UP-APL03

Temperature/Humidity Test Report

Report NO: 22UP020007

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

Issue date	Deputy Manager	Test Engineer
2022-06-10	**Louie Lee**	**Ben Sun**

Test item list

1. *Test item list* ---------- 2
2. *Configuration of EUT* ---------- 3
3. *Temp./humidity power on/off test* ---------- 4
4. *Temperature variation operation test* ---------- 5
5. *Cold start and hot start test* ---------- 6
6. *Memory test* ---------- 7

Testing Result

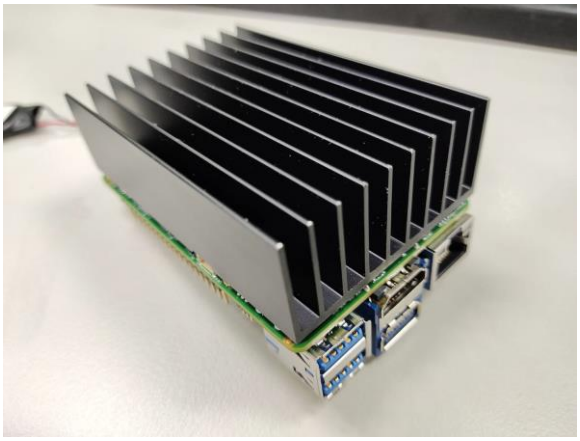
Num	Test item list	Result	Remark
1	Temp./humidity power on/off test	Pass	
2	Temperature variation operation test	Pass	
3	Cold start and hot start test	Pass	
4	Memory test	Pass	

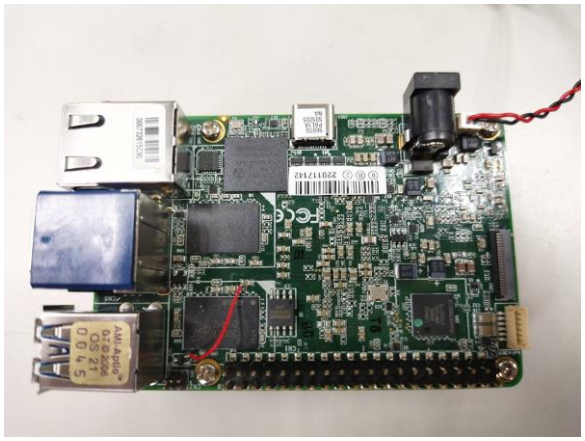
Configuration of EUT

Test Product: UP-APL03 A0.5

Sample Configuration & Quantity Under Test:

1. CPU: Intel® Pentium N4200 SRGVZ(F1- Stepping)
2. BIOS Ver. UPAPBM06
3. Chipset: Intel Apollo Lake
4. Memory: 8GB LPDDR4 MICRON MT53D512M32D2DS-053 WT:D
5. USB Flash: Transcend 8GB (For UEFI Mode Power On/Off Test)
6. Storage: 64GB eMMC 5.1 Flash Sandisk SDINBDA4-64G-V
7. Test Software: Windows 10 / Run PassMark Burn In Test 9.0 Pro (1014)
8. Adapter: PS1065-120IB500 12V/5A
9. Heatsink:





Temp./humidity power on/off test

Test Date: 06-02 ~ 04-2022

Test Site: AAEON QE Dept.

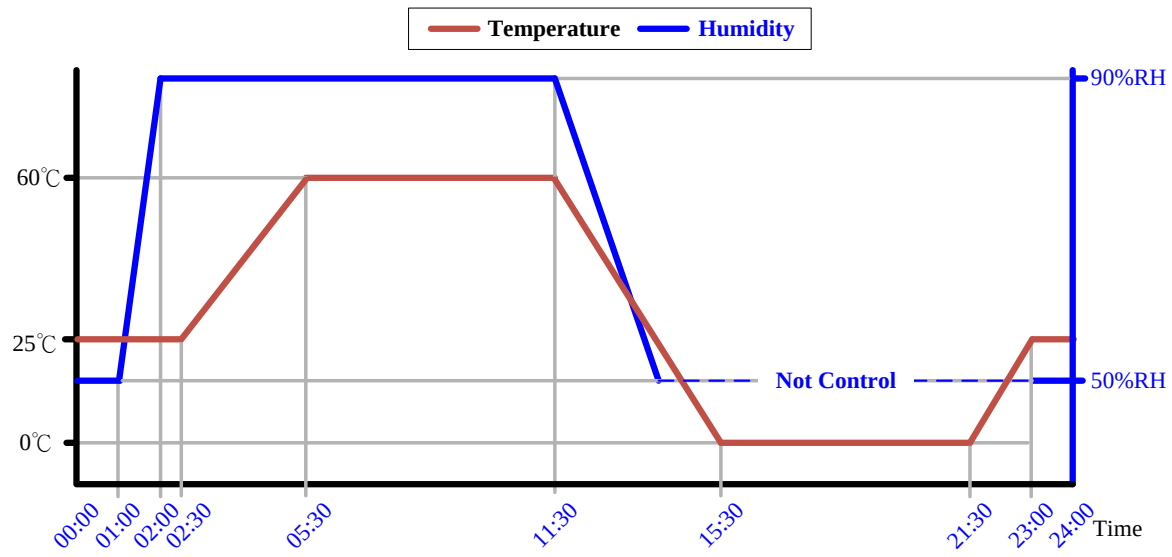
Test Standard: Refer to IEC 68-2-30 Testing procedures
Test Db: Damp Heat Test
Refer to IEC 68-2-1 Testing procedures
Test Ad: Cold Test

Test Equipment:

Programmable Temperature & Humidity Chamber: (K.SON. INS. TECH. CORP.)
Model: THS-D7TS-100+LN2
Date of Calibration: 10/04/21
Due date of Calibration: 10/03/22
Serial Number: 3898

Temperature & Humidity Power On/Off Test:

1. Test High Temp./Humidity: 60℃@90%RH
2. Test Low Temperature: 0℃
3. Test Time: 24Hours / Cycle
4. Test Cycle: 2 Cycles
5. Test Software: UEFI Mode / Run Boot-Up Time Count Tool
6. Test Environment Curve:



Test Result:

	Actual	Successful	Failure rate	Test Result
Power On/Off	3722/times	3722/times	0 %	Pass

Note: 1. Failure rate need to under 0%. (0/2000 times)
2. Power on/off fixture setting: on - 40 sec / off - 5 sec

Temperature variation operation test

Test Date: 06-06 ~ 07-2022

Test Site: AAEON QE Dept.

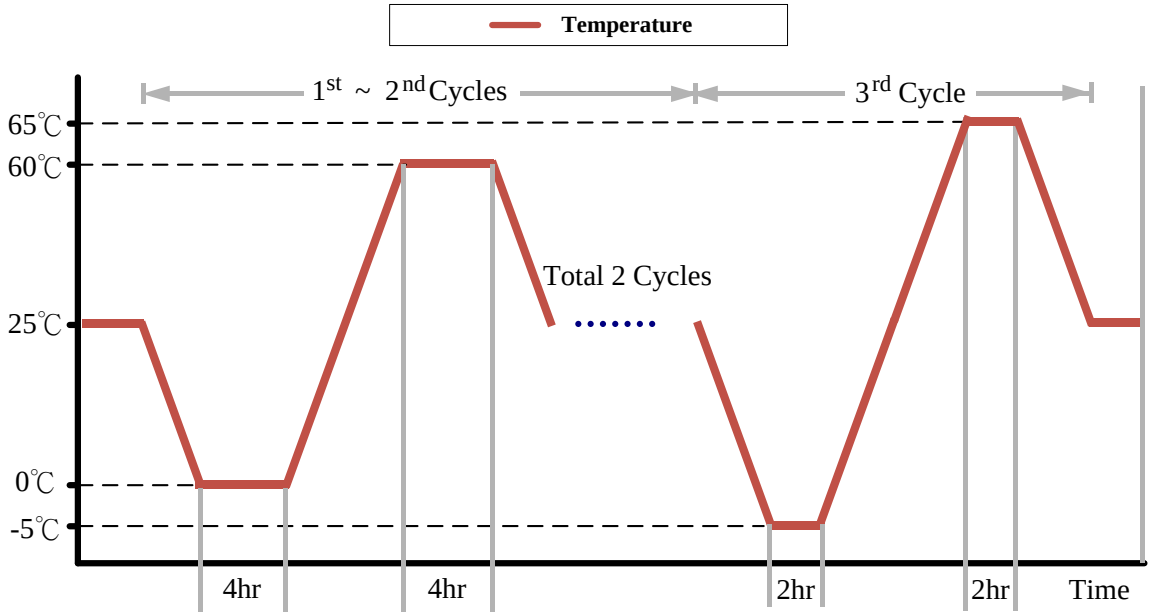
Test Standard: Refer to IEC 68-2-14 Testing procedures
Test N: Change of temperature Test

Test Equipment:

Programmable Temperature & Humidity Chamber: (K.SON. INS. TECH. CORP.)
Model: THS-D7TS-100+LN2
Date of Calibration: 10/04/21
Due date of Calibration: 10/03/22
Serial Number: 3898

Temperature Cycle Test:

1. Test Low Temperature: 0℃ (1~2 cycles)
   -5℃ (3rd cycle)
2. Test High Temperature: 60℃ (1~2 cycles)
   65℃ (3rd cycle)
3. Test dwell time: 4Hrs (1~2 cycles)
   2Hrs (3rd cycle)
4. Temperature slope: 2℃/min
5. Test cycle: 3 cycles
6. Test Software: Windows 10 / Run PassMark Burn In Test 9.0 Pro (1014)
7. Test Environment Curve:



Test Result:

No issues found during the temperature variation operation test.

Cold start and hot start test

Test Date: 06-08 ~ 09-2022

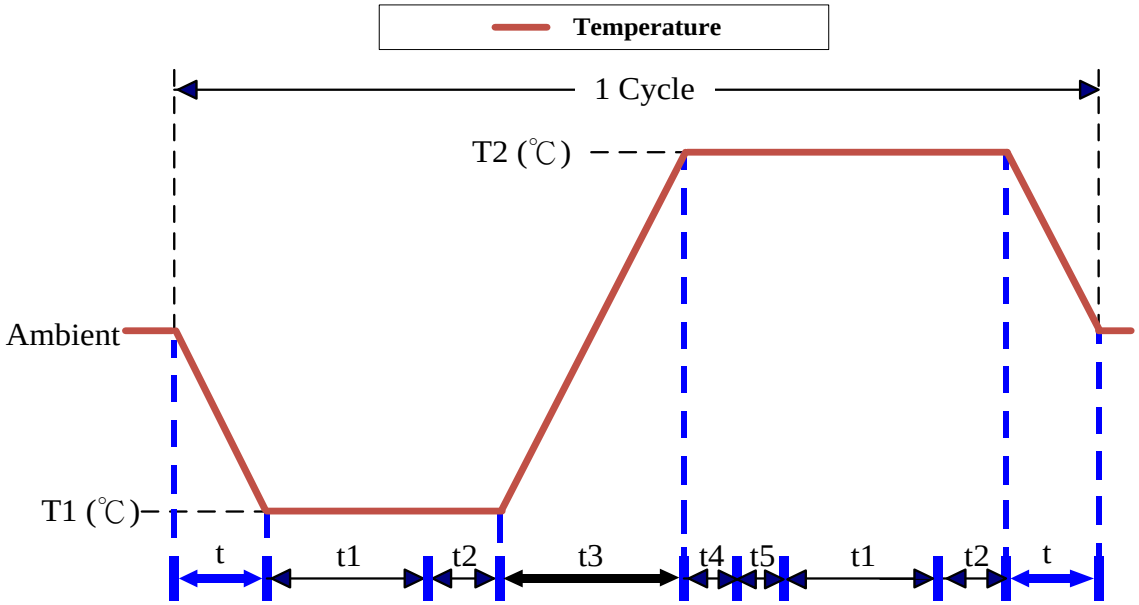
Test Site: AAEON QE Dept.

Test Standard: Refer to 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-D7TS-100+LN2
Date of Calibration: 10/04/21
Due date of Calibration: 10/03/22
Serial Number: 3898

Test Condition:



Parameters	Description
T1	-5℃
T2	65℃
t1	4 hrs
t2	1 hrs
t4, t5	30 min
t, t3	2℃/min
n (Cycle)	1

t,t3 = temprature slope
t, t1: Power Off
t2: Power on/off test 5 times (on 2 min / off 10min)
t3,t4: Run PassMark Burn In Test
t5: Windows 10 Software restart test 2 times
Test Software: Windows 10

Test Result:

a. No issues found during the cold start test.

b. No issues found during the hot start test.

Memory test

Test Date: 06-09 ~ 10-2022

Test Site: AAEON QE Dept.

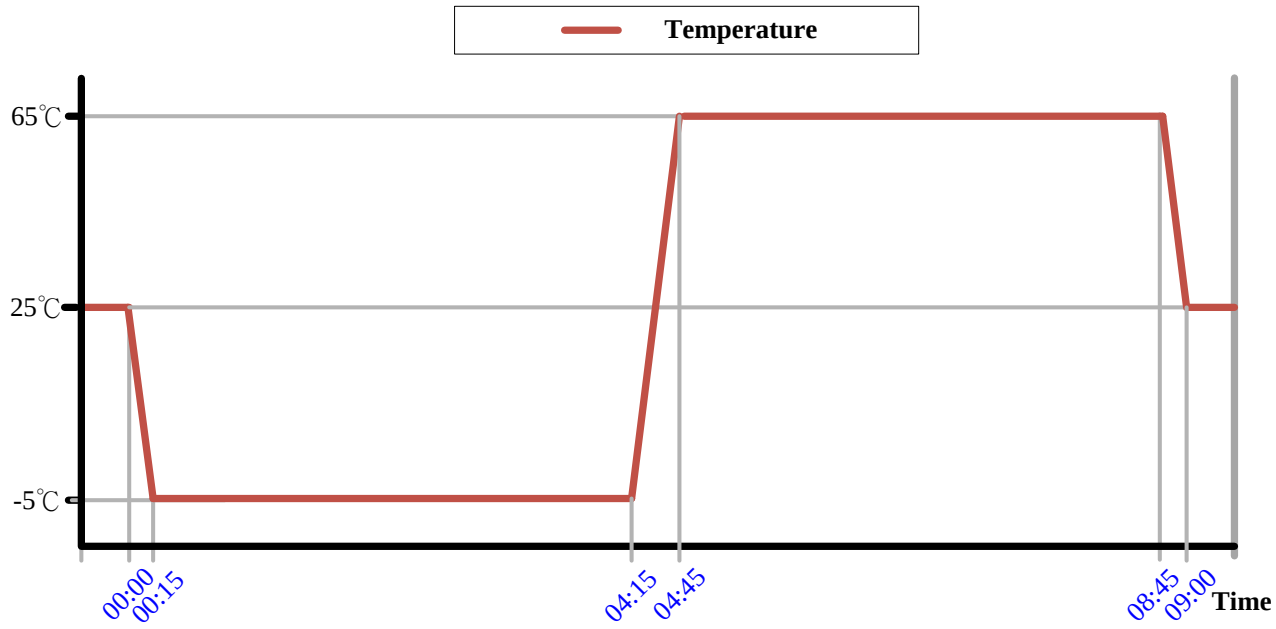
Test Standard: Refer to IEC 68-2-14 Testing procedures
Test N: Change of temperature Test

Test Equipment:

Programmable Temperature & Humidity Chamber: (K.SON. INS. TECH. CORP.)
Model: THS-D7TS-100+LN2
Date of Calibration: 10/04/21
Due date of Calibration: 10/03/22
Serial Number: 3898

Temperature Cycle Test:

1. Test Low Temperature: -5℃
2. Test High Temperature: 65℃
3. Test dwell time: 4Hrs
4. Temperature slope: 2~3℃/min
5. Test cycle: 1 cycle
6. Test Software: Run MemTest86 V8.2 Pro
7. Test Environment Curve:



Test Result:

No issues found during the memory test.