GCS-2500

Rev.A1.0

Environment Test Report

Report NO: 12I020002

Summary	☑ **Pass** ☐ **Fail** Note : There is/are ___ defect(s) not list in the report, please check it in the DTS Website. ☐ **Pass with Deviation** **Comment:** _____

Issue date	Approval	Test Engineer
2012-03-08	**Wayne Chen**	**Matthew Chi**

Test item list

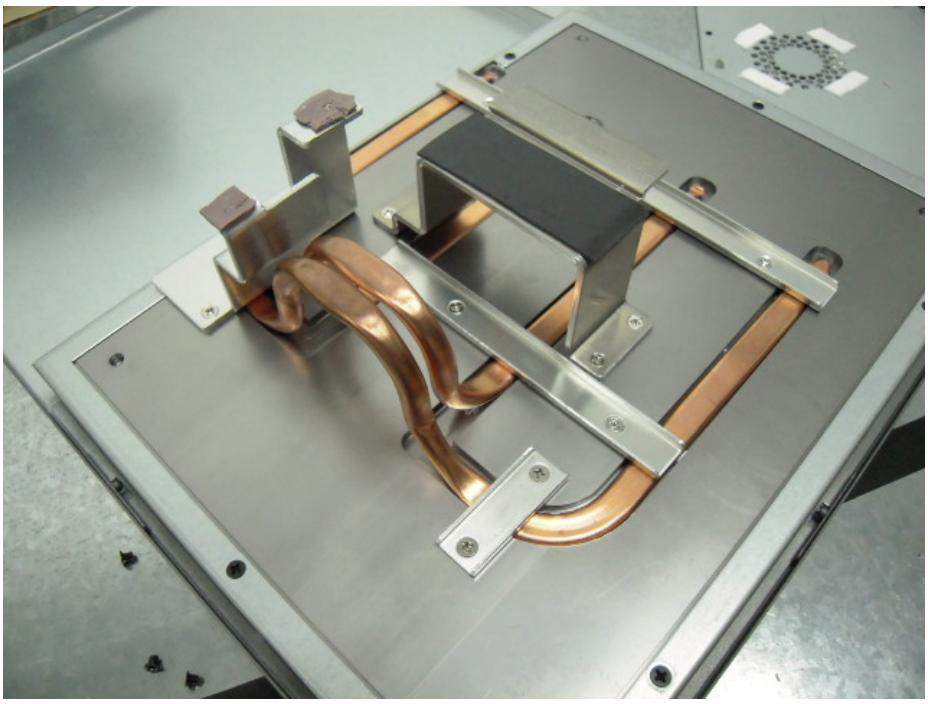
Testing Result

Num	Test item list	Result	Remark
1	Temperature rise test	Pass	
2	Temperature cycle operation test	Pass	
3	High temperature storage test	Pass	
4	Low temperature storage test	Pass	
5	Humidity test	Pass	
6	Cold start and hot start test	Pass	

Configuration of EUT

Item	Device Information		
SYSTEM PC Model / Ver.	GCS-2500 A1.0		
CPU Board	IMBI-QM57 A1.2		
BIOS / Version	Rev0.3(01/19/2012)		
CPU Type	Intel Core CPU i7-620M 2.66GHz		
Memory Type	Transcend DDR3-1333 4GBx2		
SATA HDD	TOSHIBA MK1060GSC 160GB		
Operating System	☒	Windows 7 Professional English 32 Bit	
DC Adapter	FSP120-AAB /DC 19V/6.32A		

Heat sink:



Temperature rise test

Test Date: 03-05-2012

Test Product: GCS-2500

Test Site: AAEON QE Dept.

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

Temperature Measurement:

40 Channel Thermal Recorder:
YOKOGAWA Inc,
Model: GCS-2500
Date of Calibration: 10/12/2011
Serial Number: 12A323190

Test Condition:

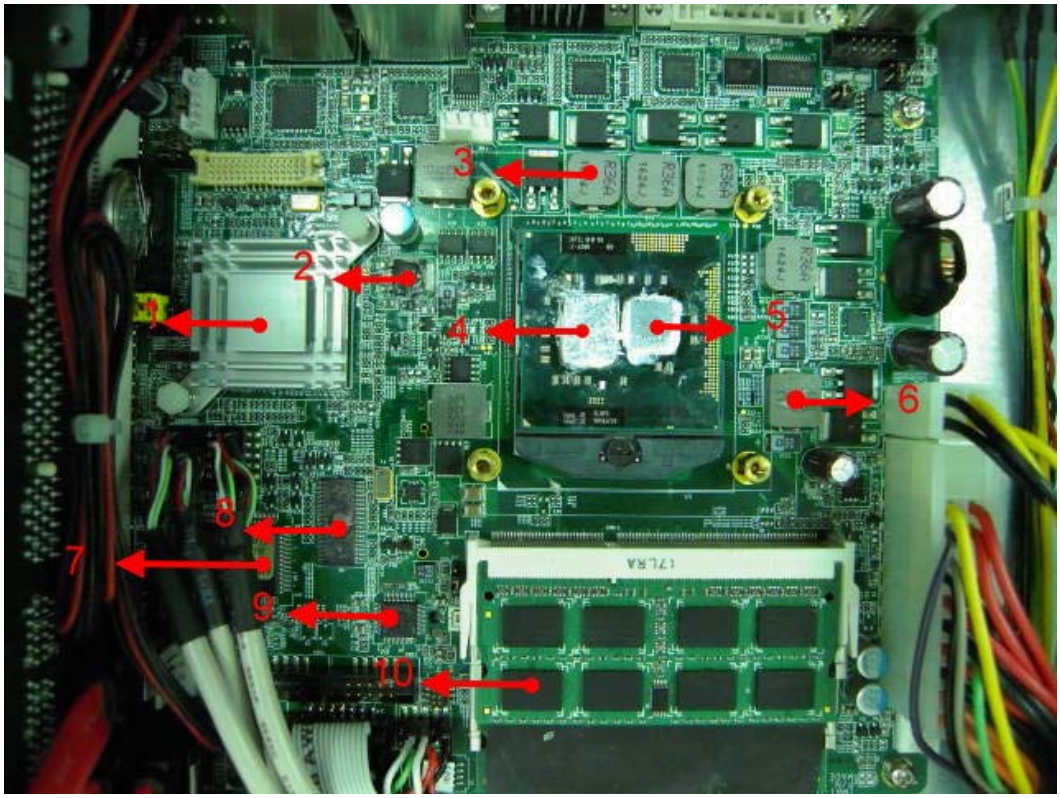
Ambient temperature: 50℃
Continuous running till thermal stability (within less than 1℃)

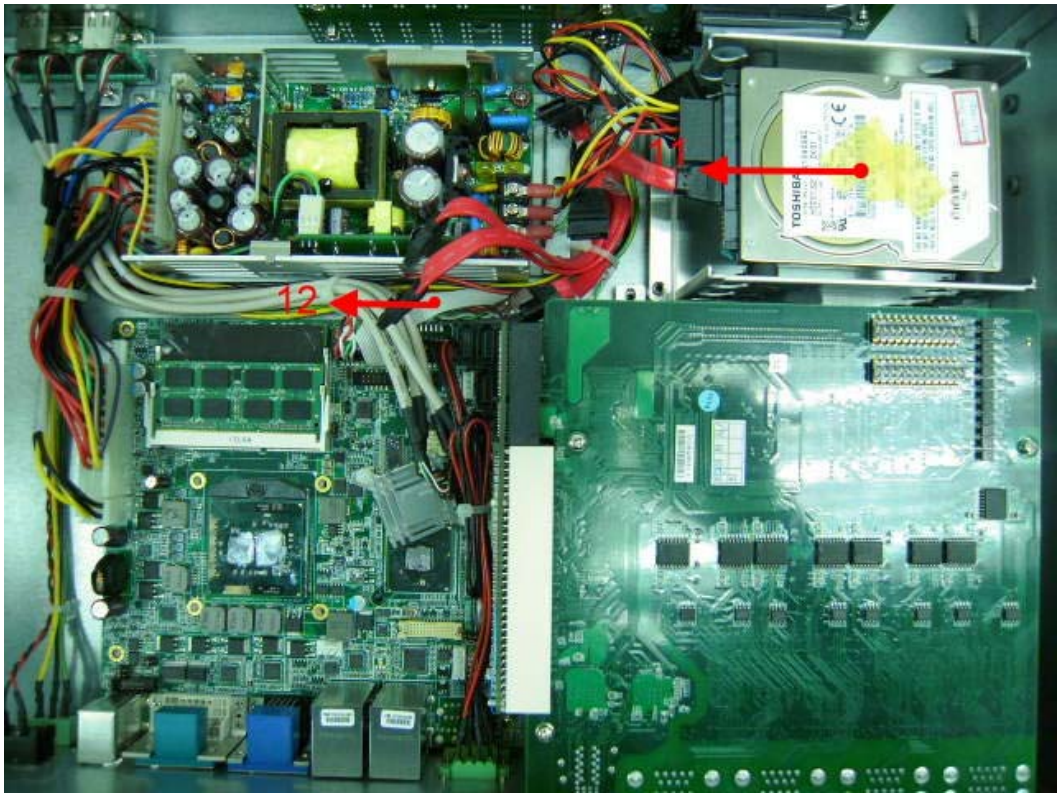
Test Software:

Windows 7 / Run PassMark Burn In Test 7.0 Pro

Terminal Recorder:

Temperature rise test





Temperature rise test

Temperature rise test

Thermal profile data:

Point \ Temp. Stage(℃)	Spec	45	25
IMBI-QM57 A1.2			
01.U2 - (TF)IC.SMD.Chipset PCH.INTEL.BD82QM57 SLGZQ	125	107.5	87.5
02.U12 - (TF)REG.SMD.TO-252 5A Linear Regulator.Diodes.	100	82.9	62.9
03.L16 - (TF)COIL.0.36uH.Irms=34A.20%.MD(11.5x10x4.0).2pin.RD	130	84.4	64.4
04.CPU Core1 - Intel Core I7 CPU 620M @2.66GHz / 32nm / PQI 2400 MHz	105	97.1	77.1
05.CPU Core2 - Intel Core I7 CPU 620M @2.66GHz / 32nm / PQI 2400 MHz	105	85.3	65.3
06.L6 - (TF)COIL.1uH.20%.SMD.11.5x10.3x4.0mm.DCR=3m	125	82.6	62.6
07.U5 - (TF)IC.SMD.QFP128P.Super I/O w/4 COMs.ITE.IT8781F	100	90.1	70.1
08.U6 - (TF)IC.TSSOP.CLOCK GENERATOR.SILEGO.SLG505YC264BTTR	100	84.1	64.1
09.U4 - (TF)IC.SMD.PCI Express to.PATA Host Controller.JMicron.JMB368-LGGZ0A	100	97.5	77.5
10.memory – Transcend SODIMM CL9 DDR3-1333 4GB	95	80.3	60.3
11.HDD – TOSHIBA MK1060GSC 2.5” 160GB	85	69.7	49.7
12. Control Box Inside Air Temperature	N/A	76.1	56.1
13. Control Box Surface Temperature	N/A	79.8	59.8
14. Chamber Air Temperature	N/A	45.5	25.5
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 (GCS-2500)

Test Result:

No problem was found during the temperature rise operation test.

Temperature cycle test

Test Date: 02-22 ~ 24-2012

Test Product: GCS-2500

Test Site: AAEON QE Dept.

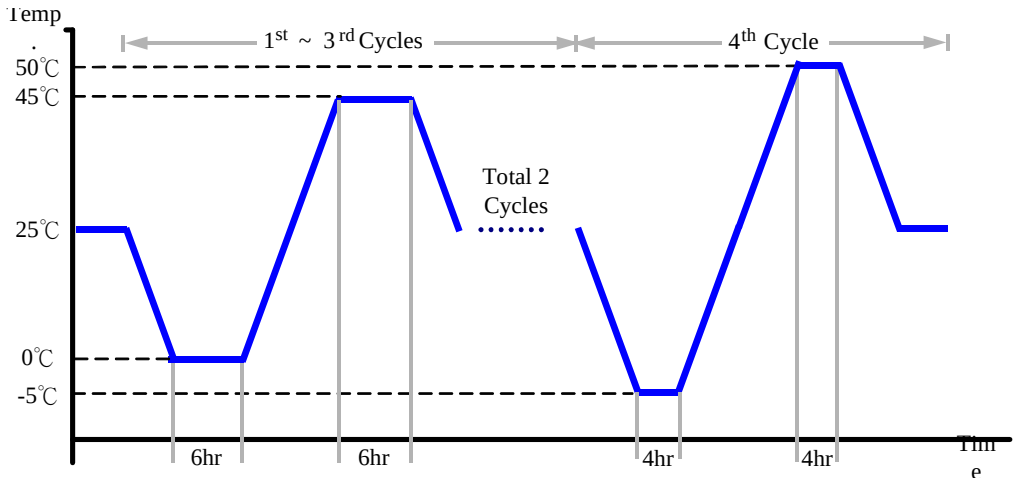
Test Standard: Reference IEC68-2-14 Testing procedures
Test N: Change of temperature Test

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D75-100+LN2
Date of Calibration: 10/13/11
Serial Number: 6487KT

Test Condition:

1. Test Low Temperature: 0℃ (1~3 cycles)
   -5℃ (4th cycle)
2. Test High Temperature: 45℃ (1~3 cycles)
   50℃ (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 (GCS-2500)

Test Result:

No problem was found during the temperature operation cycle test.

High temperature storage test

Test Date: 02-21 ~ 22-2012

Test Product: GCS-2500

Test Site: AAEON QE Dept.

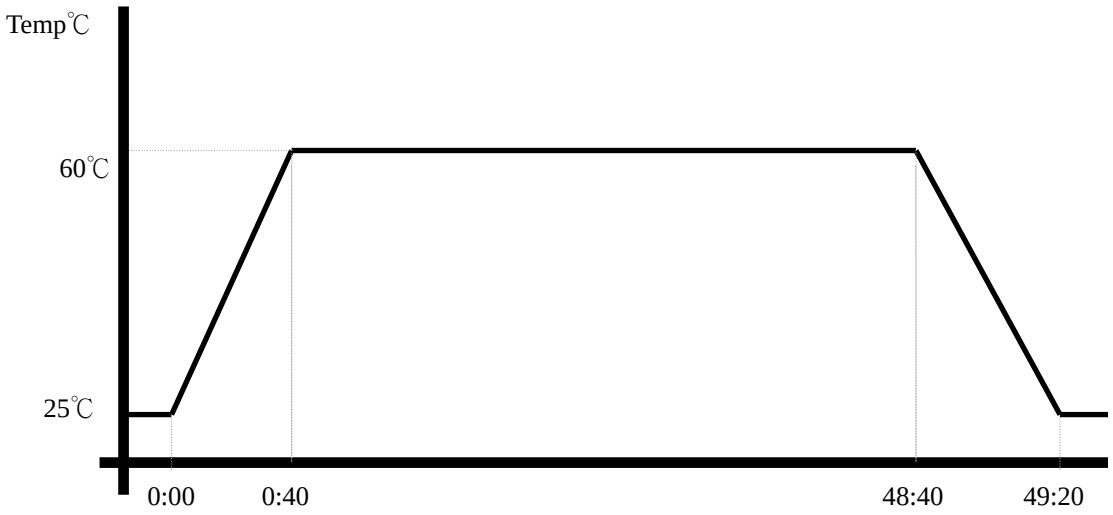
Test Standard: Reference IEC 68-2-2 Testing procedures
Test Bb: Dry Heat Test (Non-operation)

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D75-100+LN2
Date of Calibration: 10/13/11
Serial Number: 6487KT

Testing Item:

1. Test Temperature: 60℃
2. Test Times: 48Hrs
3. Test Software: Windows 7 / Run PassMark Burn In Test 7.0 Pro
4. Test Environment Curve:



Sample Configuration & Quantity Under Test:
Quantity: 1 (GCS-2500)

Test Result:

No problem was found after the high temperature storage test.

Low temperature storage test

Test Date: 02-21 ~ 22-2012

Test Product: GCS-2500

Test Site: AAEON QE Dept.

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-D75-100+LN2
Date of Calibration: 10/13/11
Serial Number: 6487KT

Testing Item:

1. Test Temperature: -20℃
2. Test Times: 48Hrs
3. Test Software: Windows 7 / Run PassMark Burn In Test 7.0 Pro
4. Test Environment Curve:

Sample Configuration & Quantity Under Test:
Quantity: 1 (GCS-2500)

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

Humidity test

Test Date: 03-01 ~02 -2012

Test Product: GCS-2500

Test Site: AAEON QE Dept.

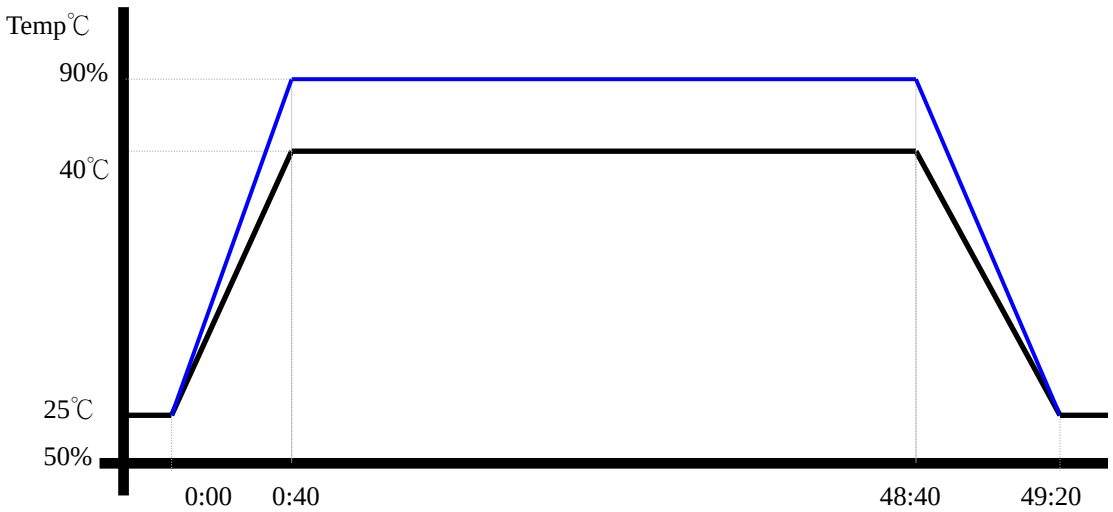
Test Standard: Reference IEC 68-2-3 Testing procedures
Test Ca: Damp heat, steady state (Non-operation)

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D75-100+LN2
Date of Calibration: 10/13/11
Serial Number: 6487KT

Testing Item:

1. Test Temperature: 40℃
2. Test Humidity: 90%RH
3. Test Times: 48Hrs
4. Test Software: Windows 7 / Run PassMark Burn In Test 7.0 Pro
5. Test Environment Curve:



Sample Configuration & Quantity Under Test:
Quantity: 1 (GCS-2500)

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

Cold start and hot start test

Test Date: 03-02 ~03 -2012

Test Product: GCS-2500

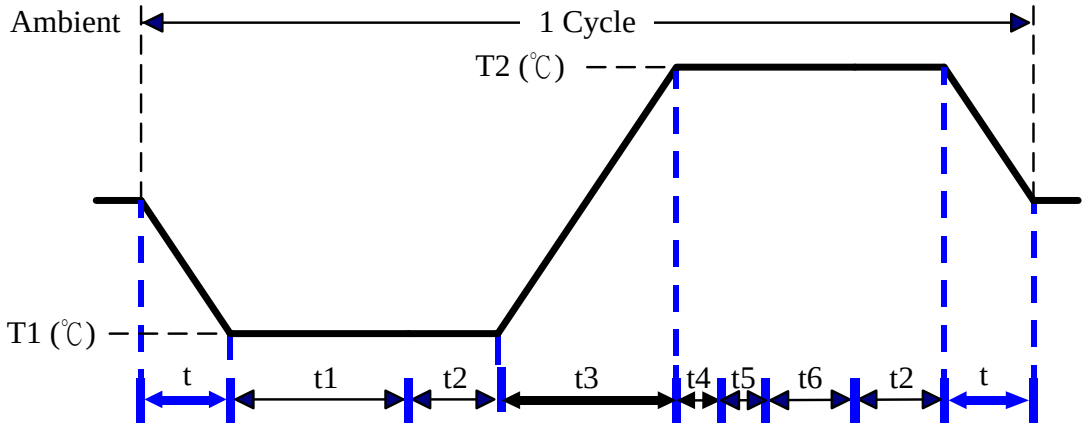
Test Site: AAEON QE Dept.

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-D75-100+LN2
Date of Calibration: 10/13/11
Serial Number: 6487KT

Test Condition:



Parameters	Description
T1	-5℃
T2	50℃
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 media player
t5: Win 7 Software restart test 3 times
Test Software: Windows 7

Test Result:

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

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