



Industrial Computing Platform Partner

ONYX-172

Environment Test Report

Report NO: 08P020027

Issued by:

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12/31/2008

Test Engineer

Date

Reviewed by:

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/

12/31/2008

Manager

Date

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Test Configuration:

Num	Item	Spec
1.	Panel PC:	ONYX-172
	1. 17"LCD	CPT170EA07H
	2. Inverter	HWAYOUN QF132V.1
	3. Power Board	AAEON PER-P02D A1.1
	4. Power Adapter	SINPRO / MPU100-105
2.	CPU Board:	GENE-8310 A1.2
	1. Bios Ver.	ONYX-172 A0.2
	2.CPU	Intel Celeron M Processor 1.5GHz
	3.Memory (Wide Temp.)	Apacer 512MB / V58C2512804SAI5I
	4. HDD (Wide Temp.)	FUJITSU MHW2040AC / 40GB
	5.Test Software	Windows XP / Run PassMark Burn In Test 5.1 Pro

Temperature rise test

Test Date: 12-30-2008

Test Product: ONYX-172

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: 12/13/07

Serial Number: 12A323190

Test Condition:

Ambient temperature: 40dC

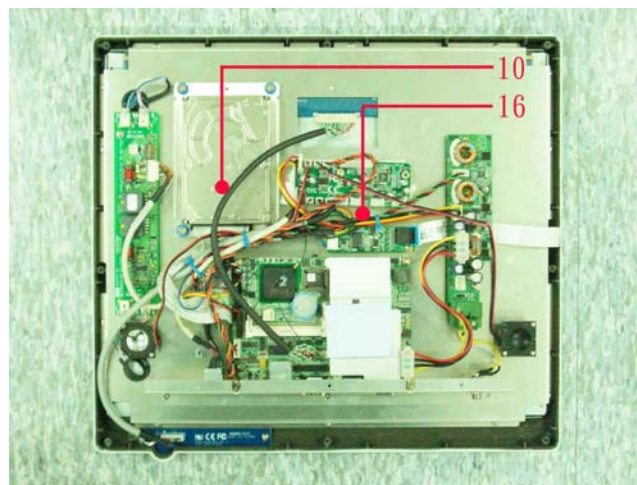
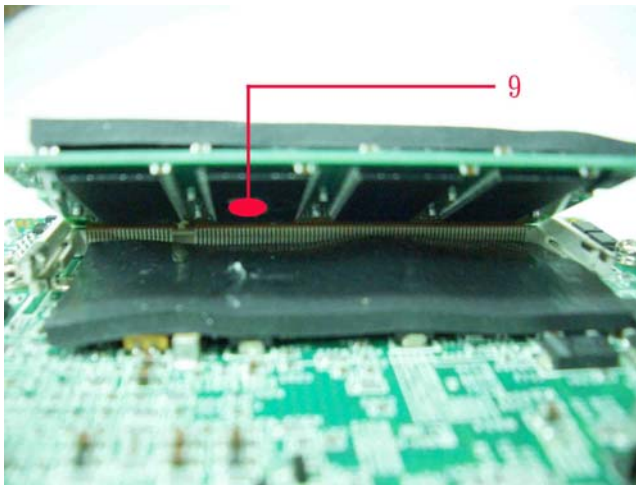
Continuous running till thermal stability (within less than 1°C)

Test Software:

Windows XP / Run PassMark Burn In Test 5.1 Pro

Terminal Recorder:

Measuring Thermal Couple Position :



Temperature rise test

Thermal profile data:

ONYX-172

Point	Temp. Stage(°C)	Spec	40	25
GENE-8310				
01. U4 - (TF) INTEL CPU.Celeron M-1.5G		100	85.3	70.3
02. U8 - (TF) Chipset.NB82852GM.Intel.RG82852GM-SL6ZK		85	76.9	61.9
03. U3 - (TF) Chipset ICH4.INTEL.FW82801DB SL6DM.		115	77.1	62.1
04. U6 - (TF) ICS.ICS952601;EE-A040124;14S3260100;TWN		125	87.0	72.0
05. L2 - (TF) COIL.1.0uH.VISHAY.HLP5050EZER1R0M01		125	87.1	72.1
06. U35 - (TF) Super I/O.ITE.IT8712F-A/IX-L		95	74.5	59.5
07. U47 - (TF) IMVP4 Single Phase PWM.Intersil.ISL6218CVZ		100	83.0	68.0
07. U16 - (TF) 6 Channel AC'97 Audio Codec.REALTEK.ALC655-LF		95	74.6	59.6
09. Memory (Wide Temp.)		85	75.1	60.1
10. HDD (Wide Temp.)		80	64.6	49.6
PER-P02D Power Board				
11. U2 - (TF) Regulator.Vin 3.5-36V.LINEAR.LTC3728EUH#PBF		85	79.2	64.2
12. Q7 - (TF)PWR.N-Channel 30V MOSFET.VISHAY.SI4410BDY-T1-E3v		125	88.0	73.0
13. U1 - (TF)PWR.SSOP16 MOSFET.LINEAR-TECHNOLOGY.LTC1778EGN		110	95.8	80.8
Inverter				
14. Inverter - Q2		150	94.4	79.4
15. Inverter - IC1		85	73.8	58.8
16. Control Box Internal Air Temperature -1		N/A	67.2	52.2
17. Control Box External Surface -1		N/A	61.9	46.9
18. Control Box External Surface -2		N/A	58.2	43.2
19. Chamber Air Temperature		N/A	40.1	25.1
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 (ONYX-172)

Test Result:

No problem was found during the temperature rise operation test.

Temperature cycle test

Test Date: 12-23~26-2008

Test Product: ONYX-172

Test Site: AAEON QA Internal Lab.

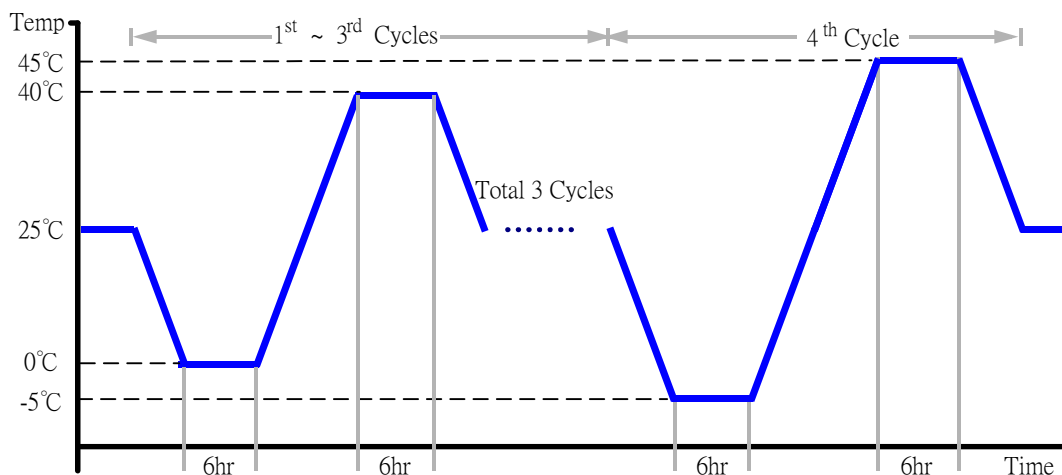
Test Standard: Reference IEC68-2-14 Testing procedures
Test N: Change of temperature Test

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4H+-100
Date of Calibration: 11/07/08
Serial Number: 2582

Test Condition:

1. Test Low Temperature: 0°C (1~3 cycles)
-5°C (4th cycle)
2. Test High Temperature: 40°C (1~3 cycles)
45°C (4th cycle)
3. Test dwell time: 6Hrs
4. Temperature slope: 2°C/min
5. Test cycle: 4 cycles
6. Test Software: Windows XP / Run PassMark Burn In Test 5.1 Pro
7. Test Environment Curve:



Sample Configuration & Quantity Under Test:

Quantity: 1 (ONYX-172)

Test Result:

No problem was found during the temperature cycle operation test.

High temperature storage test

Test Date: 12-17~19-2008

Test Product: ONYX-172

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.

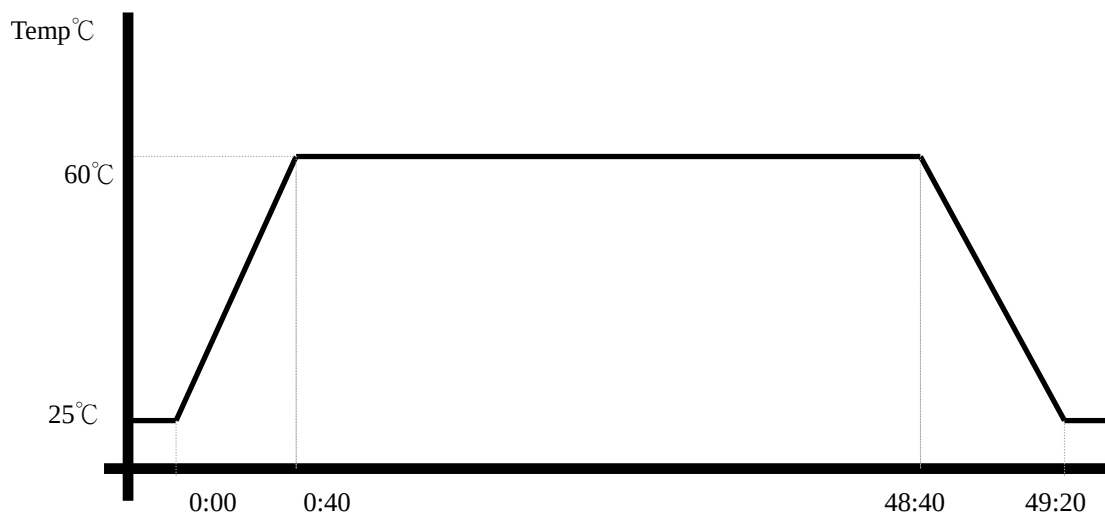
Model: THS-D4H+-100

Date of Calibration: 11/07/08

Serial Number: 2582

Testing Item:

1. Test Temperature: 60°C
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 (ONYX-172)

Test Result:

No problem was found after the high temperature storage test.

Low temperature storage test

Test Date: 12-19~22-2008

Test Product: ONYX-172

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-D4H+-100

Date of Calibration: 11/07/08

Serial Number: 2582

Testing Item:

1. Test Temperature: -20°C
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 (ONYX-172)

Test Result:

No problem was found after the low temperature storage test.

Humidity test

Test Date: 12-26~29-2008

Test Product: ONYX-172

Test Site: AAEON QA Internal Lab.

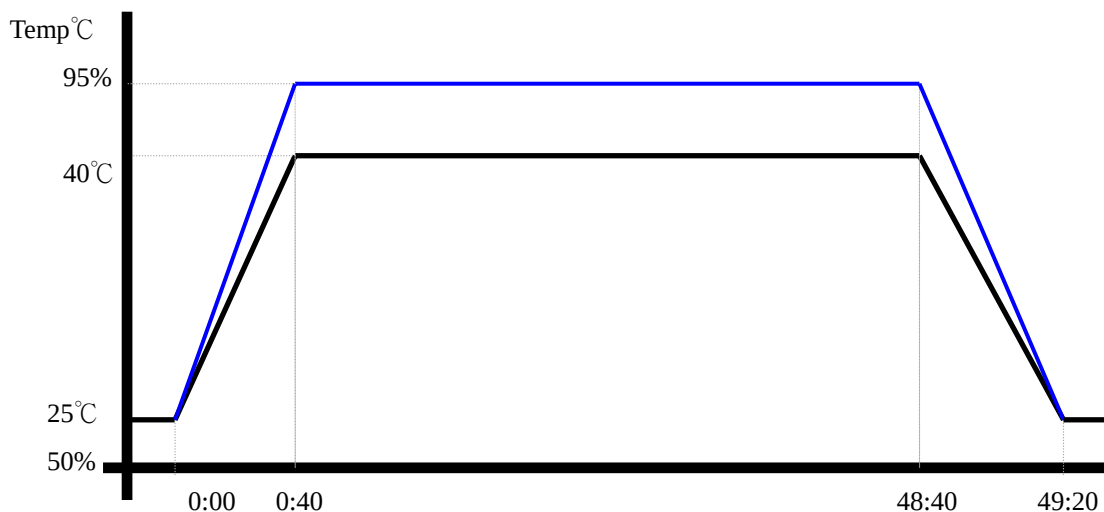
Test Standard: Reference IEC 68-2-3 Testing procedures
Test Ca: Damp heat, steady state (Non-operation)

Test Equipment:
Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4H+-100
Date of Calibration: 11/07/08
Serial Number: 2582

Testing Item:

1. Test Temperature: 40°C
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 (ONYX-172)

Test Result:

No problem was found after the humidity storage test.

Cold start and hot start test

Test Date: 12-22~23-2008

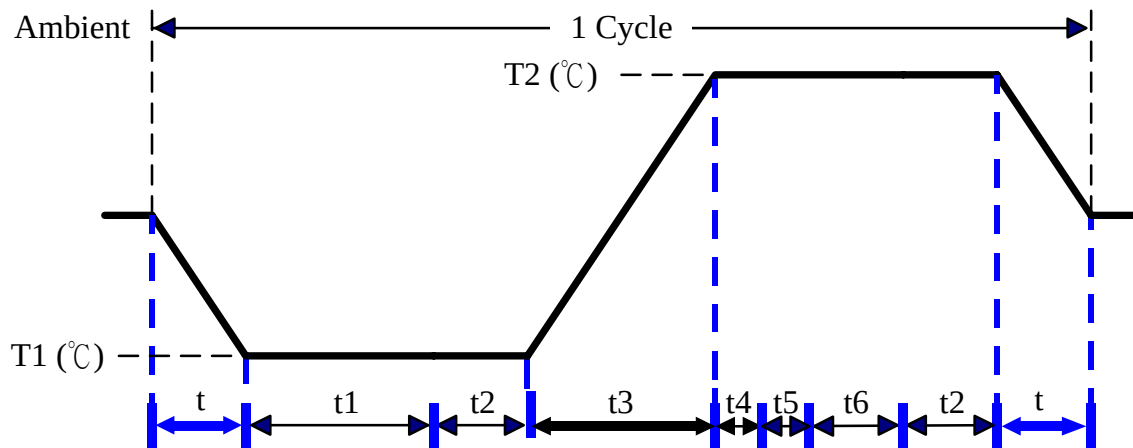
Test Product: ONYX-172

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-D4H+-100
Date of Calibration: 11/07/08
Serial Number: 2582

Test Condition:



Parameters	Description
T1	-5°C
T2	45°C
t1	4 hrs
t2, t6	2 hrs
t4, t5	1hrs
t, t3	2°C/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:

- No problem was found during the cold start test.
- No problem was found during the hot start test.