

Product Test Report



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Report Edition	1.1
BIOS Version	1.1
Testing Engineer	RICK
Check Engineer	MASTER

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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	IDE	PASS
6	SATA 1/2/3	PASS
7	USB 1/2/3/4/5/6	PASS
8	DDRII	PASS
9	COM 1/2/3/4/5/6	PASS
10	VGA Port	PASS
11	CN_CRT	PASS
12	PS2	PASS
13	CN_AUDIO	PASS
14	CF	PASS
15	MINI CARD 1/2	PASS
16	DIO	PASS
17	CPUFAN	PASS
18	SYSFAN	PASS
19	PCI 1/2/3/4	PASS
20	LPT	PASS
21	LVDS	PASS
22	LAN 1/2	PASS

23	IrDA	PASS
24	CN_PS	PASS

Jumper

Item	Description	Result
1	JRTC	PASS
2	JCSEL1	PASS
3	JCSEL2	PASS
4	JVLCD	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	Quick Power On Self Test	PASS	
6	Boot Device Setting	PASS	
7	Boot Up Num Lock Status	PASS	
8	ACPI Suspend Type	PASS	
9	Halt On	PASS	
10	Onboard Serial Port	PASS	
11	On-Chip Frame Buffer Size	PASS	
12	Total GFX memory	PASS	
13	Boot Display	PASS	
14	USB Device Setting	PASS	
15	Soft-Off by PWRBTN	PASS	
16	Power On Function	PASS	
17	ACPI Function	PASS	
18	Hot Key Password	PASS	
19	Wake-up by PCI card (PCI Express Mini Card)	PASS	
20	Onboard Parallel Port	PASS	
21	Resume by Alarm	PASS	
22	Watch Dog Timer Select	PASS	
23	Init Display First	PASS	
24	Power On by Ring	PASS	

25	Set Supervisor Password	PASS	
26	Set User Password	PASS	
27	UART Mode Select	PASS	
28	RxD , Txd Active	PASS	
29	IR Transmission Delay	PASS	
30	UR2 duplex Mode	PASS	
31	Use IR Pins	PASS	
32	CPU Warning Temperature	PASS	
33	Shutdown Temperature	PASS	
34	USB KB Wake-Up From S3	PASS	

1.3 Driver

CD Edition : 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 2000 SP4 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

3. Windows Server 2003 Driver Test

Item	Description	Result	version
1	Chipset Driver	PASS	9.1.1.1019
2	Audio Driver	PASS	5.10.0.6083
3	LAN Driver	PASS	11.4.7.0

4. Windows Vista 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

5. Windows Vista 64 bit Driver Test

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

6. Windows Server 2008 32 bit Driver Test

Item	Description	Result	version
1	Chipset Driver	PASS	9.1.1.1019
2	VGA Driver	PASS	8.14.10.1792
3	Audio Driver	PASS	6.0.1.6083
4	LAN Driver	PASS	11.4.7.0

7. Windows Server 2008 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

8. Windows 7 32 bit Driver Test

Item	Description	Result	version
1	Chipset Driver	PASS	9.1.1.1019
2	VGA Driver	PASS	8.14.10.1792
3	Audio Driver	PASS	6.0.1.6083
4	LAN Driver	PASS	11.4.7.0

9. 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

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	L2 Size	Result
SLBLA	1.66 GHz	Atom	D510	N/A	1 MB	PASS
SLBMH	1.66 GHz	Atom	D410	N/A	512KB	PASS
SLBMG	1.66 GHz	Atom	N450	N/A	512KB	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	PASS	
8	Windows Server 2003	PASS	
9	Windows 2000 SP4	PASS	
10	RED HAT 5.4 64 bit (2.6.18-164.e15)	PASS	
11	Fedora 8 (2.6.23.1-42.fc8)	PASS	
12	Kubuntu 9.04 (2.6.28-11-generic)	PASS	

2.3 Memory Test

Test environment:

OS Windows XP professional SP2

Test program : PC MARK 2005

Manufacturer	Chip	Frequency	Capacity Mbytes	Result
hnnix	HY5PS121621B	DDRII 667	256 MB	PASS
A-DATA	AD2908A8A-3EG	DDRII 667	512 MB	PASS
A-DATA	AD20908A8A-3EG	DDRII 667	1 GB	PASS
TLA	HY5PS1G831C	DDRII 667	1 GB	PASS
Transcend	KY5PS1G831C	DDRII 800	1 GB	PASS
Transcend	E1108ACBG-6E-E	DDR II 667	2 GB	PASS
PQI	7QE22D9NHL	DDRII 667	2 GB	PASS
Kingston	H5PS2G83AFR	DDR II 800	4 GB	PASS

2.4 VGA Graphic Quality Test

Test environment:

OS Windows XP professional SP2

Driver version : 6.14.10.5134

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

2.5 Audio

Test environment:

OS Windows XP professional SP2

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 Server 2003

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 Server 2008 32 bit**Driver version : 6.0.1.6083**

Item	Description	Result	Remark
1	2 CH	PASS	
2	Microphone	PASS	

OS Windows Server 2008 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	

2.6 HDD Test

Test environment:

OS Windows XP professional SP2

MODEL	INTERFACE	capacity	Size Detect	Data Transfer
Western Digital WD22500JB-00GVC0	IDE	250 GB	PASS	PASS
Western Digital AC313000-00RTT2	IDE	13 GB	PASS	PASS
Hitachi HTS543216L9A	SATA	160 GB	PASS	PASS
Western Digital WD3200AAJS-00YZCA0	SATA	320 GB	PASS	PASS
Western Digital WD500AAKS-00V1A0	SATA	500 GB	PASS	PASS
Transcend	CF	1 GB	PASS	PASS

2.7 CD-ROM Test

Test environment:

OS Windows XP professional SP2

MODEL	INTERFACE	Detect	Data Transfer	PLAY CD
PIONEER DVD-127P	IDE	PASS	PASS	PASS
SONY CDU4811	IDE	PASS	PASS	PASS
ATAPI LH-1P52N	IDE	PASS	PASS	PASS
BENQ CB523C	IDE	PASS	PASS	PASS
BENQ DVD DW2005 UB34	SATA	PASS	PASS	PASS
Optiarc DVD AD-7204S	SATA	PASS	PASS	PASS
LG DVD GGW-H20L	SATA	PASS	PASS	PASS

LITEON DVD SOSC-2485KX	USB	PASS	PASS	PASS
LITEON DVD SOSW-833XS	USB	PASS	PASS	PASS
LITEON DVD eTAU108	USB	PASS	PASS	PASS
MATSHITA BD-CMB UJ-120	USB	PASS	PASS	PASS

2.8 USB device Test

1. Windows XP SP2

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

2. Windows 2000 SP4

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

3. Windows Server 2003

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

4. Windows Vista 32 bit

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

5. Windows 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	

6. Windows Server 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	

7. Windows Server 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	

8. 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	

9. 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	

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	PC Check	PASS	
4	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 2000 SP4

Item	Description	Result	Remark
1	Device Manager Check	PASS	
2	RS-232 Mouse Test	PASS	
3	b&b com port 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 Vista 32 bit

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

6. Windows Vista 64 bit

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

7. 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	

8. Windows Server 2008 64 bit

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

9. Windows 7 32 bit

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

10. Windows 7 64 bit

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

2.10 Print Port Test

1. MS-DOS

Item	Description	Result	Remark
1	PC Check	PASS	
2	TS	PASS	

2. Windows 2000 SP4

Item	Description	Result	Remark
1	ECP/EPP PRINT TEST	PASS	

3. Windows Server 2003

Item	Description	Result	Remark
1	ECP/EPP PRINT TEST	PASS	

4. Windows XP SP2

Item	Description	Result	Remark
1	ECP/EPP PRINT TEST	PASS	

5. Windows Vista 32 bit

Item	Description	Result	Remark
1	ECP/EPP PRINT TEST	PASS	

6. Windows Vista 64 bit

Item	Description	Result	Remark
1	ECP/EPP PRINT TEST	PASS	

7. Windows Server 2008 32 bit

Item	Description	Result	Remark
1	ECP/EPP PRINT TEST	PASS	

8. Windows Server 2008 64 bit

Item	Description	Result	Remark
1	ECP/EPP PRINT TEST	PASS	

9. Windows 7 32 bit

Item	Description	Result	Remark
1	ECP/EPP PRINT TEST	PASS	

10. Windows 7 64 bit

Item	Description	Result	Remark
1	ECP/EPP PRINT TEST	PASS	

2.11 PS2 Keyboard 、 Mouse Test

1. MS-DOS

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

2. Windows XP SP2

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

3. Windows 2000 SP4

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

4. Windows Server 2003

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

5. Windows Vista 32 bit

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

6. Windows Vista 64 bit

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

7. Windows Server 2008 32 bit

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

8. Windows Server 2008 64 bit

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

9. Windows 7 32 bit

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

10. Windows 7 64 bit

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

2.12 LAN Test

Data Transfer Test environment:

-CAT 6 UTP 100M

-8 HR. continuous

1. Windows XP SP2

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

2. Windows Server 2003

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

3. Windows Vista 32 bit

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

4. Windows Vista 64 bit

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

5. Windows Server 2008 32 bit

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

6. Windows Server 2008 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	

2.13 Power Supply Test

Item	TYPE	Description	Result	Remark
1	ATX Power	HIGH POWER HPC-250-101 A/OEM 300W	PASS	
2	ATX Power	MC-B350ATW	PASS	
3	ATX Power	CHANNEL WELL TECHNOLOGY CWT-300ATX12 300W	PASS	
4	ATX Power	HIGH POWER HPC-250-101 A/OEM 250W	PASS	

2.14 PCI Express mini card

Motherboard	PCI Express mini card	Remark
HE-772	MPX-574D/D2	PASS
HE-772	MPX-954	PASS
HE-772	MPX-643	PASS
HE-772	MPX-7202	PASS
HE-772	MPX-7767	PASS
HE-772	MPX-827	PASS
HE-772	MPX-SDVOD	NO SUPPLY
HE-772	MPX-SDVOX	NO SUPPLY
HE-772	MPX-TP4R	PASS
HE-772	MPX-1040	PASS
HE-772	MPX-3132	PASS

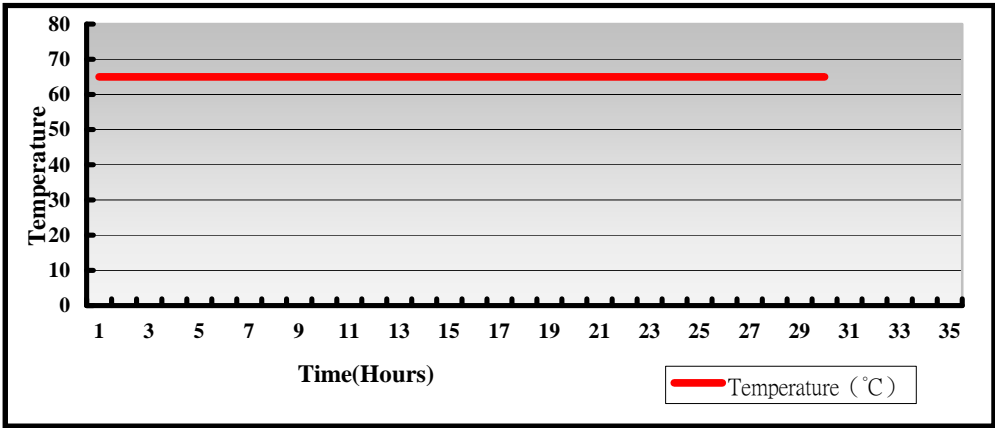
2.15 Back plane (PICMG1.3 or PICMG 1.0 or PISA)

Item	BRAND	MODEL	Result	Remark
1	Commell	CBP-5P4	PASS	

3. Environmental test

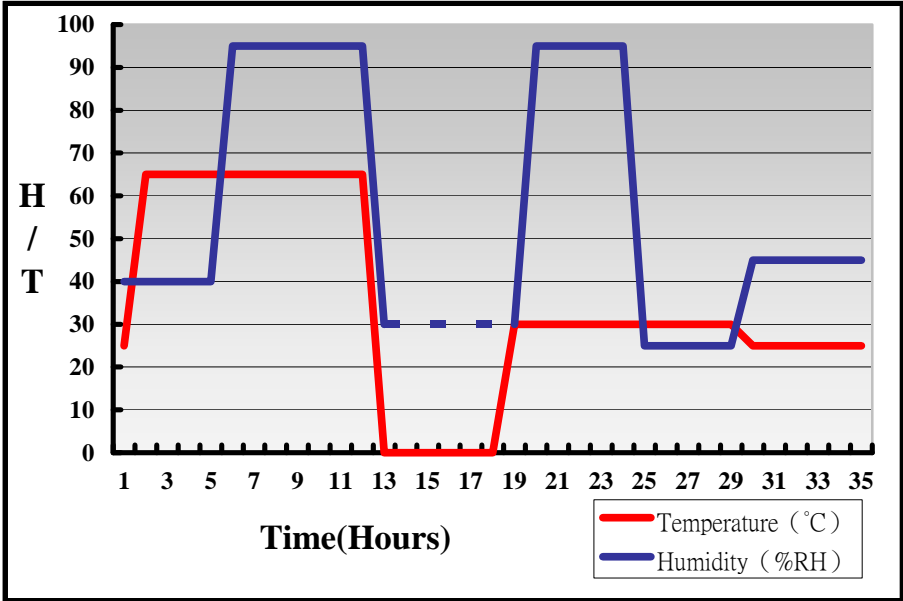
3.1 Temperature Test

System Board	HE-772H+CBP-5P4
CPU	Intel(R) Atom(TM) CPU D410 1.66GHz
Memory	PQI DDR2 667 2GB (E1108ACBG-6E-E)
HDD	Western Digital WD2500JB-00GVC0 250GB
Operating OS	Windows XP
Test Equipment	GIANT FORCE (GTH-150-60-CP-AR)
Test Program	3DMark 2003



Hardware Device list:

System Board	HE-772H+CBP-5P4
CPU	Intel(R) Atom(TM) CPU D410 1.66GHz
Memory	PQI DDR2 667 2GB (E1108ACBG-6E-E)
HDD	Western Digital WD2500JB-00GVC0 250GB
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:**

System Board	HE-772H+CBP-5P4
CPU	Intel(R) Atom(TM) CPU D410 1.66GHz
Memory	PQI DDR2 667 2GB (E1108ACBG-6E-E)
HDD	Western Digital WD2500JB-00GVC0 250GB

Temperature	Result	Remark
-40°C	PASS	50 Times
85°C	PASS	50 Times

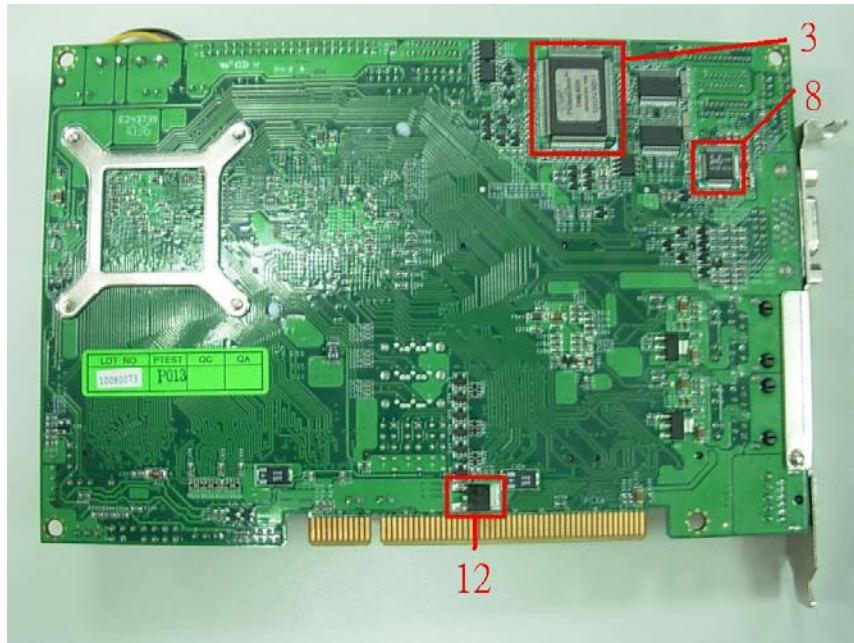
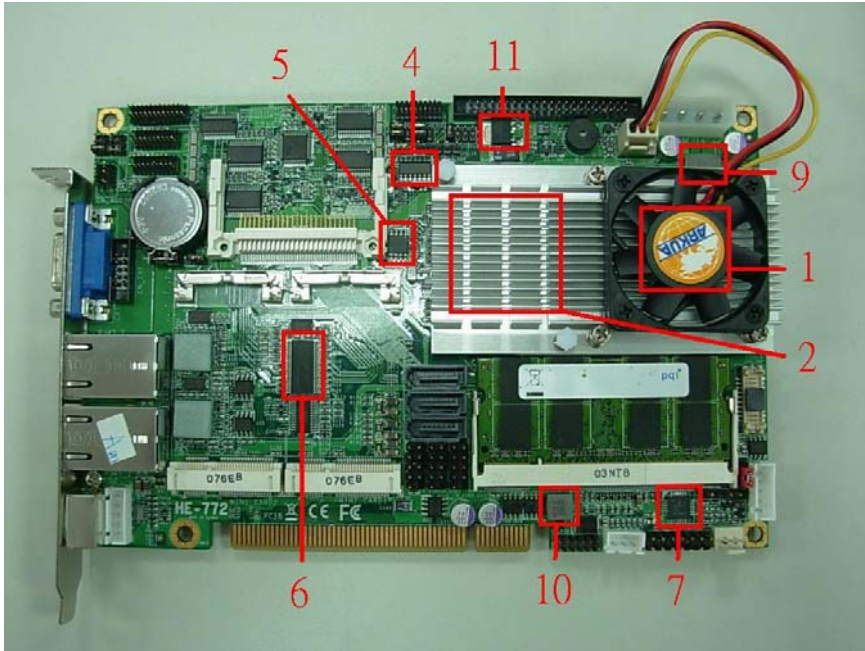
3.2 Thermal measurements at various points on the board

Test Environment :

CPU	Intel(R) Atom(TM) CPU D510 1.66GHz
Memory	PQI DDR2 667 2GB (E1108ACBG-6E-E)
HDD	Western Digital WD2500JB-00GVC0 250GB
Power	HIGH POWER HPC-250-101 A/OEM
Operating System	Windows XP
Test Program	Burnin 5.3

Test Result:

Item	Environmental temperature	27.8°C
1	CPU	68°C
2	ICH8M(Southbridge)	38.3°C
3	LPCIO(ICH83627DHG-P+OBL6W-1)	35.8°C
4	U6(ITS74F125)	43.5°C
5	U8(ICH25VF080B)	41.3°C
6	U11(ICS9LP505)	52.7°C
7	U16(ISL6537CR)	45.2°C
8	U21(ICHALC888)	47.2°C
9	L1(LLC3.3UH/0445)	53.4°C
10	LC1(LLC0.47UH/063T)	48.4°C
11	Q2(TRE1085)	45.8°C
12	Q37(TRE1085)	50°C



4. Reliability Test

4.1 Power Consumption Test

1.Test Environment:

Motherboard	HE-772G+CBP-5P4
CPU	Intel(R) Atom(TM) CPU N450 1.66GHz
Memory	Transcend DDR2 667 2GB (E1108ACBG-6E-E)
HDD	Western Digital WD5000AAKS-00V1A0 500GB

Power Supply : MC-B350ATW

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003 +PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	0.91	10.92	0.52	6.24
5V	3.53	17.65	3.56	17.8
3.3V	0.01	0.033	0.01	0.033
5VSB	0.233	1.165	0.005	0.025

1.a.Test Environment:

The same as above but with LCD panel

Display Panel	AUO G084SN05 V.7 8.4” LCD
---------------	---------------------------

Power Supply : MC-B350ATW

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003 +PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	1.57	18.84	1.06	12.72
5V	3.41	17.05	4.05	20.25
3.3V	0.01	0.033	0.01	0.033
5VSB	0.239	1.195	0.007	0.035

2.Test Environment:

Motherboard	HE-772G+CBP-5P4
CPU	Intel(R) Atom(TM) CPU N450 1.66GHz
Memory	PQI DDR2 667 2GB (E1108ACBG-6E-E)
HDD	Western Digital WD5000AAKS-00V1A0 500GB

Power Supply : MC-B350ATW

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003 +PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	1	12	0.51	6.12
5V	2.71	13.55	2.87	14.35
3.3V	0.01	0.033	0.01	0.033
5VSB	0.231	1.155	0.004	0.02

2.a.Test Environment:

The same as above but with LCD panel

Display Panel	AUO G084SN05 V.7 8.4" LCD
---------------	---------------------------

Power Supply : MC-B350ATW

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003 +PRIME95	
	Current (A)	Power (W)	Current (A)	Current (A)
12V	1.61	19.32	1.03	12.36
5V	3.96	19.8	4.27	21.35
3.3V	0.01	0.033	0.01	0.033
5VSB	0.233	1.165	0.006	0.03

3.Test Environment:

Motherboard	HE-772A+CBP-5P4
CPU	Intel(R) Atom(TM) CPU D510 1.66GHz
Memory	PQI DDR2 667 2GB (E1108ACBG-6E-E)
HDD	Western Digital WD5000AAKS-00V1A0 500GB

Power Supply : MC-B350ATW

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003 +PRIME95	
	Current (A)	Power (W)	Current (A)	Current (A)
12V	1.23	14.76	0.77	9.24
5V	3.85	19.25	3.96	19.8
3.3V	0.01	0.033	0.01	0.033
5VSB	0.219	1.095	0.006	0.03

3.a.Test Environment:

The same as above but with LCD panel

Display Panel	AUO G084SN05 V.7 8.4" LCD
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Power Supply : MC-B350ATW

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003 +PRIME95	
	Current (A)	Power (W)	Current (A)	Current (A)
12V	1.85	22.2	1.27	15.24
5V	4.1	20.5	4.27	21.35
3.3V	0.01	0.033	0.01	0.033
5VSB	0.223	1.115	0.008	0.04

4.Test Environment:

Motherboard	HE-772A+CBP-5P4
CPU	Intel(R) Atom(TM) CPU D510 1.66GHz
Memory	Transcend DDR2 667 2GB (E1108ACBG-6E-E)
HDD	Western Digital WD5000AAKS-00V1A0 500GB

Power Supply : MC-B350ATW

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003 +PRIME95	
	Current (A)	Power (W)	Current (A)	Current (A)
12V	1.17	14.04	0.71	8.52
5V	3.79	18.95	3.95	19.75
3.3V	0.01	0.033	0.01	0.033
5VSB	0.211	1.055	0.004	0.02

4.a.Test Environment:

The same as above but with LCD panel

Display Panel	AUO G084SN05 V.7 8.4" LCD
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Power Supply : MC-B350ATW

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003 +PRIME95	
	Current (A)	Power (W)	Current (A)	Current (A)
12V	1.78	21.36	1.33	15.96
5V	4.09	20.45	4.45	22.25
3.3V	0.01	0.033	0.01	0.033
5VSB	0.249	1.245	0.006	0.03

5.Test Environment:

Motherboard	HE-772H+CBP-5P4
CPU	Intel(R) Atom(TM) CPU D410 1.66GHz
Memory	Transcend DDR2 667 2GB (E1108ACBG-6E-E)
HDD	Western Digital WD5000AAKS-00V1A0 500GB

Power Supply : MC-B350ATW

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003 +PRIME95	
	Current (A)	Power (W)	Current (A)	Current (A)
12V	1.16	13.92	0.61	7.32
5V	3.6	18	3.74	18.7
3.3V	0.01	0.033	0.01	0.033
5VSB	0.213	1.065	0.007	0.035

5.a.Test Environment:

The same as above but with LCD panel

Display Panel	AUO G084SN05 V.7 8.4” LCD
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Power Supply : MC-B350ATW

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003 +PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	1.71	20.52	1.19	14.28
5V	3.87	19.35	3.93	19.65
3.3V	0.01	0.033	0.01	0.033
5VSB	0.2	1	0.003	0.015

6.Test Environment:

Motherboard	HE-772H+CBP-5P4
CPU	Intel(R) Atom(TM) CPU D410 1.66GHz
Memory	PQI DDR2 667 2GB (E1108ACBG-6E-E)
HDD	Western Digital WD5000AAKS-00V1A0 500GB

Power Supply : MC-B350ATW

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003 +PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	1.18	14.16	0.57	6.84
5V	3.73	18.65	4.01	20.05
3.3V	0.01	0.033	0.01	0.033
5VSB	0.212	1.06	0.005	0.025

6.a.Test Environment:

The same as above but with LCD panel

Display Panel	AUO G084SN05 V.7 8.4” LCD
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Power Supply : MC-B350ATW

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003 +PRIME95	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	1.79	21.48	1.13	13.56
5V	4.01	20.05	4.31	21.55
3.3V	0.01	0.033	0.01	0.033
5VSB	0.211	1.055	0.003	0.015

5. Performance Test

5.1 Business Win Stone 2002

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
Business Win stone2002	Intel(R) Atom(TM) CPU D410 1.66GHz PQI DDR2 667 2GB (E1108ACBG-6E-E) Western Digital WD2500JB-00GVC0 250GB	PASS	13.1 12.9 13.6 14.1
Business Win stone2002	Intel(R) Atom(TM) CPU D410 1.66GHz hnnix DDR2 667 256MB (HY5PS121621B) Western Digital WD5000AAKS-00V1A0 500GB	PASS	23.3 23.2 23.3 23.4
Business Win stone2002	Intel(R) Atom(TM) CPU N450 1.66GHz PQI DDR2 667 2GB (E1108ACBG-6E-E) Western Digital WD5000AAKS-00V1A0 500GB	PASS	24.5 24.3 24.4 24.5
Business Win stone2002	Intel(R) Atom(TM) CPU N450 1.66GHz hnnix DDR2 667 256MB (HY5PS121621B)	PASS	23.2 23.3 23.4 23.2

	Western Digital WD5000AAKS-00V1A0 500GB		
Business Win stone2002	Intel(R) Atom(TM) CPU D510 1.66GHz PQI DDR2 667 2GB (E1108ACBG-6E-E) Western Digital WD5000AAKS-00V1A0 500GB	PASS	25 25.6 25.2 21
Business Win stone2002	Intel(R) Atom(TM) CPU D510 1.66GHz hnnix DDR2 667 256MB (HY5PS121621B) Western Digital WD5000AAKS-00V1A0 500GB	PASS	23.9 23.9 23.8 24

5.2 Business Win Stone 2004

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
Business Win stone2004	Intel(R) Atom(TM) CPU D410 1.66GHz PQI DDR2 667 2GB (E1108ACBG-6E-E) Western Digital WD5000AAKS-00V1A0 500GB	PASS	13.8 13.8 13.7 13.7
Business Win stone2004	Intel(R) Atom(TM) CPU D410 1.66GHz hnnix DDR2 667 256MB (HY5PS121621B) Western Digital WD5000AAKS-00V1A0 500GB	PASS	13 12.9 12.9 12.9
Business Win stone2004	Intel(R) Atom(TM) CPU N450 1.66GHz PQI DDR2 667 2GB (E1108ACBG-6E-E) Western Digital WD5000AAKS-00V1A0 500GB	PASS	13.8 13.9 13.8 13.8

Business Win stone2004	Intel(R) Atom(TM) CPU N450 1.66GHz hnnix DDR2 667 256MB (HY5PS121621B) Western Digital WD5000AAKS-00V1A0 500GB	PASS	13.3 13.1 12.8 13.2
Business Win stone2004	Intel(R) Atom(TM) CPU D510 1.66GHz PQI DDR2 667 2GB (E1108ACBG-6E-E) Western Digital WD5000AAKS-00V1A0 500GB	PASS	13.3 13.8 13.9 14
Business Win stone2004	Intel(R) Atom(TM) CPU D510 1.66GHz hnnix DDR2 667 256MB (HY5PS121621B) Western Digital WD5000AAKS-00V1A0 500GB	PASS	13.1 12.9 12.8 13.2

5.3 Content Creation Winstone 2004

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
Content Creation Winstone 2004	Intel(R) Atom(TM) CPU D510 1.66GHz PQI DDR2 667 2GB (E1108ACBG-6E-E) Western Digital WD5000AAKS-00V1A0 500GB	PASS	15.5 15.5 15.5 15.5
Content Creation Winstone 2004	Intel(R) Atom(TM) CPU D510 1.66GHz hnnix DDR2 667 256MB (HY5PS121621B) Western Digital WD5000AAKS-00V1A0 500GB	PASS	14.7 14.8 14.8 14.6
Content Creation Winstone 2004	Intel(R) Atom(TM) CPU N450 1.66GHz PQI DDR2 667 2GB (E1108ACBG-6E-E) Western Digital WD5000AAKS-00V1A0 500GB	PASS	15 15 15 14.9

Content Creation Winstone 2004	Intel(R) Atom(TM) CPU N450 1.66GHz hnnix DDR2 667 256MB (HY5PS121621B) Western Digital WD5000AAKS-00V1A0 500GB	PASS	14.4 14.4 14.4 14.3
Content Creation Winstone 2004	Intel(R) Atom(TM) CPU D410 1.66GHz PQI DDR2 667 2GB (E1108ACBG-6E-E) Western Digital WD2500JB-00GVC0 250GB	PASS	15 15 15 15
Content Creation Winstone 2004	Intel(R) Atom(TM) CPU D410 1.66GHz hnnix DDR2 667 256MB (HY5PS121621B) Western Digital WD5000AAKS-00V1A0 500GB	PASS	14.4 14.5 14.4 14.4

5.4 3D MARK(2001、2003、2005)

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Score	Intel(R) Atom(TM) CPU D410 1.66GHz PQI DDR2 667 2GB (E1108ACBG-6E-E) Western Digital WD5000AAKS-00V1A0 500GB	PASS	3085
3DMARK2003 Score		PASS	862
3DMARK2005 Score		PASS	262

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Score	Intel(R) Atom(TM) CPU D410 1.66GHz Transcend DDR2 667 2GB (E1108ACBG-6E-E) Western Digital WD5000AAKS-00V1A0 500GB	PASS	3178
3DMARK2003 Score		PASS	864
3DMARK2005 Score		PASS	267

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Score	Intel(R) Atom(TM) CPU N450 1.66GHz PQI DDR2 667 2GB (E1108ACBG-6E-E) Western Digital WD2500JB-00GVC0 250GB	PASS	3127
3DMARK2003 Score		PASS	803
3DMARK2005 Score		PASS	267

5.5 3D MARK2006

Windows XP SP2

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Score	Intel(R) Atom(TM) CPU D410 1.66GHz PQI DDR2 667 2GB (E1108ACBG-6E-E) Western Digital WD2500JB-00GVC0 250GB	PASS	115
2	SM2.0 Score		PASS	53
3	HDR/SM3.0 Score		NO SUPPLY	N/A
4	CPU Score		PASS	510

Windows XP SP2

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Score	Intel(R) Atom(TM) CPU N450 1.66GHz PQI DDR2 667 2GB (E1108ACBG-6E-E) Western Digital WD2500JB-00GVC0 250GB	PASS	104
2	SM2.0 Score		PASS	48
3	HDR/SM3.0 Score		NO SUPPLY	N/A
4	CPU Score		PASS	513

Windows XP SP2

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Score	Intel(R) Atom(TM) CPU D510 1.66GHz PQI DDR2 667 2GB (E1108ACBG-6E-E) Western Digital WD2500JB-00GVC0 250GB	PASS	139
2	SM2.0 Score		PASS	64
3	HDR/SM3.0 Score		NO SUPPLY	N/A
4	CPU Score		PASS	889

Windows XP SP2

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Score	Intel(R) Atom(TM) CPU D510 1.66GHz hnnix DDR2 667 256MB (HY5PS121621B) Western Digital WD2500JB-00GVC0 250GB	PASS	27
2	SM2.0 Score		PASS	12
3	HDR/SM3.0 Score		NO SUPPLY	N/A
4	CPU Score		PASS	366

Windows XP SP2

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Score	Intel(R) Atom(TM) CPU N450 1.66GHz hnnix DDR2 667 256MB (HY5PS121621B) Western Digital WD2500JB-00GVC0 250GB	PASS	26
2	SM2.0 Score		PASS	12
3	HDR/SM3.0 Score		NO SUPPLY	N/A
4	CPU Score		PASS	309

Windows XP SP2

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Score	Intel(R) Atom(TM) CPU D410 1.66GHz hnnix DDR2 667 256MB (HY5PS121621B) Western Digital WD2500JB-00GVC0 250GB	PASS	20
2	SM2.0 Score		PASS	9
3	HDR/SM3.0 Score		NO SUPPLY	N/A
4	CPU Score		PASS	305

5.6 PC MARK2002

Test Environment
Intel(R) Atom(TM) CPU D510 1.66GHz A-DATA DDR2 667 1GB (AD20908A8A-3EG) Western Digital WD2500JB-00GVC0 250GB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	CPU Score	PASS	2797
2	Memory Score	PASS	7119
3	HDD Score	PASS	97

Test Environment
Intel(R) Atom(TM) CPU D410 1.66GHz A-DATA DDR2 667 1GB (AD20908A8A-3EG) Western Digital WD2500JB-00GVC0 250GB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	CPU Score	PASS	2771
2	Memory Score	PASS	7111
3	HDD Score	PASS	97

Test Environment
Intel(R) Atom(TM) CPU N450 1.66GHz A-DATA DDR2 667 1GB (AD20908A8A-3EG) Western Digital WD2500JB-00GVC0 250GB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	CPU Score	PASS	2790
2	Memory Score	PASS	7134
3	HDD Score	PASS	97

5.7 PC MARK2004

Test Environment
Intel(R) Atom(TM) CPU N450 1.66GHz A-DATA DDR2 667 512MB (AD2908A8A-3EG) Western Digital WD2500JB-00GVC0 250GB

Windows XP PS2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Score	PASS	2055
2	CPU Score	PASS	2101
3	Memory Score	PASS	3216
4	Graphic Score	PASS	851
5	HDD Score	PASS	1321

Test Environment
Intel(R) Atom(TM) CPU D410 1.66GHz A-DATA DDR2 667 1GB (AD20908A8A-3EG) Western Digital WD2500JB-00GVC0 250GB

Windows XP PS2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Score	PASS	2057
2	CPU Score	PASS	2107
3	Memory Score	PASS	3215
4	Graphic Score	PASS	1228
5	HDD Score	PASS	N/A

Test Environment
Intel(R) Atom(TM) CPU D510 1.66GHz A-DATA DDR2 667 1GB (AD20908A8A-3EG) Western Digital WD2500JB-00GVC0 250GB

Windows XP PS2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Score	PASS	2242
2	CPU Score	PASS	2204
3	Memory Score	PASS	3214
4	Graphic Score	PASS	1224
5	HDD Score	PASS	N/A

5.8 PC MARK2005

Test Environment
Intel(R) Atom(TM) CPU D510 1.66GHz A-DATA DDR2 667 512MB (AD2908A8A-3EG) Western Digital WD2500JB-00GVC0 250GB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Score	PASS	N/A
2	CPU Score	PASS	2045
3	Memory Score	PASS	2560
4	Graphic Score	PASS	N/A
5	HDD Score	PASS	763

Test Environment
Intel(R) Atom(TM) CPU D510 1.66GHz Transcend DDR2 800 1GB (KY5PS1G831C) Western Digital WD2500JB-00GVC0 250GB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Score	PASS	1547
2	CPU Score	PASS	2041
3	Memory Score	PASS	2545
4	Graphic Score	PASS	836
5	HDD Score	PASS	762

Test Environment
Intel(R) Atom(TM) CPU D410 1.66GHz A-DATA DDR2 667 512MB (AD2908A8A-3EG) Western Digital WD2500JB-00GVC0 250GB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Score	PASS	1332
2	CPU Score	PASS	1565
3	Memory Score	PASS	2551
4	Graphic Score	PASS	782
5	HDD Score	PASS	763

Test Environment
Intel(R) Atom(TM) CPU D410 1.66GHz Transcend DDR2 800 1GB (KY5PS1G831C) Western Digital WD2500JB-00GVC0 250GB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Score	PASS	1321
2	CPU Score	PASS	1567
3	Memory Score	PASS	2532
4	Graphic Score	PASS	791
5	HDD Score	PASS	763

Test Environment
Intel(R) Atom(TM) CPU N450 1.66GHz A-DATA DDR2 667 512MB (AD2908A8A-3EG) Western Digital WD2500JB-00GVC0 250GB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Score	PASS	1284
2	CPU Score	PASS	1566
3	Memory Score	PASS	2553
4	Graphic Score	PASS	69
5	HDD Score	PASS	762

Test Environment
Intel(R) Atom(TM) CPU N450 1.66GHz Transcend DDR2 800 1GB (KY5PS1G831C) Western Digital WD2500JB-00GVC0 250GB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Score	PASS	1290
2	CPU Score	PASS	1568
3	Memory Score	PASS	2532
4	Graphic Score	PASS	671
5	HDD Score	PASS	761

Test Environment
Intel(R) Atom(TM) CPU N450 1.66GHz A-DATA DDR2 667 1GB (AD20908A8A-3EG) Western Digital WD2500JB-00GVC0 250GB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Score	PASS	1290
2	CPU Score	PASS	1568
3	Memory Score	PASS	2532
4	Graphic Score	PASS	671
5	HDD Score	PASS	761

Test Environment
Intel(R) Atom(TM) CPU N450 1.66GHz PQI DDR2 667 2GB (7QE22D9NHL) Western Digital WD2500JB-00GVC0 250GB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Score	PASS	1284
2	CPU Score	PASS	1565
3	Memory Score	PASS	2575
4	Graphic Score	PASS	675
5	HDD Score	PASS	762

Test Environment
Intel(R) Atom(TM) CPU N450 1.66GHz Transcend DDR2 667 2GB (E1108ACBG-6E-E) Western Digital WD5000AAKS-00V1A0 500GB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Score	PASS	1760
2	CPU Score	PASS	1567
3	Memory Score	PASS	2572
4	Graphic Score	PASS	576
5	HDD Score	PASS	6865

Test Environment
Intel(R) Atom(TM) CPU D410 1.66GHz hnnix DDR2 667 256MB (HY5PS121621B) Western Digital WD2500JBM-00GVC0 250GB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Score	PASS	1329
2	CPU Score	PASS	1567
3	Memory Score	PASS	2546
4	Graphic Score	PASS	777
5	HDD Score	PASS	761

Test Environment
Intel(R) Atom(TM) CPU D410 1.66GHz TLA DDR2 667 1GB (HY5PS1G831C) Western Digital WD500AAKS-00V1A0 500GB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Score	PASS	N/A
2	CPU Score	PASS	1562
3	Memory Score	PASS	2545
4	Graphic Score	PASS	N/A
5	HDD Score	PASS	6796

Test Environment
Intel(R) Atom(TM) CPU D510 1.66GHz TLA DDR2 800 4GB (H5PS2G83AFR) Western Digital WD500AAKS-00V1A0 500GB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Score	PASS	2171
2	CPU Score	PASS	2046
3	Memory Score	PASS	2567
4	Graphic Score	PASS	737
5	HDD Score	PASS	6777

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
Western Digital WD2500JB-00GVC0	IDE	250 GB	3.1 MB/sec	3.1 MB/sec	15.2 ms
Western Digital AC313000-00RTT2	IDE	13 GB	11.3 MB/sec	31.1 MB/sec	19 ms
Hitachi HTS543216L9A	SATA	160 GB	46.5 MB/sec	117.9 MB/sec	18.3 ms
Western Digital WD3200AAJS-00YZCA0	SATA	320 GB	88.9 MB/sec	140.7 MB/sec	15.3 ms
Western Digital WD5000AAKS-00V1A0	SATA	500 GB	102.8 MB/sec	130.8 MB/sec	14.9 ms

TDK LoR Trans-It Drive	USB	4 GB	16.6 MB/sec	17.8 MB/sec	0.9 ms
Apacer USB FLASH DRIVE	USB	515 MB	9.1 MB/sec	9.3 MB/sec	1.8 ms
A-DATA USB Flash Drive	USB	4 GB	5.2 MB/sec	10.8 MB/sec	1 ms
JetFlash Transcend	USB	4 GB	15.2 MB/sec	15.6 MB/sec	0.7 ms
TOSHIBA TransMemory	USB	8 GB	17.4 MB/sec	17.9 MB/sec	0.7 ms
Transcend	CF	1 GB	1.7 MB/sec	1.7 MB/sec	0.9 ms

5.9.2 CD-ROM

Test environment:

OS Windows XP professional SP2

Program (NERO)

CD-ROM MODEL	INTERFACE	Average speed	Full READ	Burst Rate	CD
PIONEER DVD-127P	IDE	29.44 x	178 ms	22 MB/s	52 X CD-R
SONY CDU4811	IDE	15.03 x	230 ms	2 MB/s	52 X CD-R
ATAPI LH-1P52N	IDE	11.58 x	196 ms	2 MB/s	52 X CD-R
BENQ CB523C	IDE	37.15 x	180 ms	24 MB/s	52 X CD-R
BENQ DVD DW2005 UB34	SATA	26.49 x	155 ms	41 MB/s	52 X CD-R
Optiarc DVD AD-7204S	SATA	34.37 x	263 ms	39 MB/s	52 X CD-R
LG DVD GGW-H20L	SATA	31.12 x	223 ms	34 MB/s	52 X CD-R

LITEON DVD SOSC-2485KX	USB	16.15 x	186 ms	20 MB/s	52 X CD-R
LITEON DVD SOSW-833XS	USB	17.19 x	180 ms	19 MB/s	52X CD-R
LITEON DVD eTAU108	USB	18.19 x	274 ms	17 MB/s	52X CD-R
MATSHITA BD-CMB UJ-120	USB	18.89 x	312 ms	19 MB/s	52X CD-R