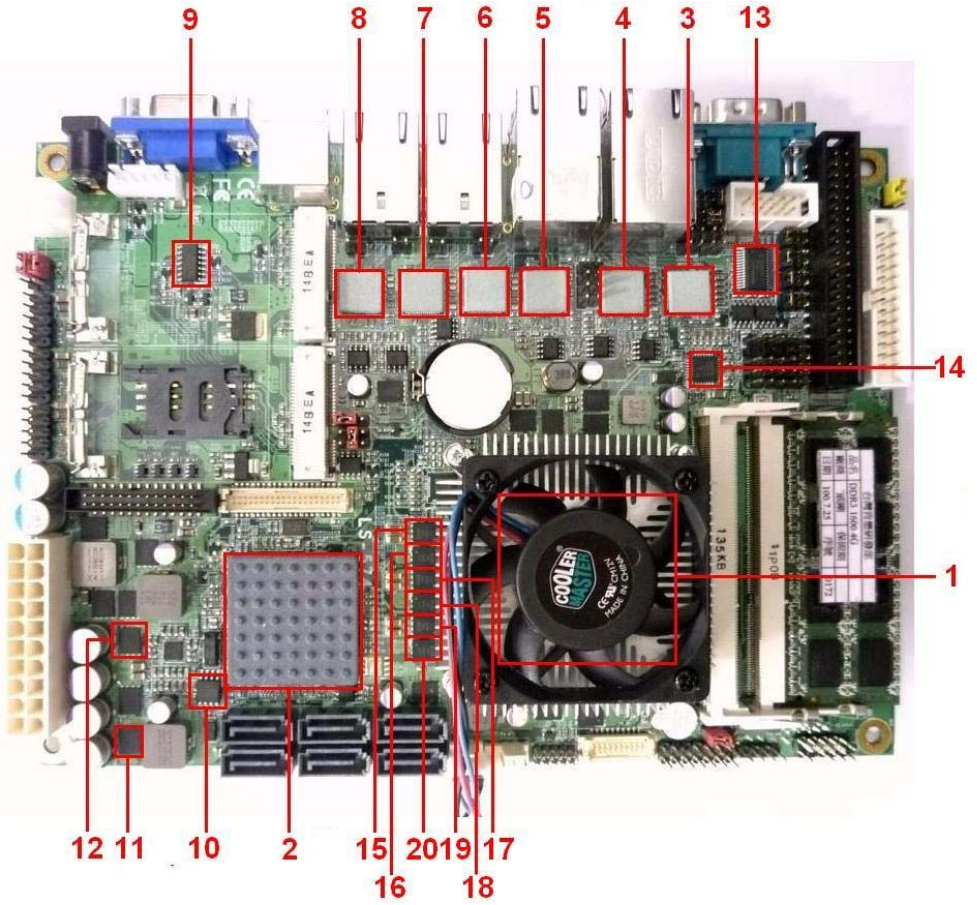
### Test Environment :

<b>CPU</b>	<b>Intel® Celeron® B810 1.60GHz</b>
<b>Memory</b>	<b>A-DATA DDR3 1600 4GB (J2108BCSE-GN-F)</b>
<b>HDD</b>	<b>Western Digital WD10EALX-009BA0 1.0TB</b>
<b>Power</b>	<b>AcBel ATX-350P-DNSS</b>
<b>Operating System</b>	<b>Windows XP SP2 32-bit</b>
<b>Test Program</b>	<b>BurnIn 6.0</b>

### Test Result:

<b>Item</b>	<b>Environmental temperature</b>	
<b>1</b>	<b>CPU</b>	<b>35.8°C</b>
<b>2</b>	<b>PCH (QM67)</b>	<b>42.8°C</b>
<b>3</b>	<b>U5(82574L)</b>	<b>34.6°C</b>
<b>4</b>	<b>U8(82574L)</b>	<b>31.5°C</b>
<b>5</b>	<b>U11(82574L)</b>	<b>31.2°C</b>
<b>6</b>	<b>U13(82574L)</b>	<b>31.2°C</b>
<b>7</b>	<b>U16(82574L)</b>	<b>29.9°C</b>
<b>8</b>	<b>U18(82574L)</b>	<b>30.1°C</b>
<b>9</b>	<b>U22(ITS74HC14)</b>	<b>32.9°C</b>
<b>10</b>	<b>U20(ICW25Q64CVSSIG)</b>	<b>34.8°C</b>

11	Q35(TMSIRFH7914PBF)	32.9°C
12	Q33(TMSIRFH7914PBF)	32.4°C
13	U2(ICADM213ECA-T)	35.4°C
14	U4(ISL6537ACR)	36.2°C
15	Q11(TMSIRFH7914PBF)	35.4°C
16	Q12(TMSIRFH7914PBF)	34°C
17	Q13(TMSIRFH7914PBF)	35°C
18	Q14(TMSIRFH7914PBF)	35.3°C
19	Q15(TMSIRFH7914PBF)	35.8°C
20	Q16(TMSIRFH7914PBF)	34.8°C
21	LPCIO(ICH83627)	33.4°C



## 4. Reliability Test

### 4.1 Power Consumption Test

#### 1. Test Environment:

<b>Motherboard</b>	<b>LS-574</b>
<b>CPU</b>	<b>Intel® Celeron® B810 1.60GHz</b>
<b>Memory</b>	<b>A-DATA DDR3 1600 4GB (J2108BCSE-GN-F)</b>
<b>HDD</b>	<b>Western Digital WD10EALX-009BA0 1.0TB</b>

#### (A) Power Supply : Seventeam ST-300WAP

Voltage	MS-DOS Boot up		Windows XP SP2 32-bit 3DMARK 2003 +PRIME95	
	Current ( A )	Power ( W )	Current ( A )	Power ( W )
<b>12V</b>	3.34	40.08	5.92	71.04
<b>5V</b>	1.31	6.55	1.8	9
<b>3.3V</b>	3.81	12.57	0.7	2.31
<b>5VSB</b>	0.57	2.85	0.009	0.045

**(B)DC Power Supply: GWINSTEK SPS-3610**

Voltage	MS-DOS Boot up		Windows XP SP2 32-bit 3DMARK 2003 +PRIME95	
	Current( A )	Power ( W )	Current( A )	Power ( W )
12V	4.92	59.04	7.02	84.24
19V	3.03	57.57	4.3	81.7
24V	2.40	57.60	3.24	77.76

**1.a.Test Environment:**

The same as above but with LCD panel

Display Panel	AUO M170EG01 17”LCD
---------------	---------------------

**(C)Power Supply : Seventeam ST-300WAP**

Voltage	MS-DOS Boot up		Windows XP SP2 32-bit 3DMARK 2003 +PRIME95	
	Current ( A )	Power ( W )	Current ( A )	Power ( W )
12V	3.79	45.48	6.06	72.72
5V	1.66	8.3	1.82	9.1
3.3V	3.9	12.87	0.71	2.343
5VSB	0.59	2.95	0.015	0.075

## 5. Performance Test

### 5.1 Content Creation Winstone 2004

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
<b>Content Creation Winstone 2004</b>	<b>Intel® Celeron® B810 1.60GHz Kingston DDR3 1333 1GB*2 (D1288JEMFPGD9V) Western Digital WD10EALX-009BA0 1.0TB</b>	PASS	40.8 41.3 40.4 40.7

## 5.2 3D MARK(2001、2003、2005)

### Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Score	Intel® Core™ i7-2710QE 2.10 GHz  A-DATA DDR3 1600 4GB*2 (J2108BCSE-GN-F)  Western Digital WD10EALX-009BA0 1.0TB	19442	PASS
3DMARK2003 Score		7297	PASS
3DMARK2005 Score		7273	PASS

### Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Score	Intel® Core™ i7-2710QE 2.10 GHz  Transcend DDR3 1066 1GB (K4B1G0846U)  Western Digital WD10EALX-009BA0 1.0TB	12620	PASS
3DMARK2003 Score		4312	PASS
3DMARK2005 Score		4606	PASS

**Windows XP SP2**

<b>WEIGHTED SUITE</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
<b>3DMARK2001 Score</b>	<b>Intel® Core™ i3</b> <b>A-DATA DDR3 1600 4GB*2</b> <b>(J2108BCSE-GN-F)</b> <b>Western Digital</b> <b>WD10EALX-009BA0 1.0TB</b>	14264	PASS
<b>3DMARK2003 Score</b>		5580	PASS
<b>3DMARK2005 Score</b>		5268	PASS

**Windows XP SP2**

<b>WEIGHTED SUITE</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
<b>3DMARK2001 Score</b>	<b>Intel® Core™ i3</b> <b>Transcend DDR3 1066 1GB</b> <b>(K4B1G0846U)</b> <b>Western Digital</b> <b>WD10EALX-009BA0 1.0TB</b>	9885	PASS
<b>3DMARK2003 Score</b>		3838	PASS
<b>3DMARK2005 Score</b>		4012	PASS



## Windows XP SP2

<b>WEIGHTED SUITE</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
<b>3DMARK2001 Score</b>	<b>Intel® Celeron® B810 1.60GHz Kingston DDR3 1333 1GB*2 (D1288JEMFPGD9V) Western Digital WD10EALX-009BA0 1.0TB</b>	10604	PASS
<b>3DMARK2003 Score</b>		4189	PASS
<b>3DMARK2005 Score</b>		4262	PASS

### 5.3 3D MARK2006

#### Windows XP SP2

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Score	Intel® Core™ i7-2710QE 2.10 GHz A-DATA DDR3 1600 4GB*2 (J2108BCSE-GN-F) Western Digital WD10EALX-009BA0 1.0TB	3509	PASS
2	SM2.0 Score		1219	PASS
3	HDR/SM3.0 Score		1272	PASS
4	CPU Score		4967	PASS

#### Windows XP SP2

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Score	Intel® Core™ i7-2710QE 2.10 GHz Transcend DDR3 1066 1GB (K4B1G0846U) Western Digital WD10EALX-009BA0 1.0TB	2309	PASS
2	SM2.0 Score		797	PASS
3	HDR/SM3.0 Score		816	PASS
4	CPU Score		5213	PASS

**Windows XP SP2**

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
1	3DMARK Score	<b>Intel® Core™ i3</b> <b>A-DATA DDR3 1600 4GB*2</b> <b>(J2108BCSE-GN-F)</b> <b>Western Digital</b> <b>WD10EALX-009BA0 1.0TB</b>	2951	PASS
2	SM2.0 Score		1059	PASS
3	HDR/SM3.0 Score		1096	PASS
4	CPU Score		2570	PASS

**Windows XP SP2**

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
1	3DMARK Score	<b>Intel® Core™ i3</b> <b>Transcend DDR3 1066 1GB</b> <b>(K4B1G0846U)</b> <b>Western Digital</b> <b>WD10EALX-009BA0 1.0TB</b>	1898	PASS
2	SM2.0 Score		645	PASS
3	HDR/SM3.0 Score		705	PASS
4	CPU Score		2554	PASS

**Windows XP SP2**

<b>Item</b>	<b>WEIGHTED SUITE</b>	<b>Test Environment</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>3DMARK Score</b>	<b>Intel® Celeron® B810 1.60GHz Kingston DDR3 1333 1GB*2 (D1288JEMFPGD9V) Western Digital WD10EALX-009BA0 1.0TB</b>	2029	PASS
<b>2</b>	<b>SM2.0 Score</b>		708	PASS
<b>3</b>	<b>HDR/SM3.0 Score</b>		784	PASS
<b>4</b>	<b>CPU Score</b>		1623	PASS

## 5.4 PC MARK2002

<b>Test Environment</b>
<b>Intel® Core™ i7-2710QE 2.10 GHz</b> <b>A-DATA DDR3 1600 4GB*2 (J2108BCSE-GN-F)</b> <b>Western Digital WD10EALX-009BA0 1.0TB</b>

### Windows XP SP2

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>CPU Score</b>	PASS	12211
<b>2</b>	<b>Memory Score</b>	PASS	47851
<b>3</b>	<b>HDD Score</b>	PASS	2444

<b>Test Environment</b>
<b>Intel® Core™ i7-2710QE 2.10 GHz</b> <b>Transcend DDR3 1066 1GB (K4B1G0846U))</b> <b>Western Digital WD10EALX-009BA0 1.0TB</b>

### Windows XP SP2

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>CPU Score</b>	PASS	12142
<b>2</b>	<b>Memory Score</b>	PASS	47619
<b>3</b>	<b>HDD Score</b>	PASS	2543

<b>Test Environment</b>
<b>Intel® Core™ i3</b> <b>Transcend DDR3 1066 1GB (K4B1G0846U))</b> <b>Western Digital WD10EALX-009BA0 1.0TB</b>

**Windows XP SP2**

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>CPU Score</b>	PASS	8955
<b>2</b>	<b>Memory Score</b>	PASS	28294
<b>3</b>	<b>HDD Score</b>	PASS	2462

<b>Test Environment</b>
<b>Intel® Celeron® B810 1.60GHz</b> <b>Kingston DDR3 1333 1GB*2 (D1288JEMFPGD9V)</b> <b>Western Digital WD10EALX-009BA0 1.0TB</b>

**Windows XP SP2**

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>CPU Score</b>	PASS	6400
<b>2</b>	<b>Memory Score</b>	PASS	23117
<b>3</b>	<b>HDD Score</b>	PASS	2259

## 5.5 PC MARK2004

<b>Test Environment</b>
<b>Intel® Core™ i7-2710QE 2.10 GHz</b> <b>A-DATA DDR3 1600 4GB*2 (J2108BCSE-GN-F)</b> <b>Western Digital WD10EALX-009BA0 1.0TB</b>

### Windows XP PS2

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>PCMark Score</b>	PASS	NA
<b>2</b>	<b>CPU Score</b>	PASS	NA
<b>3</b>	<b>Memory Score</b>	PASS	13266
<b>4</b>	<b>Graphic Score</b>	PASS	4615
<b>5</b>	<b>HDD Score</b>	PASS	6700

<b>Test Environment</b>
<b>Intel® Core™ i7-2710QE 2.10 GHz</b> <b>Transcend DDR3 1066 1GB (K4B1G0846U))</b> <b>Western Digital WD10EALX-009BA0 1.0TB</b>

### Windows XP PS2

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>PCMark Score</b>	PASS	NA
<b>2</b>	<b>CPU Score</b>	PASS	NA
<b>3</b>	<b>Memory Score</b>	PASS	10369
<b>4</b>	<b>Graphic Score</b>	PASS	3989
<b>5</b>	<b>HDD Score</b>	PASS	6757

<b>Test Environment</b>
<b>Intel® Core™ i3</b> <b>Transcend DDR3 1066 1GB (K4B1G0846U))</b> <b>Western Digital WD10EALX-009BA0 1.0TB</b>

**Windows XP SP2**

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>PCMark Score</b>	PASS	6668
<b>2</b>	<b>CPU Score</b>	PASS	NA
<b>3</b>	<b>Memory Score</b>	PASS	6314
<b>4</b>	<b>Graphic Score</b>	PASS	3408
<b>5</b>	<b>HDD Score</b>	PASS	6708

<b>Test Environment</b>
<b>Intel® Celeron® B810 1.60GHz</b> <b>Kingston DDR3 1333 1GB*2 (D1288JEMFPGD9V)</b> <b>Western Digital WD10EALX-009BA0 1.0TB</b>

**Windows XP SP2**

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>PCMark Score</b>	PASS	5802
<b>2</b>	<b>CPU Score</b>	PASS	NA
<b>3</b>	<b>Memory Score</b>	PASS	6840
<b>4</b>	<b>Graphic Score</b>	PASS	2820
<b>5</b>	<b>HDD Score</b>	PASS	5177



## 5.6 PC MARK2005

<b>Test Environment</b>
<b>Intel® Core™ i7-2710QE 2.10 GHz</b> <b>A-DATA DDR3 1600 4GB*2 (J2108BCSE-GN-F)</b> <b>Western Digital WD10EALX-009BA0 1.0TB</b>

### Windows XP SP2

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>PCMark Score</b>	PASS	7256
<b>2</b>	<b>CPU Score</b>	PASS	10035
<b>3</b>	<b>Memory Score</b>	PASS	9984
<b>4</b>	<b>Graphic Score</b>	PASS	3978
<b>5</b>	<b>HDD Score</b>	PASS	7378

<b>Test Environment</b>
<b>Intel® Core™ i7-2710QE 2.10 GHz</b> <b>Transcend DDR3 1066 1GB (K4B1G0846U)</b> <b>Western Digital WD10EALX-009BA0 1.0TB</b>

### Windows XP SP2

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>PCMark Score</b>	PASS	NA
<b>2</b>	<b>CPU Score</b>	PASS	10011
<b>3</b>	<b>Memory Score</b>	PASS	7842
<b>4</b>	<b>Graphic Score</b>	PASS	3345
<b>5</b>	<b>HDD Score</b>	PASS	7522

<b>Test Environment</b>
<b>Intel® Core™ i3</b> <b>Transcend DDR3 1066 1GB (K4B1G0846U))</b> <b>Western Digital WD10EALX-009BA0 1.0TB</b>

**Windows XP SP2**

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>PCMark Score</b>	PASS	5582
<b>2</b>	<b>CPU Score</b>	PASS	6688
<b>3</b>	<b>Memory Score</b>	PASS	6292
<b>4</b>	<b>Graphic Score</b>	PASS	3002
<b>5</b>	<b>HDD Score</b>	PASS	7466

<b>Test Environment</b>
<b>Intel® Celeron® B810 1.60GHz</b> <b>Kingston DDR3 1333 1GB*2 (D1288JEMFPGD9V)</b> <b>Western Digital WD10EALX-009BA0 1.0TB</b>

**Windows XP SP2**

<b>Item</b>	<b>Weighted Suite</b>	<b>Result</b>	<b>Remark</b>
<b>1</b>	<b>PCMark Score</b>	PASS	4353
<b>2</b>	<b>CPU Score</b>	PASS	4483
<b>3</b>	<b>Memory Score</b>	PASS	5804
<b>4</b>	<b>Graphic Score</b>	PASS	2723
<b>5</b>	<b>HDD Score</b>	PASS	6011

## 5.7 Storage Performance

### 5.7.1 HDD

Test environment:

OS Windows XP professional SP2

Program (HD Tune)

HDD MODEL	INTERFACE	capacity	Average	Burst Rate	Access time
Western Digital WD10EALX-009BA0	SATA	1.0 TB	97.4 MB/sec	106.6 MB/sec	13.1 ms
Western Digital WD10EARS-00Y5B1	SATA	1.0 TB	77.0 MB/sec	151.9 MB/sec	15.7 ms
Western Digital WD5000AAKX-221CA0	SATA	500 GB	100.8 MB/sec	196.1 MB/sec	15.7 ms
Western Digital WD3200AAJS-00YZCA0	SATA	320 GB	83.8 MB/sec	148.8 MB/sec	15.4 ms
Western Digital WD3200BEKT-22F3T0	SATA	320 GB	66.5 MB/sec	153.9 MB/sec	14.4 ms
Memoright	SATA	64 GB	172.0 MB/sec	73.3 MB/sec	0.2 ms

## 5.7.2 CD-ROM

Test environment:

OS Windows XP professional SP2

Program (NERO)

CD-ROM Model	Interface	Average Speed	Full Read	Burst Rate	CD
LG DVD GH20NS15	SATA	16.46 x	170 ms	34 MB/s	52 X CD-R
LITEON DVD SOSC-2485KX	USB	10.67 x	127 ms	17 MB/s	52 X CD-R