PER-TAIX2-A10-2280

Thermal Image Analysis Report

Summary	☐ **Pass** ☐ **Fail** ☑ **Pass with Deviation** **Comment:** There is one temperature point marginal passed, the system works properly.

Test Result Summary				
	Critical	Major	Minor	Enhancement
Defect Found	0	0	0	1
Defect Unsolved	0	0	0	1

Issue date	QE Supervisor	Test Engineer
2019 / 04 / 30	Louie Lee	Ben Sun

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Sample Configuration & Quantity Under Test

- **Model name : PER-TAIX2-A10-2280**

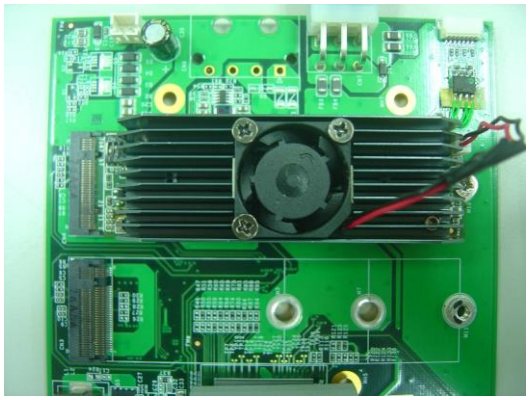
- **PCI-E Riser Card : PER-TAIX2-A10-PCIE A0.2**

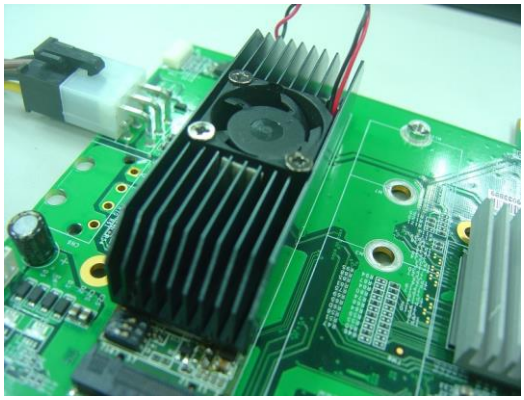
- **Main Board : SMS-002 R1.03**
  1. **CPU : Intel Pentium G3260 / 3.3GHz**
  2. **Memory : Panram 8GB * 1 / DDR3 1333 / F143X8ADW405**
  3. **2.5” SSD : Transcend 32GB / SSD370**
  4. **BIOS : SMS-002 V1.6AddBraswellPatch.7**

- **Test Software : Ubuntu 16.04.5 Kernel version : v4.15**
  / Run Open Vino version : R5.1

- **Power : CWT DSA400P-C**

- **Cooler :**





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Thermal Image Analysis

1. Test Date: 2019-04-29

2. Test Product: PER-TAIX2-A10-2280 A0.2

3. Test Site: AAEON QE Dept.

4. Temperature Measurement:

4.1. 40 Channel Thermal Recorder:

4.1.1 YOKOGAWA Inc,

4.1.2 Model: DA100-13-1D

Date of Calibration: 09/07/18

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: 11/06/18

Serial Number: 1051444

5. Test Condition:

Test by DA-100: 25.0℃ with Cooler

6. Take Picture Time:

After power on 2 hours

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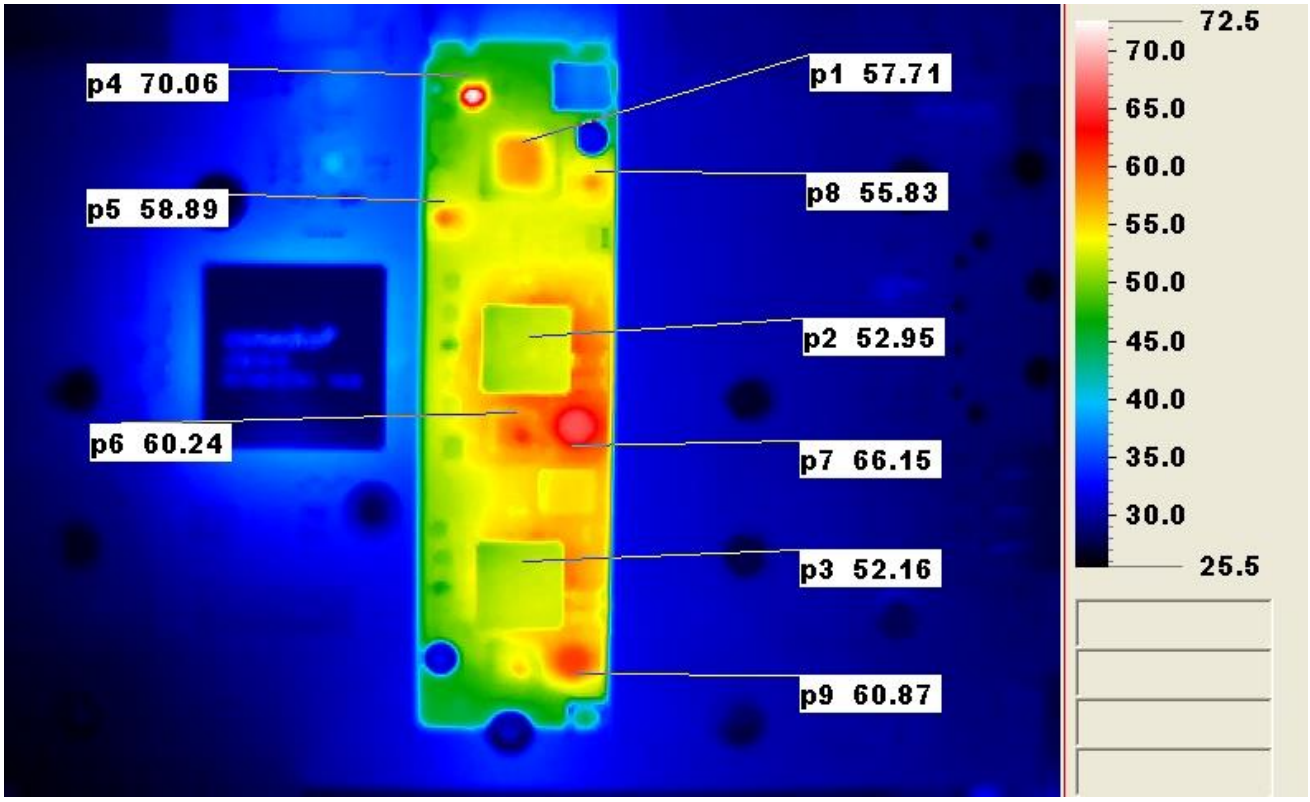
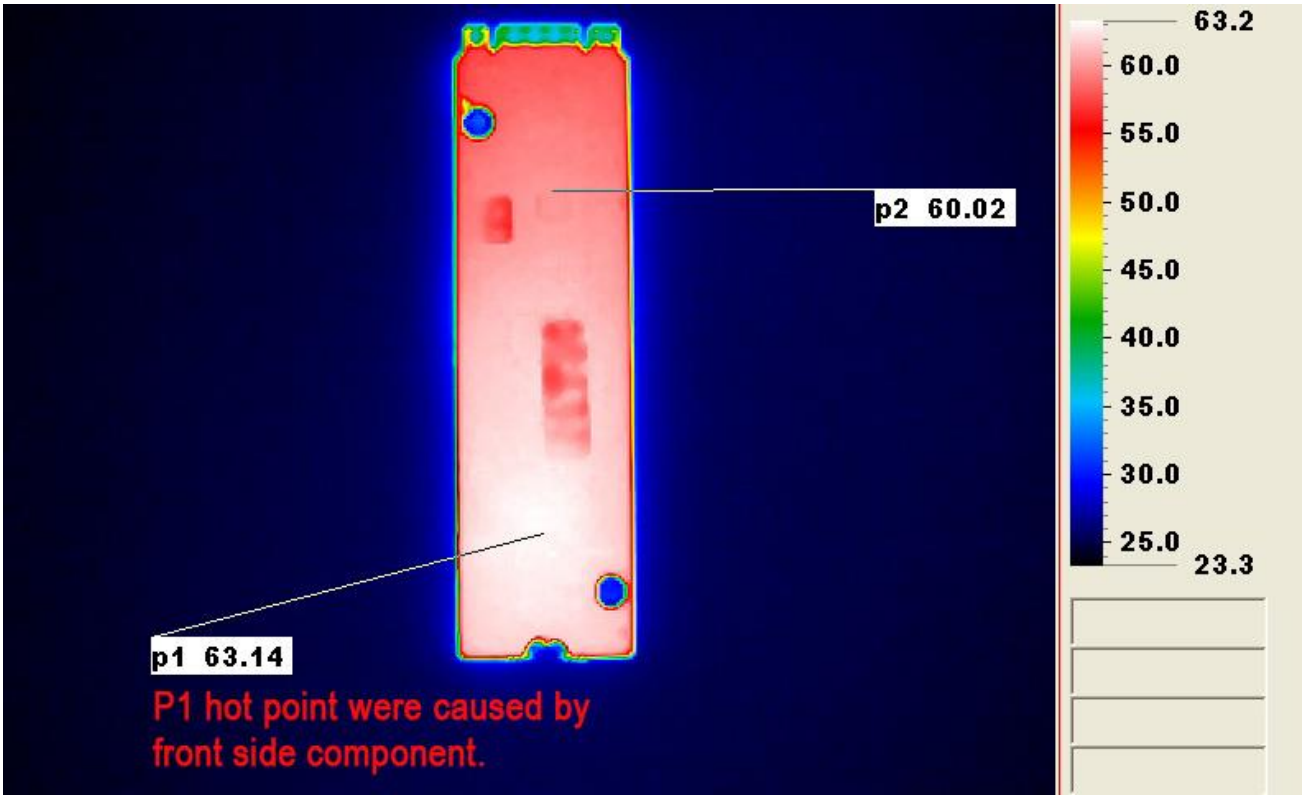
Temperature Profile Test:

Component Side:



Back Side:



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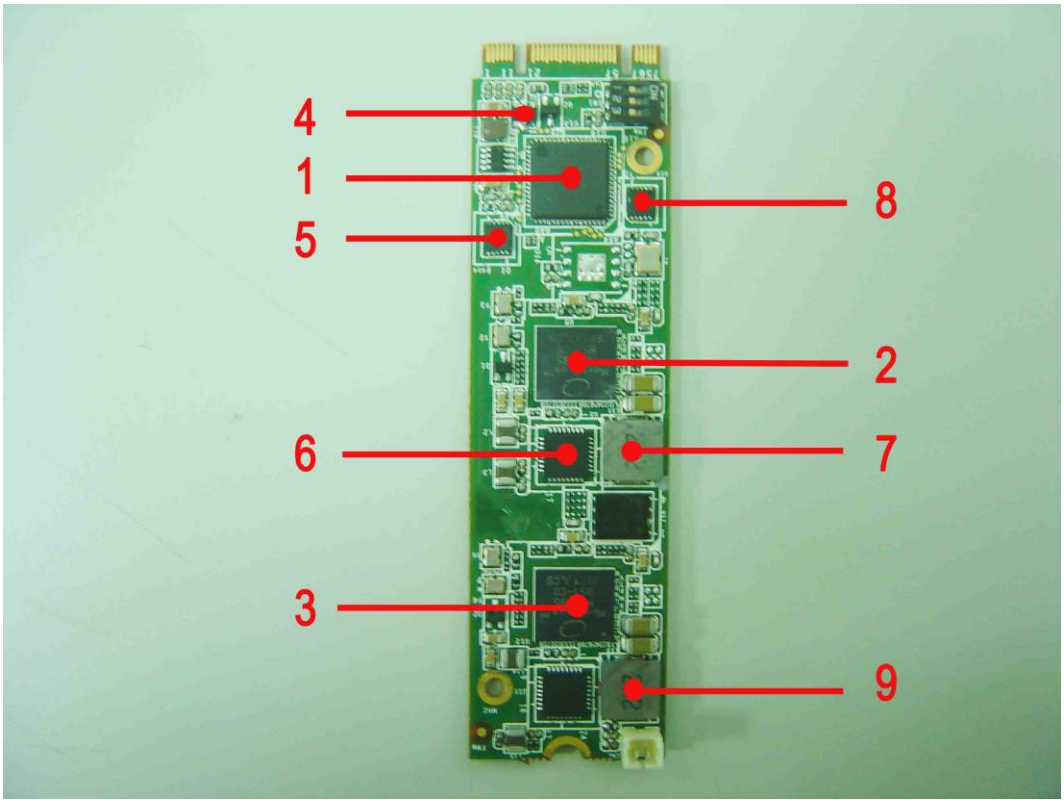
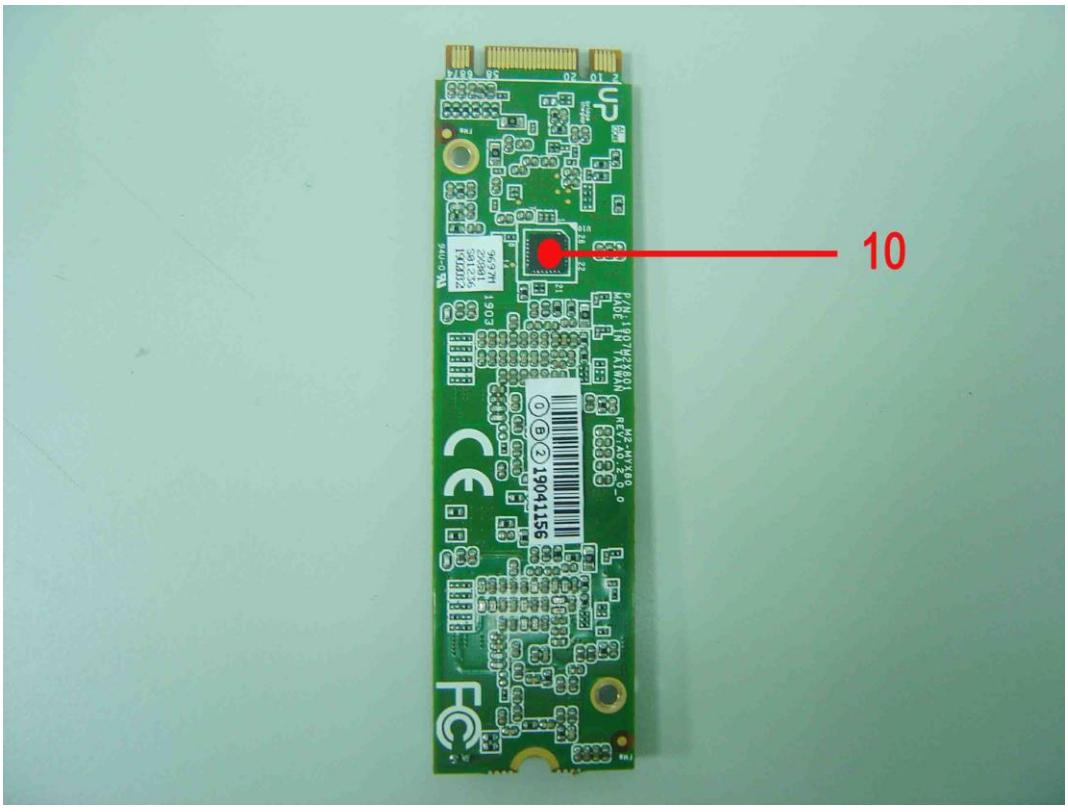
Terminal Recorder:

Measuring Thermal Couple Position：





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Using YOKOGAWA / DA100-13-1D test

Point	Position	Describe	Tc (*1) (℃)	TAT(*2) 25℃	TPT(*3) 60℃	Note
1	U13	(TF)IC.PCIE to 4 port USB3.0.Host Controller.DRQFN-116P.SMD.FRESCO.FL1100-1Q0-EX	105℃	61.0	96.0	
2	U6	(TF)IC.CHIPSET.VPU.MyriadX.VFBGA 380-ball.SMD.Movidius.MA2485(C0)/MM#999A6H/SLMYP	125℃	66.5	101.5	
3	U12	(TF)IC.CHIPSET.VPU.MyriadX.VFBGA 380-ball.SMD.Movidius.MA2485(C0)/MM#999A6H/SLMYP	125℃	61.0	96.0	
4	FB1	(TF)BEAD.60ohm(100MHz).3.5A.0603.SMD.TDK.MPZ1608S600A	125℃	57.2	92.2	
5	U14	(TF)IC.ULDO Regulator.6V.3A.WDFN-10L 3x3.SMD.RICHTEK.RT9059GQW	100℃	56.5	91.5	
6	U3	(TF)IC.Triple Synchronous.Step-Down Converter.VQFN32.TI.TPS65266RHBR	125℃	70.3	105.3	
7	L11	(TF)COIL.2.2uH.DCR=58mΩ.Idc=4Amp.20%.SMD.7.1*6.6*1.0mm.RLITECH.AMPI0612ED2R2MT	125℃	75.4	110.4	
8	U15	(TF)IC.ULDO Regulator.6V.3A.WDFN-10L 3x3.SMD.RICHTEK.RT9059GQW	100℃	45.8	80.8	
9	L12	(TF)COIL.2.2uH.DCR=58mΩ.Idc=4Amp.20%.SMD.7.1*6.6*1.0mm.RLITECH.AMPI0612ED2R2MT	125℃	65.6	100.6	
10	U10	(TF)IC.USB to GPIO.Host Controller.QFN-28P.SMD.FINTEK.F75114N	85°C	48.0	83.0	NOTE4

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.

Defect No:

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