



# **AMB-2000 (MBC-5410) Environment Test Report**

**Report NO : 03P020014**

**Issued by:**

**/**

**05/21/2003**

*Rex-Chang*  
**DV Engineer**

**Date**

**Reviewed by:**

**/**

**05/21/2003**

*Wayne-Chen*  
**A.V.P**

**Date**

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Num	Item	Spec
1.	LCD panel PC:	AMB-2000
	1.LCD	Fujitsu 38XGC6V-06
	2.Power	MAGIC POWER MPD-8071-S 70W
	3. Inverter	SI JING HARNG 8592F-01
2.	CPU Board:	MBC-5410 Rev:A1.0 (Bios Ver.1.0)
	1.CPU	Onboard NS Geode GX1 300MHz
	2.Memory	ELPIDA D45128841G5-A75-9JF PC-133 SDRAM 256MB
	2.HDD	IBM Travelstar <sup>TM</sup> IC25N020ATCS04-0 20GB



# Temperature/Humidity cycle test

Report NO. 03P020014

AMB-2000(MBC-5410 Rev:A1.0)

**Test Date:** 05-14~16-2003

**Test Product:** AMB-2000 (MBC-5410) Panel PC

**Test Site:** AAEON DV Internal Lab.

**Performed By :** Rex Chang

**Test Standard :**

Reference IEC 68-2-61 Testing procedures  
Test Z/ABD : Climatic Sequence Test

## Test Equipment:

Programmable Temperature & Humidity Chamber

K.SON. INS. TECH. CORP.

Model : THS-D4H+-100

Date of Calibration : 06/07/02

Serial Number: 1241

## Temperature Measurement :

20 Channel Thermal Recorder:

YOKOGAWA Inc,

Model : DA100-13-1D

Date of Calibration : 01/03/03

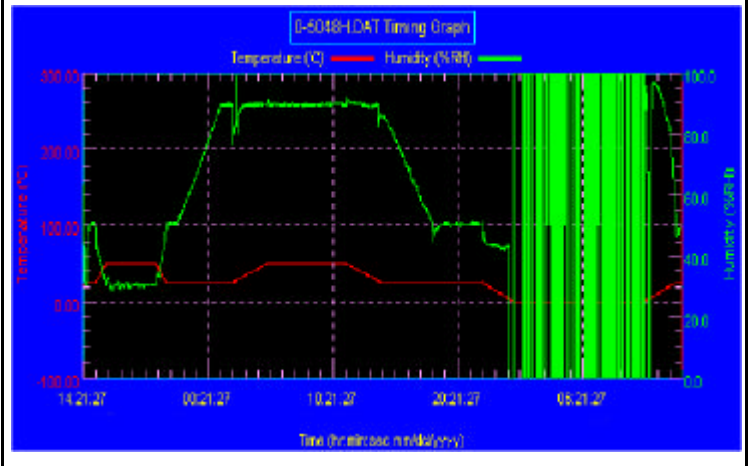
Serial Number: 12A323190

## Temperature & Humidity Cycle Test:

### Testing Specification

Step	Temperature ( )	Humidity (%RH)	Duration (HH:MM)
1	25	50	00:30
2	25	50	00:30
3	50	30	00:50
4	50	30	04:00
5	25	50	00:50
6	25	50	00:50
7	25	90	03:30
8	25	90	01:00
9	50	90	02:46
10	50	90	06:21
11	25	90	02:46
12	25	50	04:07
13	25	50	03:30
14	25	50	00:30
15	0	0	02:30
16	0	0	10:30
17	25	50	02:30
18	25	50	00:30

### Test Curve:

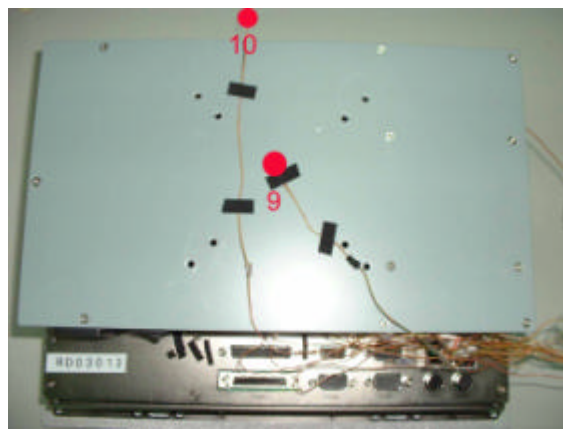
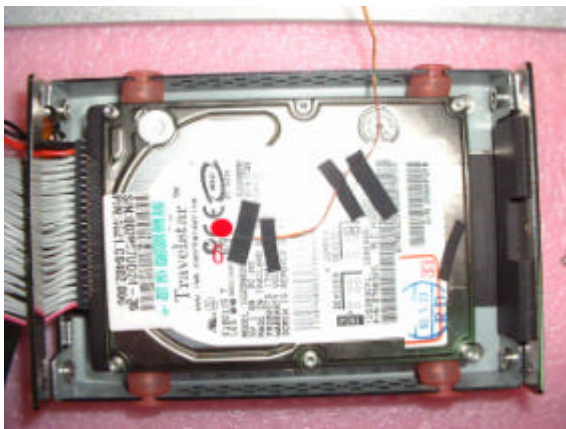
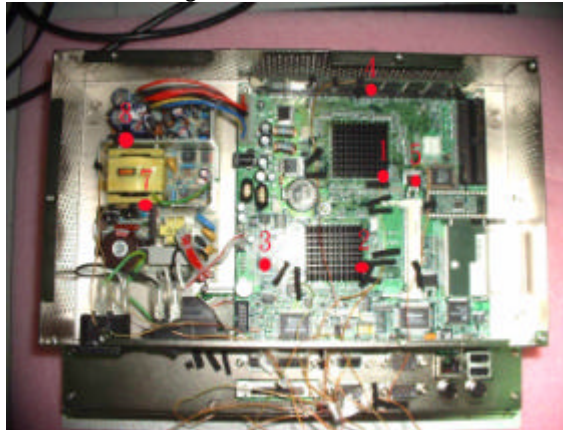


## Sample Configuration & Quantity Under Test:

Using one AMB-2000 Panel PC.

Temperature Recorder:

Measuring Accelerometer Position:



Thermal profile data :

**AMB-2000 10.4" LCD Panel PC**

Point	Temp. Stage		
	50	25	0
1. CPU	85.4	58.2	32.5
2.NS Geode CS5530A Chipset	72.1	47.3	22.0
3. AC97 Codec	73.7	48.9	23.6
4 .Memory	78.5	54.6	29.8
5.Regulator (Q4)	83.3	53.5	25.4
6.HDD	57.9	34.8	7.5
7.Power Heat Sink (1)	73.5	49.3	24.9
8.Power Heat Sink (2)	82.6	59.3	35.6
9.Control Box. External Surface	55.7	30.5	4.8
10.Chamber air temperature	51.5	26.3	1.5

**Sample Configuration & Quantity Under Test:**

Quantity: 1 (AMB-2000 10.4" Panel PC)

**Test Result:**

**Passed.**

The AMB-2000 Industrial Panel PC meets temperature cycle test

AMB-2000(MBC-5410 Rev:A1.0)

**Test Date:** 03-07~11-2003

**Test Product:** AMB-2000 (MBC-5410) Panel PC

**Test Site:** AAEON DV Internal Lab.

**Performed By :** Rex Chang

**Test Standard :** Reference IEC 68-2-56 Testing procedures  
Test Cb : Damp Heat Steady State Test (Non-operation)

**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 : 10/28/02  
Serial Number: 2582

**Testing Item:**

1. Test Temperature: 60
2. Test Times: 48Hrs
3. Test Software: Windows media Player (Video test soft-MPEG form HDD)
4. Test Environment Curve:



**Sample Configuration & Quantity Under Test:**

Quantity: 1 (AMB-2000 10.4" Panel PC)

**Test Result:**

**Passed.**

The AMB-2000 Industrial Panel PC meets High temperature storage test.

**AMB-2000(MBC-5410 Rev:A1.0)****Test Date:** 02-22~21-2003**Test Product:** AMB-2000 (MBC-5410) Panel PC**Test Site:** AAEON DV Internal Lab.**Performed By :** Rex Chang**Test Standard :** Reference IEC 68-2-1  
Testing procedures Test Ab : Cold Test (Non-operation)**Test Equipment:**

Programmable Temperature &amp; Humidity Chamber

K.SON. INS. TECH. CORP.

Model : THS-D4H+-100

Date of Calibration : 10/28/02

Serial Number: 2582

**Testing Item:**

1. Test Temperature : -20
2. Test Times : 48Hrs
3. Test Software : Windows media Player (Video test soft-MPEG form HDD)
4. Test Environment Curve :

**Sample Configuration & Quantity Under Test:**  
Quantity: 1 (AMB-2000 10.4" Panel PC)**Test Result:****Passed.**

The AMB-2000 Industrial Panel PC meets Low temperature storage test

**AMB-2000(MBC-5410 Rev:A1.0)****Test Date:** 02-27~03-01-2003**Test Product:** AMB-2000 (MBC-5410) Panel PC**Test Site:** AAEON DV Internal Lab.**Performed By :** Rex Chang**Test Standard :** Reference IEC 68-2-30 Testing procedures  
Test Db : Humidity test (Non-operation)**Test Equipment:**

Programmable Temperature &amp; Humidity Chamber

K.SON. INS. TECH. CORP.

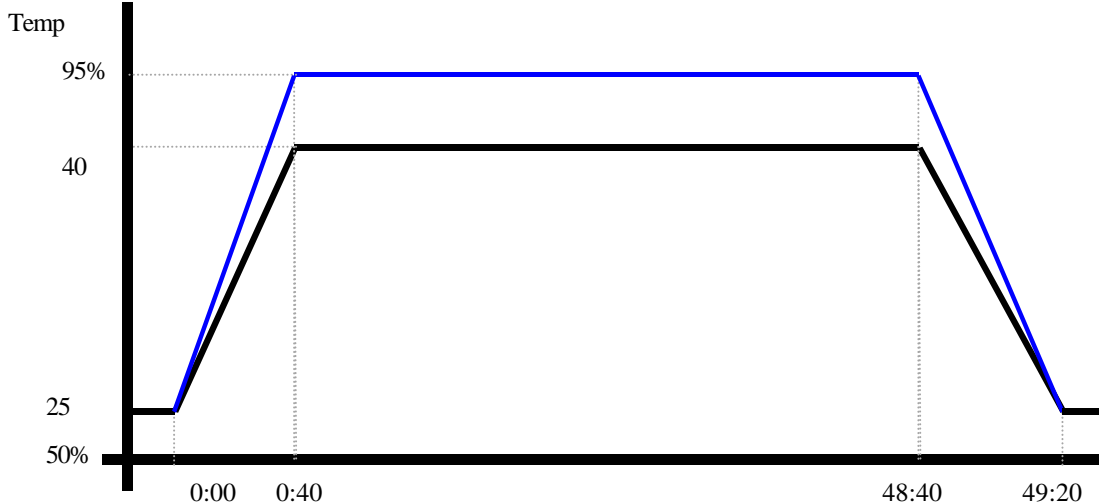
Model : THS-D4H+-100

Date of Calibration : 06/10/02

Serial Number: 1241

**Testing Item:**

1. Test Temperature: 40
2. Test Humidity : 95%RH
3. Test Times: 48Hrs
4. Test Software : Windows media Player (Video test soft-MPEG form HDD)
5. Test Environment Curve:

**Humidity %****Sample Configuration & Quantity Under Test:**

Quantity: 1 (AMB-2000 10.4" Panel PC)

**Test Result:****Passed.**

The AMB-2000 Industrial Panel PC meets Humidity test

AMB-2000(MBC-5410 Rev:A1.0)

**Test Date:** 03-31~04-01-2003

**Test Product:** AMB-2000 (MBC-5410) Panel PC

**Test Site:** AAEON DV Internal Lab.

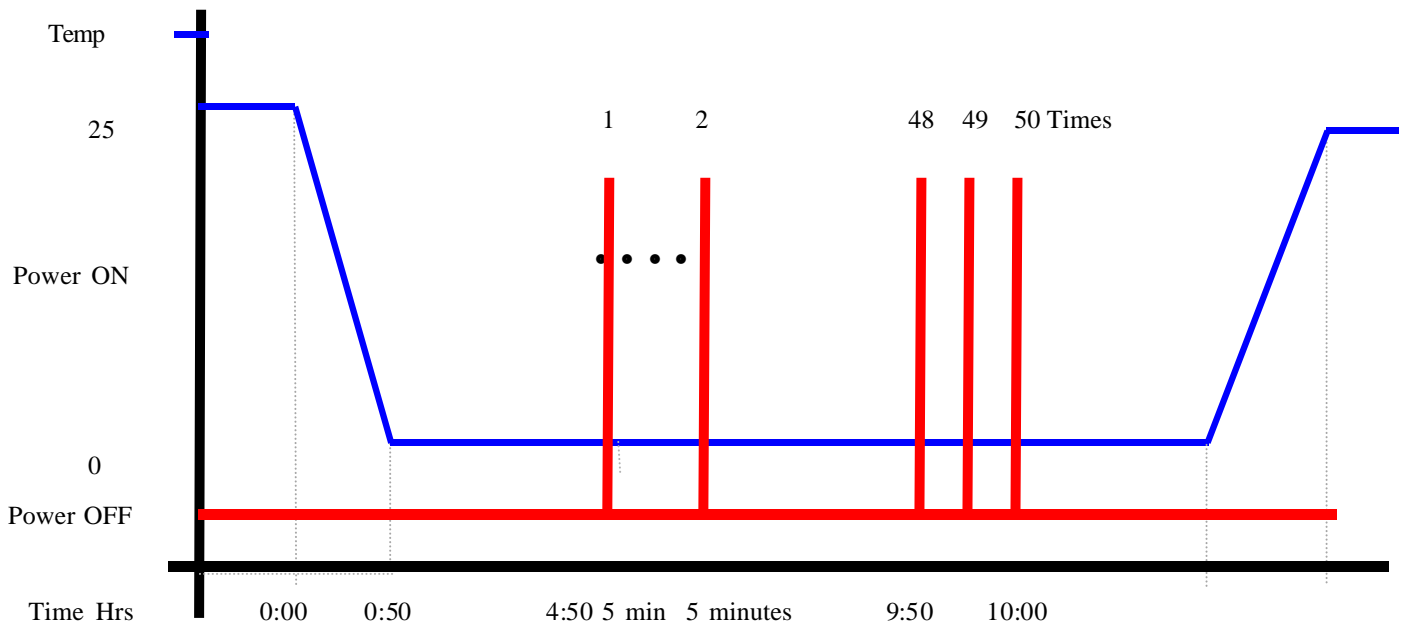
**Performed By :** Rex Chang

**Test Standard :** Reference IEC 68-2-1 Testing procedures  
Test Ab : Cold Test

**Test Equipment:**  
Programmable Temperature & Humidity Chamber  
K.SON. INS. TECH. CORP.  
Model : THS-D4H+-100  
Date of Calibration : 06/07/02  
Serial Number: 1241

**Test Condition :**

- 1. Test Temperature : 0
- 2. Test Times : 5Hrs  
Power off 4 hours before first time power on  
Power off to next power on between 10 minutes
- 3. Number of test : 50 times
- 4. Test Software : Windows98SE
- 5. Test Environment Curve :







## Cold Start test

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AMB-2000(MBC-5410 Rev:A1.0)

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**Sample Configuration & Quantity Under Test:**

Quantity: 1 (AMB-2000 10.4" Panel PC)

**Test Result:**

**Passed.**

The AMB-2000 Industrial Panel PC meets Cold start test.