UP-CHT01(UP-X5-Z8300-02)

Thermal Image Analysis Report

Summary	☑ **Pass** ☐ **Fail** ☐ **Pass with Deviation** **Comment:**_____

Test Result Summary				
	Critical	Major	Minor	Enhancement
Defect Found	0	0	0	0
Defect Unsolved	0	0	0	0

Issue date	QE Manager	Test Engineer
2016 / 04 /26	KJ Wang	Juno Cheng

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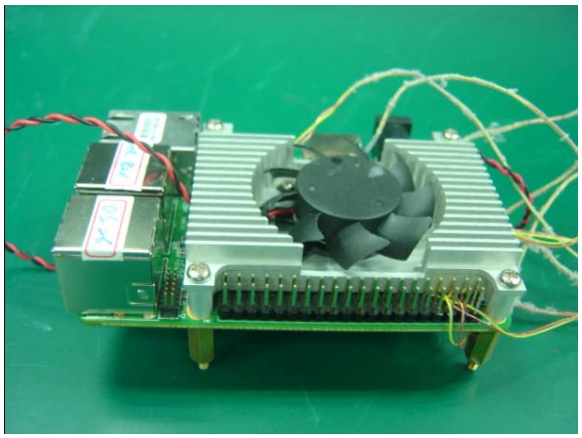
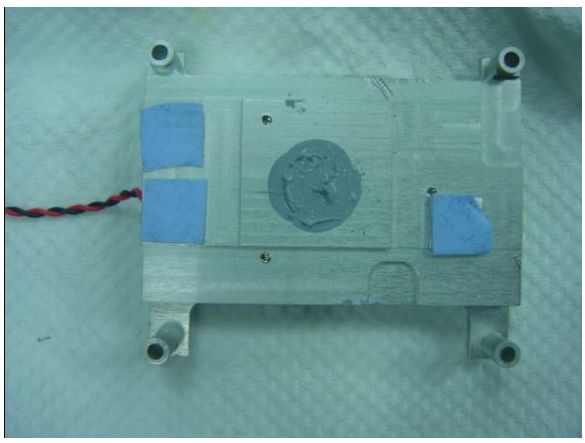
Sample Configuration & Quantity Under Test

- **Model name : UP-CHT01 A0.1**
- **CPU Board : UP-X5-Z8300-02 A0.1**
- **CPU : Intel.SOC.Cherry Trail-T3.x5-Z8350**
- **Chipset : Intel.SOC.Cherry Trail-T3.x5-Z8350**
- **Memory : Onboard 2GB / DDR3L 1600 / NANYA.NT5CC256M16DP-DI**
- **Onboard eMMC: Kingston.EMMC32G-M525-A51 / 32GB**
- **BIOS：UP-CHT01 R0.G (UPC1BM0G) (02/25/2016)**
- **Test Software : Windows 10 / Run PassMark Burn In Test 8.1 Pro**
- **AT Power：FSP FSP015-DPAN2 / 5V, 3.0A (15W Max)**
- **CPU Cooler: :**





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Thermal Image Analysis

1. Test Date: 2016-04-26

2. Test Product: UP-CHT01

3. Test Site: AAEON QE Dept.

4. Temperature Measurement:

4.1. 40 Channel Thermal Recorder:

4.1.1 YOKOGAWA Inc,

4.2.2 Model: DA100-13-1D

Date of Calibration: 2015/09/07

Serial Number: 12A323190

4.2. IR Scanner: Infrared Camera

4.2.1 NEC Avio Infrared Technologies Co., Ltd.

4.2.2 Model: Thermo GEAR G100W2-D

Date of Calibration: 2015/12/25

Serial Number: 1051444

5. Test Condition:

Test by DA-100: 23.0℃ with CPU Cooler

6. Take Picture Time:

After power on 2 hours

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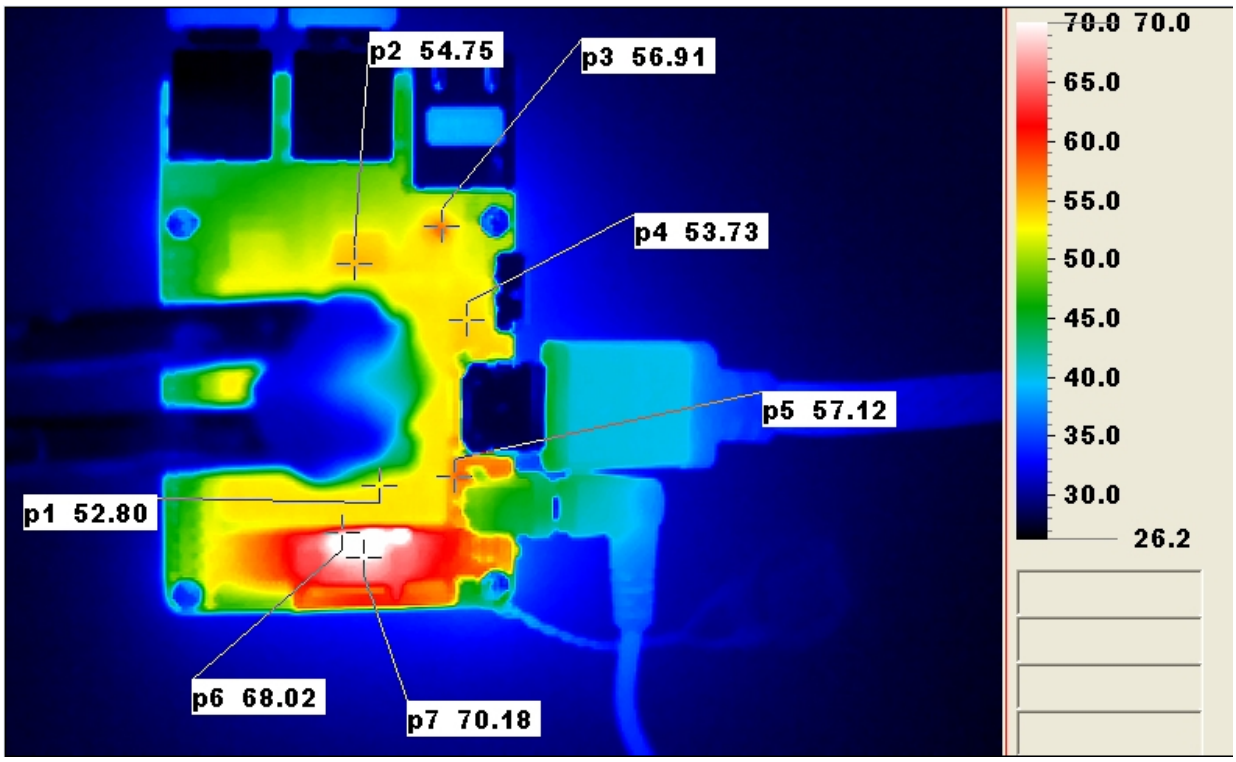
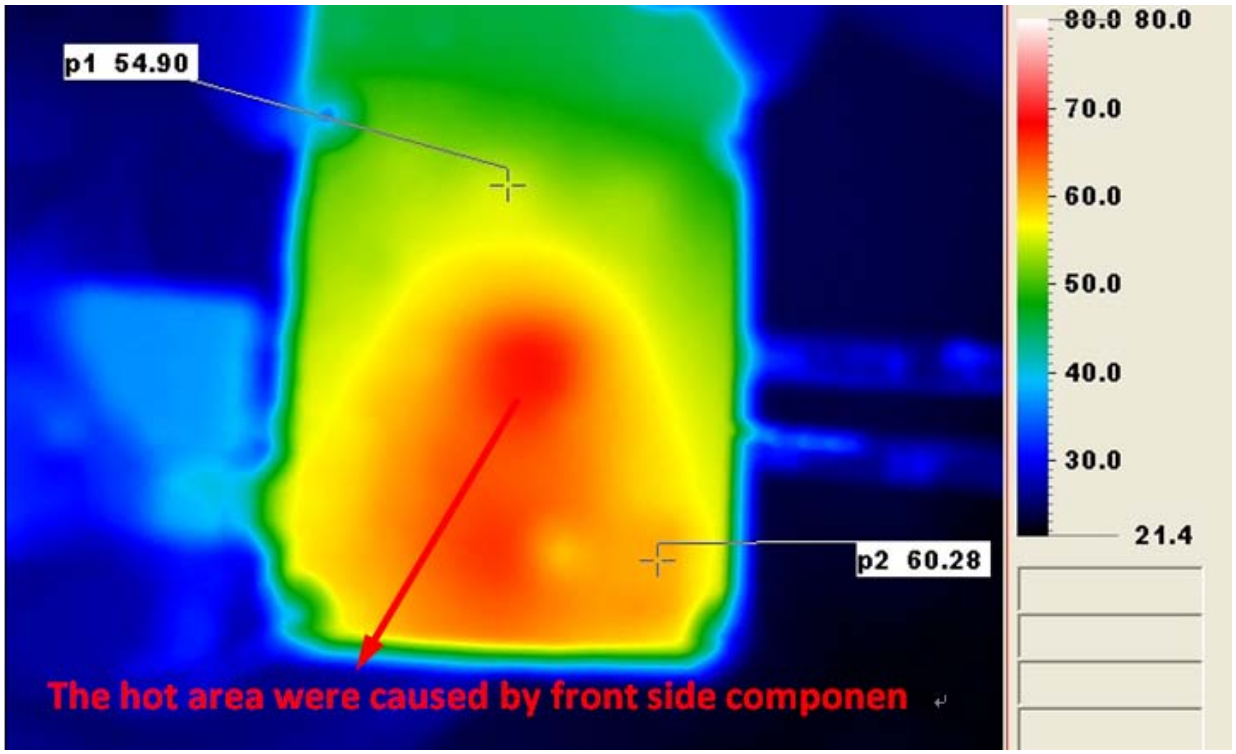
Temperature Profile Test:

Component Side:





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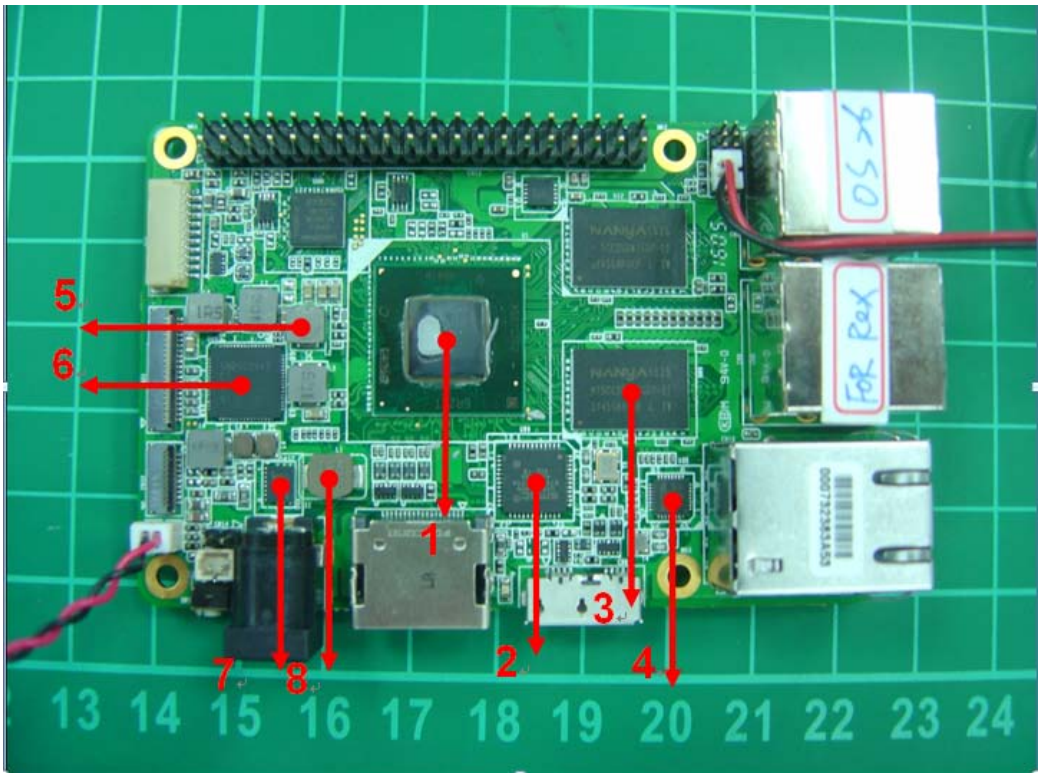
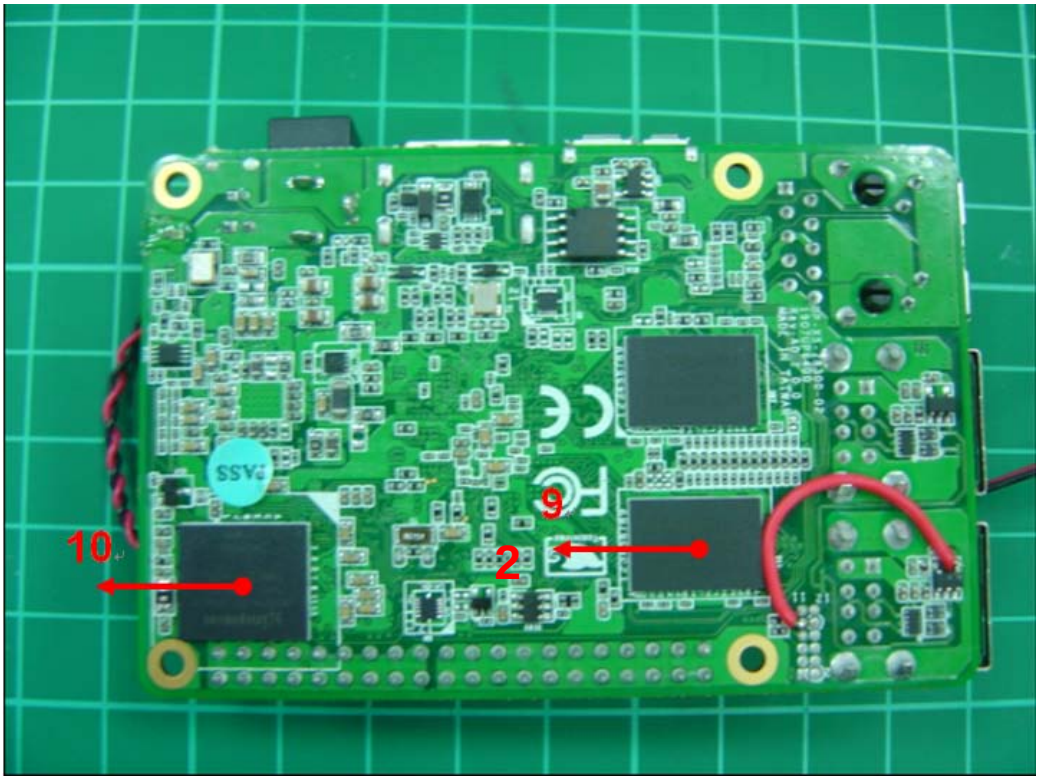
Terminal Recorder:

Measuring Thermal Couple Position：





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Using YOKOGAWA / DARWIN DA100-100-13-1D test

Point	Position	Describe	Tc (*1) (℃)	TAT(*2)	TPT(*3)	Note
				25.0℃	60℃	
1	U1	(TF)INTEL CPU.SOC.Cherry Trail-T3.x5-Z8350.1.92GHz.	90	45.5	80.5	
2	U99	(TF)IC.HSIC controller.QFN SMD.SMSC.USB4604-1080HN-TR	100	46.2	81.2	
3	U98	(TF)IC.4G.DDR3L-1600.SDRAM.I.SMD.NANYA.NT5CC256M16DP-DI	95	40.5	75.5	
4	U35	(TF)IC.PCI-express.Gigabit Ethernet Chip. REALTEK.RTL8111G-CG	100	44.6	79.6	
5	L2	(TF)COIL. SMD.GOTREND.GSTD4020PM-1R0M	125	44.1	79.1	
6	U49	(TF)IC.PMIC for Intel Cherry Trail.CR Platform.TI.SND9039A2CTRSKR	100	43.0	78.0	
7	U48	(TF)IC.Synchronous tep down.SMD.MPS.MP8762GLE-Z	100	56.7	91.7	
8	L1	(TF)COIL.NEC/TOKIN.MPLCG0530L1R5	120	51.8	86.8	
9	U11	(TF)IC.4G.DDR3L-1600.SDRAM.SMD.NANYA.NT5CC256M16DP-DI	95	43.6	78.6	
10	U19	(TF)IC.eMMC Flash.SMD.Kingston.EMMC32G-M525-A51	100	49.1	84.1	

Note(*):

1. "Tc" indicates the component's case maximum temperature value specified in its datasheet.

2. "TAT" indicates the actual measured temperature under product specification.

3. "TPT" indicates the predicted temperature under 25℃ working environmental.

4. Judgment Criteria:

- **Fail** : Tm > Tc+5℃; The measured value is over specification plus margin.
- **Margin** : Tc+5℃ > Tm > Tc-10℃; The measured value is within specification with margin. For FANLESS system application, it is strongly recommended to add thermal dissipation design for better reliability.
- **Pass** : Tm < Tc-10℃; The measured value is with safety margin.

5. **RTC battery avoid to put on heat position.** Please do not exceed battery temperature specification.

6. Defect NO. :

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