AOP-9120

With 2.5” SATA HDD

Environment Test Report

Report NO: 09P020024

Issued by:	Rex-Chang	/	*08/14/2009*
	Test Engineer		**Date**
Reviewed by:	Wenyuan Yang	/	*08/14/2009*
	Manager		**Date**

Test item list

Test Configuration:

Num	Item	Spec
1.	**Panel PC**:	**AOP-9120HT-A1**
	1. 12" LCD	HYDIS HT12X13-100
	2. Inverter	GP GP1201-01A
	4. Power Supply	POWER-WIN PW-060B-1Y12(G)
2.	CPU Board:	EMB-9459T A1.0
	1. Bios Ver.	EMB-9459T Ver: 1.0
	2.CPU	Intel Atom N270 / 1.6GHz
	3.Memory (Wide Temp.)	DSL 512 / ELPIDA E5108AJBG-6E / DDR2 667
	4. HDD (Wide Temp.)	Fujitsu MHY2080BH ESW / 80GB
	5.Test Software	Windows XP / Run PassMark Burn In Test 5.1 Pro

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Temperature rise test

Test Date: 08-06-2009

Test Product: AOP-9120

Test Site: AAEON QA Internal Lab.

Test Standard: Reference EN 61131-2(94), UL508 (94)

Temperature Measurement:

40 Channel Thermal Recorder:
YOKOGAWA Inc,
Model: DA100-13-1D
Date of Calibration: 12/08/09
Serial Number: 12A323190

Test Condition:

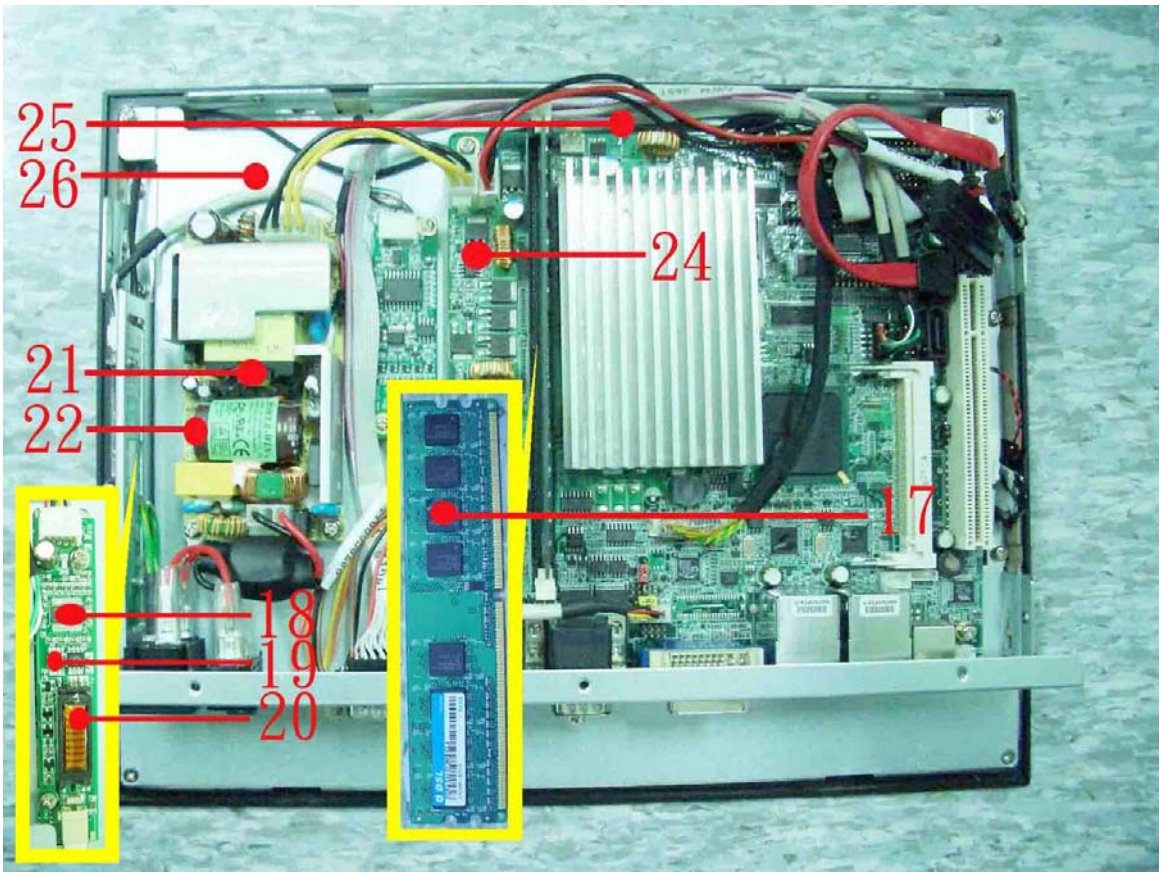
Ambient temperature: 40dC
Continuous running till thermal stability (within less than 1℃)

Test Software:

Windows XP / Run PassMark Burn In Test 5.1

Terminal Recorder:

Measuring Thermal Couple Position：



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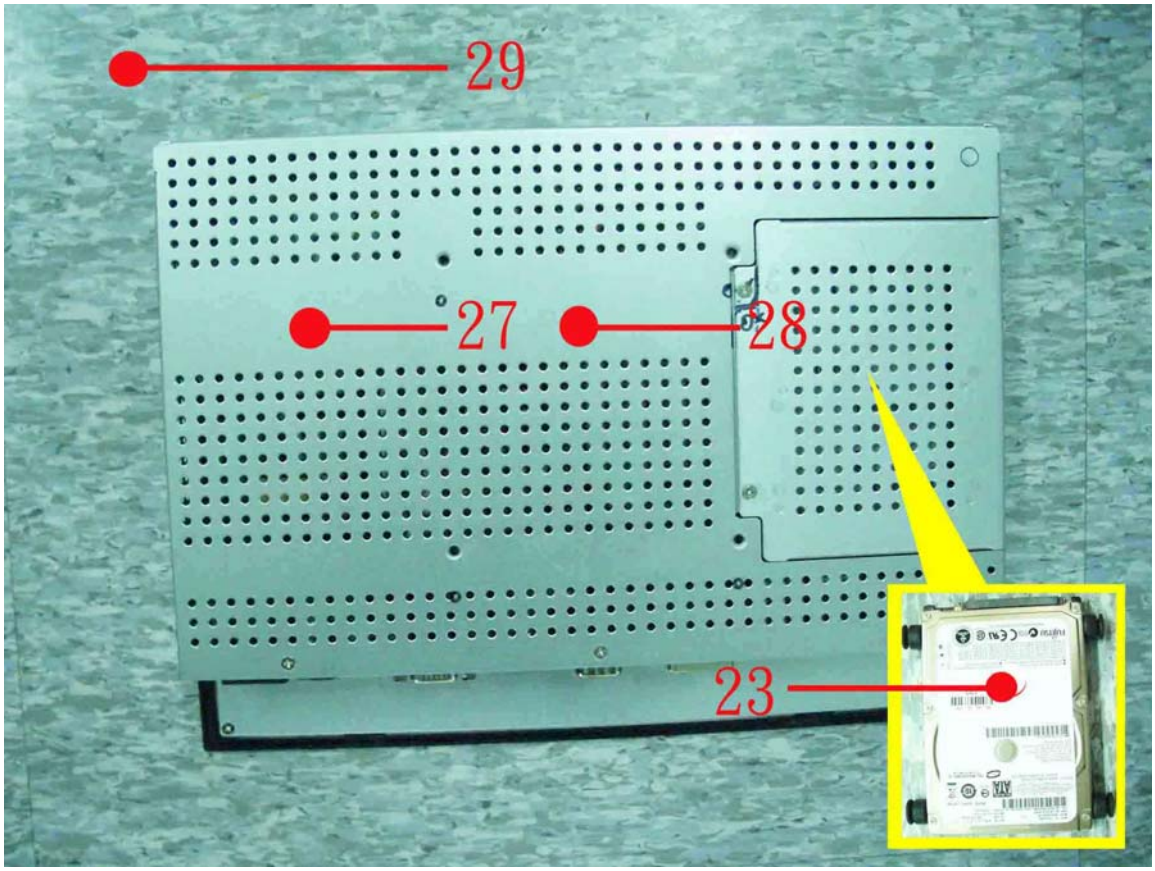
Temperature rise test



Thermal profile data:

AOP-9120

Point / Temp. Stage(℃)	Spec	40	25
01. U38 - (TF) Intel CPU.Diamondville.N270.1.6GHz/FSB	90	82.4	67.4
02. U30 - (TF) Chipset.Intel.QG82945GSE SLB2R	105	81.6	66.6
03. U28 - (TF) Chipset ICH7M.Intel.NH82801GBM SL8YB	99	80.2	65.2
04. U33 - (TF) CLOCK GENERATOR.ICS.ICS954226AGLF	115	99.8	84.8
05. U35 - (TF) Super I/O.ITE.IT8712F/KX-L	95	80.2	65.2
06. U10 - (TF) DVI Transmitter.CHRONTEL.CH7307C-DEF	110	72.2	57.2
07. U18 - (TF) Ethernet Chip.REALTEK.RTL8111C-VB-GR	95	71.7	56.7
08. U17 - (TF) Ethernet Chip.REALTEK.RTL8111C-VB-GR	95	70.0	55.0
09. U2 - (TF) AC'97 Audio Codec.REALTEK.ALC655-LF	95	70.4	55.4
10. L66 - (TF) Coil. GOTREND.C4452P-08A09YDPS	110	99.7	84.7
11. U53 - Linear Regulator.Diodes.AP1084DL-13	100	84.8	69.8
12. U51 - (TF) REG.SMD SOT223.1A Adjustable Linear	125	88.7	73.7
13. Q65 - (TF) N-Channel MOSFET.ST.STD17NF03LT4	150	83.4	68.4
14. U49 - (TF) Power Controller.for Dual Channel DDR.Intersil.ISL6537CRZ	95	83.2	68.2
15. Q74 - (TF) N-Channel MOSFET.ST.STD17NF03LT4	150	90.1	75.1
16. Q64 - (TF) N-Channel MOSFET.ST.STD17NF03LT4	150	90.5	75.5

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Temperature rise test

Point \ Temp. Stage(℃)	Spec	40	25
17. Memory	95	79.8	64.8
18. Inverter - 1	85	61.2	46.2
19. Inverter - 2	105	62.3	47.3
20. Inverter - 3	150	81.2	66.2
21. Power Supply-1	85	64.8	49.8
22. Power Supply-2	125	75.4	60.4
23. HDD (Wide Temp.)	80	65.4	50.4
24. Control Box Inside Air Temperature - 1	N/A	64.0	49.0
25. Control Box Inside Air Temperature - 2	N/A	71.1	56.1
26. Control Box Inside Air Temperature - Power Supply Ambient Temp.	64	63.4	48.4
27. Control Box External Surface - 1	N/A	52.5	37.5
28. Control Box External Surface - 2	N/A	56.4	41.4
29. Chamber Air Temperature	N/A	39.7	24.7
Any Tm value showed in red words which meaning the value over the Tc degree C of this device specification.			

Sample Configuration & Quantity Under Test:

Quantity: 1 (AOP-9120)

Test Result:

No problem was found during the temperature rise operation test.

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Temperature cycle test

Test Date: 07-31-2009 ~ 08~03-2009

Test Product: AOP-9120

Test Site: AAEON QA Internal Lab.

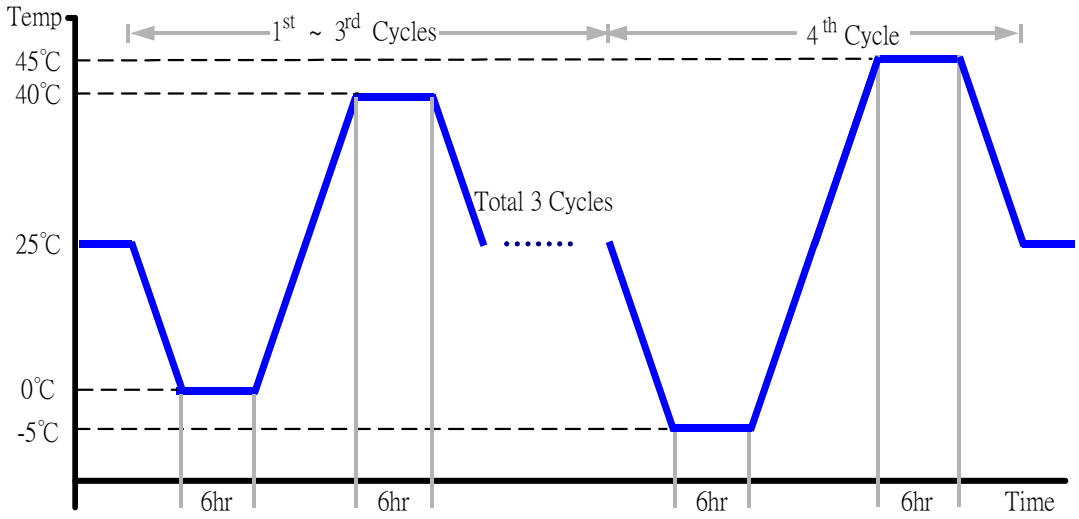
Test Standard: Reference IEC68-2-14 Testing procedures
Test N: Change of temperature Test

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4L+-100
Date of Calibration: 05/07/09
Serial Number: 1241

Test Condition:

1. Test Low Temperature: 0℃ (1~3 cycles)
   -5℃ (4th cycle)
2. Test High Temperature: 40℃ (1~3 cycles)
   45℃ (4th cycle)
3. Test dwell time: 6Hrs
4. Temperature slope: 2℃/min
5. Test cycle: 4 cycles
6. Test Environment Curve:



Sample Configuration & Quantity Under Test:

Quantity: 1 (AOP-9120)

Test Result:

No problem was found during the temperature operation cycle test.

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High temperature storage test

Test Date: 07-29~31-2009

Test Product: AOP-9120

Test Site: AAEON QA Internal Lab.

Test Standard: Reference IEC 68-2-2 Testing procedures
Test Bb: Dry Heat Test (Non-operation)

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4L+-100
Date of Calibration: 05/07/09
Serial Number: 1241

Testing Item:

1. Test Temperature: 60℃
2. Test Times: 48Hrs
3. Test Software: Windows XP / Run PassMark Burn In Test 5.1 Pro
4. Test Environment Curve:

Sample Configuration & Quantity Under Test:
Quantity: 1 (AOP-9120)

Test Result:
No problem was found after the high temperature storage test.

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Low temperature storage test

Test Date: 07-27~29-2009

Test Product: AOP-9120

Test Site: AAEON QA Internal Lab.

Test Standard: Reference IEC 68-2-1 Testing procedures
Test Ab: Cold Test (Non-operation)

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4L+-100
Date of Calibration: 05/07/09
Serial Number: 1241

Testing Item:

1. Test Temperature: -20℃
2. Test Times: 48Hrs
3. Test Software: Windows XP / Run PassMark Burn In Test 5.1 Pro
4. Test Environment Curve:

Sample Configuration & Quantity Under Test:
Quantity: 1 (AOP-9120)

Test Result:
No problem was found after the low temperature storage test.

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Humidity test

Test Date: 07-24~27-2009

Test Product: AOP-9120

Test Site: AAEON QA Internal Lab.

Test Standard: Reference IEC 68-2-3 Testing procedures
Test Ca: Damp heat, steady state (Non-operation)

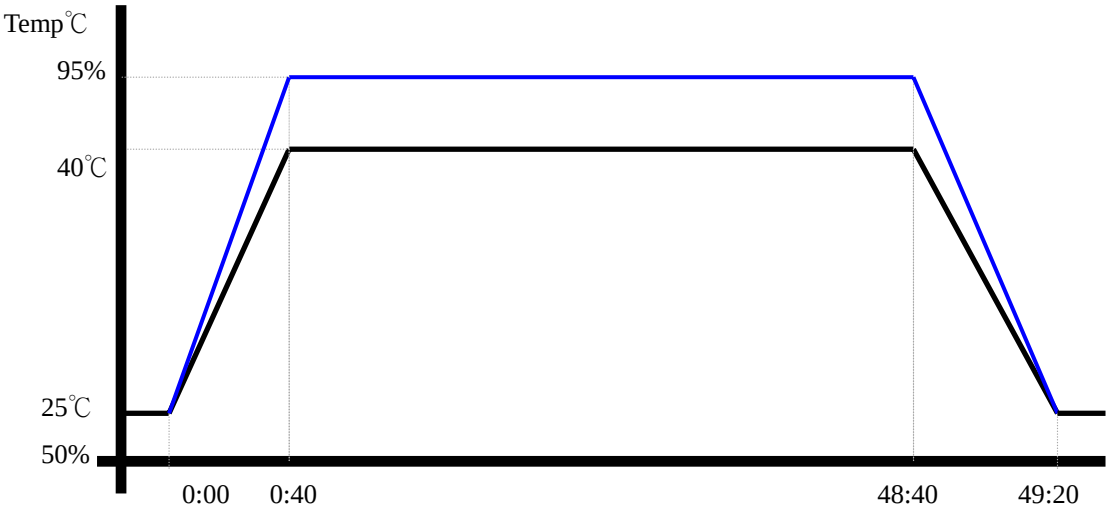
Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4L+-100
Date of Calibration: 05/07/09
Serial Number: 1241

Testing Item:

1. Test Temperature: 40℃
2. Test Humidity: 95%RH
3. Test Times: 48Hrs
4. Test Software: Windows XP / Run PassMark Burn In Test 5.1 Pro
5. Test Environment Curve:

Humidity %



Sample Configuration & Quantity Under Test:
Quantity: 1 (AOP-9120)

Test Result:
No problem was found after the humidity storage test.

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Cold start and hot start test

Test Date: 08-03~04-2009

Test Product: AOP-9120

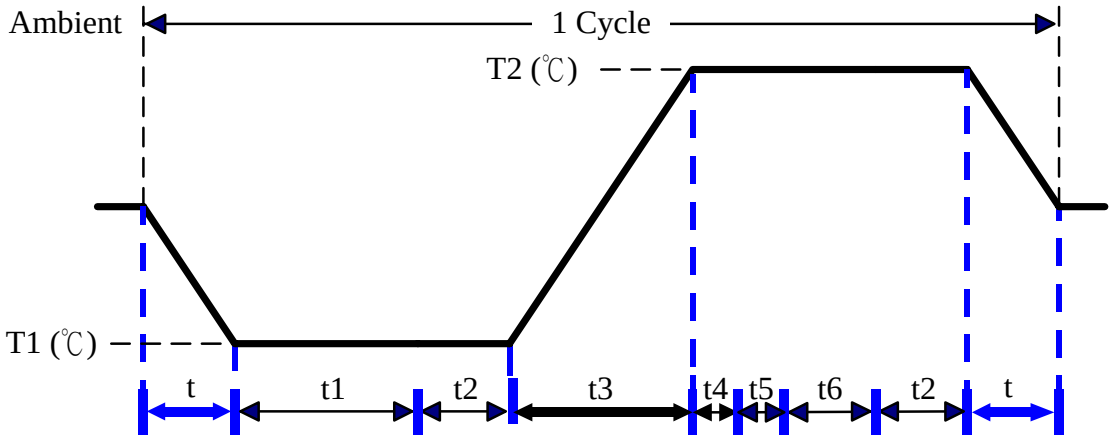
Test Site: AAEON QA Internal Lab.

Test Standard: Reference IEC 68-2-14 Testing procedures
Test N: Change of temperature Test

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4L+-100
Date of Calibration: 05/07/09
Serial Number: 1241

Test Condition:



Parameters	Description
T1	-5℃
T2	45℃
t1	4 hrs
t2, t6	2 hrs
t4, t5	1hrs
t, t3	2℃/min
n (Cycle)	1

t = temprature slope
t , t1, t6: Power Off
t2: Power on/off test 10 times (on 2 min / off 5min)
t3, t4: Run PassMark Burn In Test
t5: Win XP Software restart test 3 times
Test Software:Windows XP

Test Result:

a. No problem was found during the cold start test.

b. No problem was found during the hot start test.

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