AGD-312DHTT-V2B

Environment Test Report

Report NO: 16P020002

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
2016-01-11	KJ Wang	Ben Sun

Test item list

Testing Result

Num	Test item list	Result	Remark
1	High Temperature operation test	Pass	
2	Temperature variation operation test	Pass	
3	High temperature storage test	Pass	
4	Low temperature storage test	Pass	
5	Humidity test	Pass	
6	Cold start and hot start test	Pass	

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: +886-2-8919-1056
http://www.aaeon.com.tw

Configuration of EUT

Num	Item	Spec
1.	Rugged Touch Display	AGD-312DHTT-V2B-1010
	1. LCD	TFT LCD 12.1" AUO G121XN01LVDS 18&24Bits 500nits
	2. Touch Screen	Touch Screen 12” Miracletouch 10121024 VER:V01
	4. A/D Board	ADG/ACD Series. RGBTECH.F2281L
2.	Adapter	FSP084-DMAA1
3.	Equipment	
	1. Main Board	BOXER-6914 A1.0
	2. BIOS Ver.	BOXER-6914 R1.0 (B914AM10)(03/04/2015)

System Picture

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: +886-2-8919-1056
http://www.aaeon.com.tw

High Temperature Operation test

Test Date: 12-30～31-2015

Test Product: AGD-312DHTT-V2B

Test Site: AAEON QE Dept.

Test Standard: Refer to IEC 68-2-2 Testing procedures

Test Bd: Dry Heat Test (Operation)

Test Equipment:

Programmable Temperature & Humidity Chamber: (K.SON. INS. TECH. CORP.)

Model: THS-D7S-100+1 N2

Date of Calibration: 03/25/15

Serial Number: 6487KT

Temperature Measurement:

40 Channel Thermal Recorder:

YOKOGAWA Inc,

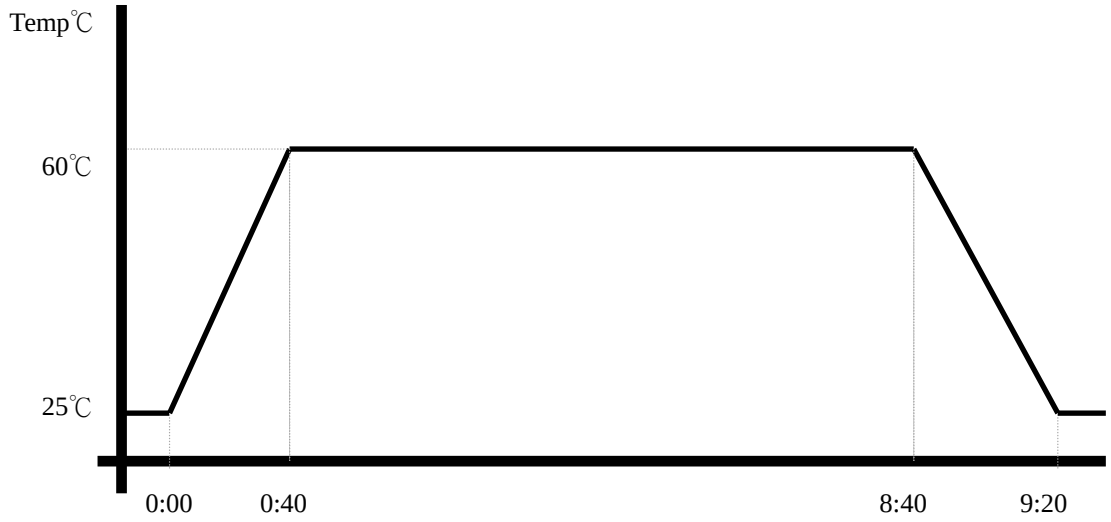
Model: DA100-13-1D

Date of Calibration: 10/30/2015

Serial Number: 12A32319

Testing Item:

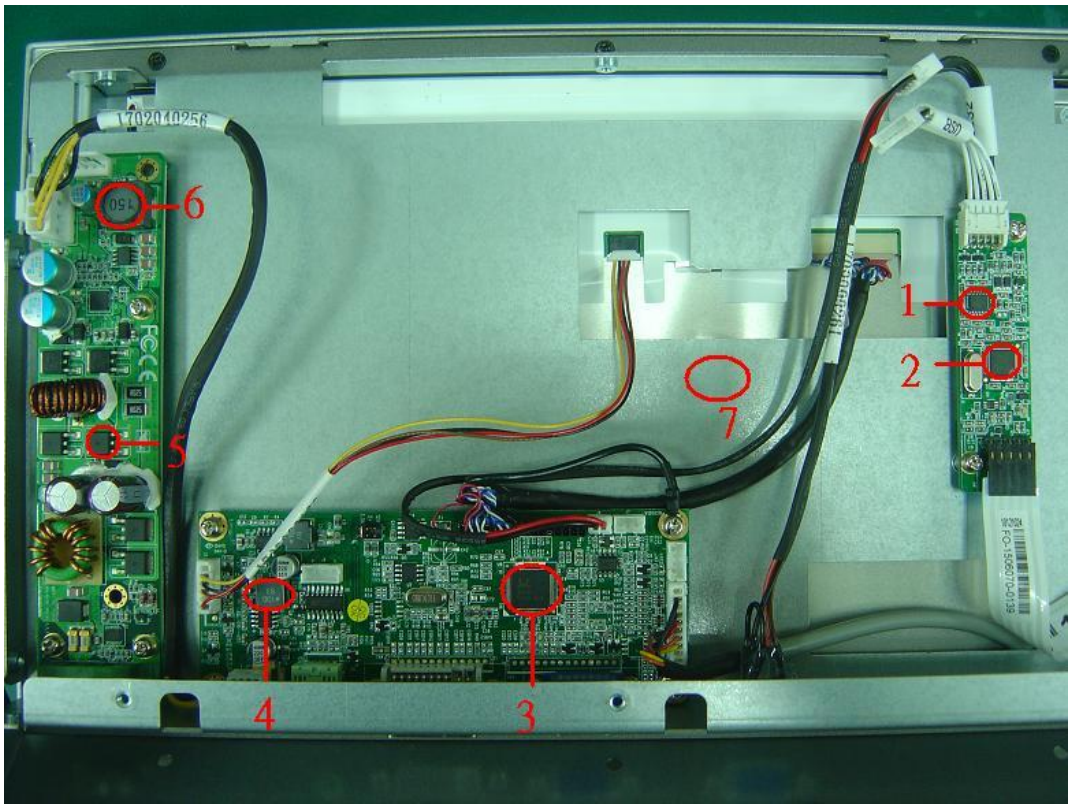
1. Test Temperature: 60℃
2. Test Times: 8Hrs
3. Test Software: Windows 7 / Run 3DMark Loop Test
4. Test Environment Curve:

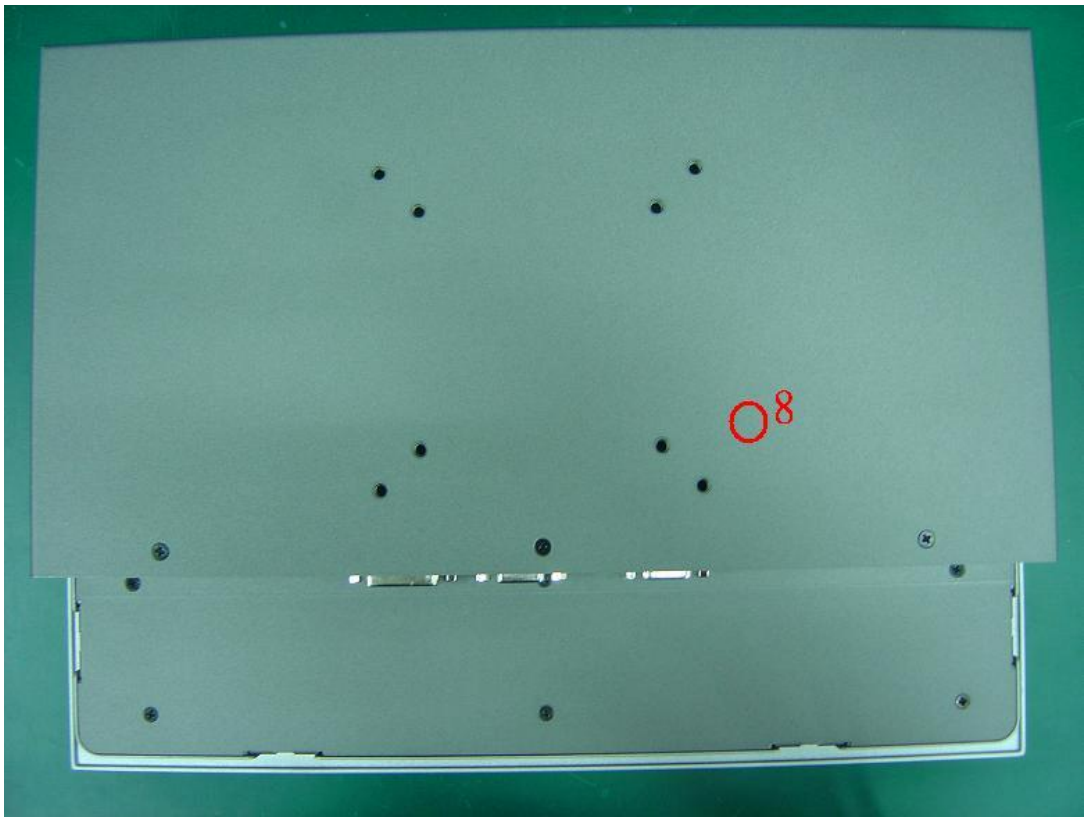


AAEON Technology Inc.
5F, No.135, Lane 235, Pao Chiao Rd.,
Hsin-Tien City, Taipei, Taiwan, R.O.C.
TEL: +886-2-8919-1234
FAX: +886-2-8919-1056
http://www.aaeon.com.tw

High Temperature Operation test

Measuring Thermal Couple Position：





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: +886-2-8919-1056
http://www.aaeon.com.tw

High Temperature Operation test

AGD-312DHTT-V2B (With 0.5m/sec airflow)

Thermal profile data:

Point	Position	Describe	Tc (*1) (℃)	TAT(*2) 60	TPT(*3) 25	Note
Touch Screen Control Board						
1		MAX3221 3-V to 5.5-V RS-232 Line Driver and Receiver	125	65.1		
2		ETP-CP-MER4485 XRU	85	67.6		
F2281L-14 AD Board						
3	U9	1920 scaler, RTD2281L	85	79.9		
4	U1	Eutech Microelectronics EUP3484S Converter	85	73.2		
POWER BORAD .PER-P17D B1_0_0						
5	L1	COIL. SMD.GOTREND.GSDRH-127-P-T-150M	85	65.0		
6	Q5	PWR.SMD.TO-252AA.N-Channel MOSFET.FAIRCHILD.FDD5670	124	65.2		
7		Control Box Inside Air Temperature	N/A	63.5		
8		Control Box External Surface	N/A	60.6		

Note(*):
1. "**Tc**" indicates the component's case maximum temperature value specified in its datasheet.
2. "**TAT**" indicates the actual measured temperature in chamber.
3. "**TPT**" indicates the predicted temperature by offset from TAT
4. Judgment Criteria:
- **Fail** : Tm > Tc; The measured value is over specification.
- **Margin Pass** : 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.

5. Defect NO.

Sample Configuration & Quantity Under Test:

Quantity: 1 (AGD-312DHTT-V2B)

Test Result:

No problem was found during the temperature rise operation 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: +886-2-8919-1056
http://www.aaeon.com.tw

Temperature variation operation test

Test Date: 12-21~22-2015

Test Product: AGD-312DHTT-V2B

Test Site: AAEON QE Dept.

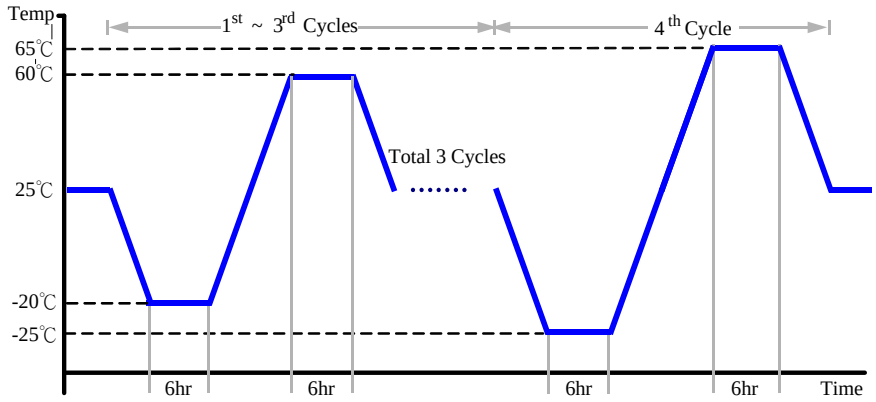
Test Standard: Reference IEC68-2-14 Testing procedures
Test N: Change of temperature Test

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4H+-100
Date of Calibration: 03/25/15
Serial Number: 6487KT

Test Condition:

1. Test Low Temperature: -20℃ (1~3 cycles)
   -25℃ (4th cycle)
2. Test High Temperature: 60℃ (1~3 cycles)
   65℃ (4th cycle)
3. Test dwell time: 6Hrs
4. Temperature slope: 2℃/min
5. Test cycle: 4 cycles
6. Test Software: Windows 7 / Run 3DMark Loop Test
7. Test Environment Curve:



Sample Configuration & Quantity Under Test:

Quantity: 1 (AGD-312DHTT-V2B)

Test Result:

No problem was found during the temperature operation cycle 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: +886-2-8919-1056
http://www.aaeon.com.tw

High temperature storage test

Test Date: 12-23~24-2015

Test Product: AGD-312DHTT-V2B

Test Site: AAEON QE Dept..

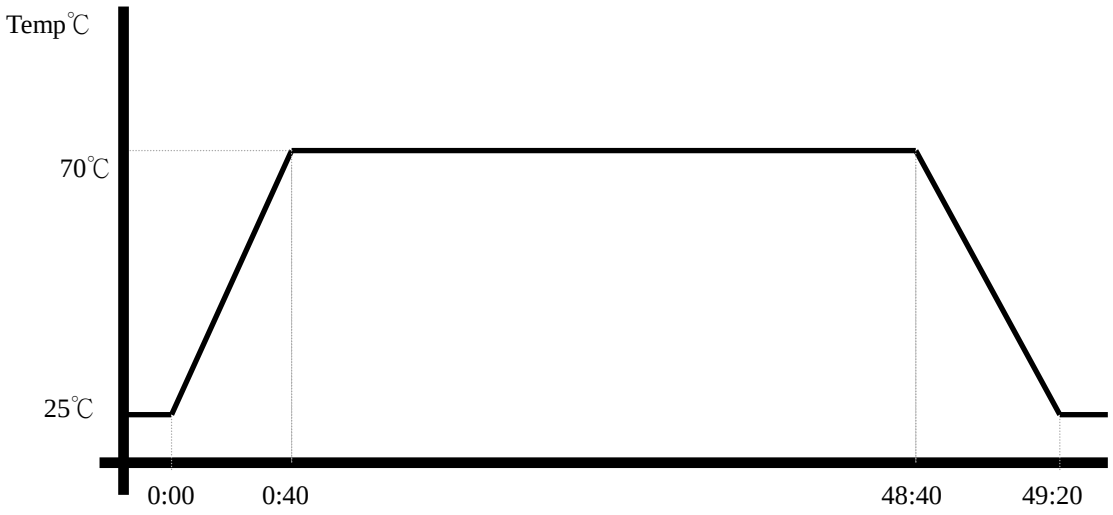
Test Standard: Reference IEC 68-2-2 Testing procedures
Test Bb: Dry Heat Test (Non-operation)

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4H+-100
Date of Calibration: 03/25/15
Serial Number: 6487KT

Testing Item:

5. Test Temperature: 70℃
6. Test Times: 48Hrs
7. Test Software: Windows 7 / Run 3DMark Loop Test
8. Test Environment Curve:



Sample Configuration & Quantity Under Test:
Quantity: 1 (AGD-312DHTT-V2B)

Test Result:
No problem was found after the high temperature storage 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: +886-2-8919-1056
http://www.aaeon.com.tw

Low temperature storage test

Test Date: 12-25~26-2015

Test Product: AGD-312DHTT-V2B

Test Site: AAEON QE Internal Lab.

Test Standard: Reference IEC 68-2-1 Testing procedures
Test Ab: Cold Test (Non-operation)

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4H+-100
Date of Calibration: 03/25/15
Serial Number: 6487KT

Testing Item:

1. Test Temperature: -20℃
2. Test Times: 48Hrs
3. Test Software: Windows 7 / Run 3DMark Loop Test
4. Test Environment Curve:

Sample Configuration & Quantity Under Test:

Quantity: 1 (AGD-312DHTT-V2B)

Test Result:

No problem was found after the low temperature storage 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: +886-2-8919-1056
http://www.aaeon.com.tw

Humidity test

Test Date: 12-28~29-2015

Test Product: AGD-312DHTT-V2B

Test Site: AAEON QE Internal Lab.

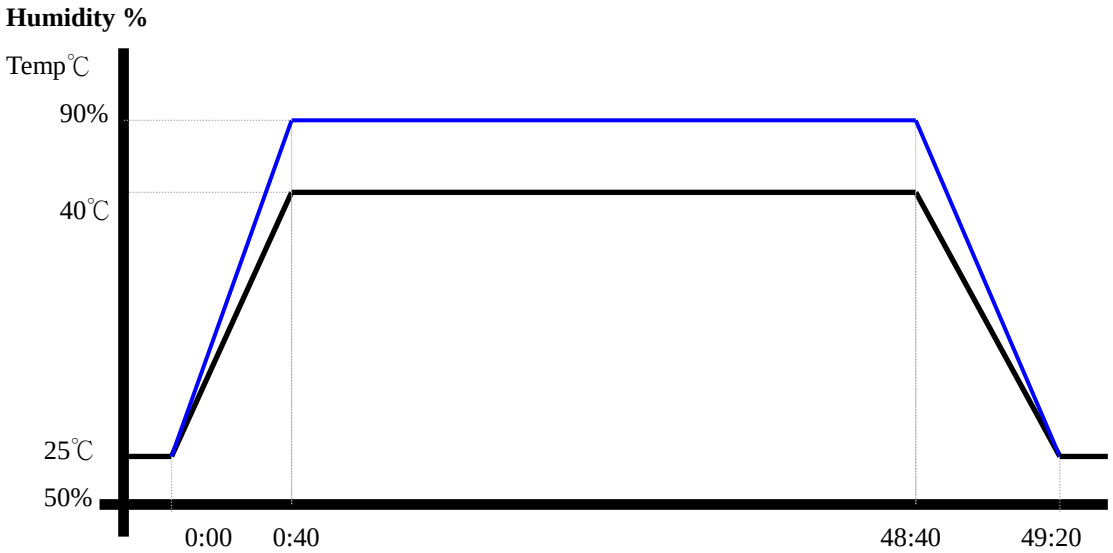
Test Standard: Reference IEC 68-2-3 Testing procedures
Test Ca: Damp heat, steady state (Non-operation)

Test Equipment:

Programmable Temperature & Humidity Chamber
K.SON. INS. TECH. CORP.
Model: THS-D4H+-100
Date of Calibration: 03/25/15
Serial Number: 6487KT

Testing Item:

1. Test Temperature: 40℃
2. Test Humidity: 90%RH
3. Test Times: 48Hrs
4. Test Software: Windows 7 / Run 3DMark Loop Test
5. Test Environment Curve:



Sample Configuration & Quantity Under Test:
Quantity: 1 (AGD-312DHTT-V2B)

Test Result:
No problem was found after the humidity storage 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: +886-2-8919-1056
http://www.aaeon.com.tw

Cold start and hot start test

Test Date: 01-04-2016

Test Product: AGD-312DHTT-V2B

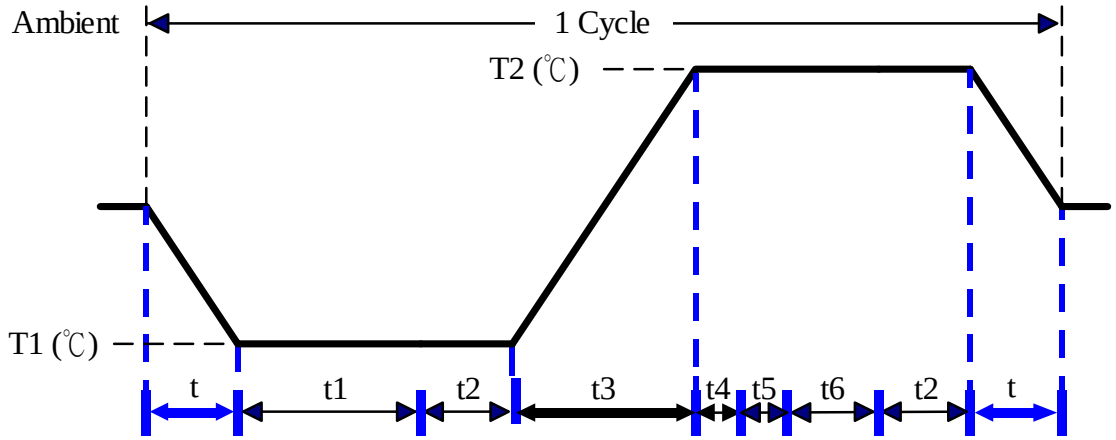
Test Site: AAEON QE Internal Lab.

Test Standard: Reference 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-D4H+-100
Date of Calibration: 03/25/15
Serial Number: 6487KT

Test Condition:



Parameters	Description
T1	-25℃
T2	65℃
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: 3DMARK
t5: Windows 7 Software restart test 3 times
Test Software: Windows 7

Test Result:

a. No problem was found during the cold start test.

b. No problem was found during the hot start 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: +886-2-8919-1056
http://www.aaeon.com.tw