

Report



Product Name	LE-376
Product Version	A
Issued Date	2010/08/03
Report Edition	1.0
BIOS Version	1.0
Testing Engineer	Master
Testing Engineer	Jamin

Index

Index	2
1. Function test	4
1.1 Hardware function	4
1.2 BIOS function	6
1.3 Driver	8
2. Compatibility test	12
2.1 CPU Test	12
2.2 Memory Test	13
VGA Graphic Quality Test	14
2.4 Audio	15
2.5 HDD Test	18
2.6 CD-ROM Test	19
2.7 USB Test	20
2.8 Serial Port Test	24
2.9 PS2 Keyboard \ Mouse Test	27
2.10 LAN Test	30
2.11 Power Supply Test	32
2.12 Os Install	32
2.13 PCI Express Mini Card	33
2.14 Minipci Card	34
3. Environmental test	35
3.1 Temperature Test	35
3.2 Thermal measurements at various points on the board	38
4. Reliability Test	42
4.1 Power Consumption Test	42
5. Performance Test	50
5.1 Business Win Stone 2002	50

5.2 Business Win Stone 2004	51
5.3 Content Creation Winstone 2001	52
5.4 Content Creation Winstone 2004	53
5.5 3D MARK(2001 、 2003 、 2005).....	54
5.6 3D MARK2006	57
5.7 PC MARK2002.....	60
5.8 PC MARK2004.....	63
5.9 PC MARK2005.....	66
5.10 Storage Performance	69
5.10.3 Vibration Test.....	71

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	CN_PS2	Pass
8	LAN1	Pass
9	LAN2	Pass
10	LAN3	Pass
11	DDRII	Pass
12	SATA1	Pass
13	SATA2	Pass
14	USB1	Pass
15	USB2	Pass
16	USB3	Pass
17	USB4	Pass
18	USB5	Pass
19	LVDS	Pass
20	INV	Pass
21	CF	Pass
22	DC_OUT	Pass

23	Audio	Pass
24	CN_DIO	Pass
25	CN_IR	Pass
26	CN_SMBUS	Pass
27	COM1/2/3/4/5/6	Pass
28	DC_IN	Pass
29	LPT	Pass
30	MINI_CRAD	Pass
31	MINIPCI	Pass

Jumper

Item	Description	Result
1	JRTC	Pass
2	JAT	Pass
3	JVLCD	Pass
4	JP1	Pass
5	JP2	Pass
6	JCSEL1	Pass
7	JCSEL2	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	Quick Power On Self Test	Pass	
7	Boot Device Setting	Pass	
8	Boot Up Num Lock Status	Pass	
9	VGA Setting	Pass	
10	Onboard Serial Port	Pass	
11	USB Device Setting	Pass	
12	Soft-Off by PWRBTN	Pass	
13	ACPI Function	Pass	
14	Power On Function	Pass	
15	Wake-up by PCI Card	Pass	
16	Resume by Alarm	Pass	
17	Power On by Ring	Pass	
18	Shutdown Temperature	Pass	
19	CPU Warning Temperature	Pass	
20	Watch Dog Timer	Pass	
21	Set Supervisor Password	Pass	
22	Set User Password	Pass	
23	UART Mode Select	Pass	
24	RxD , Txd Active	Pass	

Item	Description	Result	Remark
25	IR Transmission Delay	Pass	
26	UR2 duplex Mode	Pass	
27	Use IR Pins	Pass	

1.3 Driver

Condition : IPCI3-1.0

1. Windows XP SP2 Driver Test

Item	Description	Result	version
1	Chipset Driver	Pass	9.1.1.1019
2	VGA Driver	Pass	6.14.10.5134
3	Audio Driver	Pass	5.10.0.6083
4	LAN Driver	Pass	11.4.7.0

2. Windows XP 64 bit Driver Test

Item	Description	Result	version
1	Chipset Driver	Pass	9.1.1.1019
2	VGA Driver	Pass	6.14.10.5134
3	Audio Driver	Pass	5.10.0.6083
4	LAN Driver	Pass	11.4.7.0

3. Windows Server 2003 Driver Test

Item	Description	Result	version
1	Chipset Driver	Pass	9.1.1.1019
2	VGA Driver	Pass	6.14.10.5134
3	Audio Driver	Pass	5.10.0.6083
4	LAN Driver	Pass	11.4.7.0

4. Windows 2000 SP4 Driver Test

Item	Description	Result	version
1	Chipset Driver	Pass	9.1.1.1019
2	VGA Driver		
3	Audio Driver	Pass	5.10.0.6083
4	LAN Driver		

5. Windows Vista 32 bit Driver Test

Item	Description	Result	version
1	Chipset Driver	Pass	9.1.1.1019
2	VGA Driver	Pass	6.14.10.5134
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	9.1.1.1019
2	VGA Driver	Pass	8.14.10.1972
3	Audio Driver	Pass	6.0.1.6083
4	LAN Driver	Pass	11.4.7.0

7. Windows 7 32 bit Driver Test

Item	Description	Result	version
1	Chipset Driver	Pass	9.1.1.1019
2	VGA Driver	Pass	8.14.10.1972
3	Audio Driver	Pass	6.0.1.6083
4	LAN Driver	Pass	11.4.7.0

8. Windows 7 64 bit Driver Test

Item	Description	Result	version
1	Chipset Driver	Pass	9.1.1.1019
2	VGA Driver	Pass	8.14.10.2023
3	Audio Driver	Pass	6.0.1.6083
4	LAN Driver	Pass	11.4.7.0

9. Windows 2008 32 bit Driver Test

Item	Description	Result	Version
1	Chipset Driver	Pass	9.1.1.1019
2	VGA Driver	Pass	8.14.10.1972
3	Audio Driver	Pass	6.0.1.6083
4	LAN Driver		

10. Windows 2008 64 bit Driver Test

Item	Description	Result	Version
1	Chipset Driver	Pass	9.1.1.1019
2	VGA Driver	Pass	6.14.10.5134
3	Audio Driver	Pass	6.0.1.6083
4	LAN Driver		

2. Compatibility test

2.1 CPU Test

Test environment:

OS Windows XP professional SP2

Test program : PC MARK 2005

Spec	CPU Speed	Family	Processor	FSB	Cache Size	Result
<u>SLBMG</u>	1.66 GHz	Atom	N450	N/A	512KB	Pass
<u>SLBLA</u>	1.66 GHz	Atom	D510	N/A	1MB	Pass
<u>SLBLH</u>	1.66 GHz	Atom	D410	N/A	512KB	Pass

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
Inno Disk	HY5PSI G1631C	DDRII 667	512MB	Pass
PQI	HY5PS1 G831C	DDRII 800	2GB	Pass
PQI	HY5PS1 G831C	DDRII 800	1GB	Pass
Kingston	E1108AF SE	DDRII 800	1GB	Pass
Elixir	N2TU1G 16D6-AC	DDRII 800	1GB	Pass
Transcend	E1108AC BG-6E-E	DDRII 667	2GB	Pass

VGA Graphic Quality Test

Test environment:

OS Windows XP professional SP2

Driver version : 6.14.10.5134

Resolution	Color	Result	Remark
800 x 600	16 /32bit	Pass	
1024 x 768	16 /32bit	Pass	
1280 x 600	16 /32bit	Pass	
1280 x 720	16 /32bit	Pass	
1280 x 768	16 /32bit	Pass	
1280 x 960	16 /32bit	Pass	
1280 x 1024	16 /32bit	Pass	
1680 x 1200	16 /32bit	Pass	
1920 x 1080	16 /32bit	Pass	
1920 x 1200	16 /32bit	Pass	

2.4 Audio

Test envirement:

OS Windows XP professional SP2

Driver version : 5.10.0.6083

Item	Description	Result	Remark
1	2 CH	Pass	
2	Microphone	Pass	

OS Windows XP professional x64 Edition

Driver version : 5.10.0.6083

Item	Description	Result	Remark
1	2 CH	Pass	
2	Microphone	Pass	

OS Windows SERVER 2003

Driver version : 5.10.0.6083

Item	Description	Result	Remark
1	2 CH	Pass	
2	Microphone	Pass	

OS Windows 2000 SP4

Driver version : 5.10.0.6083

Item	Description	Result	Remark
1	2 CH	Pass	
2	Microphone	Pass	

OS Windows Vista 32 bit

Driver version : 6.0.1.6083

Item	Description	Result	Remark
1	2 CH	Pass	
2	Microphone	Pass	

OS Windows Vista 64 bit

Driver version : 6.0.1.6083

Item	Description	Result	Remark
1	2 CH	Pass	
2	Microphone	Pass	

OS Windows 7 32 bit

Driver version : 6.0.1.6083

Item	Description	Result	Remark
1	2 CH	Pass	
2	Microphone	Pass	

OS Windows 7 64 bit

Driver version : 6.0.1.6083

Item	Description	Result	Remark
1	2 CH	Pass	
2	Microphone	Pass	

OS Windows 2008 32 bit

Driver version : 6.0.1.6083

Item	Description	Result	Remark
1	2 CH	Pass	
2	Microphone	Pass	

OS Windows 2008 64 bit

Driver version : 6.0.1.6083

Item	Description	Result	Remark
1	2 CH	Pass	
2	Microphone	Pass	

2.5 HDD Test

Test envirmnt:

OS Windows XP professional SP2

HDD MODEL	INTERFACE	capacity	HDD Size Detect	HDD Data Transfer	HDD LED Check
Western Digital WD10EADS-00L5B1	HDD	1.0TB	Pass	Pass	Pass
Hitachi Deskstar (HDT722525DLA380)		250GB	Pass	Pass	Pass
InnoDisk Corp	CF Card	8GB	Pass	Pass	Pass
Turbo Industrial		2GB	Pass	Pass	Pass
Flash Card		8GB	Pass	Pass	Pass

2.6 CD-ROM Test

Test environment:

OS Windows XP professional SP2

CD-ROM MODEL	INTERFACE	CD-ROM Detect	CD-ROM Data Transfer	PLAY DVD
LITEON DVD SOSW-833XS	USB	Pass	Pass	Pass
MATSHITA DVD EBC100	USB	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 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 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	

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 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	

8. 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	

9. 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	

10. 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	

2.8 Serial Port Test

1. MS-DOS

Item	Description	Result	Remark
1	RS-232 Mouse Test	Pass	
2	PC Check	Pass	
3	TS	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 Server 2003

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

5. 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	

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 7 32 bit

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

9. Windows 7 64 bit

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

10. Windows 2008 32 bit

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

11. Windows 2008 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 Server 2003

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

5. Windows 2000 SP4

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 7 32 bit

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

9. Windows 7 64 bit

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

10. Windows 2008 32 bit

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

11. Windows 2008 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	
2	Data Transfer Test	PASS	

2. Windows XP 64 bit

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	

5. Windows Vista 32 bit

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

6. Windows Vista 64 bit

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

7. Windows 7 32 bit

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

8. Windows 7 64 bit

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

2.11 Power Supply Test

Item	TYPE	Description	Result	Remark
1	CWT	CWT-300BDP-F(300W)	Pass	
2	CWT	CWT-300ATX12(300W)	Pass	

2.12 Os Install

Item	Description	Result	Remark
1	Windows 2000 SP4	Pass	
2	Windows Server 2003	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	CentOS 5.4	Pass	
12	Fedora 12	Pass	
13	Ubuntu 10.4	Pass	

2.13 PCI Express Mini Card

Motherboard	PCI Express mini card	Remark
LE-376	MPX-954	Pass
LE-376	MPX-643	Pass
LE-376	MPX-1040	Pass
LE-376	MPX-574D	Pass
LE-376	MPX-827	Pass
LE-376	MPX-7767	Pass
LE-376	MPX-2503	Pass
LE-376	MPX-3132	Pass
LE-376	MPX-7202	Pass
LE-376	MPX-TP4R	Pass
LE-376	MPX-885	Pass

2.14 Minipci Card

Motherboard	PCI Express mini card	Remark
LE-376	MP-954	Pass
LE-376	MP-840	Pass
LE-376	MP-323	Pass
LE-376	MP-541	Pass
LE-376	MP-878	Pass
LE-376	MP-878D	Pass
LE-376	MP-878D2	Pass
LE-376	MP-878D8	Pass
LE-376	MP-954GPS	Pass
LE-376	MP-2501	Pass
LE-376	MP-2010	Pass
LE-376	MP-6010L	Pass
LE-376	MP-60102	Pass
LE-376	MP-6100	Pass
LE-376	MP-6421	Pass
LE-376	MP-6802	Pass
LE-376	MP-9200	Pass

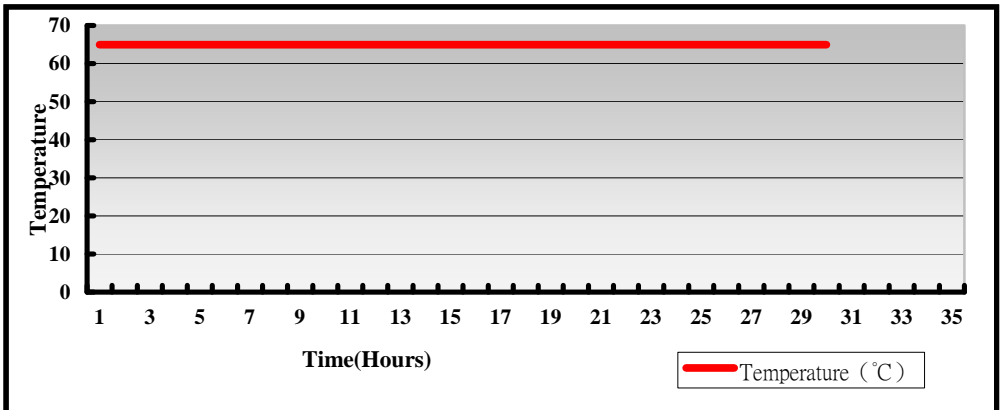
3. Environmental test

3.1 Temperature Test

Hardware Device list:

System Board	LE-376G
CPU	Intel® Atom™ Processor N450 1.66GHZ
Memory	Transcend DDRII 667 2GB (E1108ACBG)
HDD	Western Digital WD10EADS-00L5B1 1.0TB
Operating OS	Windows XP
Test Equipment	THERMOTRON 2800 Programmer/Controller
Test Program	3DMark 2003 + Prime95

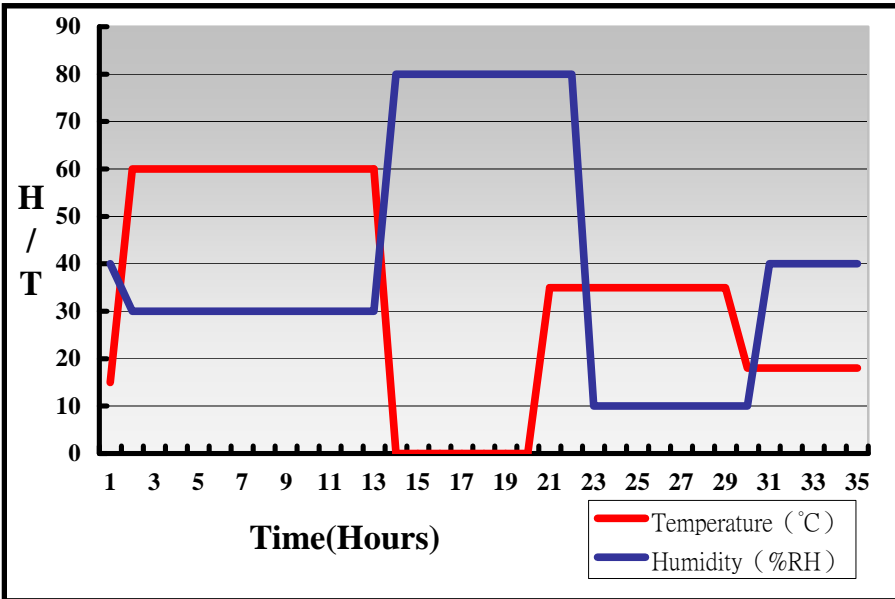
Test Result:



Hardware Device list:

System Board	LP-376G
CPU	Intel® Atom™ Processor N450 1.66GHZ
Memory	Transcend DDRII 667 2GB (E1108ACBG)
HDD	Western Digital WD10EADS-00L5B1 1.0TB
Operating OS	Windows XP
Test Equipment	THERMOTRON 2800 Programmer/Controller
Test Program	3DMark 2003

Test Result:



Boot Up Test:

Hardware Device list:

System Board	LP-376G
CPU	Intel® Atom™ Processor N450 1.66GHZ
Memory	Transcend DDRII 667 2GB (E1108ACBG)
HDD	Western Digital WD10EADS-00L5B1 1.0TB

Temperature	Result	Remark
0°C	Pass	50 Times.
65°C	Pass	50 Times

3.2 Thermal measurements at various points on the board

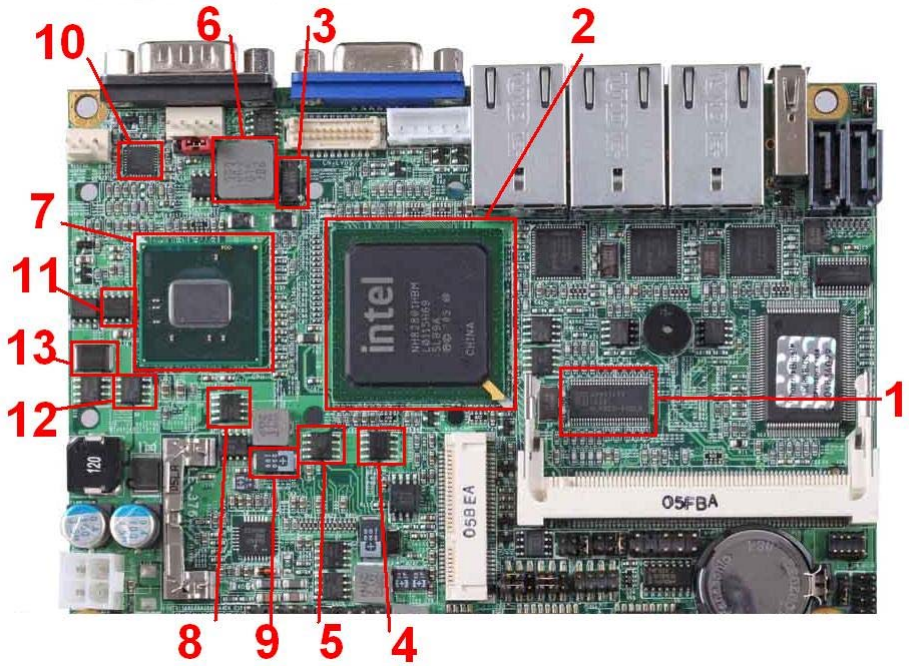
Test Environment :

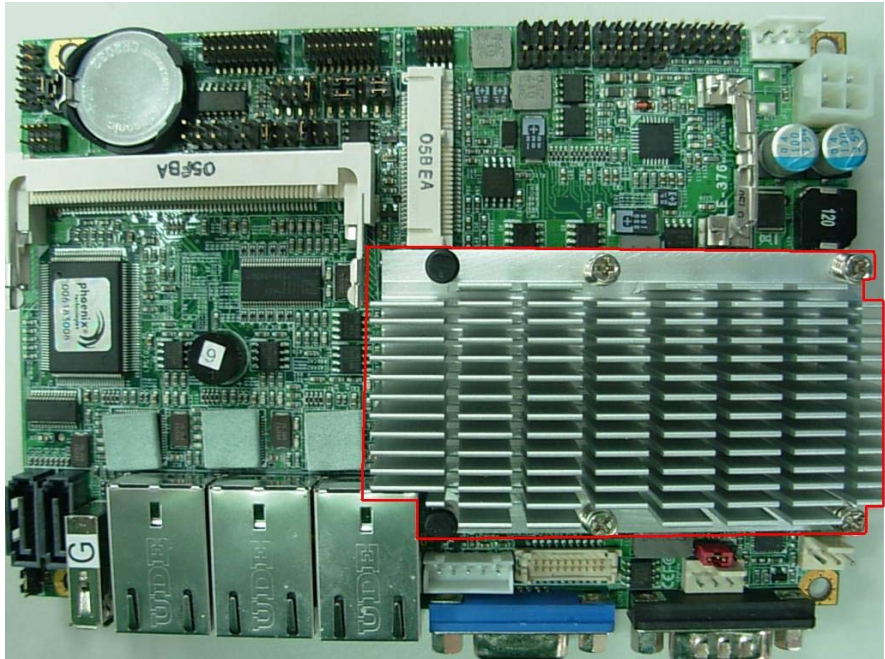
CPU	Intel® Atom™ Processor N450 1.66GHZ
Memory	Transcend DDRII 667 2GB (E1108ACBG)
HDD	Western Digital WD10EADS-00L5B1 1.0TB
Power	LS 0219B1280(80W)
Operating System	Windows XP
Test Program	3DMARK2003,Prime95

Test Result:

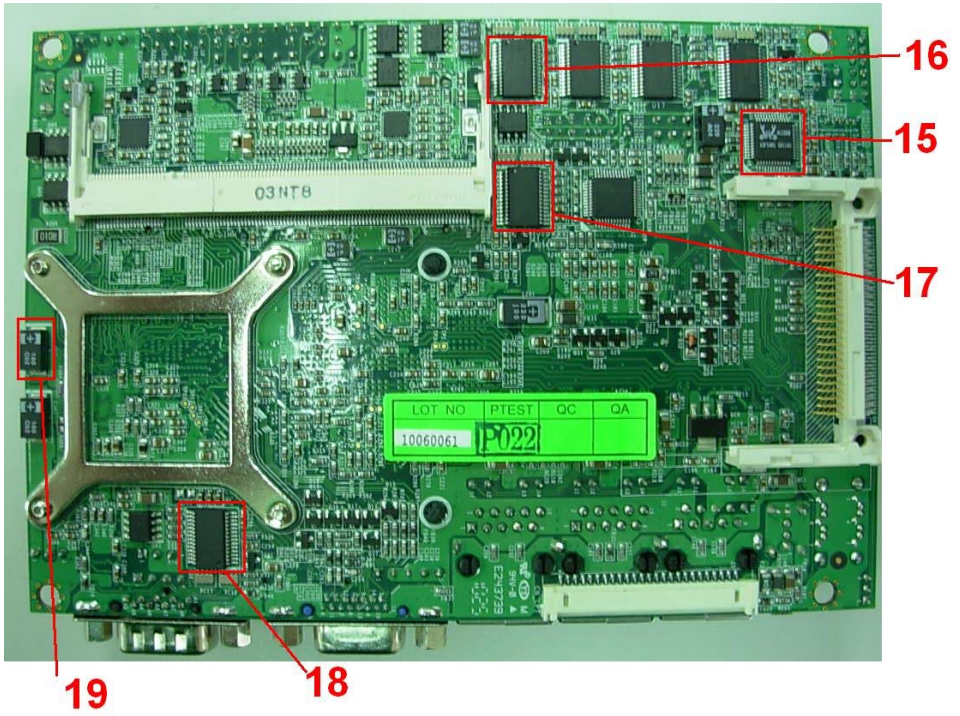
Item	Environmental temperature	27.3
1	U8(ICS9LP505)	68.5
2	SB(ICH8M)	81°C
3	X5	65.5°C
4	Q6(TMSIRF7413Z)	96.8°C
5	Q9(TMSIRF7413Z)	107.4°C
6	L1(LLC3.3UH/0445)	58.9°C
7	CPU	95°C
8	Q12	60.1°C
9	C102	80.7°C
10	U14	68.6°C
11	Q15	88.4°C
12	Q14	63.6°C
13	D9	65.7°C
14	Heat Sink	68.7°C
15	U15	59.3°C
16	U21	58°C

17	U20	60.9°C
18	U28	67.1°C
19	CE2	66.2°C





14



4. Reliability Test

4.1 Power Consumption Test

1. Test Environment:

Motherboard	LE-376H
CPU	Intel® Atom D410 processor
Memory	Transcend DDRII 667 2GB (E1108ACBG-6E-E)
CF	INNO DISK 16GB STANDARD (DC1M-16GD31C2D-D)

(A) Power Supply: CHANNEL WELL TECHNOLOGY CWT-300BS (300W)

Voltage	MS-DOS Boot up		Windows XP SP2 Prime95-255a + 3DMarks2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	1.78	21.36	1.76	21.48

1.a. Test Environment:

The same as above but with LCD panel

Display Panel	AUO G104SN03V1 10" LCD
----------------------	-------------------------------

(A) Power Supply: CHANNEL WELL TECHNOLOGY CWT-300BS (300W)

Voltage	MS-DOS Boot up		Windows XP SP2 Prime95-255a + 3DMarks2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	2.26	27.12	2.21	26.52

2.Test Environment:

Motherboard	LE-376H
CPU	Intel® Atom D410 processor
Memory	PQI DDRII 800 2 GB (HY5PS1G831C)
CF	INNO DISK 16GB STANDARD (DC1M-16GD31C2D-D)

(A) Power Supply: CHANNEL WELL TECHNOLOGY CWT-300BS (300W)

Voltage	MS-DOS Boot up		Windows XP SP2 Prime95-255a + 3DMarks2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	1.8	21.6	1.74	20.88

2.a.Test Environment:

The same as above but with LCD panel

Display Panel	AUO G104SN03V1 10" LCD
----------------------	-------------------------------

(A) Power Supply: CHANNEL WELL TECHNOLOGY CWT-300BS (300W)

Voltage	MS-DOS Boot up		Windows XP SP2 Prime95-255a + 3DMarks2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	2.28	27.36	2.23	26.76

3. Test Environment:

Motherboard	LE-376G
CPU	Intel® Atom N450 processor
Memory	Elixir DDRII 800 1GB (N2TU1G16D6-AC)
CF	INNO DISK 16GB STANDARD (DC1M-16GD31C2D-D)

(A) Power Supply: CHANNEL WELL TECHNOLOGY CWT-300BS (300W)

Voltage	MS-DOS Boot up		Windows XP SP2 Prime95-255a + 3DMarks2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	1.14	13.68	1.72	20.64

3. a. Test Environment:

The same as above but with LCD panel

Display Panel	AUO G104SN03V1 10" LCD
----------------------	-------------------------------

(A) Power Supply: CHANNEL WELL TECHNOLOGY CWT-300BS (300W)

Voltage	MS-DOS Boot up		Windows XP SP2 Prime95-255a + 3DMarks2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	2.11	25.32	2.15	25.8

4. Test Environment:

Motherboard	LE-376G
CPU	Intel® Atom N450 processor
Memory	Transcend DDRII 667 2GB (E1108ACBG-6E-E)
CF	INNO DISK 16GB STANDARD (DC1M-16GD31C2D-D)

(A) Power Supply: CHANNEL WELL TECHNOLOGY CWT-300BS (300W)

Voltage	MS-DOS Boot up		Windows XP SP2 Prime95-255a + 3DMarks2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	1.66	19.92	1.76	21.12

4. a.Test Environment:

The same as above but with LCD panel

Display Panel	AUO G104SN03V1 10" LCD
----------------------	-------------------------------

(A) Power Supply: CHANNEL WELL TECHNOLOGY CWT-300BS (300W)

Voltage	MS-DOS Boot up		Windows XP SP2 Prime95-255a + 3DMarks2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	2.01	24.12	2.16	25.92

5.Test Environment:

Motherboard	LE-376G
CPU	Intel® Atom N450 processor
Memory	PQI DDRII 800 2GB (HY5PS1G831C)
CF	INNO DISK 16GB STANDARD (DC1M-16GD31C2D-D)

(A) Power Supply: CHANNEL WELL TECHNOLOGY CWT-300BS (300W)

Voltage	MS-DOS Boot up		Windows XP SP2 Prime95-255a + 3DMarks2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	1.69	20.28	1.76	21.12

5.a.Test Environment:

The same as above but with LCD panel

Display Panel	AUO G104SN03V1 10" LCD
----------------------	-------------------------------

(A) Power Supply: CHANNEL WELL TECHNOLOGY CWT-300BS (300W)

Voltage	MS-DOS Boot up		Windows XP SP2 Prime95-255a + 3DMarks2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	2.09	25.08	2.22	26.64

6. Test Environment:

Motherboard	LE-376A
CPU	Intel® Atom D510 processor
Memory	Transcend DDRII 667 2GB (E1108ACBG-6E-E)
CF	INNO DISK 16GB STANDARD (DC1M-16GD31C2D-D)

(A) Power Supply: CHANNEL WELL TECHNOLOGY CWT-300BS (300W)

Voltage	MS-DOS Boot up		Windows XP SP2 Prime95-255a + 3DMarks2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	1.92	23.04	1.99	23.88

6.a. Test Environment:

The same as above but with LCD panel

Display Panel	AUO G104SN03V1 10" LCD
----------------------	-------------------------------

(A) Power Supply: CHANNEL WELL TECHNOLOGY CWT-300BS (300W)

Voltage	MS-DOS Boot up		Windows XP SP2 Prime95-255a + 3DMarks2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	2.44	29.28	2.48	29.76

7.Test Environment:

Motherboard	LE-376A
CPU	Intel® Atom D510 processor
Memory	PQI DDRII 800 2 GB (HY5PS1G831C)
CF	INNO DISK 16GB STANDARD (DC1M-16GD31C2D-D)

(A) Power Supply: CHANNEL WELL TECHNOLOGY CWT-300BS (300W)

Voltage	MS-DOS Boot up		Windows XP SP2 Prime95-255a + 3DMarks2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	1.91	22.92	2.01	24.12

7.a.Test Environment:

The same as above but with LCD panel

Display Panel	AUO G104SN03V1 10” LCD
----------------------	-------------------------------

(A) Power Supply: CHANNEL WELL TECHNOLOGY CWT-300BS (300W)

Voltage	MS-DOS Boot up		Windows XP SP2 Prime95-255a + 3DMarks2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	2.45	29.4	2.52	30.24

8. Test Environment:

Motherboard	LE-376A
CPU	Intel® Atom D510 processor
Memory	Elixir DDRII 800 1GB (N2TU1G16D6-AC)
CF	INNO DISK 16GB STANDARD (DC1M-16GD31C2D-D)

(A) Power Supply: CHANNEL WELL TECHNOLOGY CWT-300BS (300W)

Voltage	MS-DOS Boot up		Windows XP SP2 Prime95-255a + 3DMarks2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	1.88	22.56	1.95	23.4

8. a. Test Environment:

The same as above but with LCD panel

Display Panel	AUO G104SN03V1 10" LCD
----------------------	-------------------------------

(A) Power Supply: CHANNEL WELL TECHNOLOGY CWT-300BS (300W)

Voltage	MS-DOS Boot up		Windows XP SP2 Prime95-255a + 3DMarks2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	2.42	29.04	2.45	29.4

5. Performance Test

5.1 Business Win Stone 2002

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
<p>Business Win stone2002</p>	<p>Intel® Atom D510 processor PQI DDRII 800 2GB (HY5PS1G831C) Western Digital 1T WD10EADS</p>	<p>Pass</p>	<p>24.7 25 25.1 25.2</p>
<p>Business Win stone2002</p>	<p>Intel® Atom N450 processor PQI DDRII 800 2GB (HY5PS1G831C) Western Digital 1T WD10EADS</p>	<p>Pass</p>	<p>24.2 24.7 23.9 24.1</p>
<p>Business Win stone2002</p>	<p>Intel® Atom D410 processor Lead Free DDRII 667 1GB (E5108AGBG) Western Digital 1T WD10EADS</p>	<p>Pass</p>	<p>24.7 24.5 24.6 24.6</p>

5.2 Business Win Stone 2004

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
<p align="center">Business Win stone2004</p>	<p align="center">Intel® Atom D510 processor PQI DDRII 800 2GB (HY5PS1G831C) Western Digital 1T D10EADS</p>	<p align="center">Pass</p>	<p align="center">13.3 13.6 12.3 10.8</p>
<p align="center">Business Win stone2004</p>	<p align="center">Intel® Atom D410 processor PQI DDRII 800 2GB (HY5PS1G831C) Western Digital 1T WD10EADS</p>	<p align="center">Pass</p>	<p align="center">12.3 13.6 12.6 13.6</p>
<p align="center">Business Win stone2004</p>	<p align="center">Intel® Atom N450 processor Lead Free DDRII 667 1GB (E5108AGBG) Western Digital 1T WD10EADS</p>	<p align="center">Pass</p>	<p align="center">12.3 11.2 13.6 13.6</p>

5.3 Content Creation Winstone 2001

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
<p align="center">Content Creation Winstone 2001</p>	<p align="center">Intel® Atom D510 processor PQI DDRII 800 2GB (HY5PS1G831C) Western Digital WD10EADS</p>	<p align="center">Pass</p>	<p align="center">70.1 70.4 70.3 70.4 70.5</p>
<p align="center">Content Creation Winstone 2001</p>	<p align="center">I Intel® Atom D410 processor PQI DDRII 800 2GB (HY5PS1G831C) Western Digital 1T WD10EADS</p>	<p align="center">Pass</p>	<p align="center">67.6 68 68 68.5 67.7</p>
<p align="center">Content Creation Winstone 2001</p>	<p align="center">Intel® Atom N450 processor Lead Free DDRII 667 1GB (E5108AGBG) Western Digital 1T WD10EADS</p>	<p align="center">Pass</p>	<p align="center">66.3 66.3 66.3 66.1 66.2</p>

5.4 Content Creation Winstone 2004

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
<p align="center">Content Creation Winstone 2004</p>	<p align="center">Intel® Atom D510 processor PQI DDRII 800 2GB (HY5PS1G831C) Western Digital 1T WD10EADS</p>	<p align="center">Pass</p>	<p align="center">15.5 15.5 14.5 15.5</p>
<p align="center">Content Creation Winstone 2004</p>	<p align="center">Intel® Atom D410 processor PQI DDRII 800 2GB (HY5PS1G831C) Western Digital 1T WD10EADS</p>	<p align="center">Pass</p>	<p align="center">15.4 15.4 15.5 15.4</p>
<p align="center">Content Creation Winstone 2004</p>	<p align="center">Intel® Atom N450 processor Lead Free DDRII 667 1GB (E5108AGBG) Western Digital 1T WD10EADS</p>	<p align="center">Pass</p>	<p align="center">15 15 15 15</p>

5.5 3D MARK(2001 、 2003 、 2005)

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Scores	Intel® Atom N450 processor PQI DDRII 800 2GB (HY5PS1G831C) Western Digital WD10EADS	Pass	3194
3DMARK2003 Scores		Pass	843
3DMARK2005 Scores		Pass	271

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Scores	Intel® Atom N450 processor PQI DDRII 800 1GB(HY5PS1G831C) Western Digital WD10EADS	Pass	3061
3DMARK2003 Scores		Pass	791
3DMARK2005 Scores		Pass	264

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Scores	Intel® Atom D510 processor 456 PQI DDRII 800 2GB (HY5PS1G831C) Western Digital WD10EADS	Pass	3140
3DMARK2003 Scores		Pass	1006
3DMARK2005 Scores		Pass	352

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Scores	Intel® Atom D510 processor PQI DDRII 800 1GB(HY5PS1G831C) Western Digital WD10EADS	Pass	3119
3DMARK2003 Scores		Pass	985
3DMARK2005 Scores		Pass	349

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Scores	Intel® Atom D410 processor PQI DDRII 800 2GB (HY5PS1G831C) Western Digital WD10EADS	Pass	3115
3DMARK2003 Scores		Pass	867
3DMARK2005 Scores		Pass	277

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Scores	Intel® Atom D410 processor PQI DDRII 800 1GB(HY5PS1G831C) Western Digital WD10EADS	Pass	3121
3DMARK2003 Scores		Pass	862
3DMARK2005 Scores		Pass	267

5.6 3D MARK2006

Windows XP SP2

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Source	Intel® Atom N450 processor PQI DDRII 800 2GB (HY5PS1G831C) Western Digital WD10EADS	Pass	113
2	SM2.0 Source		Pass	52
3	HDR/SM3.0 Source		Pass	N/A
4	CPU Source		Pass	516

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Source	Intel® Atom N450 processor PQI DDRII 800 1GB(HY5PS1G831C) Western Digital WD10EADS	Pass	104
2	SM2.0 Source		Pass	48
3	HDR/SM3.0 Source		Pass	N/A
4	CPU Source		Pass	514

Windows XP SP2

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Source	Intel® Atom D510 processor PQI DDRII 800 1GB(HY5PS1G831C) Western Digital WD10EADS	Pass	140
2	SM2.0 Source		Pass	64
3	HDR/SM3.0 Source		Pass	N/A
4	CPU Source		Pass	882

Windows XP SP2

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Source	Intel® Atom D510 processor PQI DDRII 800 2GB(HY5PS1G831C) Western Digital WD10EADS	Pass	147
2	SM2.0 Source		Pass	67
3	HDR/SM3.0 Source		Pass	N/A
4	CPU Source		Pass	886

Windows XP SP2

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Source	Intel® Atom D410 processor PQI DDRII 800 2GB (HY5PS1G831C) Western Digital WD10EADS	Pass	161
2	SM2.0 Source		Pass	74
3	HDR/SM3.0 Source		Pass	N/A
4	CPU Source		Pass	512

Windows XP SP2

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Source	Intel® Atom D410 processor PQI DDRII 800 1GB(HY5PS1G831C) Western Digital WD10EADS	Pass	117
2	SM2.0 Source		Pass	54
3	HDR/SM3.0 Source		Pass	N/A
4	CPU Source		Pass	515

5.7 PC MARK2002

Test Environment
Intel® Atom N450 processor PQI DDRII 800 2GB (HY5PS1G831C) Western Digital WD10EADS

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	CPU test Source	Pass	2794
2	Memory test Source	Pass	7374
3	HDD test Source	Pass	2059

Test Environment
Intel® Atom N450 processor PQI DDRII 8001GB(HY5PS1G831C) Western Digital WD10EADS

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	CPU test Source	Pass	2788
2	Memory test Source	Pass	7108
3	HDD test Source	Pass	2129

Test Environment

**Intel® Atom D510 processor
PQI DDRII 800 2GB (HY5PS1G831C)
Western Digital WD10EADS**

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	CPU test Source	Pass	2787
2	Memory test Source	Pass	7295
3	HDD test Source	Pass	2027

Test Environment

**Intel® Atom D510 processor
PQI DDRII 800 1GB(HY5PS1G831C)
Western Digital WD10EADS**

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	CPU test Source	Pass	2802
2	Memory test Source	Pass	7103
3	HDD test Source	Pass	2099

Test Environment
Intel® Atom D410 processor PQI DDRII 800 2GB (HY5PS1G831C) Western Digital WD10EADS

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	CPU test Source	Pass	2709
2	Memory test Source	Pass	7387
3	HDD test Source	Pass	2174

Test Environment
Intel® Atom D410 processor PQI DDRII 800 1GB(HY5PS1G831C) Western Digital WD10EADS

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	CPU test Source	Pass	2776
2	Memory test Source	Pass	7098
3	HDD test Source	Pass	2142

5.8 PC MARK2004

Test Environment
Intel® Atom N450 processor PQI DDRII 800 2GB (HY5PS1G831C) Western Digital WD10EADS

Windows XP PS2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Source	Pass	2102
2	CPU test Source	Pass	2199
3	Memory test Source	Pass	3236
4	Graphic test Source	Pass	N/A
5	HDD test Source	Pass	6418

Test Environment
Intel® Atom N450 processor PQI DDRII 800 1GB (HY5PS1G831C) Western Digital WD10EADS

Windows XP PS2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Source	Pass	2105
2	CPU test Source	Pass	2207
3	Memory test Source	Pass	3235
4	Graphic test Source	Pass	N/A
5	HDD test Source	Pass	6417

Test Environment
Intel® Atom D510 processor PQI DDRII 800 2GB (HY5PS1G831C) Western Digital WD10EADS

Windows XP PS2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Source	Pass	2174
2	CPU test Source	Pass	2436
3	Memory test Source	Pass	3333
4	Graphic test Source	Pass	N/A
5	HDD test Source	Pass	6294

Test Environment
Intel® Atom D510 processor PQI DDRII 800 1GB (HY5PS1G831C) Western Digital WD10EADS

Windows XP PS2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Source	Pass	2337
2	CPU test Source	Pass	2471
3	Memory test Source	Pass	3242
4	Graphic test Source	Pass	N/A
5	HDD test Source	Pass	6410

Test Environment
Intel® Atom D410 processor PQI DDRII 800 2GB (HY5PS1G831C) Western Digital WD10EADS

Windows XP PS2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Source	Pass	2115
2	CPU test Source	Pass	2211
3	Memory test Source	Pass	3340
4	Graphic test Source	Pass	N/A
5	HDD test Source	Pass	6400

Test Environment
Intel® Atom D410 processor PQI DDRII 800 1GB (HY5PS1G831C) Western Digital WD10EADS

Windows XP PS2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Source	Pass	2107
2	CPU test Source	Pass	2208
3	Memory test Source	Pass	3224
4	Graphic test Source	Pass	N/A
5	HDD test Source	Pass	6392

5.9 PC MARK2005

Test Environment
Intel® Atom N450 processor PQI DDRII 800 2GB (HY5PS1G831C) Western Digital WD10EADS

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	System test Source	Pass	1801
2	CPU test Source	Pass	1550
3	Memory test Source	Pass	2550
4	Graphic test Source	Pass	N/A
5	HDD test Source	Pass	6602

Test Environment
Intel® Atom N450 processor PQI DDRII 800 1GB (HY5PS1G831C) Western Digital WD10EADS

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	System test Source	Pass	1812
2	CPU test Source	Pass	1562
3	Memory test Source	Pass	2550
4	Graphic test Source	Pass	N/A
5	HDD test Source	Pass	6633

Test Environment
Intel® Atom D510 processor PQI DDRII 800 2GB (HY5PS1G831C) Western Digital WD10EADS

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	System test Source	Pass	1820
2	CPU test Source	Pass	2021
3	Memory test Source	Pass	2580
4	Graphic test Source	Pass	N/A
5	HDD test Source	Pass	6673

Test Environment
Intel® Atom D510 processor PQI DDRII 800 1GB (HY5PS1G831C) Western Digital WD10EADS

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	System test Source	Pass	1800
2	CPU test Source	Pass	2022
3	Memory test Source	Pass	2553
4	Graphic test Source	Pass	N/A
5	HDD test Source	Pass	1597

Test Environment
Intel® Atom D410 processor PQI DDRII 800 2GB (HY5PS1G831C) Western Digital WD10EADS

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	System test Source	Pass	1861
2	CPU test Source	Pass	1566
3	Memory test Source	Pass	2579
4	Graphic test Source	Pass	N/A
5	HDD test Source	Pass	6690

Test Environment
Intel® Atom D410 processor PQI DDRII 800 1GB (HY5PS1G831C) Western Digital WD10EADS

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	System test Source	Pass	1815
2	CPU test Source	Pass	1566
3	Memory test Source	Pass	2529
4	Graphic test Source	Pass	N/A
5	HDD test Source	Pass	6659

5.10 Storage Performance

5.10.1 HDD

Test environment:

OS Windows XP professional SP2

Program (HD Tune)

HDD MODEL	INTERFACE	capacity	Average	Burst Rate	Access Time
Western Digital WD10EADS-00L5B1	SATA	1.0TB	69.8 MB/sec	128.4 MB/sec	14.8ms
Hitachi Deskstar (HDT722525DLA380)		250GB	52.7 MB/sec	106.2 MB/sec	13.3ms
InnoDisk Corp	CF Card	8GB	3.0 MB/sec	3.1 MB/sec	0.3ms
Turbo Industrial		2GB	1.7 MB/sec	1.7 MB/sec	0.8ms
Fudia		8GB	2.8 MB/sec	2.8 MB/sec	0.4ms

5.10.2 CD-ROM

Test environment:

OS Windows XP professional SP2

Program (NERO)

CD-ROM MODEL	INTERFACE	Average speed	Full READ	Burst Rate	CD
LITEON DVD SOSW-833SX	USB	15.62x	214ms	19 MB/s	52X CD-R
MATSHITA DVD EBC100	USB	18.19x	275ms	19 MB/s	52X CD-R

5.10.3 Vibration Test

Motherboard	LE-376A			
Test Equipment	VS-5060L			
Amplitude	Degree	Frequency	Time (1min/1Time)	Result
0.75mm	40°C	5 → 55 → 5 Hz	10	Pass
1.00mm	55°C	5 → 55 → 5 Hz	10	Pass
1.25mm	70°C	5 → 55 → 5 Hz	10	Pass
1.5mm	90°C	5 → 55 → 5 Hz	10	Pass
1.5mm	90°C	5 → 55 → 5 Hz	120	Pass