

Product Test Report



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Product Version	A
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Report Edition	1.1
BIOS Version	1.1
Testing Engineer	Master
Check Engineer	Borlin

REVISION HISTORY

DATE	REVISION NO.	PAGE	DESCRIPTONS
30.Mar.2010	Ver. 1.1	65	Initial Release

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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	SATA 1/2	PASS
6	USB 1/2/3/4/5/6	PASS
7	DDRII	PASS
8	Floppy	PASS
9	LPT	PASS
10	COM 1/2/3/4/5/6	PASS
11	VGA Port	PASS
12	PS2	PASS
13	AUDIO	PASS
14	CD_IN	PASS
15	Mini PCI	PASS
16	DIO	PASS
17	CPUFAN	PASS
18	SYSFAN	PASS
19	PCI 1/2/3/4	PASS
20	IDE	PASS
21	DVI	PASS
22	LVDS	PASS
23	LAN 1/2	PASS
24	IrDA	PASS

25	HDTV	PASS
26	ISA	PASS
27	CF	PASS
28	DC_IN	PASS
29	CN_ATKB	PASS

Jumper

Item	Description	Result
1	JRTC	PASS
2	JCSEL1	PASS
3	JCSEL2	PASS
4	JAT	PASS
5	JVLCD	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	Drive A	PASS
6	Quick Power On Self Test	PASS
7	Boot Device Setting	PASS
8	Boot Up Floppy Seek	PASS
9	Boot Up Num Lock Status	PASS
10	ACPI Suspend Type	PASS
11	Halt On	PASS
12	Onboard Serial Port	PASS
13	USB Controller	PASS
14	USB Keyboard Support	PASS
15	Onboard FDC Controller	PASS
16	Soft-Off by PWRBTN	PASS
17	Power On Function	PASS
18	ACPI Function	PASS
19	Hot Key Password	PASS
20	Wake-up by PCI card	PASS
21	Resume by Alarm	PASS
22	Watch Dog Timer Select	PASS
23	Init Display First	PASS
24	Onboard Parallel Port	PASS
25	PWRON After PWR-Fail	PASS
26	Power On by Ring	PASS
27	Set Supervisor Password	PASS

28	Set User Password	PASS
29	UART Mode Select	PASS
30	RxD , Txd Active	PASS
31	IR Transmission Delay	PASS
32	UR2 duplex Mode	PASS
33	Use IR Pins	PASS
34	CPU Warning Temperature	PASS
35	Shutdown Temperature	PASS
36	USB KB Wake Up by S3	PASS
37	Console Redirection	PASS
38	Total GFX Memory	PASS
39	LAN controller	PASS

1.3 Driver

CD Edition : IPCi 2–1.4

1. Windows XP SP2 Driver Test

Item	Description	Result	Version
1	Chipset Driver	PASS	8.2.0.1008
2	VGA Driver	PASS	6.14.10.4906
3	Audio Driver	PASS	5.10.0.5464
4	LAN Driver	PASS	10.3.49.0

2. Windows 2000 SP4

Item	Description	Result	Version
1	Chipset Driver	PASS	8.2.0.1008
2	VGA Driver	PASS	6.14.10.4906
3	Audio Driver	PASS	5.10.0.5464
4	LAN Driver	PASS	10.3.49.0

3. Windows Server 2003 Driver Test

Item	Description	Result	Version
1	Chipset Driver	PASS	8.2.0.1008
2	Audio Driver	PASS	5.10.0.5464
3	LAN Driver	PASS	10.3.49.0

4. Windows Server 2008 Driver Test

Item	Description	Result	Version
1	Chipset Driver	PASS	8.2.0.1008
2	VGA Driver	PASS	7.14.10.1409
3	Audio Driver	PASS	6.0.1.6285
4	LAN Driver	PASS	10.3.49.0

5. Windows 7 32 bit Driver Test

Item	Description	Result	version
1	Chipset Driver	PASS	8.2.0.1008
2	VGA Driver	PASS	7.14.10.1409
3	Audio Driver	PASS	6.0.1.6285
4	LAN Driver	PASS	10.3.49.0

6. Windows Vista 32 bit Driver Test

Item	Description	Result	version
1	Chipset Driver	PASS	8.2.0.1008
2	VGA Driver	PASS	7.14.10.1409
3	Audio Driver	PASS	6.0.1.6285
4	LAN Driver	PASS	10.3.49.0

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
<u>SLB73</u>	1.6 GHz	Core 2 Duo	N270	533 MHz	512 KB	PASS

2.2 Operation System Test

Item	Description	Result
1.	Windows Vista 32 bit	PASS
2.	Windows Server 2008	PASS
3.	Windows XP SP2	PASS
4.	Windows Server 2003	PASS
5.	Windows 2000 SP4	PASS
6.	Windows 7 32 bit	PASS
7.	Fedora Code 7 32 bit (Kernel 2.6.21-1-3194.fc7)	PASS
8.	Fedora Code 10 i386 (Kernel 2.6.27.5-117.fc10)	PASS
9.	CentOS 5.2 (Kernel 2.6.18-92.e15)	PASS
10.	Ubuntu 9.04 (Kernel 2.6.28-4)	PASS

2.3 Memory Test

Test environment:

OS Windows XP professional SP2

Test program : PC MARK 2005

Manufacturer	Chip	Frequency	Capacity Mbytes	Result
Hynix	HY5PS1G1631CFP-Y5	DDRII 667	512MB	PASS
Hynix	HY5PS1G1631CFP-S6	DDRII 800	1GB	PASS
Micron	7QE22D9HNL	DDRII 667	2GB	PASS
Kingston	S0185898	DDRII 533	1GB	PASS
Greencom	E5108AGBG-6E-E	DDRII 667	1GB	PASS
Transcend	A3R1GE3CFF804RAB47	DDRII 800	2GB	PASS

2.4 VGA Graphic Quality Test

Test environment:

OS Windows XP professional SP2

Driver version : 6.14.10.4906

Resolution	Color	Result
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
1856*1392	16 /32bit	PASS
1920*1080	16 /32bit	PASS
1920*1200	16 /32bit	PASS
1920*1440	16 /32bit	PASS
2048*1536	16 /32bit	PASS

2.5 Audio

Test environment:

OS Windows XP professional SP2

Driver version : 5.10.0.5464

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

OS Windows 2000 SP4

Driver version : 5.10.0.5464

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

OS Windows Server 2003

Driver version : 5.10.0.5464

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

OS Windows Server 2008

Driver version : 5.10.0.5464

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

OS Windows Vista 32 bit

Driver version : 6.0.1.6285

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

OS Windows 7 32 bit

Driver version : 6.0.1.6285

Item	Description	Result
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 WD10EADS-00L5B1	SATA	1.0TB	PASS	PASS
Western Digital WD800JD-00LSA0	SATA	80GB	PASS	PASS
Western Digital WDCWD1600AAJS-22B4A	SATA	160GB	PASS	PASS
Hitachi Deskstar T722525DLA380	SATA	250GB	PASS	PASS
Hitachi Deskstar HDS721616PLA	SATA	160GB	PASS	PASS
Quantum Fireball ST2	IDE	2GB	PASS	PASS
Samsung WA32163A	IDE	2GB	PASS	PASS

2.7 CD-ROM Test

Test environment:

OS Windows XP professional SP2

MODEL	INTERFACE	Detect	Data Transfer	PLAY DVD
LITE-ON DVD SHW-1635S	IDE	PASS	PASS	PASS
ATAPI CD LH1P52N	IDE	PASS	PASS	PASS
SONY CD CDU4811	IDE	PASS	PASS	PASS
BENQ CD CB523C	IDE	PASS	PASS	PASS
LG DVD GGW-H20L	SATA	PASS	PASS	PASS
LITEON DVD SSC-2485K	USB	PASS	PASS	PASS
MATSHITA UJ-120	USB	PASS	PASS	PASS

2.8 USB device Test

1. Windows XP SP2

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

5. Windows Server 2008

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

6. Windows 7 32 bit

Item	Result
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
1	RS-232 Mouse Test	PASS
2	RS-422 & RS-485	PASS
3	PC Check	PASS
4	TS	PASS

2. Windows 2000 SP4

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

3. Windows Server 2003

Item	Description	Result	Remark
1	Device Manager Check	PASS	NO VGA Driver
2	RS-232 Mouse Test	PASS	
3	b&b com port test	PASS	

4. Windows XP SP2

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

6. Windows Server 2008

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

7. Windows 7 32 bit

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

2.10 Print Port Test

1. MS-DOS

Item	Description	Result
1	PC Check	PASS
2	TS	PASS

2. Windows 2000 SP4

Item	Description	Result
1	ECP/EPP PRINT TEST	PASS

3. Windows Server 2003

Item	Description	Result
1	ECP/EPP PRINT TEST	PASS

4. Windows XP SP2

Item	Description	Result
1	ECP/EPP PRINT TEST	PASS

5. Windows Vista 32 bit

Item	Description	Result
1	ECP/EPP PRINT TEST	PASS

6. Windows Server 2008

Item	Description	Result
1	ECP/EPP PRINT TEST	PASS

7. Windows 7 32 bit

Item	Description	Result
1	ECP/EPP PRINT TEST	PASS

2.11 Floppy Drive Test

Floppy	Floppy Drive Detect	Floppy Data Transfer
MITSUMI D353M3D	PASS	PASS
NEC DA1M01TP0079	PASS	PASS
NEC DA1M01TP0080	PASS	PASS
MITSUMI D353GUE	PASS	PASS
TEAC FD-235HF	PASS	PASS

2.12 PS2 Keyboard 、 Mouse Test

1. MS-DOS

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

2. Windows 2000 SP4

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

3. Windows Server 2003

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

4. Windows XP SP2

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

5. Windows Server 2008

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

6. Windows Vista 32 bit

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

7. Windows 7 32 bit

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

2.13 LAN Test

Data Transfer Test environment:

-CAT 6 UTP 100M

-8 HR. continuous

1. Windows XP SP2

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

2. Windows 2000 SP4

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

3. Windows Server 2003

Item	Description	Result	Remark
1	Device Manager Check	PASS	NO VGA Driver
2	Data Transfer Test	PASS	

4. Windows Server 2008

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

5. Windows Vista 32bit

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

6. Windows 7 32bit

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

2.14 Power Supply Test

Item	TYPE	Description	Result
1	ATX Power	CWT-300ATX12 300W	PASS
2	ATX Power	CWT-300BDP-F 300W	PASS

2.15 PCI Express mini card

Motherboard	PCI Express mini card	Remark
FE-97G	MPX-574D2	PASS
FE-97G	MPX-643	PASS
FE-97G	MPX-7202	PASS
FE-97G	MPX-TP4R	PASS
FE-97G	MPX-574D	PASS
FE-97G	MPX-954	PASS
FE-97G	MPX-827	PASS
FE-97G	MPX-1040	PASS
FE-97G	MPX-7767	PASS
FE-97G	MPX-2503	PASS
FE-97G	MPX-885	PASS
FE-97G	MPX-3132	PASS

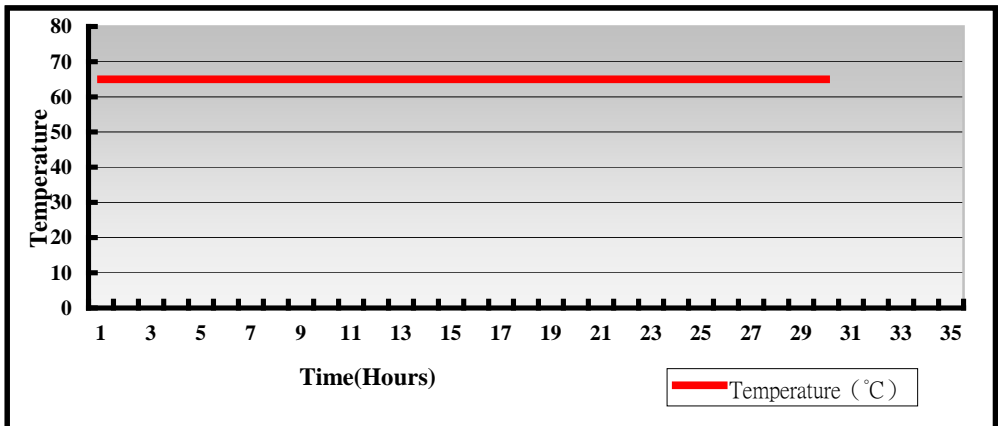
2.16 Back plane (PICMG 1.0)

Item	BRAND	MODEL	Result
1	Commell	PBP-14A7	PASS
2	Commell	CBP-14P4	PASS

3. Environmental test

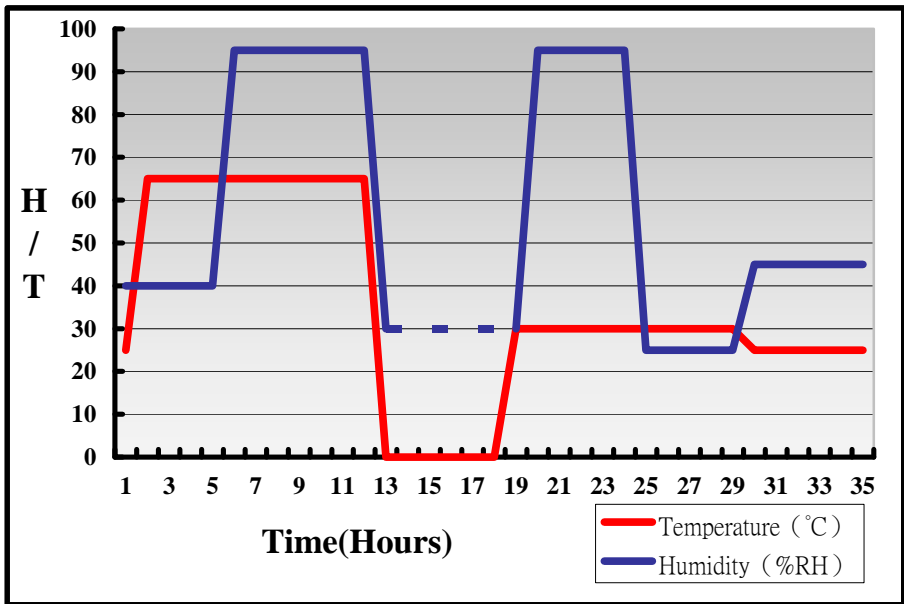
3.1 Temperature Test

System Board	FE-97G
CPU	Intel (R) Atom (TM) Processor CPU N270 1.6GHz
Memory	Hynix DDR2 667 1GB(HY5PS1G1631CFP-S6)
Operating OS	Windows XP
Test Equipment	GIANT FORCE (GTH-150-60-CP-AR)
Test Program	3DMark 2003



Hardware Device list:

System Board	FE-97G
CPU	Intel (R) Atom (TM) Processor CPU N270 1.6GHz
Memory	Hynix DDR2 667 1GB(HY5PS1G1631CFP-S6)
Operating OS	Windows XP
Test Equipment	GIANT FORCE (GTH-150-60-CP-AR)1
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	FE-97G
CPU	Intel (R) Atom (TM) Processor CPU N270 1.6GHz
Memory	Hynix DDR2 667 512MB(HY5PS1G1631CFP-Y5)
HDD	Hitachi Deskstar HDT722525DLA380 250GB

Temperature	Result	Remark
-20°C	PASS	50 Times
85°C	PASS	50 Times

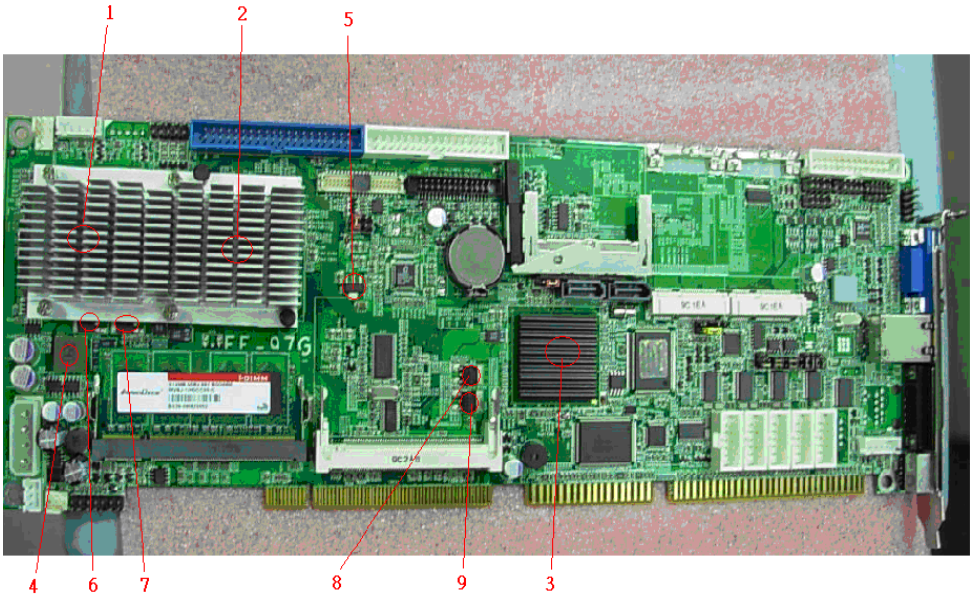
3.2 Thermal measurements at various points on the board

Test Environment :

CPU	Intel (R) Atom (TM) Processor CPU N270 1.6GHz
Memory	Kingston DDR2 533 1GB (S0185898)
HDD	Hitachi Deskstar HDT722525DLA380 250GB
Power	CWT-300BDP-F
Operating System	Windows XP
Test Program	3D MARK2003

Test Result:

Item	Environmental temperature	25.1°C
1	CPU	52.1°C
2	945GMS (Northbridge)	52.8°C
3	ICH7M(Southbridge)	47.7°C
4	LC1(LLC0.56UH/0445)	61.1°C
5	Q15(L1117LG0A02)	51.9°C
6	Q19(FR3709ZI‡RP951GE7G3)	62.4°C
7	Q20(FR3709ZI‡RP951GE7G3)	61.9°C
8	Q33(NIKOSL1084DGWBFOL0103)	47.9°C
9	Q38(NIKOSL1084DGWBFOL0103)	48.8°C



4. Reliability Test

4.1 Power Consumption Test

1. Test Environment:

Motherboard	FE-97G
CPU	Intel (R) Atom (TM) Processor CPU N270 1.6GHz
Memory	Greencom DDR2 667 1GB (E5108AGBG-6E-E)*1

Power Supply : CWT-300BDP-F

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	0.51	6.12	0.52	6.24
5V	3.01	15.05	3.24	16.20
3.3V	0.25	0.825	0.25	0.825
5VSB	0.37	1.85	0.26	1.30

1.a. Test Environment:

The same as above but with LCD panel

Display Panel	AUO G084SN03 8.4" LCD
----------------------	------------------------------

Power Supply : CWT-300BDP-F

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	0.79	9.48	0.81	9.72
5V	3.28	16.40	3.49	17.45
3.3V	0.26	0.858	0.26	0.858
5VSB	0.42	2.10	0.27	1.35

2.Test Environment:

Motherboard	FE-97G
CPU	Intel (R) Atom (TM) Processor CPU N270 1.6GHz
Memory	Kingston DDR2 533 1GB (S0185898)*1

Power Supply : CWT-300BDP-F

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	0.51	6.12	0.52	6.24
5V	2.91	14.55	3.21	16.05
3.3V	0.25	0.825	0.25	0.825
5VSB	0.37	1.85	0.26	1.30

2.a.Test Environment:

The same as above but with LCD panel

Display Panel	AUO G084SN03 8.4" LCD
----------------------	------------------------------

Power Supply : CWT-300BDP-F

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	0.79	9.48	0.79	9.48
5V	3.15	15.75	3.40	17.00
3.3V	0.26	0.858	0.26	0.858
5VSB	0.37	1.85	0.27	1.35

3.Test Environment:

Motherboard	FE-97G
CPU	Intel (R) Atom (TM) Processor CPU N270 1.6GHz
Memory	Hynix DDR2 667 1GB(HY5PS1G1631CFP-S6)*1

Power Supply : CWT-300BDP-F

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	0.51	6.12	0.53	6.36
5V	2.76	13.80	3.08	15.40
3.3V	0.25	0.825	0.25	0.825
5VSB	0.37	1.85	0.26	1.30

3.a.Test Environment:

The same as above but with LCD panel

Display Panel	AUO G084SN03 8.4" LCD
----------------------	------------------------------

Power Supply : CWT-300BDP-F

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	0.79	9.48	0.80	9.60
5V	3.02	15.10	3.31	16.55
3.3V	0.25	0.825	0.25	0.825
5VSB	0.42	2.10	0.26	1.30

4.Test Environment:

Motherboard	FE-97G
CPU	Intel (R) Atom (TM) Processor CPU N270 1.6GHz
Memory	Transcend DDR2 800 2GB (A3R1GE3CFF804RAB47)*1

Power Supply : CWT-300BDP-F

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	0.49	5.88	0.50	6.00
5V	2.90	14.50	3.11	15.55
3.3V	0.23	0.759	0.23	0.759
5VSB	0.34	1.70	0.24	1.20

4.a.Test Environment:

The same as above but with LCD panel

Display Panel	PRIME VIEW PD035VL1 3.5" LCD
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Power Supply : CWT-300BDP-F

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	0.49	5.88	0.50	6.00
5V	3.34	16.70	3.66	18.30
3.3V	0.22	0.726	0.22	0.726
5VSB	0.35	1.75	0.23	1.15

5.Test Environment:

Motherboard	FE-97G
CPU	Intel (R) Atom (TM) Processor CPU N270 1.6GHz
Memory	Hynix DDR2 667 512MB(HY5PS1G1631CFP-Y5)*1

Power Supply : CWT-300BDP-F

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	0.48	5.76	0.49	5.88
5V	2.52	12.60	3.00	15.00
3.3V	0.23	0.759	0.23	0.759
5VSB	0.34	1.70	0.23	1.15

5.a.Test Environment:

The same as above but with LCD panel

Display Panel	PRIME VIEW PD035VL1 3.5" LCD
----------------------	-------------------------------------

Power Supply : CWT-300BDP-F

Voltage	MS-DOS Boot up		Windows XP SP2 3DMARK 2003	
	Current (A)	Power (W)	Current (A)	Power (W)
12V	0.48	5.76	0.50	6.00
5V	3.10	15.5	3.43	17.15
3.3V	0.22	0.726	0.22	0.726
5VSB	0.32	1.60	0.22	1.10

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) Processor CPU N270 1.6GHz Hynix DDR2 667 512MB (HY5PS1G1631CFP-Y5) WD10EADS-00L5B1 1.0TB	PASS	23.1 12.7 23.5 23.5
Business Win stone2002	Intel (R) Atom (TM) Processor CPU N270 1.6GHz Hynix DDR2 667 1GB (HY5PS1G1631CFP-S6) WD10EADS-00L5B1 1.0TB	PASS	23.9 24.4 23.2 23.7
Business Win stone2002	Intel (R) Atom (TM) Processor CPU N270 1.6GHz Kingston DDR2 533 1GB (S0185898) Western Digital WD10EADS-00L5B1 1.0TB	PASS	23.5 24 23.3 23.3
Business Win stone2002	Intel (R) Atom (TM) Processor CPU N270 1.6GHz Micron DDR2 667 2GB (7QE22D9HNL) Western Digital WD10EADS-00L5B1 1.0TB	PASS	23.9 24.2 23.3 23.6

Business Win stone2002	Intel (R) Atom (TM) Processor CPU N270 1.6GHz Greencom DDR2 667 1GB (E5108AGBG-6E-E) Western Digital WD10EADS-00L5B1 1.0TB	PASS	23.5 23.6 23.4 23.3
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5.2 Business Win Stone 2004

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
Business Win stone2004	Intel (R) Atom (TM) Processor CPU N270 1.6GHz Hynix DDR2 667 512MB (HY5PS1G1631CFP-Y5) WD10EADS-00L5B1 1.0TB	PASS	13.2 13 13.2 13.4
Business Win stone2004	Intel (R) Atom (TM) Processor CPU N270 1.6GHz Hynix DDR2 667 1GB (HY5PS1G1631CFP-S6) WD10EADS-00L5B1 1.0TB	PASS	13.3 13.6 13.5 13.6
Business Win stone2004	Intel (R) Atom (TM) Processor CPU N270 1.6GHz Kingston DDR2 533 1GB (S0185898) Western Digital WD10EADS-00L5B1 1.0TB	PASS	10.5 12.7 8 11.6
Business Win stone2004	Intel (R) Atom (TM) Processor CPU N270 1.6GHz Micron DDR2 667 2GB (7QE22D9HNL) Western Digital WD10EADS-00L5B1 1.0TB	PASS	13.7 13.7 13 13.7

Business Win stone2004	Intel (R) Atom (TM) Processor CPU N270 1.6GHz Greencom DDR2 667 1GB (E5108AGBG-6E-E) Western Digital WD10EADS-00L5B1 1.0TB	PASS	13.5 13 12.2 13.5
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5.3 Content Creation Winstone 2004

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
<p>Content Creation Winstone 2004</p>	<p>Intel (R) Atom (TM) Processor CPU N270 1.6GHz Hynix DDR2 667 512MB (HY5PS1G1631CFP-Y5) WD10EADS-00L5B1 1.0TB</p>	<p>PASS</p>	<p>14.2 14 14.1 14.1</p>
<p>Content Creation Winstone 2004</p>	<p>Intel (R) Atom (TM) Processor CPU N270 1.6GHz Hynix DDR2 667 1GB (HY5PS1G1631CFP-S6) WD10EADS-00L5B1 1.0TB</p>	<p>PASS</p>	<p>14 14.2 14.2 14.2</p>
<p>Content Creation Winstone 2004</p>	<p>Intel (R) Atom (TM) Processor CPU N270 1.6GHz Kingston DDR2 533 1GB (S0185898) Western Digital WD10EADS-00L5B1 1.0TB</p>	<p>PASS</p>	<p>14.1 14 14.2 14.3</p>
<p>Content Creation Winstone 2004</p>	<p>Intel (R) Atom (TM) Processor CPU N270 1.6GHz Micron DDR2 667 2GB (7QE22D9HNL) Western Digital WD10EADS-00L5B1 1.0TB</p>	<p>PASS</p>	<p>14.3 14.2 14.2 14.2</p>

Content Creation Winstone 2004	Intel (R) Atom (TM) Processor CPU N270 1.6GHz Greencom DDR2 667 1GB (E5108AGBG-6E-E) Hitachi Deskstar HDT722525DLA380 250GB	PASS	14 14 14.1 14
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5.4 3D MARK(2001、2003、2005)

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Scores	Intel (R) Atom (TM) Processor CPU N270 1.6GHz Kingston DDR2 533 1GB (S0185898) Western Digital WD10EADS-00L5B1 1.0TB	PASS	2989
3DMARK2003 Scores		PASS	408
3DMARK2005 Scores		PASS	235

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Scores	Intel (R) Atom (TM) Processor CPU N270 1.6GHz Micron DDR2 667 2GB (7QE22D9HNL) Western Digital WD10EADS-00L5B1 1.0TB	PASS	2859
3DMARK2003 Scores		PASS	551
3DMARK2005 Scores		PASS	243

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Scores	Intel (R) Atom (TM) Processor CPU N270 1.6GHz Hynix DDR2 800 1GB (HY5PS1G1631CFP-S6) WD10EADS-00L5B1 1.0TB	PASS	2854
3DMARK2003 Scores		PASS	725
3DMARK2005 Scores		PASS	244

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Scores	Intel (R) Atom (TM) Processor CPU N270 1.6GHz Hynix DDR2 667 512MB (HY5PS1G1631CFP-Y5) WD10EADS-00L5B1 1.0TB	PASS	2832
3DMARK2003 Scores		PASS	719
3DMARK2005 Scores		PASS	243

Windows XP SP2

WEIGHTED SUITE	Test Environment	Result	Remark
3DMARK2001 Scores	Intel (R) Atom (TM) Processor CPU N270 1.6GHz	PASS	2860
3DMARK2003 Scores	Greencom DDR2 667 1GB (E5108AGBG-6E-E)	PASS	770
3DMARK2005 Scores	Hitachi Deskstar HDT722525DLA380 250GB	PASS	243

5.5 3D MARK2006

Windows XP SP2

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Scores	Intel (R) Atom (TM) Processor CPU N270 1.6GHz Kingston DDR2 533 1GB (S0185898) Western Digital WD10EADS-00L5B1 1.0TB	PASS	84
2	SM2.0 Scores		PASS	39
3	HDR/SM3.0 Scores		PASS	N/A
4	CPU Scores		PASS	491

Windows XP SP2

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Scores	Intel (R) Atom (TM) Processor CPU N270 1.6GHz Micron DDR2 667 2GB (7QE22D9HNL) Western Digital WD10EADS-00L5B1 1.0TB	PASS	87
2	SM2.0 Scores		PASS	40
3	HDR/SM3.0 Scores		PASS	N/A
4	CPU Scores		PASS	490

Windows XP SP2

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Scores	Intel (R) Atom (TM) Processor CPU N270 1.6GHz Hynix DDR2 800 1GB (HY5PS1G1631CFP-S6) WD10EADS-00L5B1 1.0TB	PASS	86
2	SM2.0 Scores		PASS	39
3	HDR/SM3.0 Scores		PASS	N/A
4	CPU Scores		PASS	493

Windows XP SP2

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Scores	Intel (R) Atom (TM) Processor CPU N270 1.6GHz Hynix DDR2 667 512MB (HY5PS1G1631CFP-Y5) WD10EADS-00L5B1 1.0TB	PASS	83
2	SM2.0 Scores		PASS	38
3	HDR/SM3.0 Scores		PASS	N/A
4	CPU Scores		PASS	492

Windows XP SP2

Item	WEIGHTED SUITE	Test Environment	Result	Remark
1	3DMARK Scores	Intel (R) Atom (TM) Processor CPU N270 1.6GHz Greencom DDR2 667 1GB (E5108AGBG-6E-E) Hitachi Deskstar HDT722525DLA380 250GB	PASS	91
2	SM2.0 Scores		PASS	42
3	HDR/SM3.0 Scores		PASS	N/A
4	CPU Scores		PASS	489

5.6 PC MARK2002

Test Environment
Intel (R) Atom (TM) Processor CPU N270 1.6GHz Kingston DDR2 533 1GB (S0185898) Western Digital WD10EADS-00L5B1 1.0TB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	CPU test Scores	PASS	2661
2	Memory test Scores	PASS	6383
3	HDD test Scores	PASS	1977

Test Environment
Intel (R) Atom (TM) Processor CPU N270 1.6GHz Micron DDR2 667 2GB (7QE22D9HNL) Western Digital WD10EADS-00L5B1 1.0TB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	CPU test Scores	PASS	2660
2	Memory test Scores	PASS	6458
3	HDD test Scores	PASS	1762

Test Environment

**Intel (R) Atom (TM) Processor CPU N270 1.6GHz
Hynix DDR2 800 1GB(HY5PS1G1631CFP-S6)
Western Digital WD10EADS-00L5B1 1.0TB**

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	CPU test Scores	PASS	2661
2	Memory test Scores	PASS	6462
3	HDD test Scores	PASS	1740

Test Environment

**Intel (R) Atom (TM) Processor CPU N270 1.6GHz
Hynix DDR2 667 512MB(HY5PS1G1631CFP-Y5)
Western Digital WD10EADS-00L5B1 1.0TB**

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	CPU test Scores	PASS	2661
2	Memory test Scores	PASS	6334
3	HDD test Scores	PASS	1724

Test Environment
Intel (R) Atom (TM) Processor CPU N270 1.6GHz Greencom DDR2 667 1GB (E5108AGBG-6E-E) Hitachi Deskstar HDT722525DLA380 250GB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	CPU test Scores	PASS	2656
2	Memory test Scores	PASS	6357
3	HDD test Scores	PASS	1751

5.7 PC MARK2004

Test Environment
Intel (R) Atom (TM) Processor CPU N270 1.6GHz Kingston DDR2 533 1GB (S0185898) Western Digital WD10EADS-00L5B1 1.0TB

Windows XP PS2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Scores	PASS	N/A
2	CPU test Scores	PASS	N/A
3	Memory test Scores	PASS	3009
4	Graphic test Scores	PASS	686
5	HDD test Scores	PASS	6130

Test Environment
Intel (R) Atom (TM) Processor CPU N270 1.6GHz Micron DDR2 667 2GB (7QE22D9HNL) Western Digital WD10EADS-00L5B1 1.0TB

Windows XP PS2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Scores	PASS	N/A
2	CPU test Scores	PASS	N/A
3	Memory test Scores	PASS	3053
4	Graphic test Scores	PASS	690
5	HDD test Scores	PASS	6057

Test Environment

**Intel (R) Atom (TM) Processor CPU N270 1.6GHz
Hynix DDR2 800 1GB(HY5PS1G1631CFP-S6)
Western Digital WD10EADS-00L5B1 1.0TB**

Windows XP PS2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Scores	PASS	N/A
2	CPU test Scores	PASS	N/A
3	Memory test Scores	PASS	3052
4	Graphic test Scores	PASS	689
5	HDD test Scores	PASS	6049

Test Environment

**Intel (R) Atom (TM) Processor CPU N270 1.6GHz
Hynix DDR2 667 512MB(HY5PS1G1631CFP-Y5)
Western Digital WD10EADS-00L5B1 1.0TB**

Windows XP PS2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Scores	PASS	N/A
2	CPU test Scores	PASS	N/A
3	Memory test Scores	PASS	3012
4	Graphic test Scores	PASS	686
5	HDD test Scores	PASS	6077

Test Environment

**Intel (R) Atom (TM) Processor CPU N270 1.6GHz
Greencom DDR2 667 1GB (E5108AGBG-6E-E)
Hitachi Deskstar HDT722525DLA380 250GB**

Windows XP PS2

Item	WEIGHTED SUITE	Result	Remark
1	PCMark Scores	PASS	N/A
2	CPU test Scores	PASS	N/A
3	Memory test Scores	PASS	3033
4	Graphic test Scores	PASS	685
5	HDD test Scores	PASS	6089

5.8 PC MARK2005

Test Environment
Intel (R) Atom (TM) Processor CPU N270 1.6GHz Kingston DDR2 533 1GB (S0185898) Western Digital WD10EADS-00L5B1 1.0TB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	System test Scores	PASS	N/A
2	CPU test Scores	PASS	1500
3	Memory test Scores	PASS	2451
4	Graphic test Scores	PASS	N/A
5	HDD test Scores	PASS	6016

Test Environment
Intel (R) Atom (TM) Processor CPU N270 1.6GHz Micron DDR2 667 2GB (7QE22D9HNL) Western Digital WD10EADS-00L5B1 1.0TB

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	System test Scores	PASS	N/A
2	CPU test Scores	PASS	1503
3	Memory test Scores	PASS	2442
4	Graphic test Scores	PASS	N/A
5	HDD test Scores	PASS	6044

Test Environment

**Intel (R) Atom (TM) Processor CPU N270 1.6GHz
Hynix DDR2 800 1GB(HY5PS1G1631CFP-S6)
Western Digital WD10EADS-00L5B1 1.0TB**

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	System test Scores	PASS	N/A
2	CPU test Scores	PASS	1505
3	Memory test Scores	PASS	2444
4	Graphic test Scores	PASS	N/A
5	HDD test Scores	PASS	6041

Test Environment

**Intel (R) Atom (TM) Processor CPU N270 1.6GHz
Hynix DDR2 667 512MB(HY5PS1G1631CFP-Y5)
Western Digital WD10EADS-00L5B1 1.0TB**

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	System test Scores	PASS	N/A
2	CPU test Scores	PASS	1504
3	Memory test Scores	PASS	2456
4	Graphic test Scores	PASS	N/A
5	HDD test Scores	PASS	5970

Test Environment

**Intel (R) Atom (TM) Processor CPU N270 1.6GHz
Greencom DDR2 667 1GB (E5108AGBG-6E-E)
Hitachi Deskstar HDT722525DLA380 250GB**

Windows XP SP2

Item	WEIGHTED SUITE	Result	Remark
1	System test Scores	PASS	N/A
2	CPU test Scores	PASS	1502
3	Memory test Scores	PASS	2448
4	Graphic test Scores	PASS	N/A
5	HDD test Scores	PASS	6037

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 WD10EADS-00L5B1	SATA	1.0TB	70.3 MB/sec	86.5 MB/sec	14.1ms
Western Digital WD800JD-00LSA0	SATA	80GB	47.0 MB/sec	92.2 MB/sec	14.1ms
Western Digital WDCWD1600AAJS-22B4A	SATA	160GB	80.5 MB/sec	63.0 MB/sec	16.6ms
Hitachi Deskstar T722525DLA380	SATA	250GB	52.8 MB/sec	99.3 MB/sec	12.8ms
Hitachi Deskstar HDS721616PLA	SATA	160GB	58.2 MB/sec	95.7 MB/sec	14.6ms
Quantum Fireball ST2	IDE	2GB	6.2 MB/sec	20.5 MB/sec	16.1ms
Samsung WA32163A	IDE	2GB	4.5 MB/sec	10.7 MB/sec	19.9ms

5.9.2 CD-ROM

Test environment: OS Windows XP professional SP2

Program (NERO)

CD-ROM MODEL	INTERFACE	Average speed	Fill READ	Burst Rate	CD
LITE-ON DVD SHW-1635S	IDE	8.35x	181 ms	24 MB/s	52 X CD-R
ATAPI CD LH1P52N	IDE	10.39 x	211 ms	2 MB/s	52 X CD
SONY CD CDU4811	IDE	13.59x	266 ms	2 MB/s	52 X CD
BENQ CD CB523C	IDE	39.07x	165 ms	24 MB/s	52 X CD
LG DVD GGW-H20L	SATA	8.50 x	161 ms	50 MB/s	52 X CD-R
LITEON DVD SSC-2485K	USB	18.05 x	656 ms	19 MB/s	52X CD-R
MATSHITA UJ-120	USB	18.44x	259 ms	18 MB/s	52X CD-R

5.10 Vibration Test

Motherboard	FE-97G		
Test Equipment	VS-5060L		
Amplitude	Frequency	Time (1min/1Time)	Result
0.75mm	5 → 55 → 5 Hz	10	PASS
1.00mm	5 → 55 → 5 Hz	10	PASS
1.25mm	5 → 55 → 5 Hz	10	PASS
1.5mm	5 → 55 → 5 Hz	10	PASS
1.5mm	5 → 55 → 5 Hz	120	PASS