ARC-645
Environment Test Report

Report NO: 04I020007

Issued by:	Rex-Chang	/	*10/05/2004*
	Test Engineer		**Date**
Reviewed by:	Wenyuan Yang	/	*10/05/2004*
	Manager		**Date**

Num	Item	Spec
1.	Control Box:	ARC- 645 / 4U Rack Mounting Chassis
	1. Main Board	AAEON SBC-860 Rev. A1.1 (BIOS: 1.2)
	2. CPU	Intel Celeron / 2.4 GHz (100x24.0)
	3. Memory	512MB Transcend K4H560838E-TCCE (DDR 333)
	4. Power Supply	Seventeam ST-300BLP 300W (ATX)
	5. HDD	Seagate ST33221A 3.2GB (ATA-33)
	6. CD-ROM	BENQ 652A-6N4 52X
	7. FDD	TEAC FD-235HF
	8. Backplane	BP-214SG-P4 REV:.A1.1

CPU Cooler

AAEON Technology Inc.
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Temperature cycle test

Report NO. 04I020007

ARC-645 (SBC-860 A1.1) / 4U Rack Mounting Chassis

Test Date: 09-15~17-2004

Test Product: ARC-645 (SBC-860 Rev: A1.1) / 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:

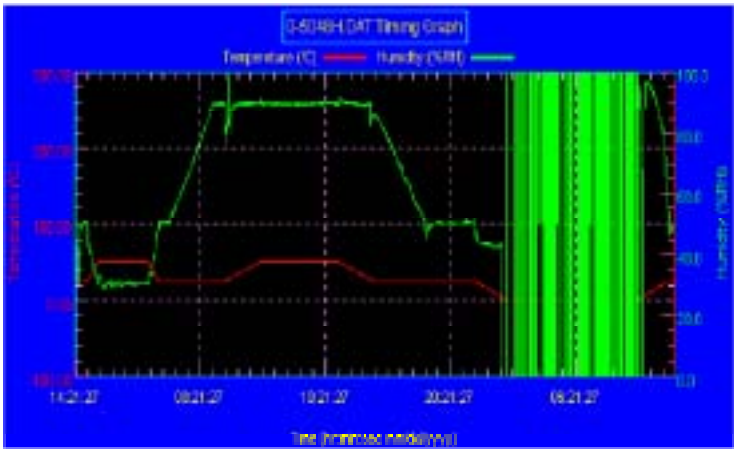
Windows 2000 / Run six Microsoft media player simultaneously.

Temperature & Humidity Cycle Test:

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 ARC-645 (SBC-860 Rev: A1.1) / 4U Rack Mounting Chassis.

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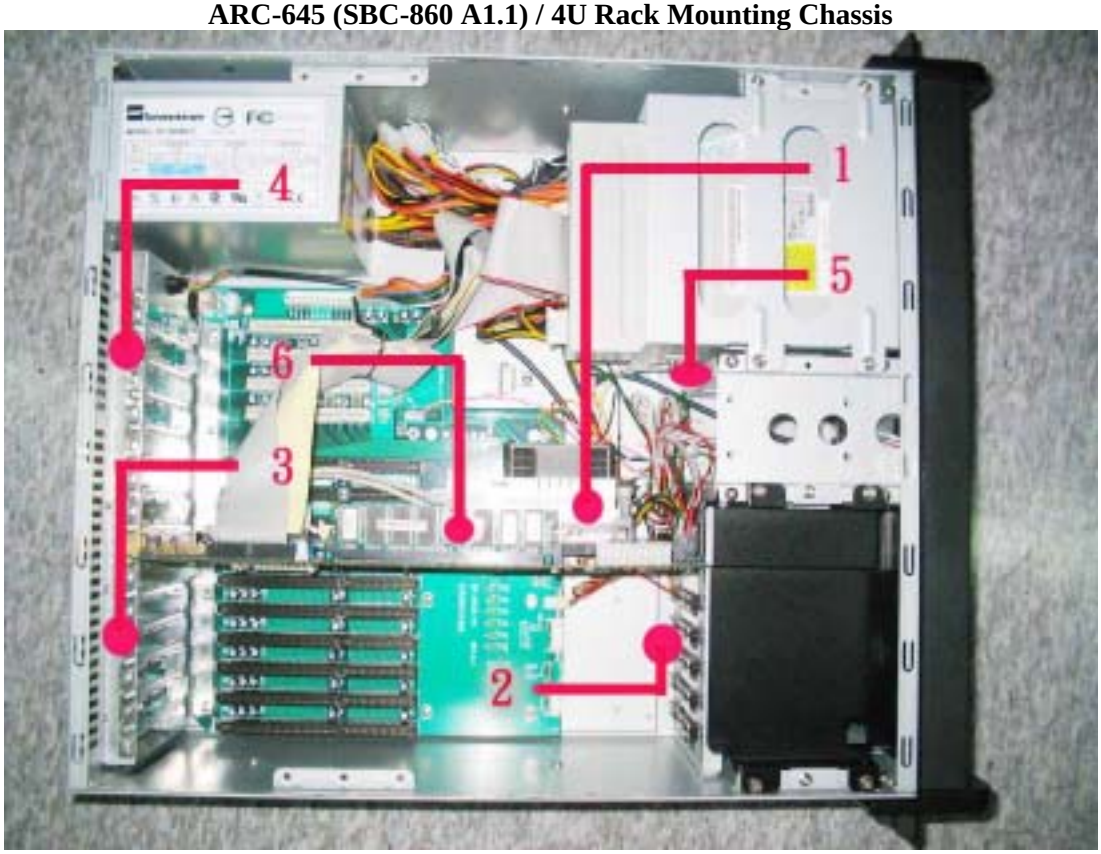
ARC-645 (SBC-860 A1.1) / 4U Rack Mounting Chassis

Temperature Recorder:

Measuring Accelerometer Position:

ARC-645 (SBC-860 A1.1) / 4U Rack Mounting Chassis



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Temperature cycle test

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Thermal profile data:

ARC-645 (SBC-860 A1.1) / 4U Rack Mounting Chassis

Point \ Temp. Stage	50°C	25°C	0°C
1. CPU	72.8°C	45.6°C	20.2°C
2. Contorl Box Inside Air Temperature - 1	54.6°C	30.5°C	5.5°C
3. Contorl Box Inside Air Temperature - 2	54.3°C	30.1°C	5.1°C
4. Contorl Box Inside Air Temperature - 3	55.7°C	33.5°C	8.8°C
5. HDD Surface	62.9°C	39.1°C	14.2°C
6. Memory	67.4°C	42.5°C	17.9°C
7. Control Box. External Surface	54.3°C	29.9°C	5.1°C
8. Chamber Air Temperature	51.8°C	27.1°C	2.3°C

Sample Configuration & Quantity Under Test:

Quantity: 1 (ARC-645 / 4U Rack Mounting Chassis.)

Test Result:

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

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Cold Start test

ARC-645 (SBC-860 A1.1) / 4U Rack Mounting Chassis

Test Date: 09-22~23-2004

Test Product: ARC-645 (SBC-860 Rev: A1.1) / 4U Rack Mounting Chassis.

Test Site: AAEON QA Internal Lab.

Performed By: Rex Chang

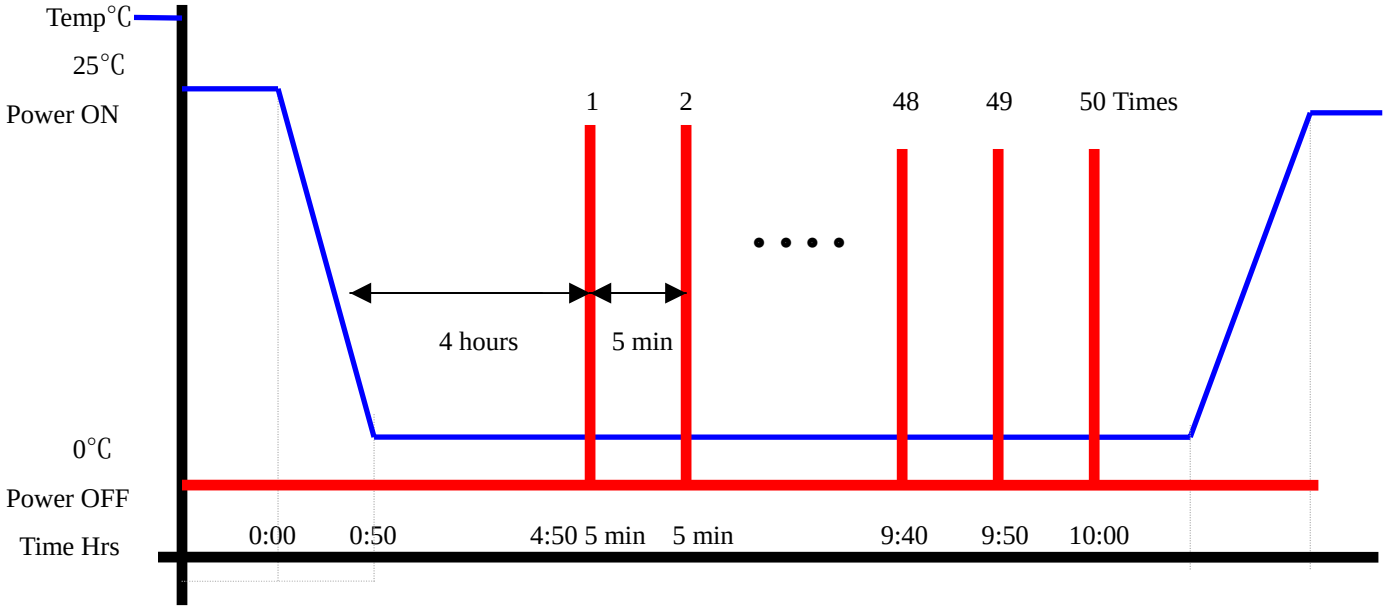
Test Standard: Reference IEC 68-2-1 Testing procedures
Test Ab: Cold Test

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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Cold Start test

ARC-645 (SBC-860 A1.1) / 4U Rack Mounting Chassis

Sample Configuration & Quantity Under Test:

Quantity: 1 (ARC-645 / 4U Rack Mounting Chassis.)

Test Result:

Passed.

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High temperature storage test

ARC-645 (SBC-860 A1.1) / 4U Rack Mounting Chassis

Test Date: 09-27~29-2004

Test Product: ARC-645 (SBC-860 Rev: A1.1) / 4U Rack Mounting Chassis.

Test Site: AAEON QA Internal Lab.

Performed By: Rex Chang

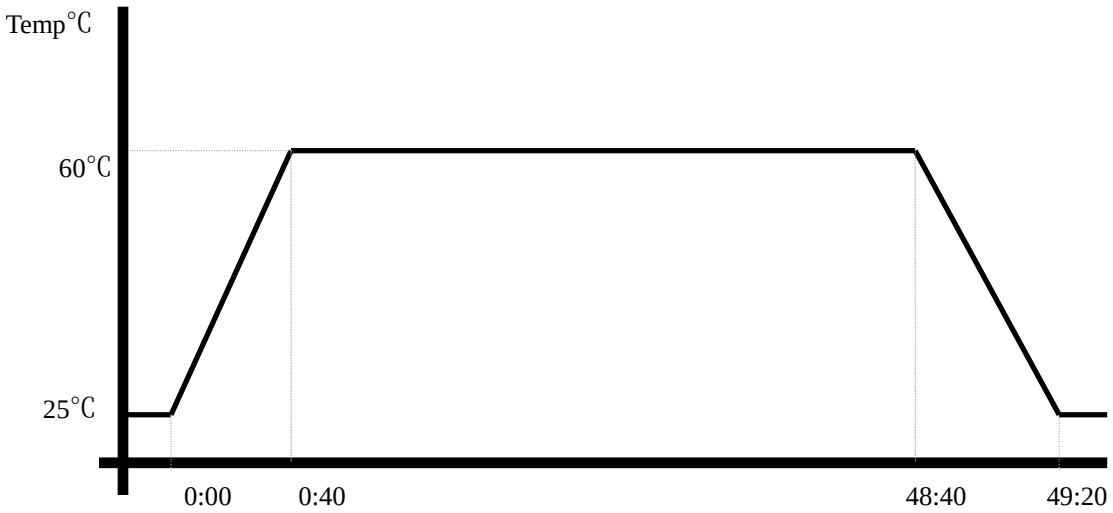
Test Standard: Reference IEC 68-2-2 Testing procedures
Test Bb: Dry Heat Test (Non-operation)

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-645 / 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.

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High temperature storage test

ARC-645 / 4U Rack Mounting Chassis

Test Date: 09-19~21-2004

Test Product: ARC-645 / 4U Rack Mounting Chassis.

Test Site: AAEON QA Internal Lab.

Performed By: Rex Chang

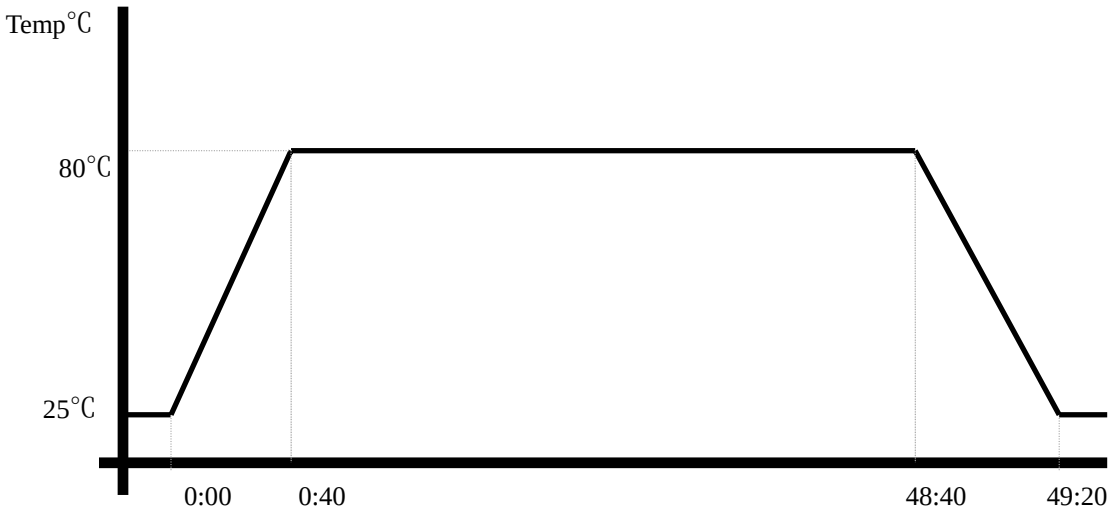
Test Standard: Reference IEC 68-2-2 Testing procedures
Test Bb: Dry Heat Test (Non-operation)

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-645 / 4U Rack Mounting Chassis)

Test Result:

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

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Low temperature storage test

ARC-645 (SBC-860 A1.1) / 4U Rack Mounting Chassis

Test Date: 09-24~27-2004

Test Product: ARC-645 (SBC-860 Rev: A1.1) / 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-645 / 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.

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ARC-645 (SBC-860 A1.1) / 4U Rack Mounting Chassis

Test Date: 09-07~09-2004

Test Product: ARC-645 (SBC-860 Rev: A1.1) / 4U Rack Mounting Chassis.

Test Site: AAEON QA Internal Lab.

Performed By: Rex Chang

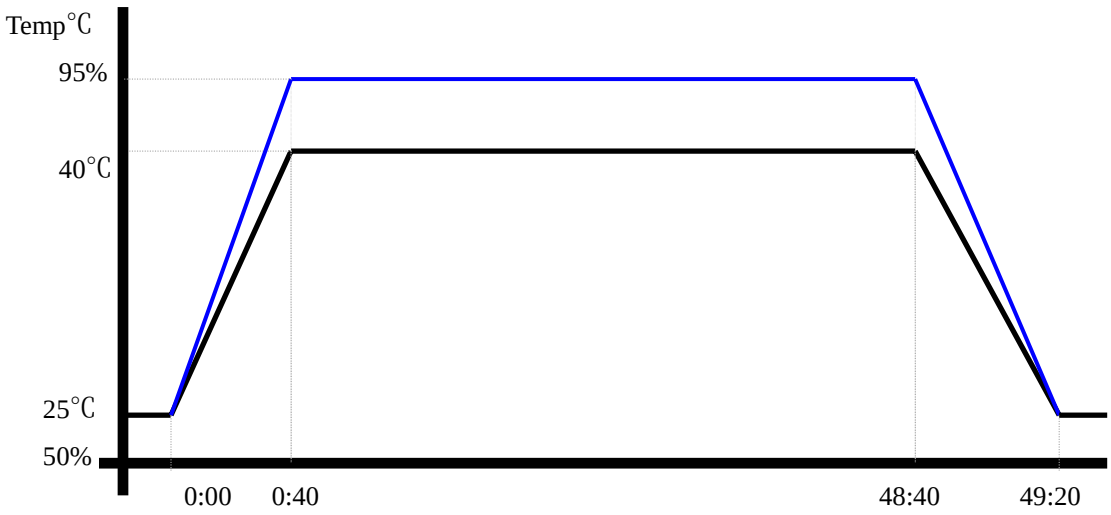
Test Standard: Reference IEC 68-2-3 Testing procedures
Test Ca: Damp heat, steady state (Non-operation)

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-645 / 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.

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