ReportNO: 12CO080006

# COM-QM77

## Thermal Image Analysis Report

| | |
|---|---|
| Summary | ☐ **Pass**<br>☐ **Fail**<br>☑ **Pass with Deviation**<br>**Comment: There are three temperature points marginal passed, the function is normal, hope to get improvement for the generation.** |

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

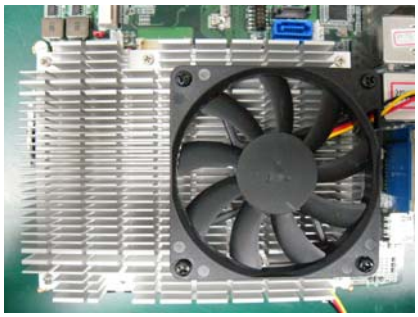
| Issue date | Approval | Test Engineer |
|---|---|---|
| 2012 / 08/14 | Tom Lin | Matthew Chi |



AAEON Technology Inc.
5F, No.135, Lane 235, Pao Chiao Rd.,
Hsin-Tien City, Taipei, Taiwan, R.O.C.
TEL: +886-2-8919-1234
FAX: +886-2-8919-1053

## Sample Configuration & Quantity Under Test

- **Model name : COM-QM77 B1.0**
- **Carrier Board : ECB-917T A1.0**
- **CPU : Intel i7 3555LE 2.50GHz**
- **Memory : Transcend DDR3-1333 4GB (SEC K4B2G0846C) x2**
- **HDD : Seagate 2.5“ SATA ST9160412AS 160GB**
- **BIOS :COM-QM77 M1.4(CM77BM14)(07/25/2012)**
- **Test Software : Windows 7 / Run PassMark Burn In Test 7.0 Pro**
- **Power : AT Power Supply: CWT DSA400P-C**
- **Heat Sink:**





AAEON Technology Inc.
5F, No.135, Lane 235, Pao Chiao Rd.,
Hsin-Tien City, Taipei, Taiwan, R.O.C.
TEL: +886-2-8919-1234
FAX: +886-2-8919-1053

# Thermal Image Analysis

**1. Test Date: 2012-08-13**

**2. Test Product : COM-QM77 B1.0**

**3. Test Site: AAEON QE Dept.**

**4. Temperature Measurement:**

**1. OMRON ZR-RX25**

**2. IR Scanner: Infrared Camera**

**NIPPON AVIONICS CO., LTD.**

**Model: NEC-G100D**

**Date of Calibration: 2012/01/03**

**Serial Number: 1051444**

**5. Test Condition:**

**Component Side-1 (Test by ZR-RX25 ): 25℃ With cooler**

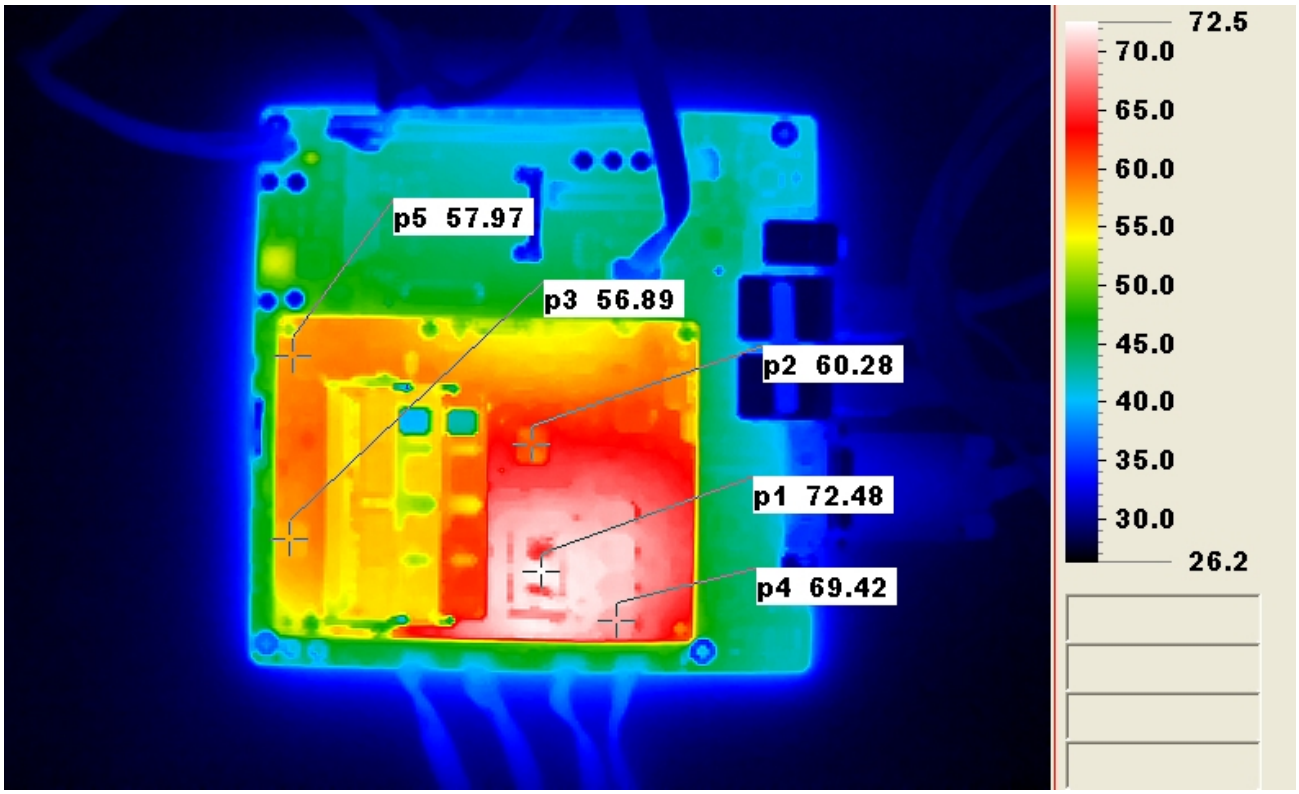
**6. Take Picture Time:**

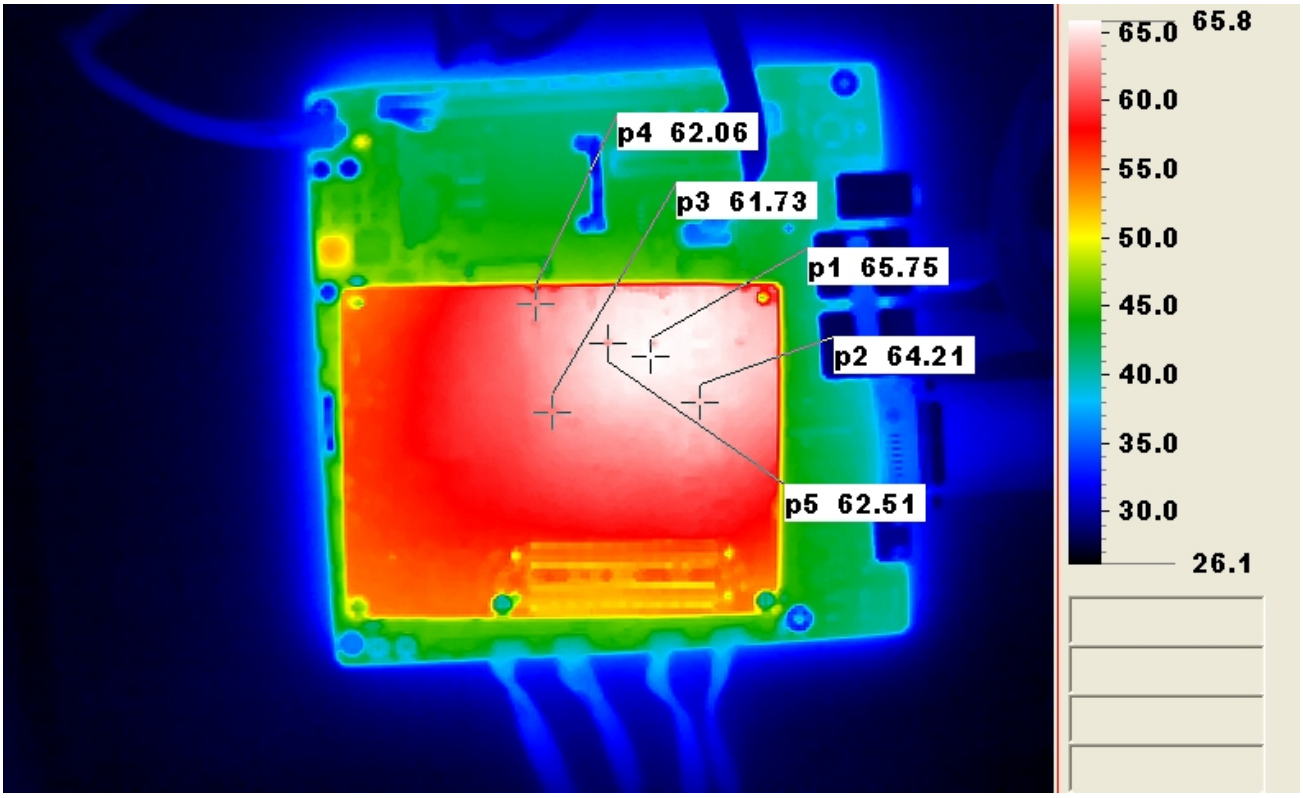
**After power on 2 hours**



AAEON Technology Inc.
5F, No.135, Lane 235, Pao Chiao Rd.,
Hsin-Tien City, Taipei, Taiwan, R.O.C.
TEL: +886-2-8919-1234
FAX: +886-2-8919-1053

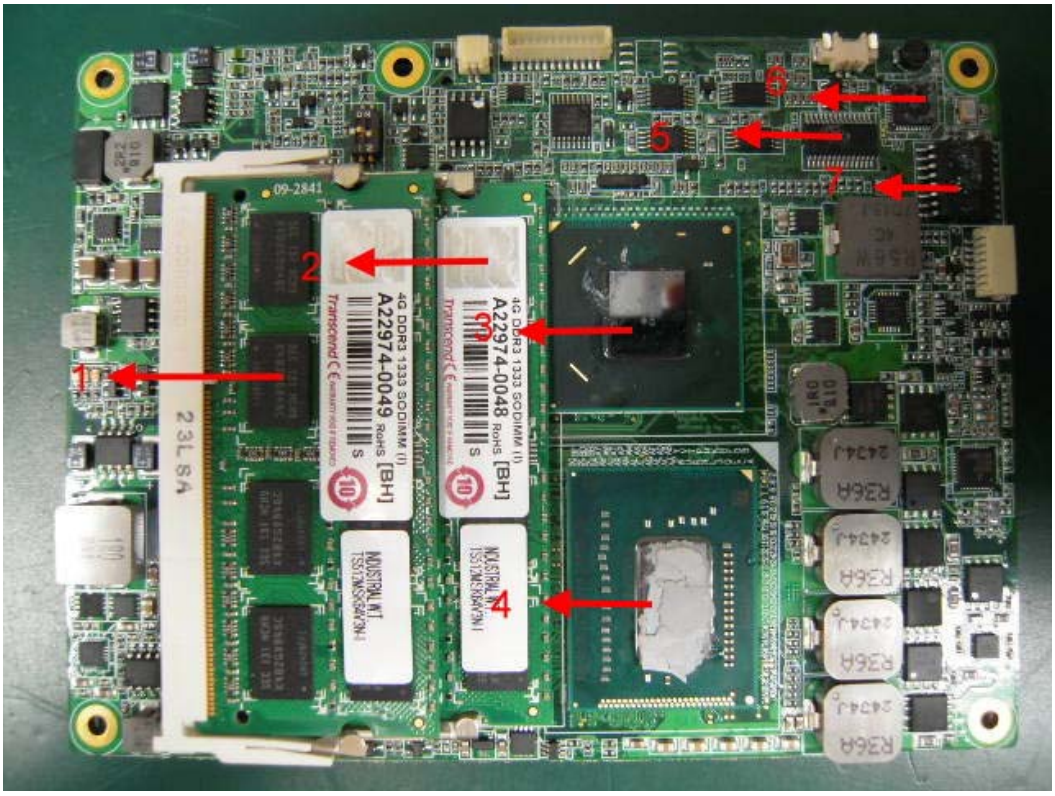
## Temperature Profile Test:

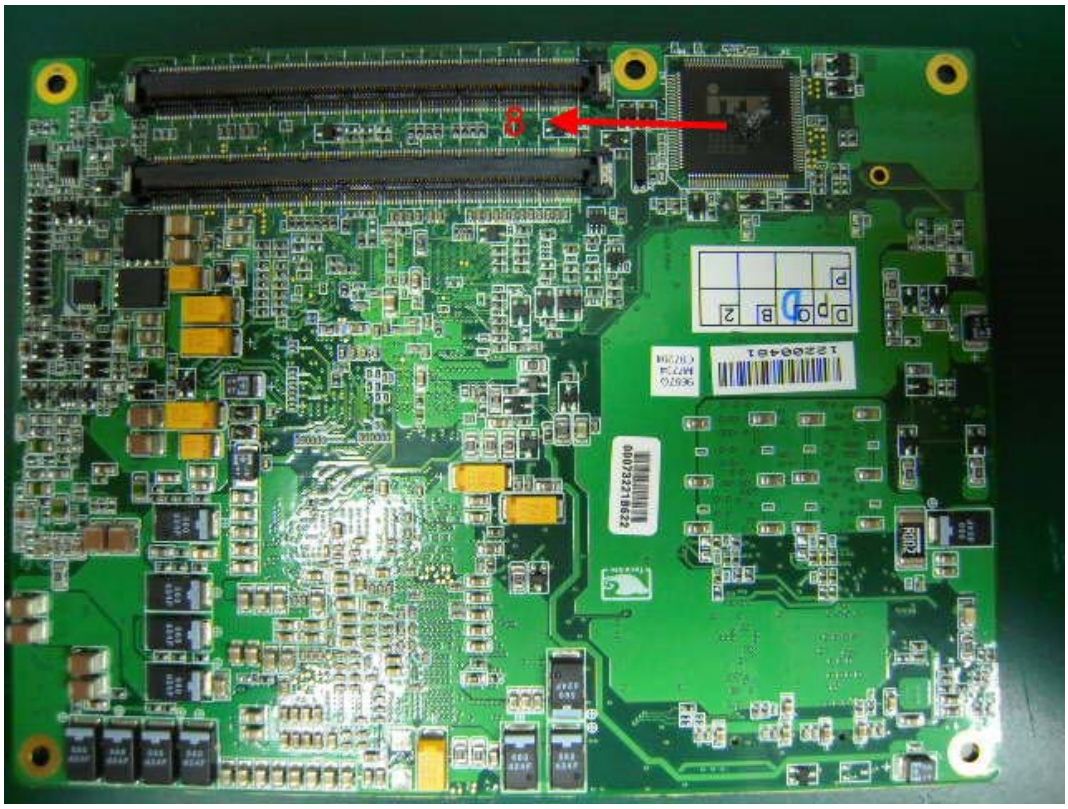





AAEON Technology Inc.
5F, No.135, Lane 235, Pao Chiao Rd.,
Hsin-Tien City, Taipei, Taiwan, R.O.C.
TEL: +886-2-8919-1234
FAX: +886-2-8919-1053






AAEON Technology Inc.
5F, No.135, Lane 235, Pao Chiao Rd.,
Hsin-Tien City, Taipei, Taiwan, R.O.C.
TEL: +886-2-8919-1234
FAX: +886-2-8919-1053

## Using OMRON ZR-RX25 test

| Point | Position | Describe | Tc (*1) (℃) | Tm (*2) Measured Under | | Note |
|---|---|---|---|---|---|---|
| | | | | 25℃ | 60℃ | |
| 1 | Memory1 | Transcend DDR3-1333 4GB (SEC K4B2G0846C) | 85 | 47.7 | 82.7 | |
| 2 | Memory2 | Transcend DDR3-1333 4GB (SEC K4B2G0846C) | 85 | 51.3 | 86.3 | |
| 3 | U1 | Intel Core i7 3555LE 2.50GHz | 105 | 45.1 | 80.1 | |
| 4 | U10 | (TF)IC.SMD.Chipset PCH.INTEL.BD82QM77 | 108 | 44.4 | 79.4 | |
| 5 | U31 | (TF)IC.SMD.Trusted Platform Module.SLB9635TT1.2(F/W 3.16) | 85 | 40.4 | 75.4 | |
| 6 | U23 | (TF)IC.PCI-E GigaBit Ethernet Chipset.Intel.WG82579LM SLHA6 | 106 | 36.4 | 71.4 | |
| 7 | U26 | (TF)IC.SMD.128M BIT SPI FLASH.MXIC.MX25L12845EMI-10G | 100 | 37.4 | 72.4 | |
| 8 | U32 | (TF)IC.SMD.LQFP.128P.Embedded Controller.ITE.IT8518E-L | 140 | 43.1 | 78.1 | |

**Note(*):**
**1. "Tc"** indicates the component's case maximum temperature value specified in its datasheet.
**2. "Tm"** indicates the measured Tc value under working environmental temperature within product specification.
**3. 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.



AAEON Technology Inc.
5F, No.135, Lane 235, Pao Chiao Rd.,
Hsin-Tien City, Taipei, Taiwan, R.O.C.
TEL: +886-2-8919-1234
FAX: +886-2-8919-1053