Industrial Computing Platform Partner

AIS-Q452

With 3.5” SATA HDD

Environment Test Report

Report NO: 09I020025

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.	Control Box:	AIS-Q452
	1. Main Board	AAEON IMBI-Q45 Rev. A1.0 (BIOS Ver: 1.0)
	2. CPU	Intel Core 2 Quad Q9400 / 2.66GHz
	3. Memory	Kingston 1GB * 2 / ELPIDA J1108ABG-DJ-E / DDR3-1333
	5. SATA HDD	Seagate ST380815AS / 80GB
	6. DVD ROM	SONY CRX890S / AD-7580S
	6. ATX Power Supply	CWT PSM275H / 275W

Temperature rise test

Test Date: 08-13-2009

Test Product: AIS-Q452

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:

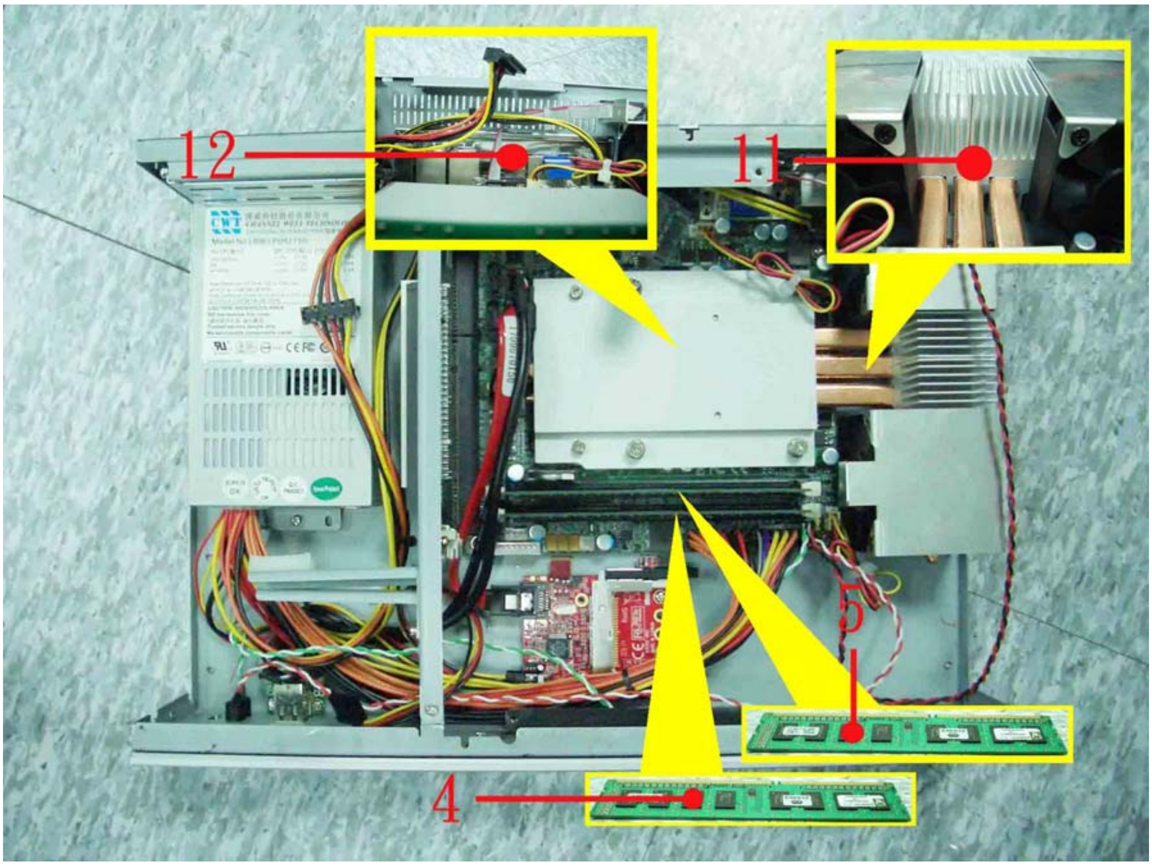
Ambient temperature: 40dC
Continuous running till thermal stability (within less than 1℃)

Test Software:

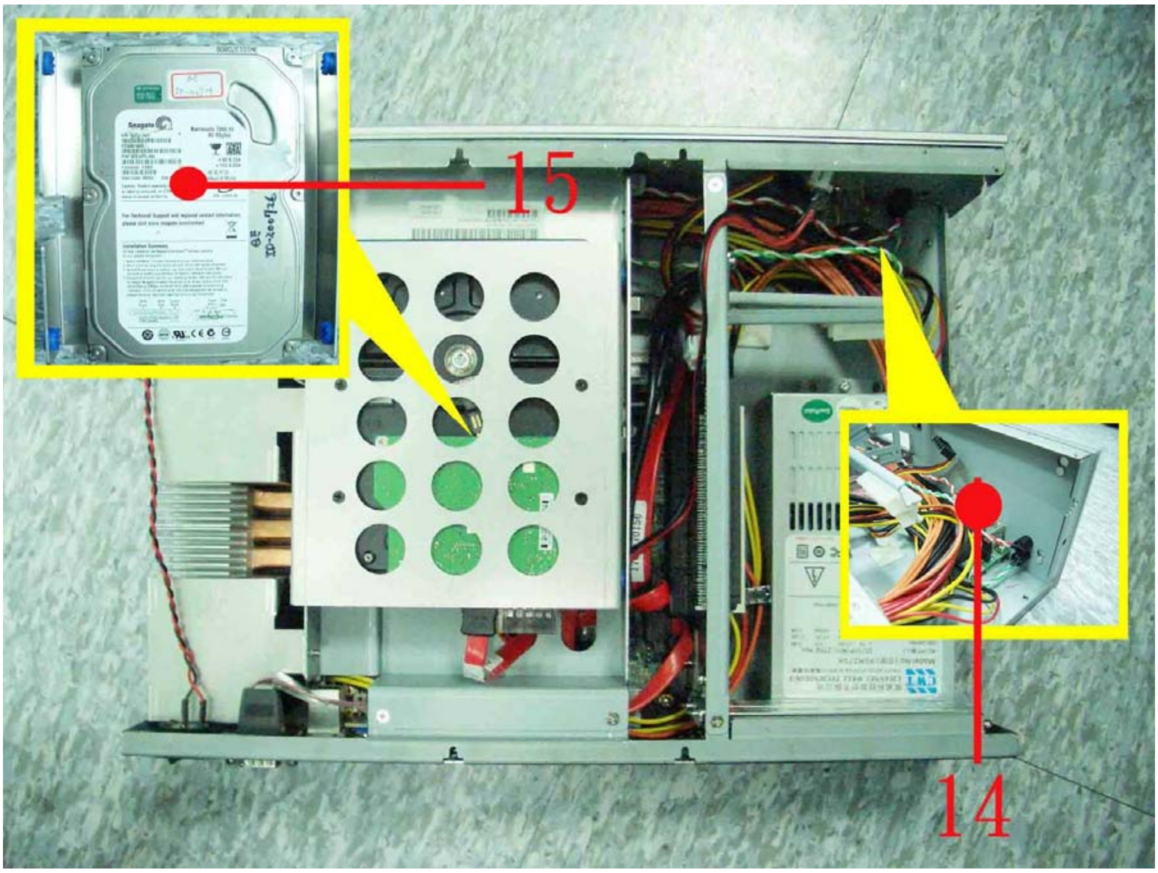
Windows XP / Run PassMark Burn In Test 5.1

Terminal Recorder:

Measuring Thermal Couple Position：



Temperature rise test



Temperature rise test

Thermal profile data:

AIS-Q452

Point / Temp. Stage(℃)	Spec	40	25
01. CPU	71.4	60.7	45.7
02. U13 - (TF) Chipset Intel.AC82Q45 SLB8A	105	62.6	47.6
03. U12 - (TF) Chipset ICH10DO.INTEL.AF82801JDO SLG8U	105	59.9	44.9
04.Memory - 1	85	51.2	36.2
05.Memory - 2	85	52.0	37.0
06. U6 - (TF)RS-232 Driver&Receivers.TI.GD75232DBR	95	66.8	51.8
07.U15 - (TF)7.1Channel HD Audio Codec.REALTEK.ALC888-VC2-GR	100	61.2	46.2
08. U19 - (TF) MOSFET Drivers.INTERSIL.ISL6612ACBZ	100	76.0	61.0
09. U29 - (TF) CLOCK GENERATOR.SILEGO.SLG505YC264BTTR	100	65.5	50.5
10. U18 - (TF) MosFET Driver.Intelsil.ISL6614ACBZ	100	69.5	54.5
11. Control Box Inside Air Temperature - 1	N/A	55.8	40.8
12. Control Box Inside Air Temperature - 2	N/A	48.5	33.5
13. Control Box Inside Air Temperature - 3	N/A	43.9	28.9
14. Control Box Inside Air Temperature - 4	N/A	42.3	27.3
15. HDD	60	53.0	38.0
16. Control Box External Surface - 1	N/A	47.5	32.5
17. Control Box External Surface - 2	N/A	46.7	31.7
18. Chamber Air Temperature	N/A	39.8	24.8

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 (AIS-Q452)

Test Result:

No problem was found during the temperature rise operation test.

Temperature cycle test

Test Date: 08-10~12-2009

Test Product: AIS-Q452

Test Site: AAEON QA Internal Lab.

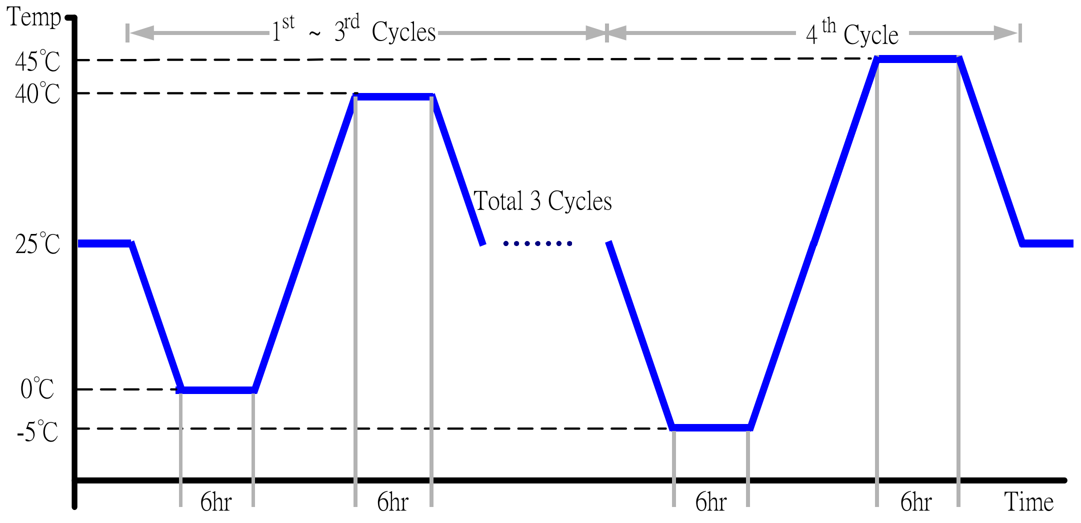
Test Standard: Reference IEC68-2-14 Testing procedures
Test N: Change of temperature Test

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℃ (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 (AIS-Q452)

Test Result:

No problem was found during the temperature operation cycle test.

High temperature storage test

Test Date: 08-03~05-2009

Test Product: AIS-Q452

Test Site: AAEON QA Internal Lab.

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

Test Equipment:

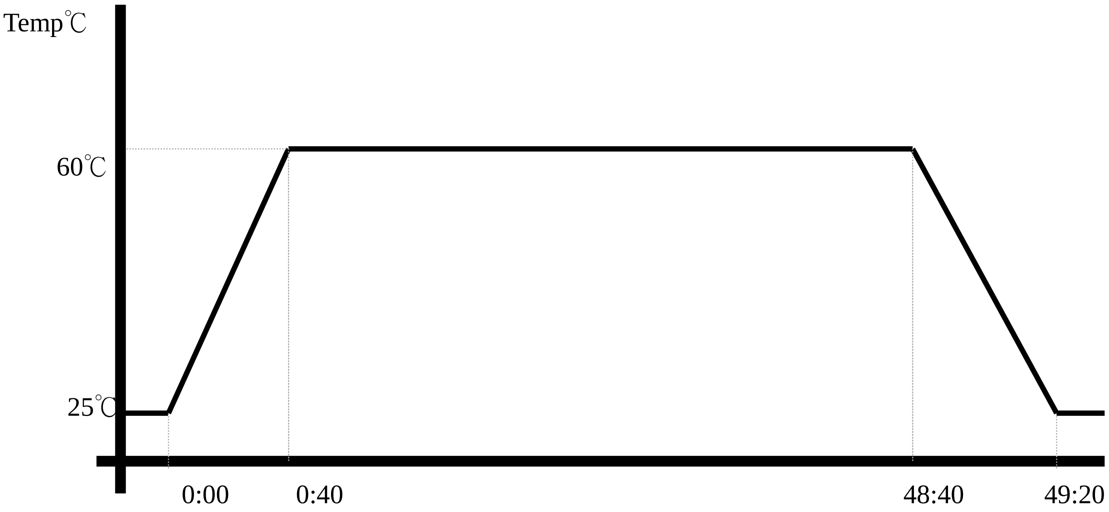
Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.

Model: THS-D4H+-100

Date of Calibration: 11/07/08
Serial Number: 2582

Testing Item:

1. Test Temperature: 60℃
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 (AIS-Q452)

Test Result:

No problem was found after the high temperature storage test.

Low temperature storage test

Test Date: 08-05~07-2009

Test Product: AIS-Q452

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℃
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 (AIS-Q452)

Test Result:

No problem was found after the low temperature storage test.

Humidity test

Test Date: 08-07~09-2009

Test Product: AIS-Q452

Test Site: AAEON QA Internal Lab.

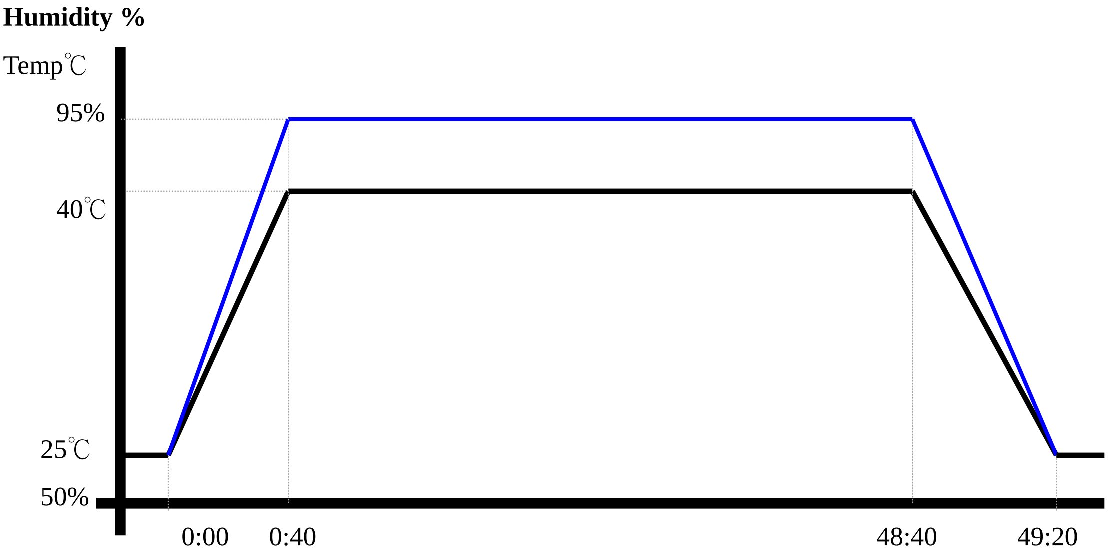
Test Standard: Reference IEC 68-2-3 Testing procedures
Test Ca: Damp heat, steady state (Non-operation)

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℃
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:



Sample Configuration & Quantity Under Test:

Quantity: 1 (AIS-Q452)

Test Result:

No problem was found after the humidity storage test.

Cold start and hot start test

Test Date: 08-12~13-2009

Test Product: AIS-Q452

Test Site: AAEON QA Internal Lab.

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

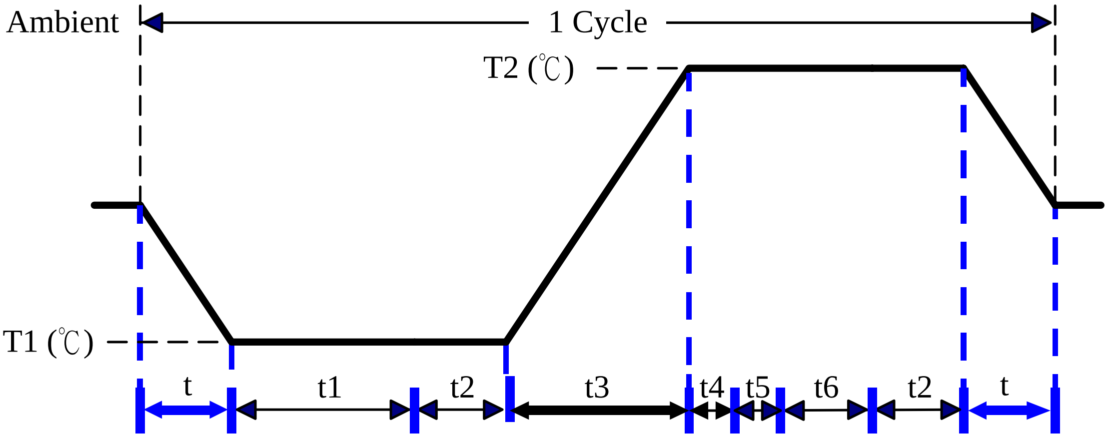
Test Equipment:

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℃
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.