UP-GWS02

Environment Test Report

Report NO:17D020006

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

Issue date	QE Manager	Test Engineer
2017-03-21	KJ Wang	Rex Chang/Juno

Test item list

Testing Result

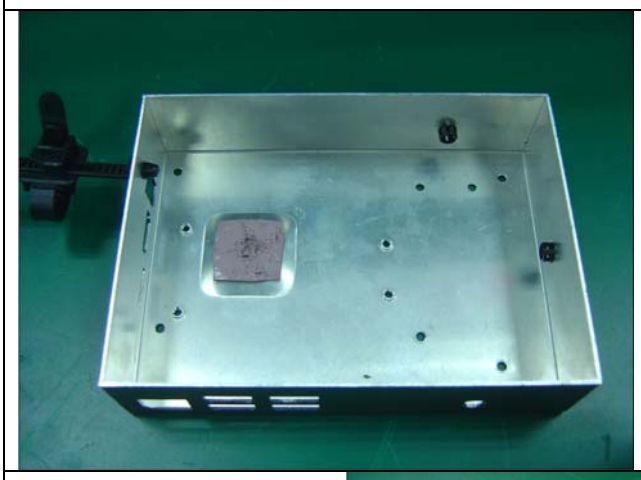
Num	Test item list	Result	Remark
1	Temperature rise test	Pass	
2	Temperature cycle operation test	Pass	
3	Cold start and hot start test	Pass	

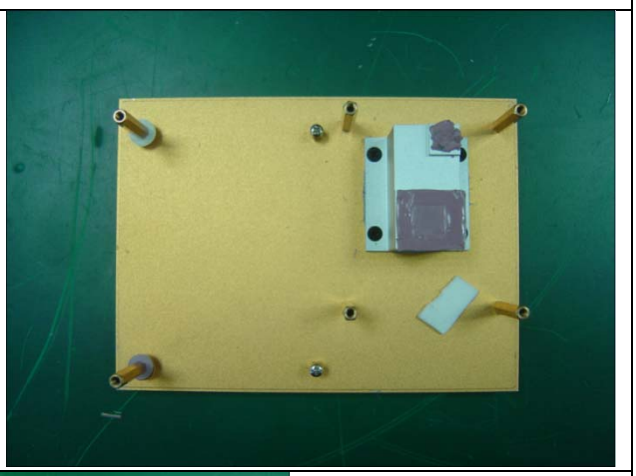
Configuration of EUT

Num	Item	Spec
1.	**Fanless System**	UP-GWS02
	1. Main Board	UP-CHT01 A0.3
	2. BIOS Ver.	UGW2AM03
	3. CPU Type	Intel CPU.SOC.Cherry Trail-T3.x5-Z8350
	4. Chipset	Intel.SOC.Cherry Trail-T3.x5-Z8350
	5. OnboardMemory	DDR3L-SDRAM Hynix.H5TC8G63CMR-PBA /4GB
	6. Onboard eMMC	eMMC. Kingston.EMMC64G-M525-A51. 64GB
	7. Test Software	Windows 10 / Run PassMark Burn In Test 8.1 Pro
2.	**Adapter:**	FJ-SW0504000N/5V

Photos

Heat Sink





Temperature rise test

Test Date: 03- 20-2017

Test Product: UP-GWS02

Test Site: AAEON QE Dept.

Test Standard: Refer to EN 61131-2(94), UL508 (94)

Temperature Measurement:

40 Channel Thermal Recorder: (YOKOGAWA Inc,)
Model: DA100-13-1D
Date of Calibration: 09/10/16
Due date of Calibration: 09/09/17
Serial Number: 12A323190

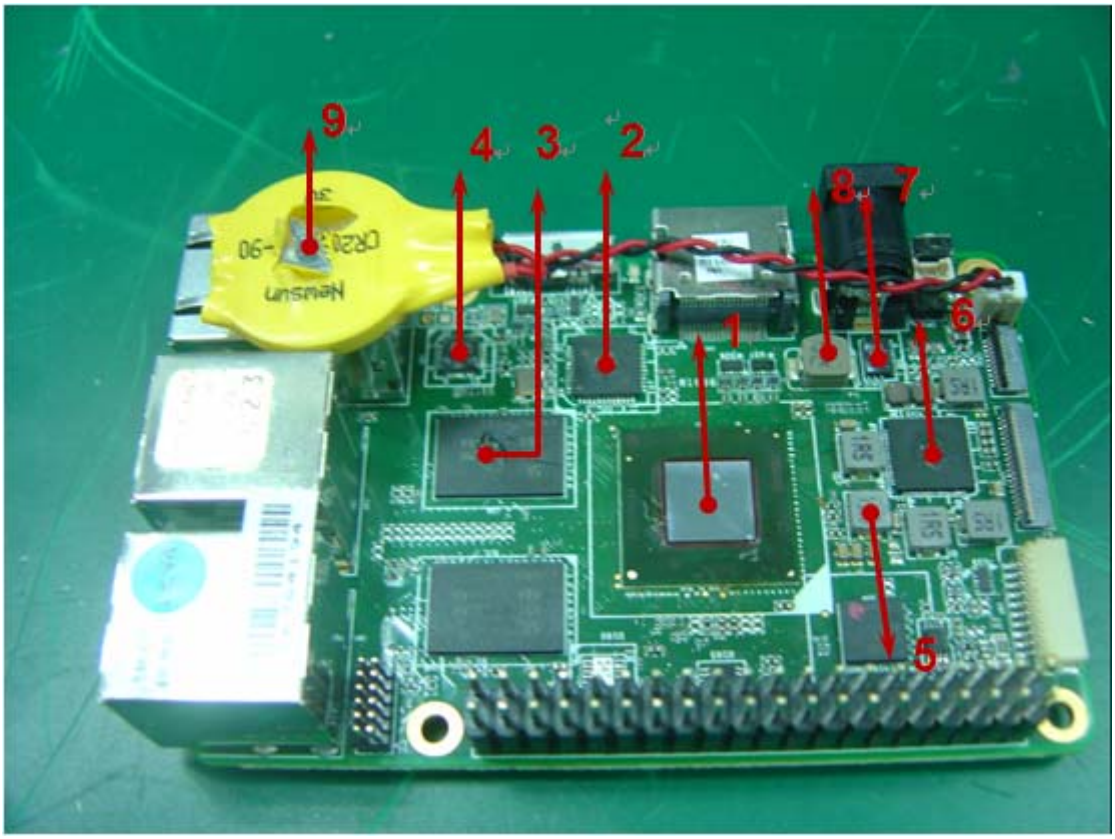
Test Condition:

Ambient temperature: 40℃
Continuous running till thermal stability (within less than 1℃)

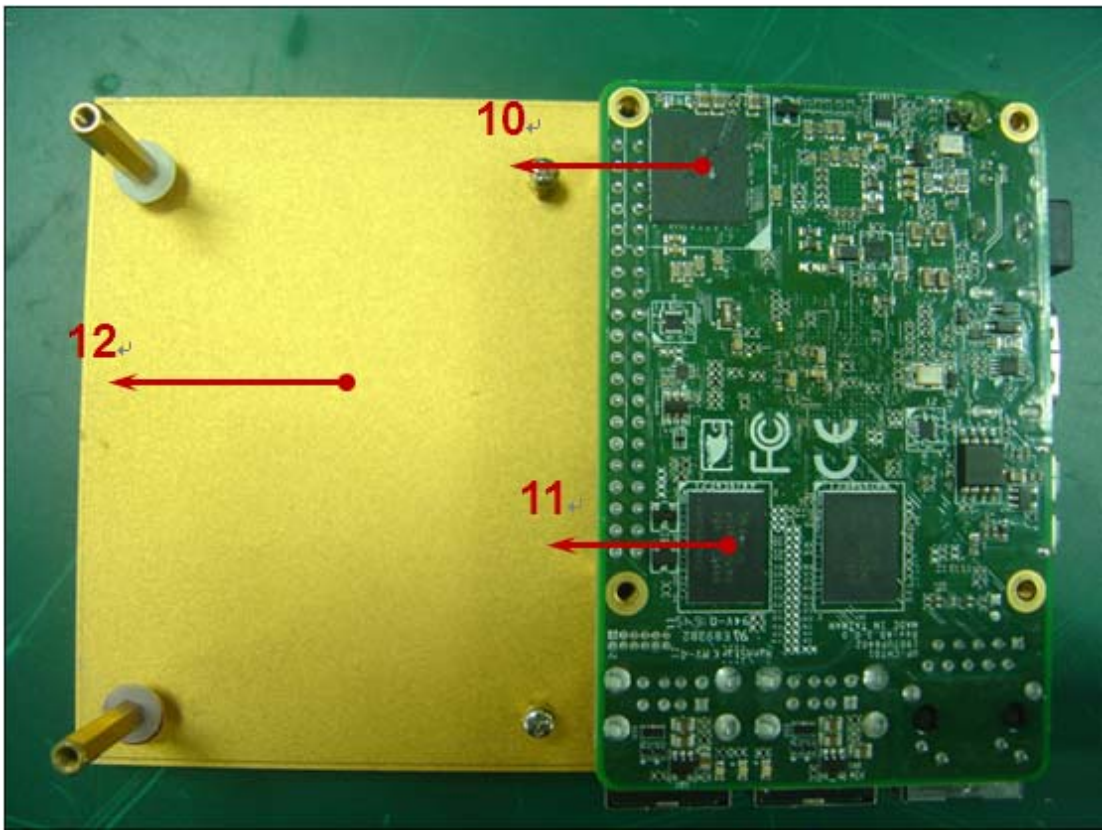
Test Software:

Windows 10 / Run PassMark Burn In Test 8.1 Pro

Terminal Recorder:



Temperature rise test



Temperature rise test

Thermal profile data:

UP-GWS02

Point / Temp. Stage(℃)	Spec Tc(*1)	TAT(*2) 40	TPT(*3) 25	Note
01. INTEL CPU.SOC.Cherry Trail-T3.x5-Z8350.1.92GHz.	90	64.3	49.3	
02. IC.HSIC controller.QFN SMD.SMSC.USB4604-1080HN-TR	100	72.7	57.7	
03. IC.DDR3L-SDRAM.1600MHz. 96P.SMD.SK Hynix.H5TC8G63CMR-PBA	95	73.1	58.1	
04. IC.PCI-express.Gigabit Ethernet Chip. REALTEK.RTL8111G-CG	100	74.0	59.0	
05. COIL. SMD.GOTREND.GSTD4020PM-1R0M	125	71.2	56.2	
06. IC.PMIC for Intel Cherry Trail.CR Platform.TI.SND9039A2CTRSKR	100	63.1	48.1	
07. IC.Synchronous tep down.SMD.MPS.MP8762GLE-Z	100	76.1	61.1	
08. COIL.NEC/TOKIN.MPLCG0530L1R5	120	75.7	60.7	
09.Lithium Battery.CR2032Hw/cable 90mm.Battery power.BP-CR2032-M90-001	85	64.0	49.0	
10. IC.eMMC Flash.SMD.Kingston.EMMC32G-M525-A51	100	71.8	56.8	
11.IC.DDR3L-SDRAM.1600MHz 96P.SMD.SK Hynix.H5TC8G63CMR-PBA	95	70.6	55.6	
12.Control Box Inside Air Temperature -	NA	60.0	45.5	
13. Control Box External Surface Temperature	NA	61.1	46.1	

Note(*):
1. **"Tc"** indicates the component's case maximum temperature value specified in its datasheet.
2. **"TAT"** indicates the actual measured temperatureunder product specification.
3. **"TPT"**indicates the predicted temperature under 25℃ working environmental.
4. Judgment Criteria:
- Fail **:** Tm > Tc; The measured value is over specification.
- Margin Pas: Tc > Tm > Tc-5℃; The measured value is within specification with margin.
It is strongly recommended to add thermal dissipation design for better reliability.
- Pass **:** Tm < Tc-5℃; The measured value is with safety margin.
4. Defect NO.:

Sample Configuration & Quantity Under Test:

Quantity: 1(UP-GWS02)

Test Result:

No issues were found during the temperature rise operation test.

Temperature cycle test

Test Date: 03-19~ 17-2017

Test Product: UP-GWS02

Test Site: AAEON QEDept.

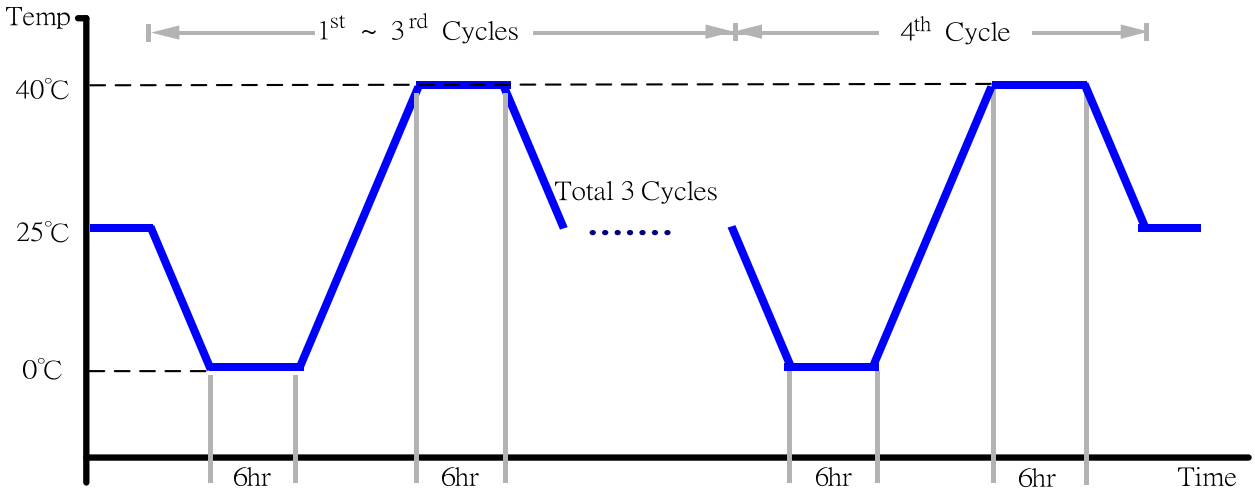
Test Standard: Refer to IEC 68-2-14 Testing procedures
Test N: Change of temperature Test

Test Equipment:

Programmable Temperature & Humidity Chamber: (K.SON. INS. TECH. CORP.)
Model: THS-B6T-150+LN2
Date of Calibration: 04/25/16
Due date of Calibration: 04/24/17
Serial Number: 6488KT

Test Condition:

1. Test Low Temperature: 0℃
2. Test High Temperature: 40℃
3. Test dwell time: 6Hrs
4. Temperature slope: 2℃/min
5. Test cycle: 4 cycles
6. Test Software: Windows 10/ Run PassMark Burn In Test 8.1 Pro
7. Test Environment Curve:



Sample Configuration & Quantity Under Test:
Quantity: 1 (UP-GWS02)

Test Result:

No issues were found during the temperature operation cycle test.

Cold start and hot start test

Test Date: 03-17~16-2016

Test Product: UP-GWS02

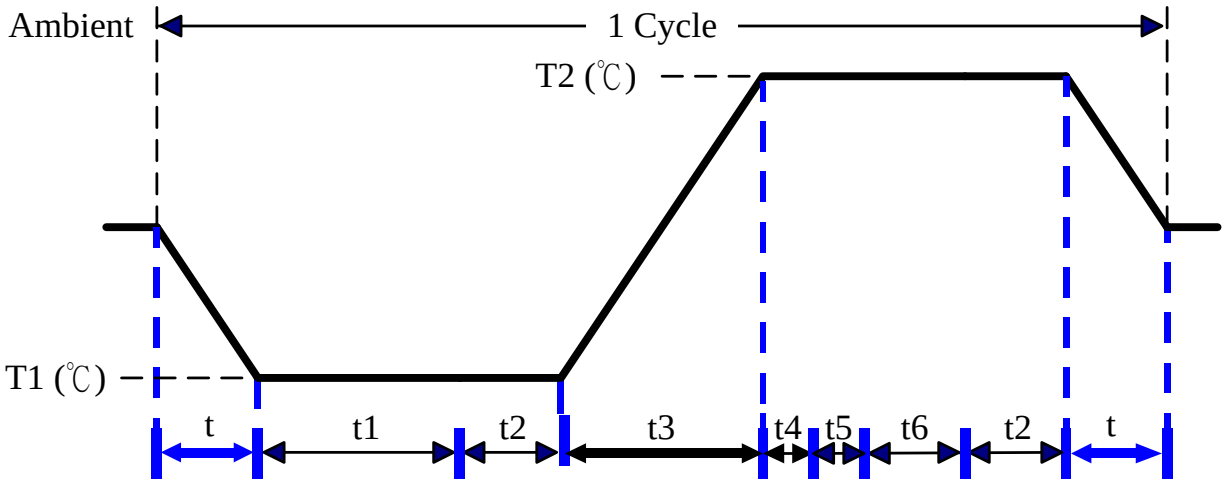
Test Site: AAEON QE Dept.

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-B6T-150+LN2
Date of Calibration: 04/25/16
Due date of Calibration: 04/24/17
Serial Number: 6488KT

Test Condition:



Parameters	Description
T1	0℃
T2	40℃
t1	4 hrs
t2, t6	2 hrs
t4, t5	1hrs
t, t3	2℃/min
n (Cycle)	1

t = temprature slope
t , t1, t6: Power Off
t2: Power on/off test 10 times (on 2 min / off 5min)
t3, t4: Run PassMark Burn In Test
t5: Win 10 Software restart test 2 times
Test Software: Windows 10

Test Result:

a. No issues were found during the cold start test.
b. No issueswere found during the hot start test.