

# GENE-QM77

## Thermal Image Analysis Report

Summary	<input type="checkbox"/> Pass			
	<input type="checkbox"/> Fail			
	<input checked="" type="checkbox"/> Pass with Deviation			
	<b>Comment: <u>One temperature points marginal passed, the function is normal, hope to get improvement for the next generation.</u></b>			
Test Result Summary				
	Critical	Major	Minor	Enhancement
Defect Found	0	0	0	1
Defect Unsolved	0	0	0	1

Issue date

2012 / 06/25

Approval

Tom Lin

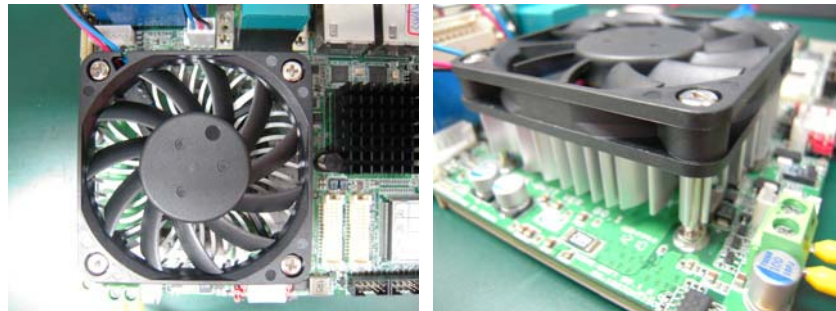
Test Engineer

Matthew Chi

## Test Product: GENE-QM77 B0.1

### Sample Configuration & Quantity Under Test:

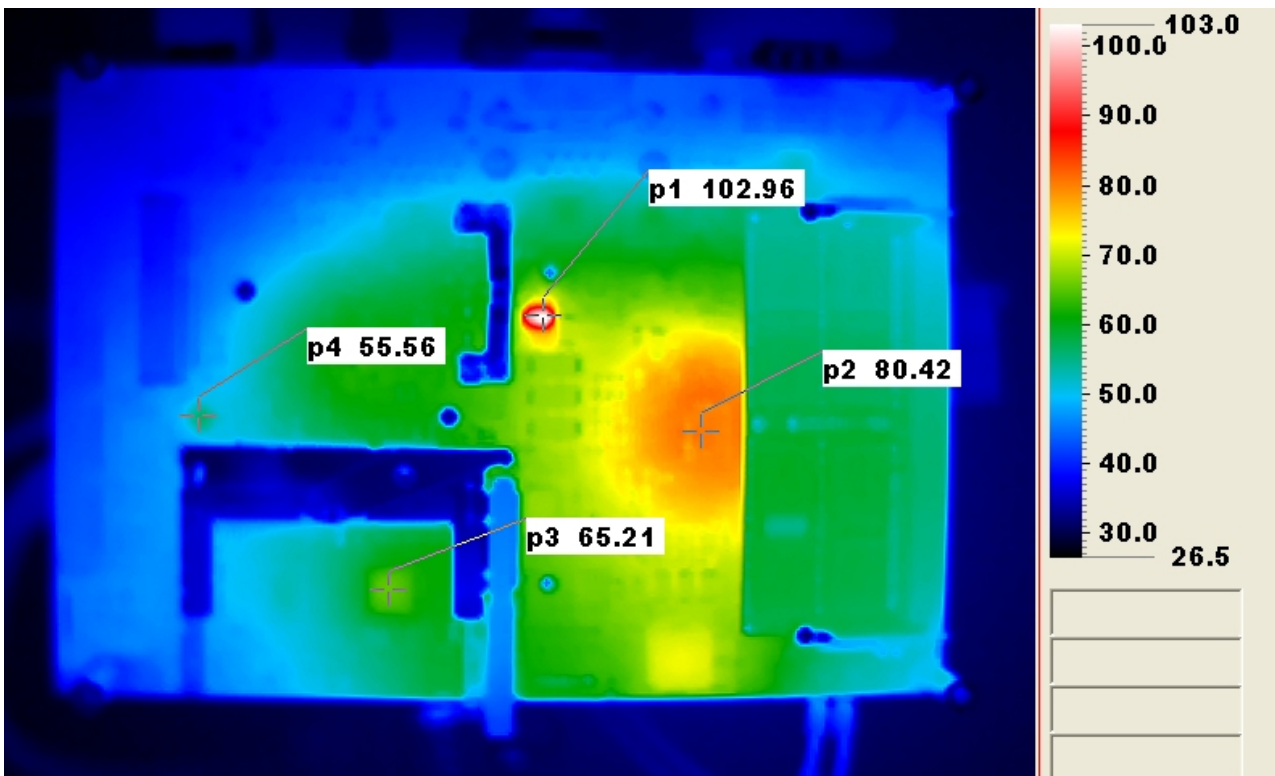
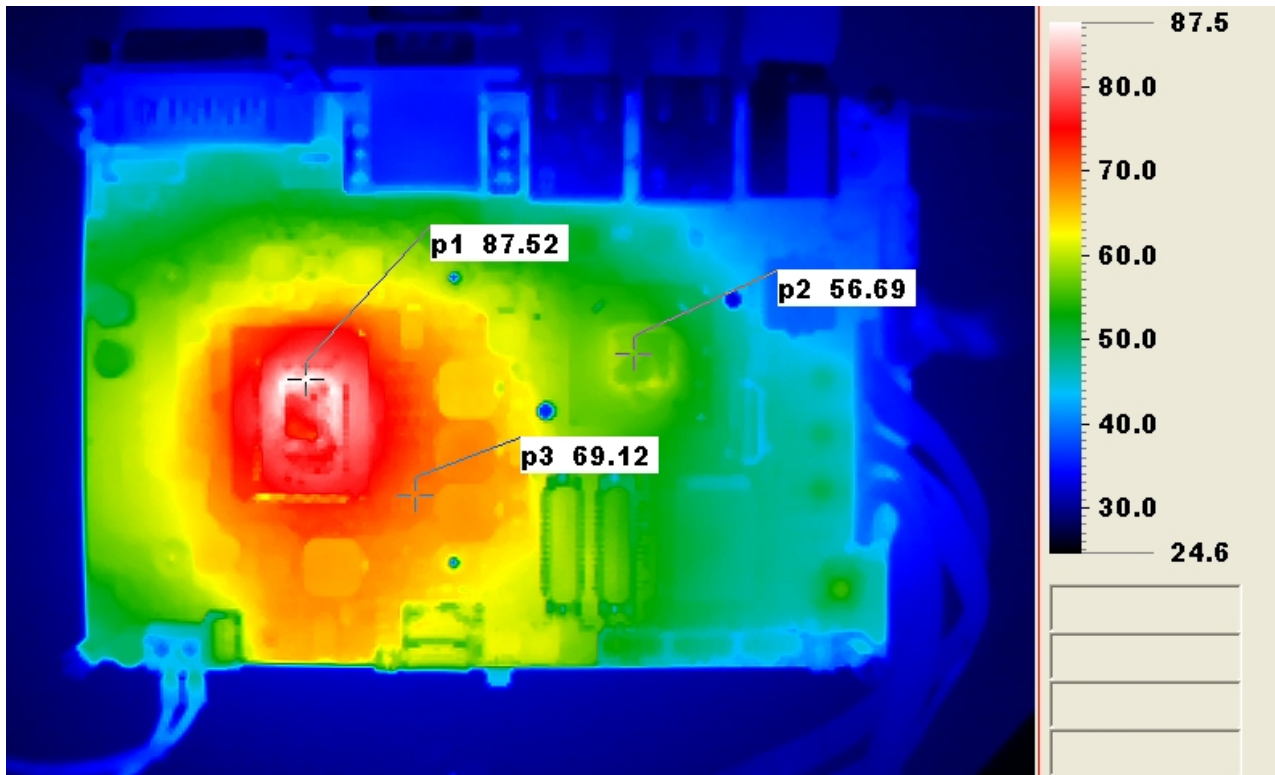
1. CPU: Intel i7 3555LE 2.50G (ES)
2. BIOS: GENE-QM77 Rev B R0.2(GM77BM02)(04/26/2012)
3. Chipset: Intel QM77
4. Memory: DSL DDR3-1600 8GB CL11 (hynix H5TQ4G83MFR)
5. HDD: TOSHIBA 2.5' SATA MK1665GSX 160GB
6. Test Software: Windows 7 / Run PassMark Burn In Test 7.0 Pro
7. AT Power Supply: ZIPPY HG2-6400P
8. CPU Fan:

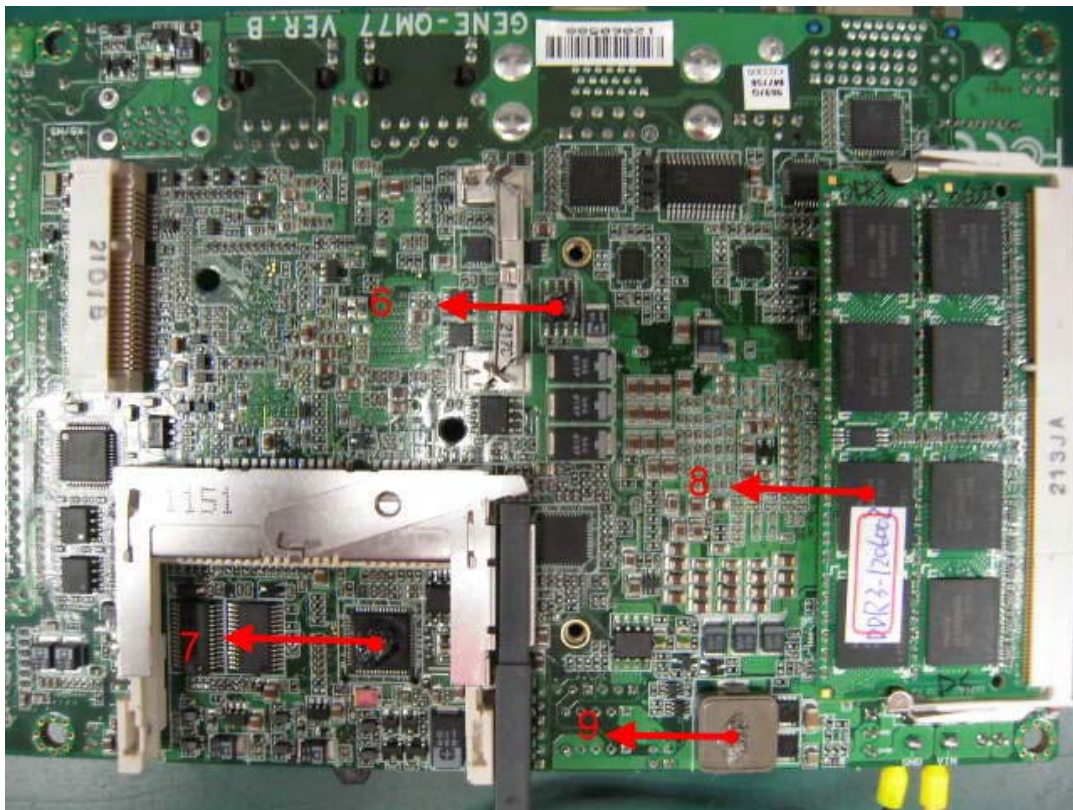
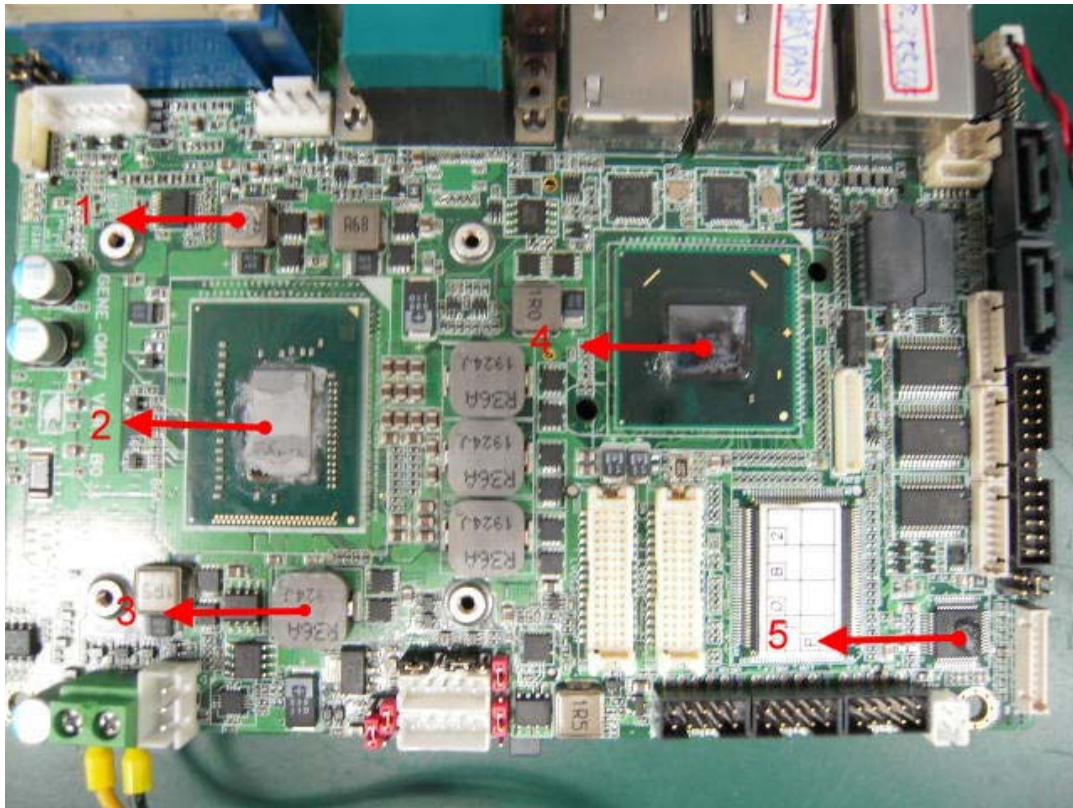


# Thermal Image Analysis

1. Test Date: 2012-06-25
2. Test Product : GENE-QM77 B0.1
3. Test Site: AAEON QE Dept.
4. Temperature Measurement:
  1. YOKOGAWA / DARWIN DA-100-13-1D
  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 DA-100 ): 25°C With cooler
6. Take Picture Time:  
After power on 2 hours

### Temperature Profile Test:





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

Point	Position	Describe	Tc (*1) (°C)	Tm (*2) Measured Under		Note
				25°C	60°C	
1	L8	(TF)COIL.0.68uH.5Amp.ZenithTek.ZPWM-6030M-R68M	125	32.9	67.9	
2	CPU	Intel i7 3555LE 2.50G (ES)	105	42.8	77.8	
3	L2	(TF)COIL.0.36uH.2pin. Ohm.Panasonic.ETQP4LR36AFC	130	34.8	69.8	
4	U33	(TF)IC.SMD.Chipset PCH.INTEL.BD82QM77	108	39.9	74.9	
5	U9	(TF)IC.SMD.High Definition.Audio Codec.REALTEK.ALC892-GR	100.5	41.8	76.8	
6	U89	(TF)IC.SMD. Linear Regulator.ANPEC.APL5912-KAC-TRL	105	68.1	103.1	
7	U70	(TF)IC.DisplayPort to LVDS Converter.Chrontel.CH7511B-BF	100	44.2	79.2	
8	Memory	DSL DDR3-1600 8GB CL11 (hynix H5TQ4G83MFR)	95	43.3	78.3	
9	L10	(TF)COIL.3.3uH.20%.SMD.ZenithTek.ZPWM-1040MB-3R3M	125	45.1	80.1	

**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** :  $T_m > T_c + 5^{\circ}\text{C}$ ; The measured value is over specification plus margin.
- **Margin** :  $T_c + 5^{\circ}\text{C} > T_m > T_c - 10^{\circ}\text{C}$ ; 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** :  $T_m < T_c - 10^{\circ}\text{C}$ ; The measured value is with safety margin.