Thermal Test Report

Report No: FI180316

Product Model	**EP-CHUPCCRSTLO EP-CHUPCCRSTHI**
Product Description	**AAEON UP Core ODM aluminum fanless chassis**

1. Document Introduction

This document describes how we conduct the environment conditions and test procedure. It includes the test equipment we use, the test condition, and the test procedure we take. We also define our test criteria and the way to conclude the test result.

Table of Testing Summary Results

NO	Test Item	Condition Description	Reference to
1	**Thermal Test**	-Operating -Thermal Cycle: 50± 2℃ - 6 hour	**IEC68-2-2**

2. Product Configuration

1. Chassis material: Aluminum
2. Finishing: Painting in matt black
3. Thermal pad: K=5 , T=1mm
4. M/B：AAEON UP Core + Carrier board Hi + Carrier board Lo
5. CPU：x5-z8350 (4C)up to 1.92GHZ Core 4

6. Instruction set: 64 bit
7. Storage: on board up to 64GB eMMC
8. USB2.0: 2
9. USB3.0: 1
10. Expansion: 100 pin GP-bus
11. Video output: 1*HDMI
12. MIPI-CSI: 1*2 lane / 1*4 lane
13. DC-in: 5V 3~4A

3. Photo of Product Configuration

Photo of UP Core with Carrier board Hi & Lo

	
Side View	**Top & Front view**

4. Thermal Profile Test

A. <u>Test Equipment:</u>

— Brand: Giant-force

— Model: GTH-408-40-CP-AR

— Programmable Temperature & Humidity Chamber

B. <u>LAB Environmental Conditions:</u>

— Ambient Temperature: 50 +/- 1℃

— Relative Humidity: 85 +/- 10% RH

C. Test Method / Specification:

— Reference to IEC68-2-2

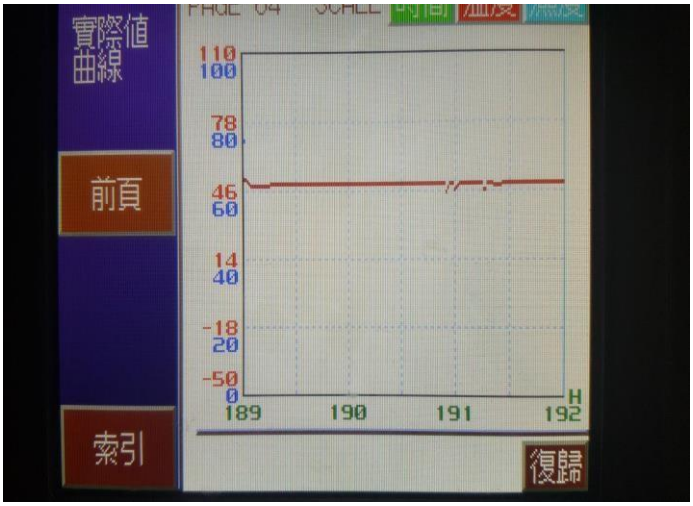
— Thermal Cycle: 50℃±1℃

— Test software

AIDA64 ver 2.8

— Quantity: Total 1 Set

— Testing time: 6.5 hours



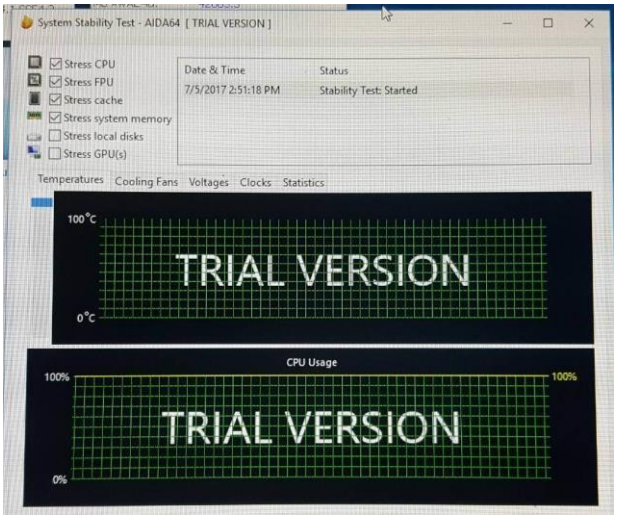


Figure 1:High temperature thermal at 50 degree

Figure : CPU 100% full load

D. Check Condition and Requirements:

It is to check the thermal profile of the test unit, and also test unit can work under high 50 degree environment temperature condition. The highest temperature /position value will be display at the thermal profile record.

The equipment in its high temperature mode, shall exposed to daily high temperature at 50 ℃.The equipment shall withstand the required environmental conditions and shall meet, without any functional damage, all performance requirements after being exposed to 1 cycle of high temperatures, as illustrated in Figure1.

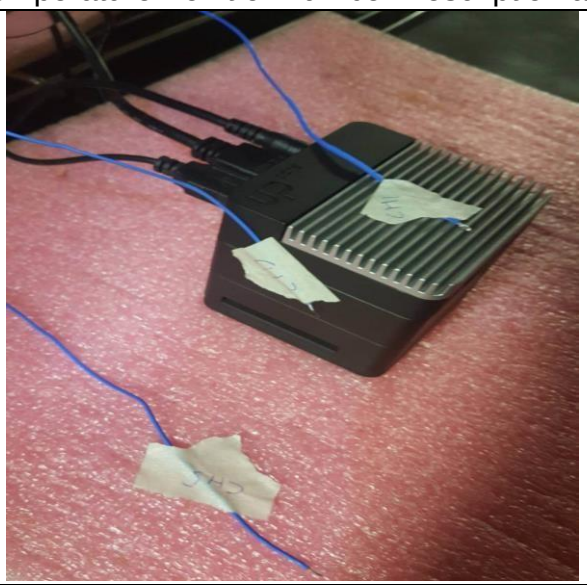
E. Test Result:

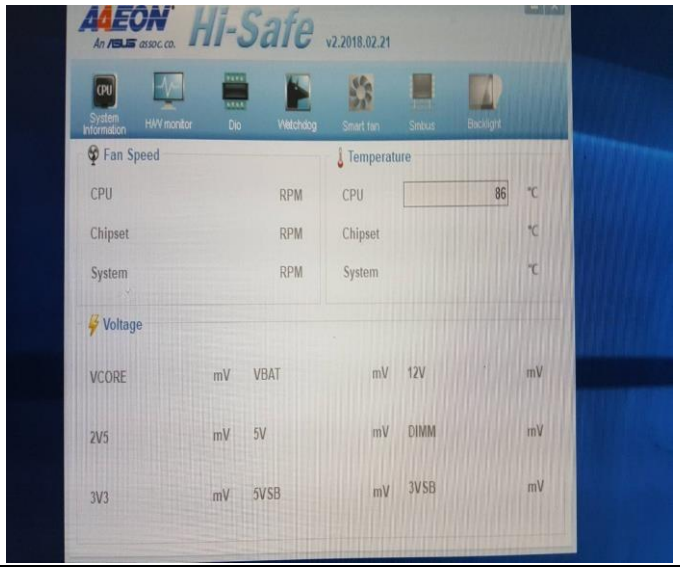
Examine the appearance of specimen(s) by visual check and perform functional check after this test.

─ Functional Check & Mechanical Structure: Normal ─
Appearance check (Visual check): No visible damage
Test Point of Temperature:

Temperature rise ℃ of part :	50℃
1. CPU	86℃
2.CH1 Top of the chassis	53.7℃
3.CH5 Side of the chassis	53.6℃
3. CH2 Environment Temperature	51℃

Temperature Point of Number Description and testing result picture

	Ambient in Chamber Detecting point CH1: Top of the chassis CH5: Side of the chassis Ch2: Environment

F. Test Result:

— Test Result as below:

Check Item Style Item No.	Appearance check (Visual check)		Functional & Performance check
	Initial	Final	
AAEON UP Core ODM aluminum fanless chassis	No visible damage	No visible damage	Normal