

# ARC-640

## Environment Test Report

Report NO: 04I020005

Issued by: Rex-Chang / 10/05/2004  
Test Engineer Date

Reviewed by: Wenyuan Yang / 10/05/2004  
Manager Date

ARC-640 (SBC-860 A1.2) / 4U Rack Mounting Chassis

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Num	Item	Spec
1.	Control Box:	ARC- 640
	1. Main Board	AAEON SBC-860 Rev. A1.2 (BIOS: 1.2)
	2. CPU	Intel Pentium (R) 4 / 2.4 GHz (133x8.0)
	3. Memory	512MB Kingston D328DL-60 (DDR 266)
	4. Power Supply	Seventeam ST-402HLP 400W (ATX)
	5. HDD	Western Digital WD1200JB-00FUA0 120GB (ATA-100)
	6. CD-ROM	ASUS CD-S400/A
	7. FDD	TEAC FD-235HF
	8. Backplane	BP-208SG-P4 REV:..A1.0

### CPU Cooler



**ARC-640 (SBC-860 A1.2) / 4U Rack Mounting Chassis**

**Test Date:** 09-15~17-2004

**Test Product:** ARC-640 (SBC-860 Rev: A1.2) / 4U Rack Mounting Chassis.

**Test Site:** AAEON QA 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: 05/24/04  
Serial Number: 1241

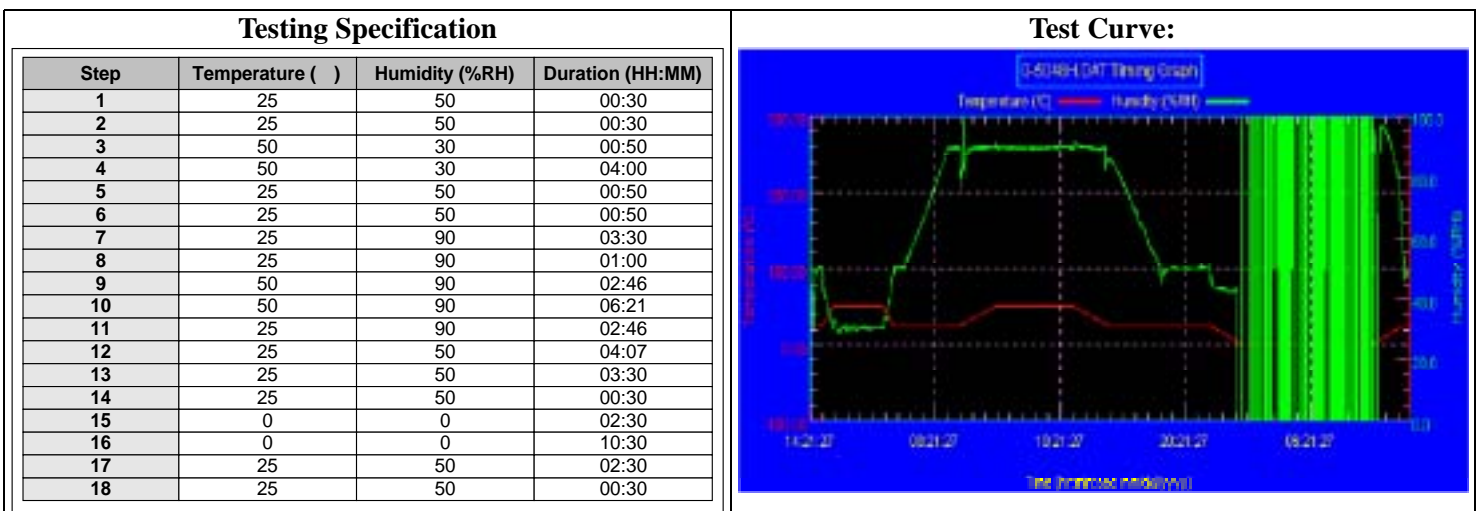
**Temperature Measurement:**

20 Channel Thermal Recorder:  
YOKOGAWA Inc,  
Model: DA100-13-1D  
Date of Calibration: 12/25/03  
Serial Number: 12A323190

**Test O.S. / Software:**

Windows 2000 / Run six Microsoft media player simultaneously.

**Temperature & Humidity Cycle Test:**



**Sample Configuration & Quantity Under Test:**

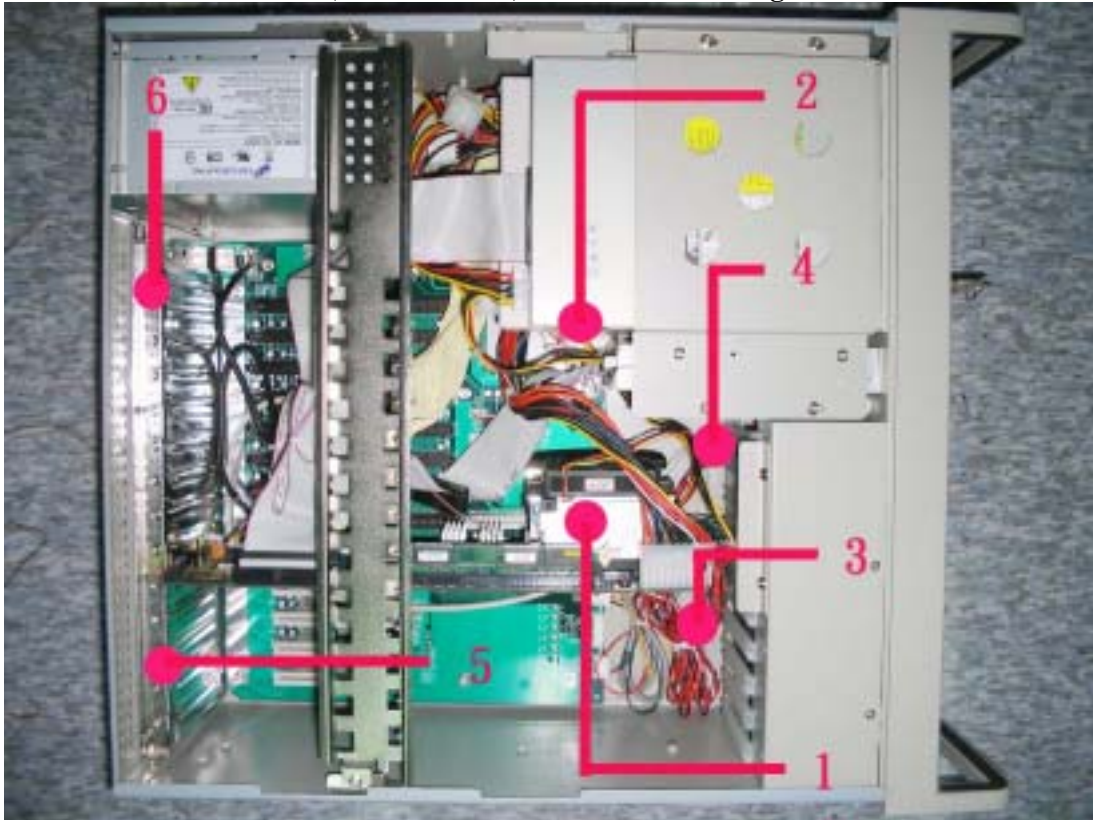
Using one ARC-640 (SBC-860 Rev: A1.2) / 4U Rack Mounting Chassis

## ARC-640 (SBC-860 A1.2) / 4U Rack Mounting Chassis

### Temperature Recorder:

Measuring Accelerometer Position:

### ARC-640 (SBC-860 A1.2) / 4U Rack Mounting Chassis



**ARC-640 (SBC-860 A1.2) / 4U Rack Mounting Chassis**

**Thermal profile data:**

**ARC-640 (SBC-860 A1.2) / 4U Rack Mounting Chassis**

Point	Temp. Stage		
	50	25	0
1. CPU	73.2	46.	19.8
2. HDD Surface	64.5	39.8	15.7
3. Control Box Inside Air Temperature - 1	59.1	33.8	8.9
4. Control Box Inside Air Temperature - 2	61.6	35.9	10.7
5. Control Box Inside Air Temperature - 3	57.0	32.5	8.4
6. Control Box Inside Air Temperature - 4	61.3	37.1	12.9
7. Control Box. External Surface	57.2	32.2	7.6
8. Chamber Air Temperature	51.8	27.1	2.3

**Sample Configuration & Quantity Under Test:**

Quantity: 1 (ARC-640 / 4U Rack Mounting Chassis)

**Test Result:**

The system structure doesn't deformation; Function is OK during system test.

**ARC-640 (SBC-860 A1.2) / 4U Rack Mounting Chassis**

**Test Date:** 09-22~23-2004

**Test Product:** ARC-640 (SBC-860 Rev: A1.2) / 4U Rack Mounting Chassis

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

**Performed By:** Rex Chang

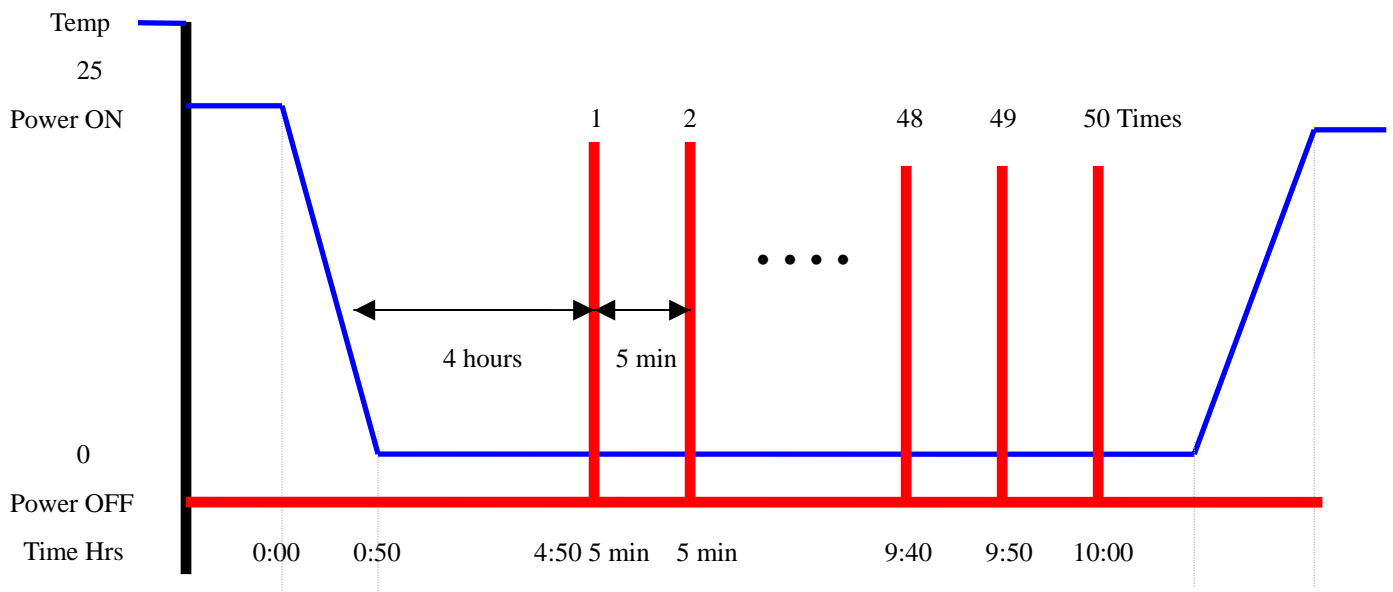
**Test Standard:** Reference IEC 68-2-1 Testing procedures  
Test Ab: Cold Test

**Test Equipment:**

Programmable Temperature & Humidity Chamber  
K.SON. INS. TECH. CORP.  
Model: THS-D4H+-100  
Date of Calibration: 10/17/03  
Serial Number: 2582

**Test Condition:**

1. Test Temperature: 0
2. Test Times: 5 Hours or 50 times of ON/OFF
  - (1) Power off for 4 hours before 1'st power on. Then once complete boot, power off immediately.
  - (2) After 5 min later power on again and wait until booting is completed.
  - (3) Repeat (2) for around 4:50
  - (4) Power off then wait for 5 min before final power on operation.
3. Number of test: 50 times
4. Test Software: Windows 2000
5. Test Environment Curve:



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**ARC-640 (SBC-860 A1.2) / 4U Rack Mounting Chassis**

**Sample Configuration & Quantity Under Test:**

Quantity: 1 (ARC-640 / 4U Rack Mounting Chassis)

**Test Result:**

**Passed.**



## ARC-640 (SBC-860 A1.2) / 4U Rack Mounting Chassis

**Test Date:** 10-01~04-2004

**Test Product:** ARC-640 (SBC-860 Rev: A1.2) / 4U Rack Mounting Chassis

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

**Performed By:** Rex Chang

**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: 10/17/03  
Serial Number: 2582

**Testing Item:**

1. Test Temperature: 60
2. Test Times: 48Hrs
3. Test Environment Curve:



**Sample Configuration & Quantity Under Test:**

Quantity: 1 (ARC-640 / 4U Rack Mounting Chassis)

**Test Result:**

1. After high temperature storage test, the structure of chassis never change shape and surface paint doesn't flake off.
2. The system all functions are OK after high temperature storage test.



## ARC-640 / 4U Rack Mounting Chassis

**Test Date:** 09-19~21-2004

**Test Product:** ARC-640 / 4U Rack Mounting Chassis

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

**Performed By:** Rex Chang

**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: 10/17/03  
Serial Number: 2582

**Testing Item:**

4. Test Temperature: 80
5. Test Times: 48Hrs
6. Test Environment Curve:



**Sample Configuration & Quantity Under Test:**

Quantity: 1 (ARC-640)

**Test Result:**

After high temperature storage test, the structure of chassis never change shape and surface paint doesn't flake off.

## ARC-640 (SBC-860 A1.2) / 4U Rack Mounting Chassis

**Test Date:** 09-24~27-2004

**Test Product:** ARC-640 (SBC-860 Rev: A1.2) / 4U Rack Mounting Chassis

**Test Site:** AAEON QA 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 & Humidity Chamber  
K.SON. INS. TECH. CORP.  
Model: THS-D4H+-100  
Date of Calibration: 10/17/03  
Serial Number: 2582

**Testing Item:**

1. Test Temperature: -20
2. Test Times: 48Hrs
3. Test Environment Curve:



**Sample Configuration & Quantity Under Test:**

Quantity: 1 (ARC-640)

**Test Result:**

1. After high temperature storage test, the structure of chassis never change shape and surface paint doesn't flake off.
2. The system all functions are OK after high temperature storage test.

**ARC-640 (SBC-860 A1.2) / 4U Rack Mounting Chassis**

**Test Date:** 09-10~13-2004

**Test Product:** ARC-640 (SBC-860 Rev: A1.2) / 4U Rack Mounting Chassis

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

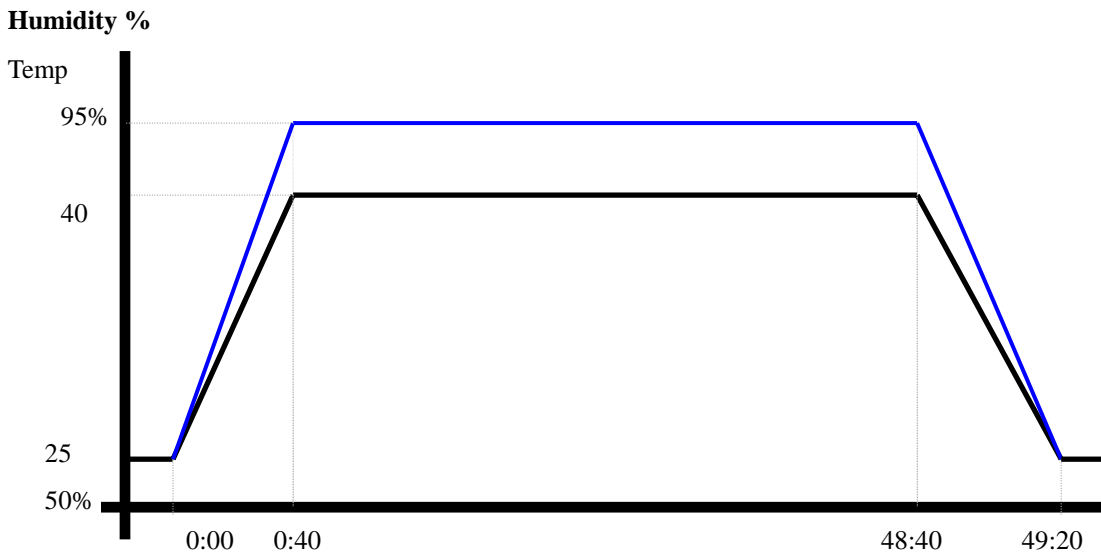
**Performed By:** Rex Chang

**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: 10/17/03  
Serial Number: 2582

**Testing Item:**

1. Test Temperature: 40
2. Test Humidity: 95%RH
3. Test Times: 48Hrs
4. Test Environment Curve:



**Sample Configuration & Quantity Under Test:**  
Quantity: 1 (ARC-640)

**Test Result:**

1. After high temperature storage test, the structure of chassis never change shape and surface paint doesn't flake off.
2. The system all functions are OK after high temperature storage test.