

Certificate No.: FD070229-01

# CERTIFICATE OF COMPLIANCE

Authorized under Declaration of Conformity according to

47 CFR.Part 2 and Part 15 of the FCC Rules



**EQUIPMENT**: Rugged Tablet Computer

MODEL NO.

: RTC-1000xx (xx is AS or blank)

APPLICANT: AAEON Technology Inc.

5F, No.135, Lane 235, Pao Chiao Rd., Hsin-Tien City, Taipei, Taiwan, R.O.C.





## **CERTIFY THAT:**

THE MEASUREMENTS SHOWN IN THIS TEST REPORT WERE MADE IN ACCORDANCE WITH THE PROCEDURES GIVEN IN ANSI C63.4 - 2003 AND THE ENERGY EMITTED BY THIS EQUIPMENT WAS FCC PART 15 SUBPART B AND CANADA STANDARDICES-003 IN BOTH RADIATED AND CONDUCTED EMISSIONS CLASS B LIMITS. THE TESTING WAS COMPLETED ON Sep. 14, 2010 AT SPORTON INTERNATIONAL INC. LAB.

Jones Chen Supervisor





## **FCC TEST REPORT**

Authorized under **D**eclaration **o**f **C**onformity

#### according to

## 47 CFR FCC Rules and Regulations Part 15 Subpart B, Class B Digital Device

Equipment : Rugged Tablet Computer

Model No. : RTC-1000xx (xx is AS or blank)

Filing Type : Declaration of Conformity

Applicant : AAEON Technology Inc.

5F, No.135, Lane 235, Pao Chiao Rd., Hsin-Tien City,

Taipei, Taiwan, R.O.C.

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- Certificate or Test Report must not be used by the applicant to claim the product in this test report endorsement by any agency of U.S. government.

#### SPORTON International Inc.

No. 52 Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.



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## History of this test report

Original Report Issue Date: Oct. 20, 2010

■ No additional attachment.

□ Additional attachment were issued as following record:

Attachment No.	Issue Date	Description



Report No. : FD070229-01

Certificate No.: FD070229-01

## CERTIFICATE OF COMPLIANCE

Authorized under **D**eclaration **o**f **C**onformity according to

47 CFR FCC Rules and Regulations Part 15 Subpart B,

Class B Digital Device

Equipment : Rugged Tablet Computer

Model No. : RTC-1000xx (xx is AS or blank)

Applicant : AAEON Technology Inc.

5F, No.135, Lane 235, Pao Chiao Rd., Hsin-Tien City,

Taipei, Taiwan, R.O.C.

## I HEREBY CERTIFY THAT:

The measurements shown in this test report were made in accordance with the procedures given in **ANSI C63.4 - 2003** and the energy emitted by this equipment was *passed* FCC Part 15 Subpart B in both radiated and conducted emission Class B limits.

Testing was carried out on Sep. 14, 2010 at SPORTON International Inc. LAB.

hon Oct 29.2010

Jones Chan Supervisor

#### SPORTON International Inc.

No. 52 Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C

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## 1. General Description of Equipment under Test

#### 1.1 Applicant

#### **AAEON Technology Inc.**

5F, No.135, Lane 235, Pao Chiao Rd., Hsin-Tien City, Taipei, Taiwan, R.O.C.

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#### 1.2 Manufacturer

Same as 1.1

#### 1.3 Basic Description of Equipment under Test

Equipment : Rugged Tablet Computer

Model No. : RTC-1000xx (xx is AS or blank)

Trade Name : AAEON

RJ45 Cable : Non-Shielded, 10 m

Power Supply Type : Switching

AC Power Cable : Non-Shielded, 1.8m, 3 pin DC Power Cable : Shielded, 1.25 m, 2 pin

#### 1.4 Feature of Equipment under Test

Description	cription Brand Model		Spec.		
CPU	Intel®	Atom™ N270	1.6G		
LCD Display	D Display CPT CLAA102NA0ACW		10.2" 16:9 TFT LCD with Touch Screen (AOT)		
Memory Team TSDD1024M		TSDD1024M667C5-E	DDR2 667 1GB		
HDD	WD	WD800BEVT-00A23T0	800GB		
WLAN 802.11 b/g + Bluetooth® 2.0 Class 1 Module		AWM-S0021M	802.11 b/g + Bluetooth		
MODEM	AGERE	D40 AM5	56Kbps		
Battery	Hyper power	H805084	351P 3cells Smart Li-on (4,100 mAh)		
Power Adapter FSP FSP065-R		FSP065-RAB	Input: 100-240Vac, 50-60Hz, 1.5A Output: 19Vdc, 3.42A (65W)		
Cradle					

Please refer to manufacturer's specifications or Users' Manual

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## 2. Test Configuration of Equipment under Test

#### 2.1 Test Manner

a. The EUT has been associated with peripherals pursuant to ANSI C63.4-2003 and configuration operated in a manner which tended to maximize its emission characteristics in a typical application.

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- b. The complete test system included remote workstation, DELL LCD Monitor, ACEEX Modem, HP USB Keyboard, HP USB Mouse, TERASYS USB 2.0 HDD (x2), Sandisk CF Card, üPA 3C Headset and EUT for EMI test. The remote workstation included HP PC, Compaq Monitor, Compaq PS/2 Keyboard, Compaq PS/2 Mouse.
- c. The following test modes were pretested for conducted and radiated test:

Mode 1. CPU:1.6GHz, D-Sub: 1024 x 600, 60Hz, LAN: 100Mbps Mode 2. CPU:1.6GHz, D-Sub: 800 x 600, 60Hz, LAN: 10Mbps Cause " Mode 1 " generated the worst test result, it was reported as final data.

- d. The following test mode was for radiated (1GHz / 5TH of harmonic CPU fundamental) final test: Mode 1. 1-8GHz
- e. Frequency range investigated: conduction 150 KHz to 30 MHz, radiation 30 MHz to 13,000MHz.

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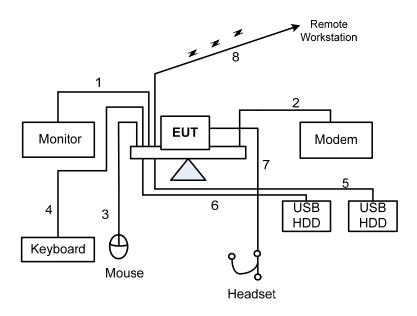
## 2.2 Description of Test System

No.	Description	Manufacturer	Model	FCC ID	Signal Cable Description
1	LCD Monitor	DELL	2408WFPb	DoC	D-Sub Cable, D-Shielded, 1.8m (with two cores)
2	Modem	ACEEX	DM1414	IFAX1414	Shielded, 1.15m
3	USB Keyboard	HP	SK-2885	DoC	USB Cable, D-Shielded, 1.8m
4	USB Mouse	HP	M-UAE96	DoC	USB Cable, AL-Shielded, 1.8m
5	USB 2.0 HDD	TERASYS	F12-UF	DoC	USB Cable, D- Shielded, 1.2m
6	USB 2.0 HDD	TERASYS	F12-UF	DoC	USB Cable, D- Shielded, 1.8m
7	CF Card	Sandisk	128MB		
8	Headset	3C	MIC03		Non-Shielded, 1.8m
9	PC (Remote Workstation)	HP	HP dc7700	DoC	RJ45 Cable, Non-Shielded, 10m
10	Monitor (Remote Workstation)	Compaq	S510	DoC	D- Shielded, 1.7m
11	PS/2 Keyboard (Remote Workstation)	Compaq	6511-VA	DoC	AL- Shielded, 1.6m
12	PS/2 Mouse (Remote Workstation)	Compaq	M-S69	DoC	AL- Shielded, 1.8m

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#### **Connection Diagram of Test System**



The support unit 7 insert into EUT.

- 1. The D-Sub cable is connected from EUT to the support unit 1.
- 2. The I/O cable is connected from EUT to the support unit 2.
- 3. The USB cable is connected from EUT to the support unit 4.
- 4. The USB cable is connected from EUT to the support unit 3.
- 5. The USB cable is connected from EUT to the support unit 5.
- 6. The USB cable is connected from EUT to the support unit 6.
- 7. The Audio cable is connected from EUT to the support unit 8.
- 8. The RJ45 cable is connected from EUT to remote workstation.

Note: Above support unit on behalf of the meaning, please refer to section 2.2.

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#### 3. Test Software

An executive program, "EMCTEST.exe" under Win Embeded Standard, which generates a complete line of continuously repeating "H" pattern was used as the test software.

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The program was executed as follows:

- a. Turn on the power of all equipment.
- b. The EUT reads the test program "EMCtest.exe" from the hard disk drive and runs it.
- c. The EUT sends "H" messages to the monitor, and the monitor displays "H" patterns on the screen.
- d. The EUT sends "H" messages to the modem.
- e. The EUT sends "H" messages to the internal hard disk, and the hard disk reads and writes the message.
- f. Repeat the steps from c to e.

At the same time, the following programs were executed:

- Executed "Windows Media Player.exe" play music.
- Executed "EMC.exe" to read and write data from USB 2.0 HDD and CF card.
- Executed "Ping.exe" to link with the remote workstation to receive and transmit data via RJ45 cable.



#### 4. General Information of Test

#### 4.1 Test Facility

For Conducted Emission

Test Site Location : No. 30-2, Lin 6, Diing-Fwu Tsuen, Lin-Kou-Hsiang, Taipei Hsien, Taiwan, R.O.C.

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TEL: 886-2-26011640

FAX: 886-2-2601-1695

Test Site No. : CO01-LK

For Radiated Emission below 1GHz

Test Site Location : No. 30-2, Lin 6, Diing-Fwu Tsuen, Lin-Kou-Hsiang, Taipei Hsien, Taiwan, R.O.C.

TEL: 886-2-26011640

FAX: 886-2-2601-1695

Test Site No. : OS05-LK

For Radiated Emission above 1GHz

Test Site Location : No. 52 Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien,

Taiwan, R.O.C. TEL 886-3-327-3456 FAX 886-3-318-0055

Test Site No. : 03CH02-HY

#### 4.2 Uncertainty of Test Site

Test Items	Test Site No.	Uncertainty	Remark
Conducted Emissions	CO01-LK	± 2.42dB	Confidence levels of 95%
Radiated Emissions	OS05-LK	± 2.96dB	Confidence levels of 95%
Radiated Emissions above 1GHz	03CH02-HY	± 2.54dB	Confidence levels of 95%

#### 4.3 Test Voltage

120V / 60Hz

#### 4.4 Standard for Methods of Measurement

ANSI C63.4-2003

#### 4.5 Test in Compliance with

FCC Rules and Regulations Part 15 Subpart B

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#### 4.6 Frequency Range Investigated

a. Conduction: from 150 kHz to 30 MHz b. Radiation: from 30 MHz to 13,000 MHz

#### 4.7 Test Distance

- a. The test distance of radiated emission from antenna to EUT is 10 M (from 30MHz~1GHz).
- b. The test distance of radiated emission from antenna to EUT is 3 M (from 1GHz~7GHz).
- c. The test distance of radiated emission from antenna to EUT is 1 M (from 7GHz~13GHz).

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#### 5. Test of Conducted Powerline

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 KHz and return leads of the EUT according to the methods defined in ANSI C63.4-2003 Section 3.1. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown in section 5.3. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

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#### **5.1 Major Measuring Instruments**

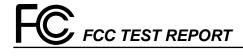
 Test Receiver ( R&S ESCS 30 )

Attenuation 10 dB 0.15 MHz Start Frequency Stop Frequency 30 MHz IF Bandwidth 9 kHz

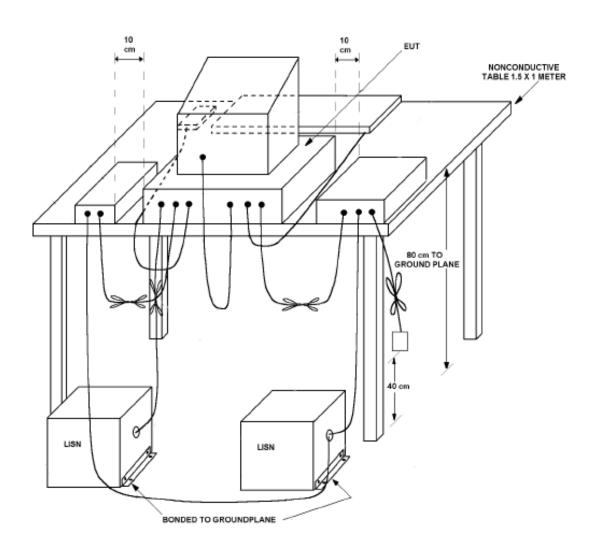
#### 5.2 Test Procedures

- a. The EUT warm up about 15 minutes then start test.
- The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- Connect EUT to the power mains through a line impedance stabilization network (LISN).
- d. All the support units are connect to the other LISN.
- e. The LISN provides 50 ohm coupling impedance for the measuring instrument.
- f. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
- Both sides of AC line were checked for maximum conducted interference.
- The frequency range from 150 kHz to 30 MHz was searched.
- Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

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## 5.3 Typical Test Setup Layout of Conducted Powerline



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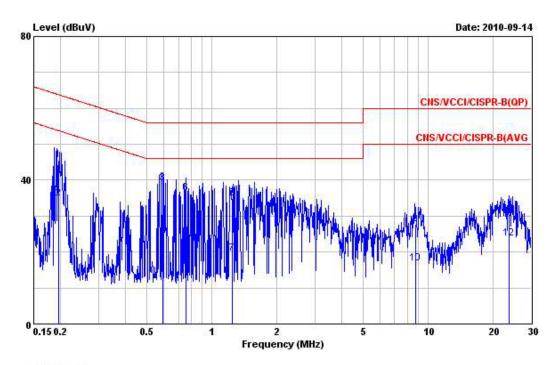


#### 5.4 Test Result of AC Powerline Conducted Emission

Test Mode	Mode 1	Temperature	<b>27</b> ℃
Test Engineer	Wilson Ye	Humidity	55%

Note: Corrected Reading ( $dB\mu V$ ) = LISN Factor + Cable Loss + Read Level = Level

#### ■ The test was passed at the minimum margin that marked by the frame in the following data



Site : LK\_CO01 Condition : LISN\_98087\_20091008 LINE

: RTC-1000 AS EUT

MODEL

POWER :120VAC/60Hz MEMO : CPU:N270 1.6 GHz

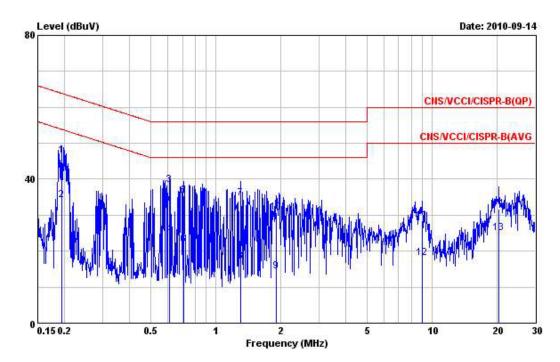
: D-Sub:1024\*600 60Hz/LAN:100M

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
100	MHz	dBuV	dB	dBuV	dBuV	dB	dB	10
1	0.195	45.52	-18.29	63.81	45.35	0.16	0.01	QP
2	0.195	35.03	-18.78	53.81	34.86	0.16	0.01	Average
3	0.595	39.14	-16.86	56.00	38.91	0.18	0.05	QP
4	0.595	23.03	-22.97	46.00	22.80	0.18	0.05	Average
5	0.759	19.23	-26.77	46.00	18.98	0.18	0.07	Average
6	0.759	36.41	-19.59	56.00	36.16	0.18	0.07	QP
7	1.240	19.67	-26.33	46.00	19.39	0.19	0.09	Average
8	1.240	34.89	-21.11	56.00	34.61	0.19	0.09	QP
9	8.775	27.84	-32.16	60.00	27.14	0.45	0.25	QP
10	8.775	16.95	-33.05	50.00	16.25	0.45	0.25	Average
11	23.760	30.37	-29.63	60.00	28.86	1.08	0.43	QP
12	23.760	23.85	-26.15	50.00	22.34	1.08	0.43	Average

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Site : LK\_CO01 Condition : LISN\_98087\_20091008 NEUTRAL

: RTC-1000 AS EUT

MODEL:

POWER : 120VAC/60Hz MEMO : CPU:N270 1.6GHz

: D-Sub:1024\*600 60Hz/LAN:100M

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
i e	MHz	dBuV	dB	dBuV	dBuV	dB	dB	ē <u>20</u>
1	0.193	46.61	-17.30	63.91	46.38	0.22	0.01	QP
2	0.193	34.23	-19.68	53.91	34.00	0.22	0.01	Average
3	0.611	38.49	-17.51	56.00	38.22	0.22	0.05	QP
4	0.611	24.52	-21.48	46.00	24.25	0.22	0.05	Average
5	0.708	35.54	-20.46	56.00	35.26	0.22	0.06	QP
6	0.708	21.85	-24.15	46.00	21.57	0.22	0.06	Average
7	1.300	34.56	-21.44	56.00	34.22	0.24	0.10	QP
8	1.300	16.99	-29.01	46.00	16.65	0.24	0.10	Average
9	1.900	14.34	-31.66	46.00	13.96	0.26	0.12	Average
10	1.900	30.75	-25.25	56.00	30.37	0.26	0.12	QP
11	8.960	28.45	-31.55	60.00	27.72	0.48	0.25	QP
12	8.960	18.13	-31.87	50.00	17.40	0.48	0.25	Average
13	20.380	25.01	-24.99	50.00	23.62	1.00	0.39	Average
14	20.380	31.61	-28.39	60.00	30.22	1.00	0.39	QP

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## 5.5 Photographs of Conducted Powerline Test Configuration

• The photographs show the configuration that generates the maximum emission.

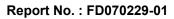


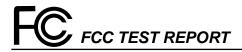
FRONT VIEW



**REAR VIEW** 

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SIDE VIEW

TEL: 886-3-327-3456 FAX: 886-3-318-0055

#### 6. Test of Radiated Emission

Radiated emissions below 1 GHz were measured with a bandwidth of 120 kHz for 30 MHz to 1,000 MHz and bandwidth of 1 MHz for above 1 GHz to 5th harmonic of highest frequency according to the methods defines in ANSI C63.4-2003. The EUT was placed on a nonmetallic stand in the open-field site, 0.8 meter above the ground plane, as shown in section 6.3. The interface cables and equipment positions were varied within limits of reasonable applications to determine the positions producing maximum radiated emissions.

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#### **Major Measuring Instruments**

#### 6.1.1 From 30MHz to 1GHz

 Amplifier (HP 8447D)

RF Gain 25 dB

Signal Input 0.1 MHz - 1.3 GHz

Spectrum Analyzer (ADVANTEST R3261C)

Attenuation 10 dB Start Frequency 30 MHz Stop Frequency 1000 MHz Resolution Bandwidth 120 kHz

9 kHz - 2.6 GHz Signal Input

Test Receiver (R&S ESCS 30)

Resolution Bandwidth 120 kHz

9 kHz - 2.75 GHz Frequency Band

Quasi-Peak Detector ON for Quasi-Peak Mode

OFF for Peak Mode

#### 6.1.2 From 1GHz to 13GHz

Amplifier (Agilent 8449B)

RF Gain 35 dB

Signal Input 1 GHz - 26.5 GHz

Spectrum Analyzer (R&S FSP30)

Attenuation 10 dB Start Frequency 1 GHz Stop Frequency 18 GHz Resolution Bandwidth 1 MHz Video Bandwidth 3 MHz

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#### **6.2 Test Procedures**

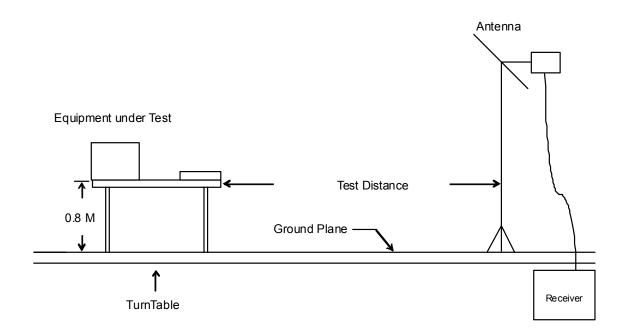
- a. The EUT was placed on a rotatable table top 0.8 meter above ground.
- b. The EUT was set 1/3/10 meters from the interference-receiving antenna which was mounted on the top of a variable height antenna tower.

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- c. The table was rotated 360 degrees to determine the position of the highest radiation.
- d. The antenna is a half wave dipole and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.
- e. For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 M to 4 M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.
- f. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.
- g. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method and reported.
- h. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.



## 6.3 Typical Test Setup Layout of Radiated Emission



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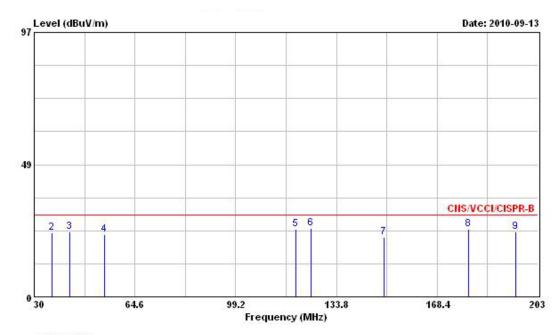
#### 6.4 Test Result of Radiated Emission (Below 1GHz)

Frequency Range of Test	from 30 MHz to 1000 MHz	Test Distance	10m
Test Mode	Mode 1	Temperature	<b>27</b> ℃
Test Engineer	Chi Ming Chu	Humidity	58%

Note: 1. Emission level ( $dB\mu V/m$ ) = 20 log Emission level ( $\mu V/m$ )

2. Corrected Reading: Antenna Factor + Cable Loss + Read Level – Preamp Factor = Level

#### ■ The test was passed at the minimum margin that marked by the frame in the following data



Site : LK-OS05

Condition : CNS/VCCI/CISPR-B 10m VERTICAL

EUT : RTC-1000AS

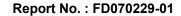
MODEL :

POWER : 120VAC

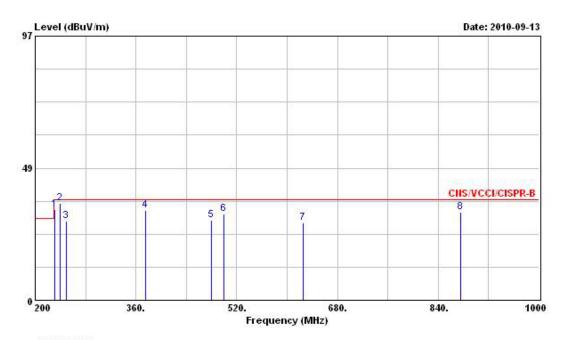
MEMO : CPU N270 1.6 GHz MEMO : D-SUB:1024\*600 60Hz , LAN:100M

			Over	Limit	Read	Antenna	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dВ	dBuV/m	dBuV	dB/m	dВ	dB	2	cm.	deg
10	30.000	26.00	-4.00	30.00	34.60	17.90	0.90	27.40	QP		
2	36.200	23.53	-6.47	30.00	34.70	15.31	0.92	27.40	QP		300000
3	42.200	23.69	-6.31	30.00	38.60	11.49	1.00	27.40	QP		
4	54.130	22.77	-7.23	30.00	41.30	7.76	1.10	27.39	Peak		
5	120.000	24.78	-5.22	30.00	38.40	12.00	1.60	27.22	QP		
6	125.000	25.04	-4.96	30.00	37.90	12.69	1.65	27.20	Peak	0.000	1000
7	150.000	21.90	-8.10	30.00	36.19	10.96	1.85	27.10	Peak		
8	179.130	24.96	-5.04	30.00	40.19	9.66	2.09	26.98	Peak		
9	195 400	23 99	-6 01	30 00	39 60	9 13	2 18	26 92	Deak		

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: LK-OS05 Site

Condition : CNS/VCCI/CISPR-B 10m VERTICAL

EUT : RTC-1000AS

MODEL :

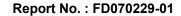
POWER : 120VAC

MEMO

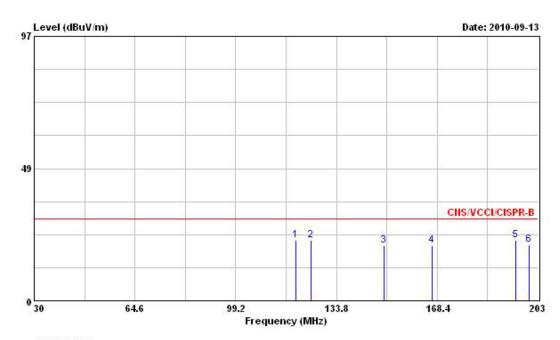
: D-SUB:1024\*600 60Hz , LAN:100M MEMO

			0ver	Limit	Read	Antenna	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
42	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	2	cm	deg
10	230.690	33.20	-3.80	37.00	46.21	11.45	2.38	26.84	Peak		
2 @	240.000	35.66	-1.34	37.00	47.90	12.14	2.44	26.82	QP	100	62
3	250.000	29.14	-7.86	37.00	40.46	12.98	2.50	26.80	Peak	2522	0.00
4	375.000	32.90	-4.10	37.00	41.31	15.72	3.10	27.23	Peak		
5	480.000	29.40	-7.60	37.00	35.60	18.08	3.60	27.88	Peak		
6	500.000	31.71	-5.29	37.00	37.60	18.51	3.60	28.00	Peak		1000
7	625.000	28.35	-8.65	37.00	31.20	20.70	4.45	28.00	Peak		
8	875.000	32.19	-4.81	37.00	30.60	23.59	5.75	27.75	Peak		

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: LK-OS05 Site

Condition : CNS/VCCI/CISPR-B 10m HORIZONTAL

**EUT** : RTC-1000AS

MODEL:

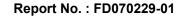
POWER : 120VAC

MEMO : CPU N270 1.6 GHz

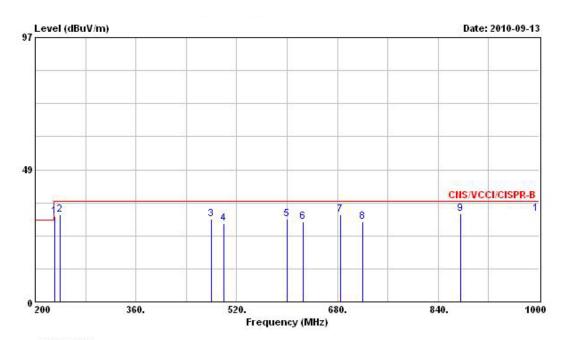
MEMO : D-SUB:1024\*600 60Hz , LAN:100M

	Freq	Level	Over Limit	201000		Antenna Factor			Remark	Ant Pos	Table Pos
÷	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB			cm.	deg
1	120.000	22.21	-7.79	30.00	35.83	12.00	1.60	27.22	Peak		
2	125.000	22.14	-7.86	30.00	35.00	12.69	1.65	27.20	Peak		30000
3	150.000	20.30	-9.70	30.00	34.59	10.96	1.85	27.10	Peak		
4	166.670	20.29	-9.71	30.00	35.19	10.16	1.97	27.03	Peak		
5	195.400	22.19	-7.81	30.00	37.80	9.13	2.18	26.92	Peak		
6	200.000	20.57	-9.43	30.00	36.26	9.01	2.20	26.90	Peak	(57.7.7)	AGE 118

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Site : LK-OS05

Condition : CNS/VCCI/CISPR-B 10m HORIZONTAL

**EUT** : RTC-1000AS

MODEL :

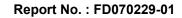
POWER :120VAC

MEMO : CPU N270 1.6 GHz

MEMO : D-SUB:1024\*600 60Hz , LAN:100M

			Over	Limit	Read	Antenna	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dВ	dBuV/m	dBuV	dB/m	<u>ав</u>	dB	2	cm.	deg
1	230.660	31.20	-5.80	37.00	44.21	11.45	2.38	26.84	Peak		
2	240.000	31.96	-5.04	37.00	44.20	12.14	2.44	26.82	QP		100000
3	480.000	30.40	-6.60	37.00	36.60	18.08	3.60	27.88	Peak		
4	500.000	28.71	-8.29	37.00	34.60	18.51	3.60	28.00	Peak		
5	600.000	30.26	-6.74	37.00	33.40	20.66	4.20	28.00	Peak		
6	625.000	29.35	-7.65	37.00	32.20	20.70	4.45	28.00	Peak		1000
7	684.700	31.91	-5.09	37.00	34.40	20.81	4.70	28.00	Peak		
8	720.000	29.49	-7.51	37.00	31.41	21.24	4.82	27.98	Peak		
9	875.000	32.40	-4.60	37.00	30.81	23.59	5.75	27.75	Peak	-	
10	1000.000	32.21	-4.79	37.00	28.20	24.81	6.60	27.40	Peak		

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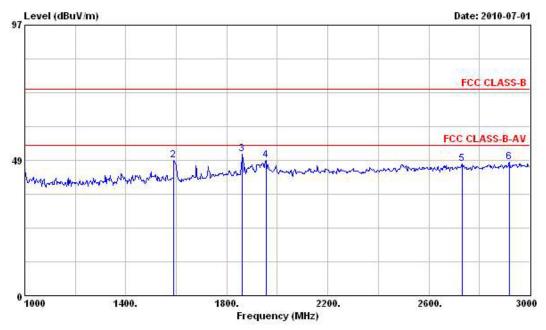
#### 6.5 Test Result of Radiated Emission (Above 1GHz)

Frequency Range of Test	From 1000MHz to 13000MHz	Test Distance	1m/3m
Test Mode	Mode 1	Temperature	<b>21</b> ℃
Test Engineer	Daniel Hsu	Humidity	57%

Note: 1. Emission level ( $dB\mu V/m$ ) = 20 log Emission level ( $\mu V/m$ )

2. Corrected Reading: Antenna Factor + Cable Loss + Read Level – Preamp Factor = Level

#### ■The test was passed at the minimum margin that marked by the frame in the following data



Site : 03CH02-HY

Condition : FCC CLASS-B 3m HORN-3117-091126-V VERTICAL

eut

model : RTC-1000AS

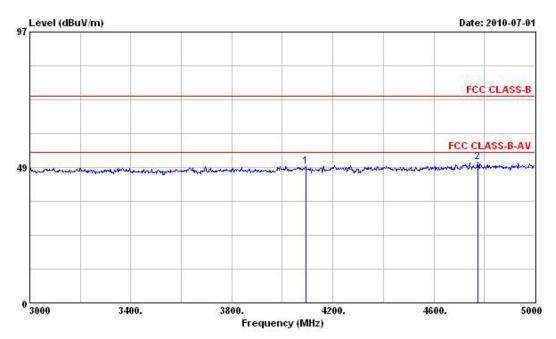
тето : тето :

	Freq	Level	Over Limit	Limit Line		Antenna Factor			Remark
7	MKz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	1000.000	44.82	-29.18	74.00	50.98	26.90	1.80	34.86	Peak
2	1590.000	48.52	-25.48	74.00	51.68	28.68	2.36	34.20	Peak
3 @	1862.000	50.82	-23.18	74.00	52.05	29.96	2.59	33.78	Peak
4	1956.000	48.53	-25.47	74.00	49.14	30.36	2.69	33.66	Peak
5	2732.000	47.21	-26.79	74.00	45.37	32.77	3.24	34.17	Peak
6	2918.000	47.77	-26.23	74.00	45.39	33.07	3.37	34.06	Peak

 SPORTON International Inc.
 Page No.
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 TEL: 886-3-327-3456
 Issued Date
 : Oct. 20, 2010





: 03CH02-HY

Condition : FCC CLASS-B 3m HORN-3117-091126-V VERTICAL

eut

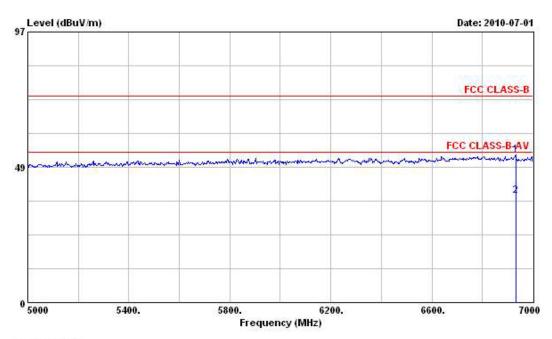
model : RTC-1000AS

тето тето

			Over	Limit	Readi	Antenna	Cable	Preamp		
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	-	10
1	4092.000	48.95	-25.05	74.00	45.03	34.32	4.18	34.58	Peak	
2	4774.000	50.52	-23.48	74.00	45.47	35.08	4.55	34.58	Peak	

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: 03CH02-HY Site

Condition : FCC CLASS-B 3m HORN-3117-091126-V VERTICAL 0cm 0deg

eut

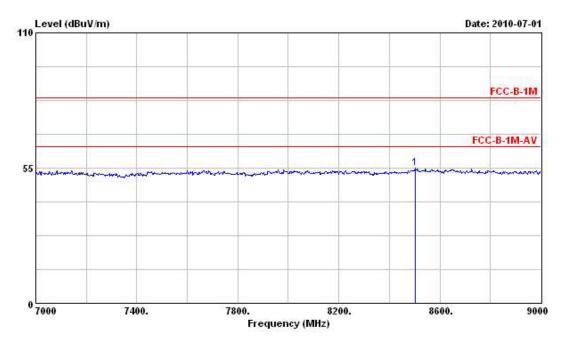
: RTC-1000AS model

тето тето

				Over	Limit	Read	Antenna	Cable	Preamp		
		Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	
	MHz	z dBuV/m	dB	dBuV/m	dBuV	dB/m	₫В	dB		Ŧ,	
1	9 693	2.000	53.11	-20.89	74.00	45.05	36.76	5.58	34.28	Peak	
2	9 693	2.000	38.33	-15.67	54.00	30.27	36.76	5.58	34.28	Average	

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: 03CH02-HY

Condition : FCC-B-1M 1m HORN-3117-1M VERTICAL

eut

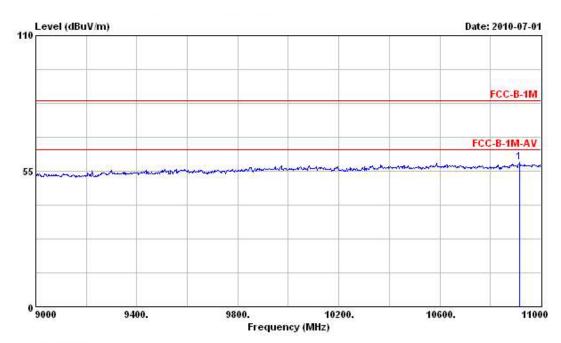
model : RTC-1000AS

тето : тето

Over Limit ReadAntenna Cable Preamp Freq Level Limit Line Level Factor Loss Factor Remark MHz dBuV/m dB dBuV/m dBuV dB/m 1 8502.000 55.04 -28.50 83.54 44.80 38.50 5.94 34.20 Peak

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: 03CH02-HY Site

Condition : FCC-B-1M 1m HORN-3117-1M VERTICAL

model : RTC-1000AS

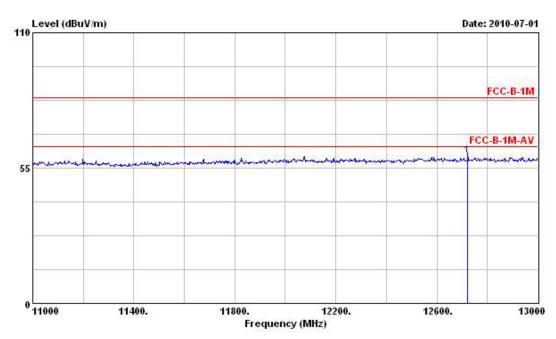
тето тето

Over Limit ReadAntenna Cable Preamp Freq Level Limit Line Level Factor Loss Factor Remark dB MHz dBuV/m dB dBuV/m dBuV dB/m dB 1 10916.000 58.53 -25.01 83.54 44.55 40.35 7.12 33.49 Peak

SPORTON International Inc.

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: 03CH02-HY Site

Condition : FCC-B-1M 1m HORN-3117-1M VERTICAL

eut

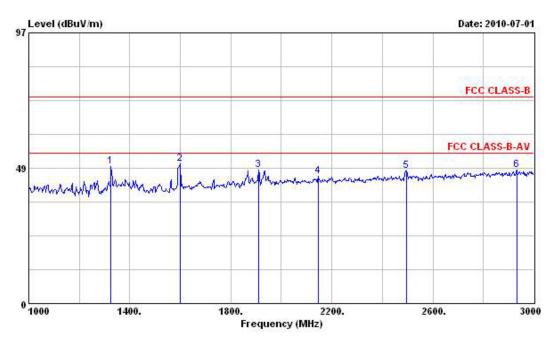
: RTC-1000AS model

тето тето

> Over Limit ReadAntenna Cable Preamp Freq Level Limit Line Level Factor Loss Factor Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB 1 12722.000 60.15 -23.39 83.54 44.88 41.40 6.99 33.12 Peak

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: 03CH02-HY

Condition : FCC CLASS-B 3m HORN-3117-091126-H HORIZONTAL

eut

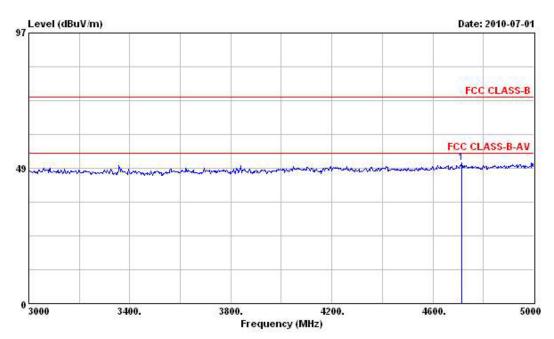
: RTC-1000AS model

тето : тето

		0ver		Limit ReadAntenna		Cable	Preamp		
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
		MHz dBuV/m		dBuV/m	BuV/m dBuV		dB	dB	£
1	1326.000	49.16	-24.84	74.00	54.20	27.36	2.11	34.51	Peak
2	1598.000	50.13	-23.87	74.00	53.93	28.04	2.36	34.20	Peak
3	1910.000	47.82	-26.18	74.00	49.15	29.75	2.62	33.70	Peak
4	2148.000	45.67	-28.33	74.00	45.84	30.82	2.81	33.80	Peak
5	2494.000	47.52	-26.48	74.00	46.55	32.20	3.08	34.31	Peak
6	2932 000	47 80	-26 20	74 00	45 22	33 24	3 39	34 05	Dook

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: 03CH02-HY

Condition : FCC CLASS-B 3m HORN-3117-091126-H HORIZONTAL

eut

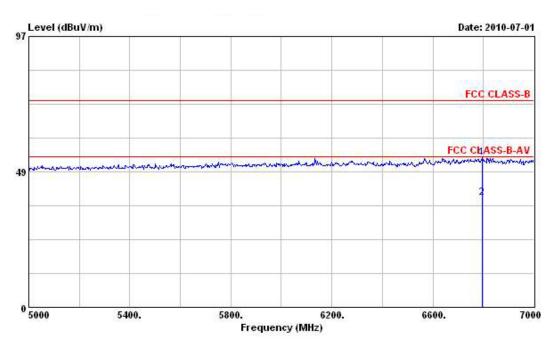
: RTC-1000AS model

тето : тето

			0ver	Limit	Readi	Antenna	Cable	Preamp	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4716.000	50.48	-23.52	74.00	45.03	35.61	4.48	34.64	Peak

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: 03CH02-HY Site

Condition : FCC CLASS-B 3m HORN-3117-091126-H HORIZONTAL

eut

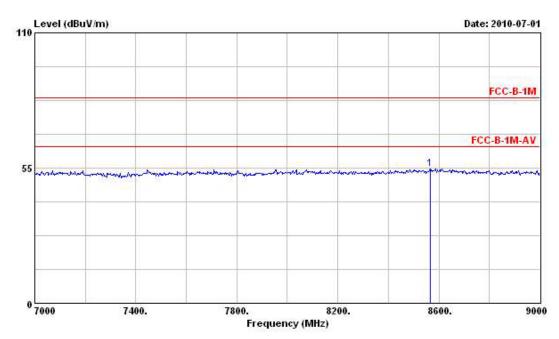
model : RTC-1000AS

тето : тето

			0ver		ReadAntenna		Cable	Preamp	
	Freq	Level	Limit		Level	Factor	Loss	Factor	Remark
Ä	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1 @	6796.000	53.58	-20.42	74.00	44.63	37.68	5.56	34.29	Peak
2 @	6796.000	39.36	-14.64	54.00	30.41	37.68	5.56	34.29	Average

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: 03CH02-HY

Condition : FCC-B-1M 1m HORN-3117-1M HORIZONTAL

eut

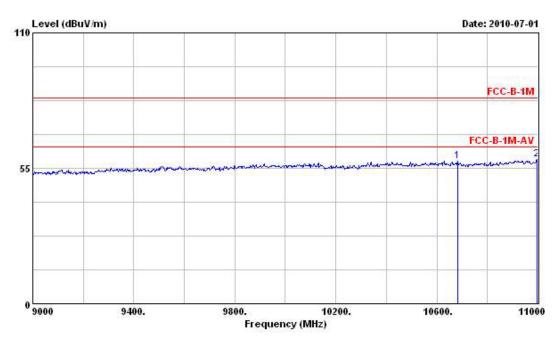
model : RTC-1000AS

тето : тето

Over Limit ReadAntenna Cable Preamp Freq Level Limit Line Level Factor Loss Factor Remark MHz dBuV/m dB dBuV/m dBuV dB/m 1 8566.000 54.75 -28.79 83.54 44.61 38.45 5.97 34.28 Peak

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: 03CH02-HY

: FCC-B-1M 1m HORN-3117-1M HORIZONTAL Condition

eut

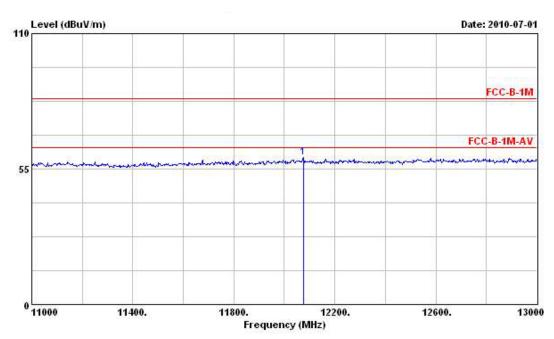
: RTC-1000AS model

тето : тето

			0ver	Limit	imit ReadA	Antenna	Cable	Preamp	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dВ	dB	
1	10684.000	58.05	-25.49	83.54	44.66	40.21	6.96	33.78	Peak
2	10996.000	58.46	-25.08	83.54	44.28	40.40	7.17	33.39	Peak

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: 03CH02-HY Site

Condition : FCC-B-1M 1m HORN-3117-1M HORIZONTAL

model : RTC-1000AS

тето тето

	Freq		0ver	Limit	ReadAntenna		Cable	Preamp	
		Freq Level Limi	Limit	Line	Level	Factor	Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	ав	dB	
1	12076.000	59.68	-23.86	83.54	45.61	40.90	6.66	33.49	Peak

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## 6.6 Photographs of Radiated Emission Test Configuration

• The photographs show the configuration that generates the maximum emission.



FRONT VIEW



**REAR VIEW** 

# 7. List of Measuring Equipment Used

### < Conducted Emission >

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Receiver	R&S	ESCS 30	838251/003	9 kHz - 2.75 GHz	Apr. 16, 2010	Conduction (CO01-LK)
LISN	Rolf Heine	NNB-2/16Z	99081	9 kHz - 30 MHz	Jan. 27, 2010	Conduction (CO01-LK)
RF Cable-CON	Suhner Switzerland	RG223/U	CB017	9 kHz - 30 MHz	Nov. 04, 2009	Conduction (CO01-LK)
Impedance Stabilization Network	TESEQ GMBH	T400A	24853	9kHz –30MHz	Nov. 09, 2009	Conduction (CO01-LK)
Receiver	R&S	ESCS 30	838251/003	9 kHz - 2.75 GHz	Apr. 16, 2010	Conduction (CO01-LK)

Report No.: FD070229-01

### < Radiated Emission below 1GHz >

Tradition Emission Solow Total								
Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark		
Open Area Test Site	SPORTON	OATS-10	OS05-LK	30 MHz - 1 GHz 10m, 3m	Aug. 14, 2010	Radiation (OS05-LK)		
Amplifier	HP	8447D	2944A08242	0.1 MHz - 1.3 GHz	Jun. 15, 2010	Radiation (OS05-LK)		
Spectrum Analyzer	Advantest	R3261C	71720606	9 kHz – 2.6GHz	Apr. 26, 2010	Radiation (OS05-LK)		
Receiver	R&S	ESCS 30	100168	9 kHz - 2.75 GHz	Oct. 21, 2009	Radiation (OS05-LK)		
Bilog Antenna	SCHAFFNER	CBL6111C	2743	30 MHz - 1GHz	May 15, 2010	Radiation (OS05-LK)		
Antenna Mast	EMCO	2075	9806-2160	1m - 4m	N/A	Radiation (OS05-LK)		
Turn Table	EMCO	2080	9806-2070	0° - 360°	N/A	Radiation (OS05-LK)		
RF Cable-R10m	BELDEN	RG8/U	CB013	30 MHz - 1 GHz	Jan. 25, 2010	Radiation (OS05-LK)		
RF Cable-R03m	BELDEN	RG8/U	CB014	30 MHz - 1 GHz	Jan. 25, 2010	Radiation (OS05-LK)		

 $<sup>\</sup>ensuremath{\,\times\,}$  Calibration Interval of instruments listed above is one year.

### < Radiated Emission above 1GHz >

Instrument			Serial No.	Characteristics	Calibration Date	Remark			
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH02-HY	30 MHz - 1 GHz 3m	May 01, 2010	Radiation (03CH02-HY)			
Spectrum Analyzer	R&S	FSP30	100792	9 kHz – 30GHz	Apr. 01, 2010	Radiation			
Amplifier	Agilent	8449B	3008A02326	1GHz – 26.5 GHz	Feb. 26, 2010	Radiation			
RF Cable-HIGH	SUHNER	SUCOFLEX 106	CB063-HF	1 GHz - 40 GHz	Nov. 25, 2009	Radiation			
Horn Antenna	ETS	3117	00091920	1GHz ~ 18GHz	Oct. 22, 2009	Radiation			

 $<sup>\</sup>ensuremath{\,\times\,}$  Calibration Interval of instruments listed above is one year.

 SPORTON International Inc.
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Calibration Interval of instruments listed above is one year.



## 8. TAF Certificate of Accreditation



Certificate No.: L1190-100529

Report No.: FD070229-01

# Taiwan Accreditation Foundation

### Certificate of Accreditation

This is to certify that

### Sporton International Inc.

#### **EMC & Wireless Communications Laboratory**

No.52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

### is accredited in respect of laboratory

Accreditation Criteria : ISO/IEC 17025:2005

Accreditation Number

Originally Accredited : December 15, 2003

Effective Period : January 10, 2010 to January 09, 2013

Accredited Scope : Testing Field, see described in the Appendix

Specific Accreditation : Accreditation Program for Designated Testing Laboratory

for Commodities Inspection Program

Accreditation Program for Telecommunication Equipment

Testing Laboratory

Accreditation Program for BSMI Mutual Recognition

Arrangment with Foreign Authorities

Jay-San Chen

President, Taiwan Accreditation Foundation

y-san Chen

Date: May 29, 2010

P1, total 23 pages

The Appendix forms an integral part of this Certificate, which shall be invalid when use without the Appendix

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FAX: 886-3-318-0055





# APPENDIX A. Photographs of EUT





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ISSUED DATE : Oct. 20, 2010







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ISSUED DATE : Oct. 20, 2010









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ISSUED DATE : Oct. 20, 2010











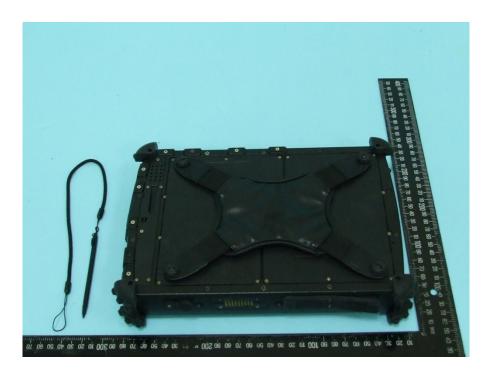


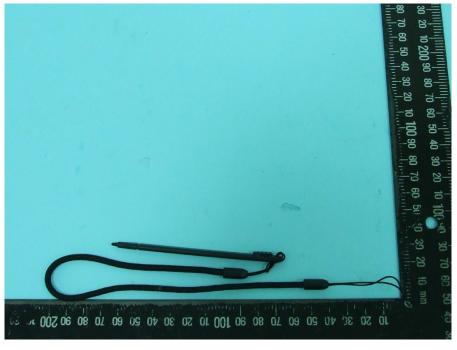


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ISSUED DATE : Oct. 20, 2010



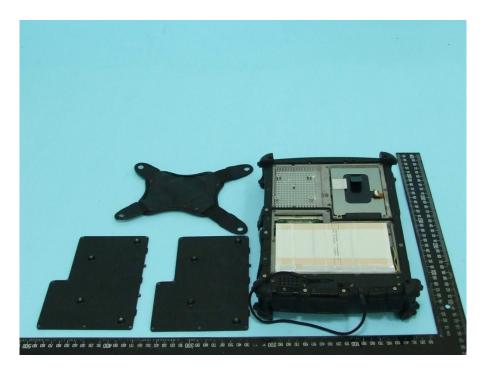






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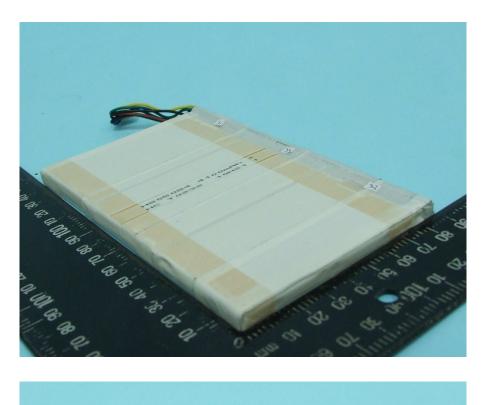


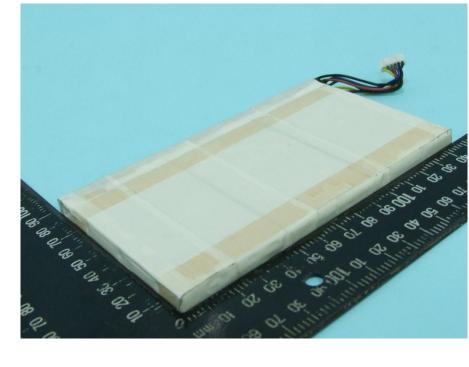






















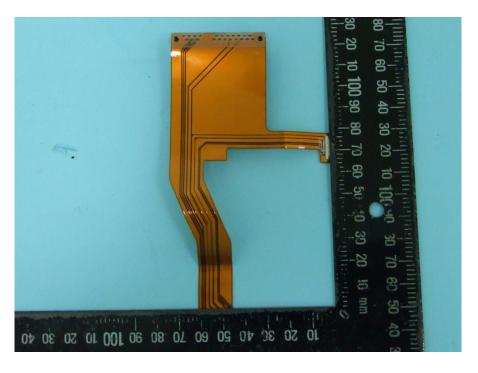


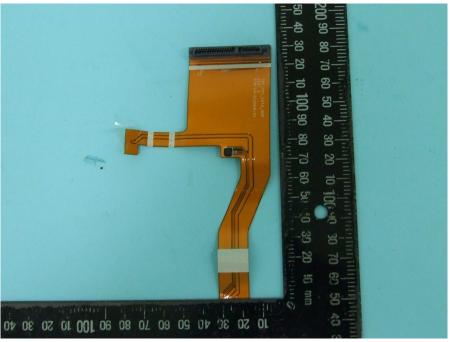


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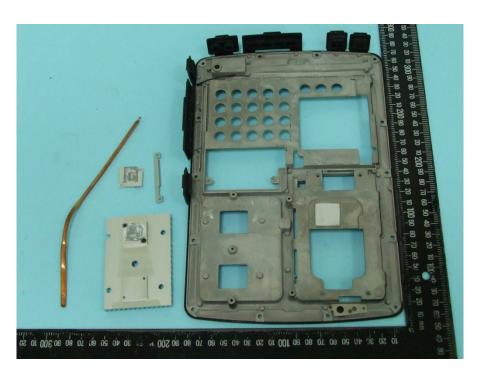






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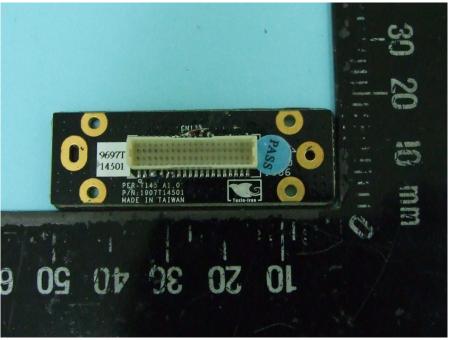




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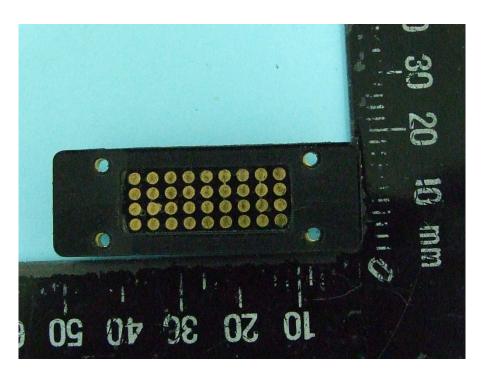




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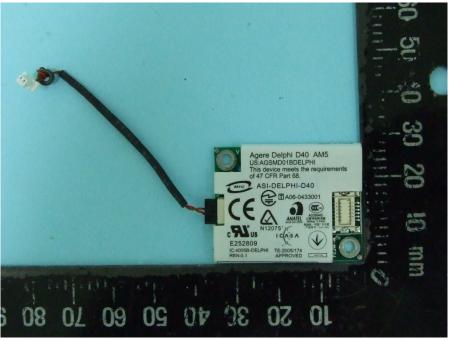












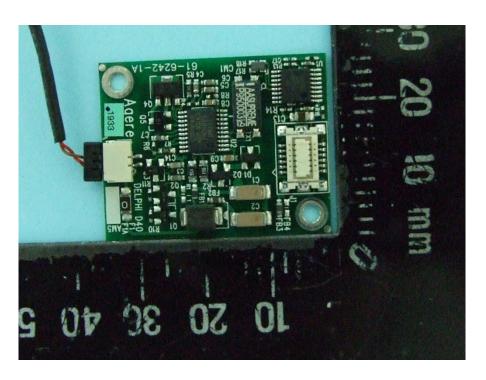


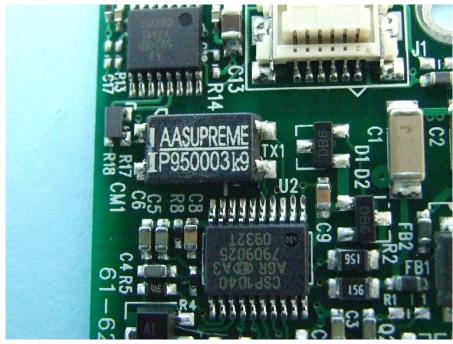




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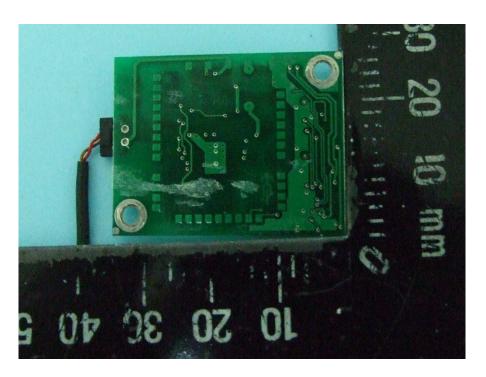


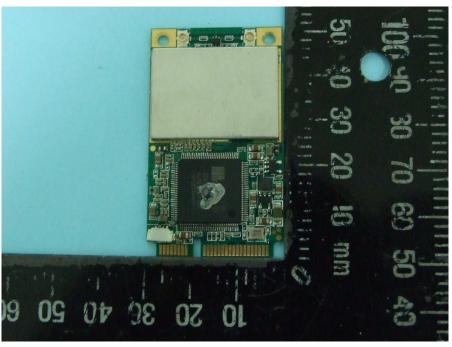




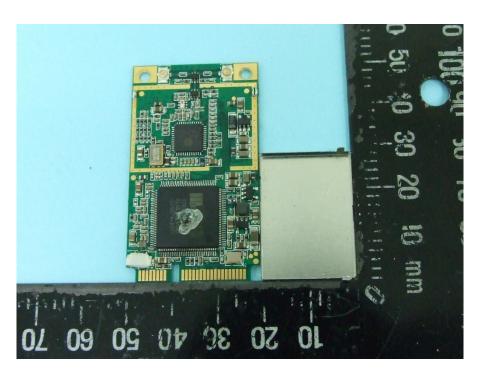








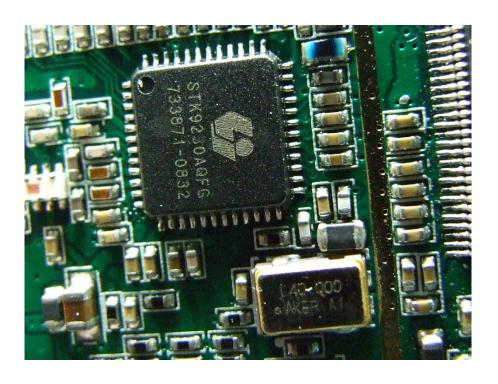






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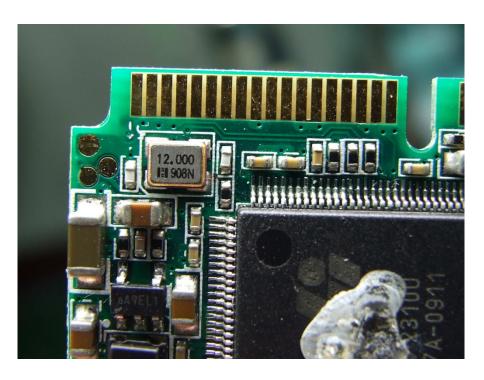




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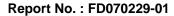
TEL: 886-3-327-3456 FAX: 886-3-318-0055 PAGE NUMBER : A22 OF A57 ISSUED DATE : Oct. 20, 2010



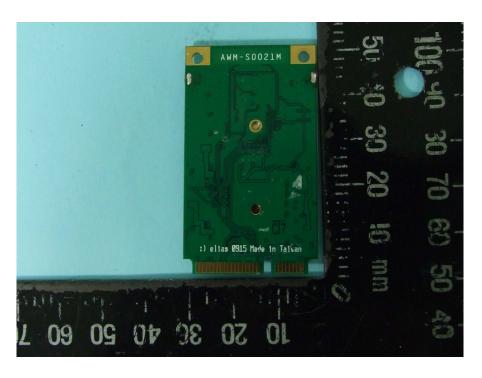




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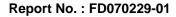






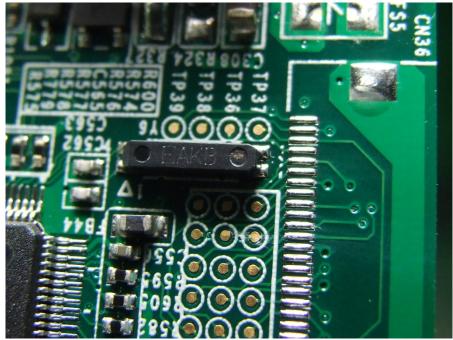






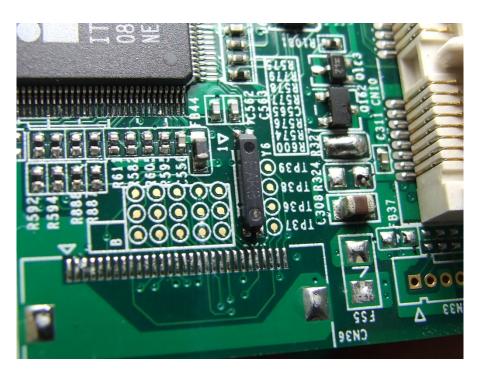


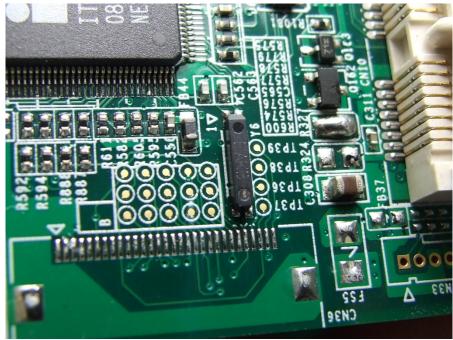




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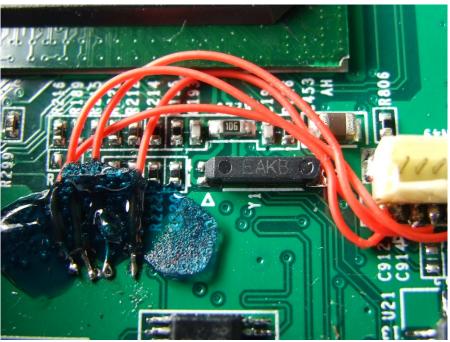




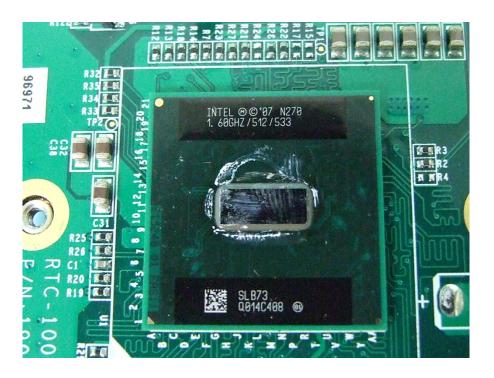
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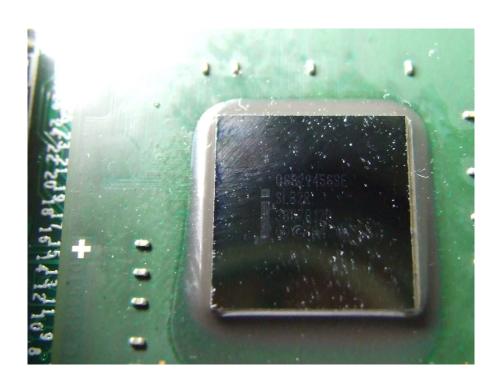












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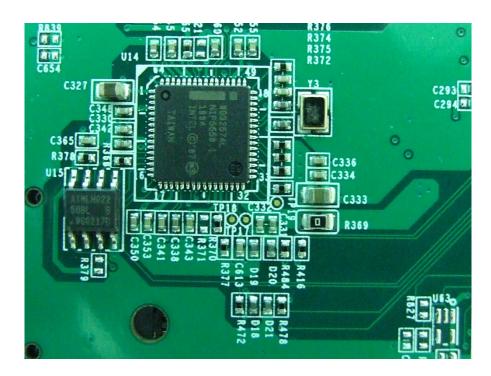


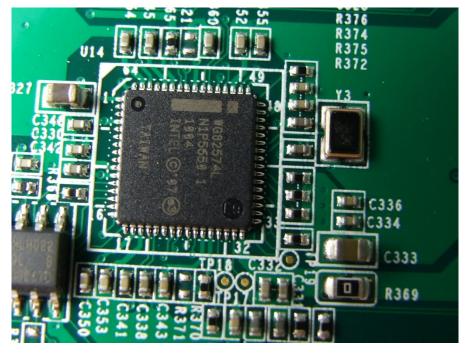




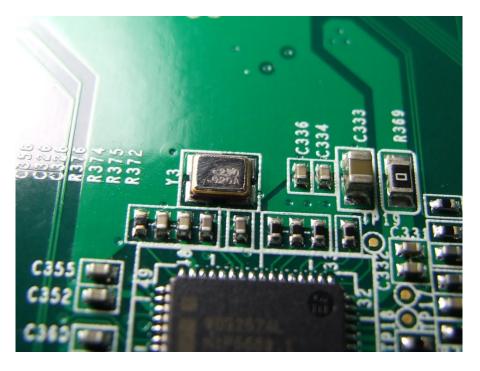
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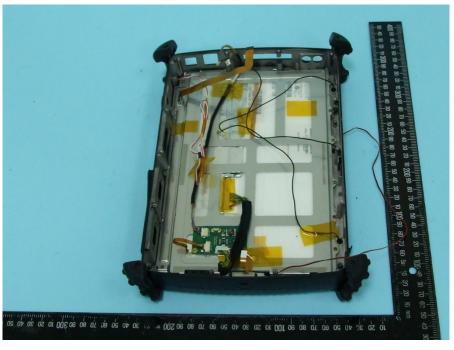




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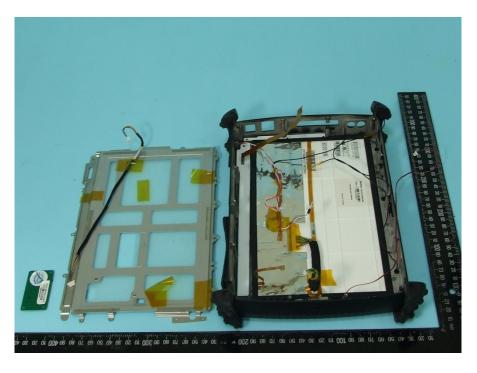


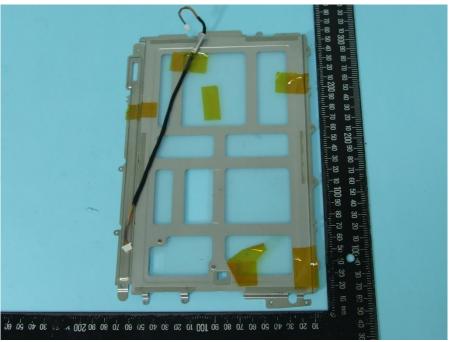




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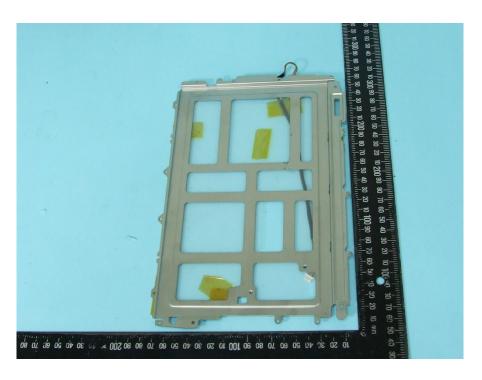


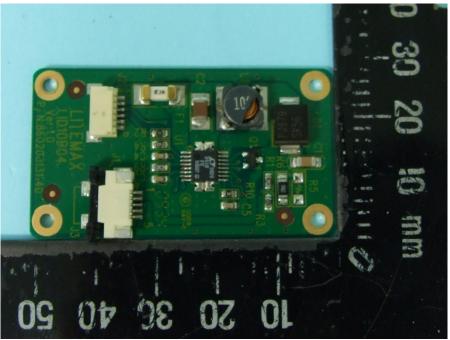




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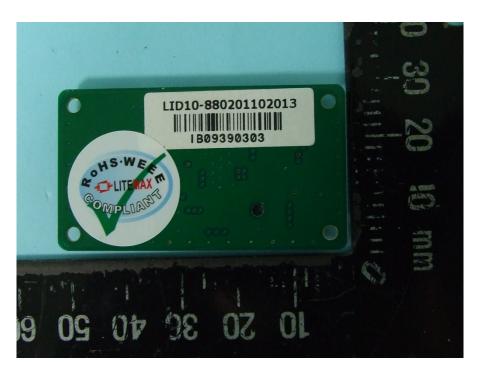


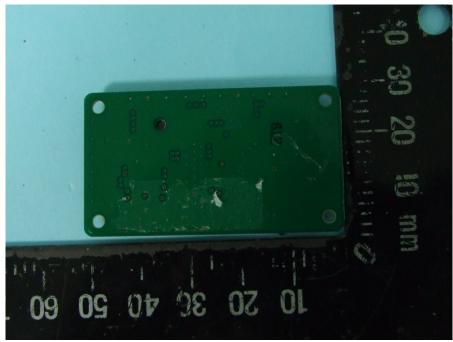


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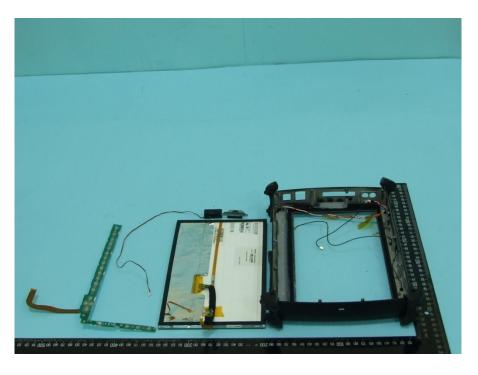


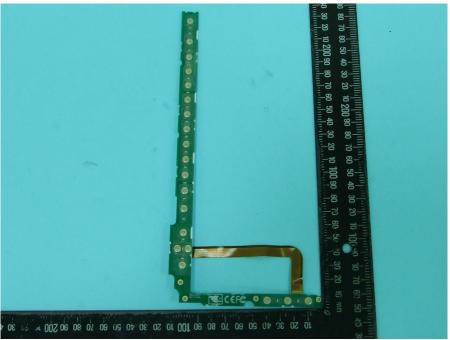




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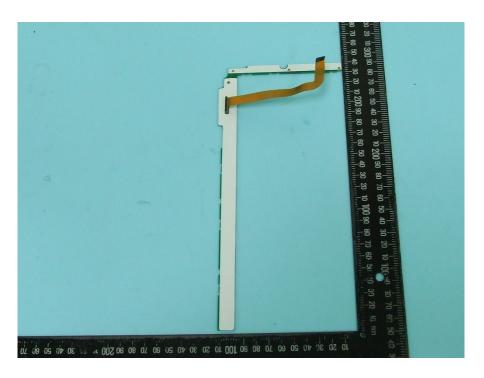


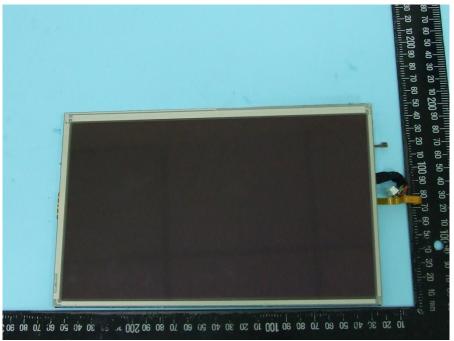


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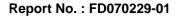








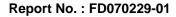
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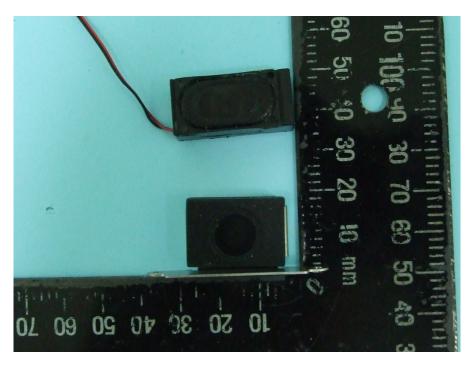


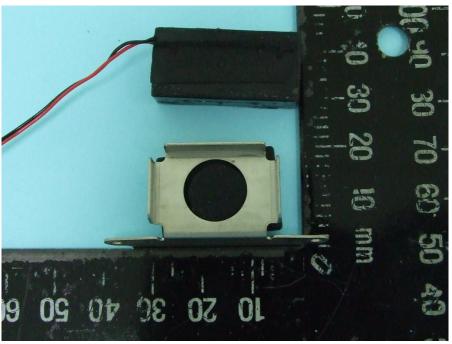




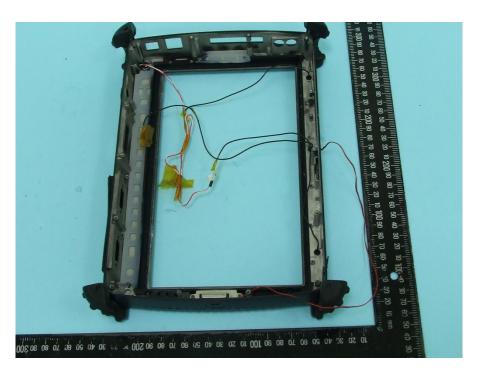








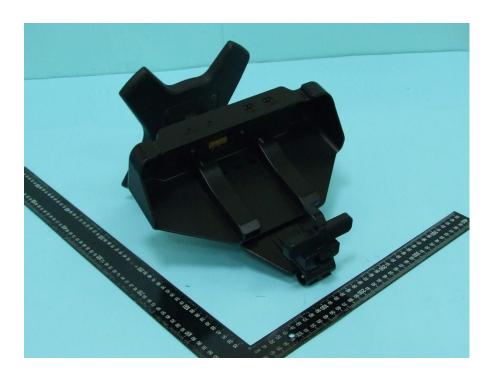






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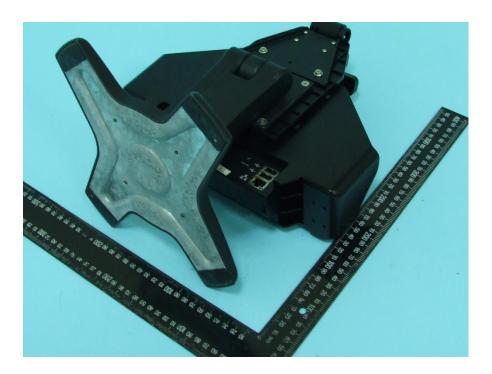


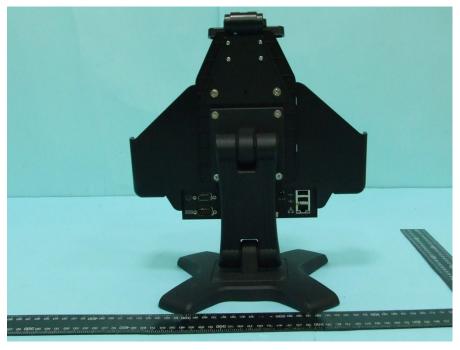


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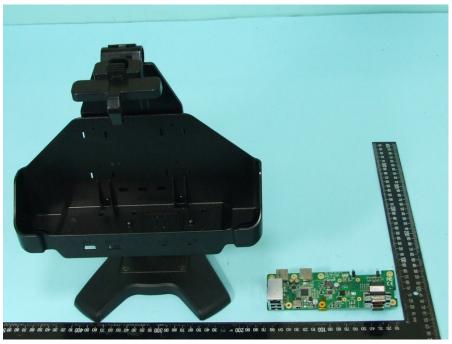




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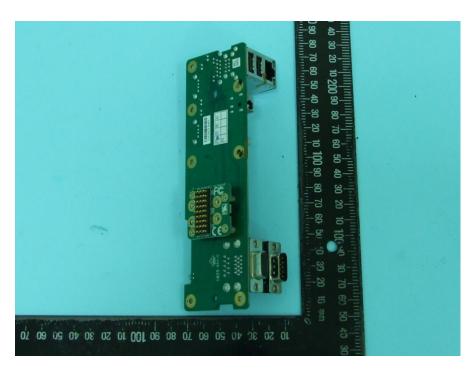
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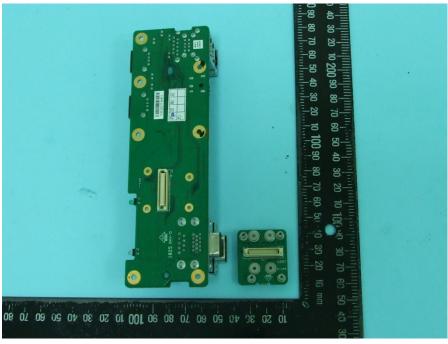






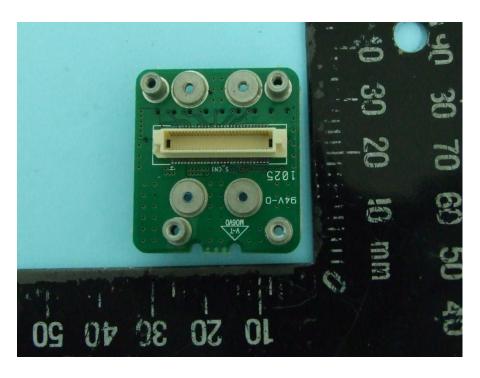


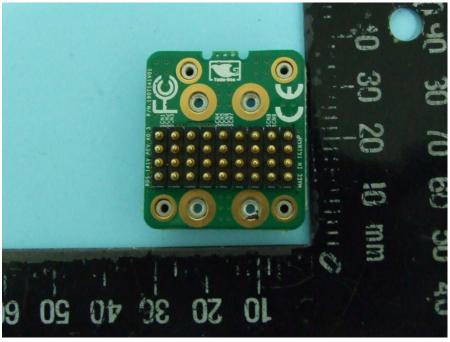






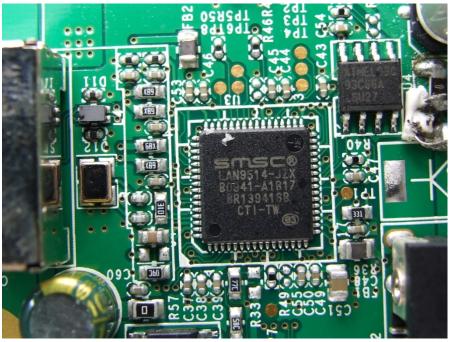




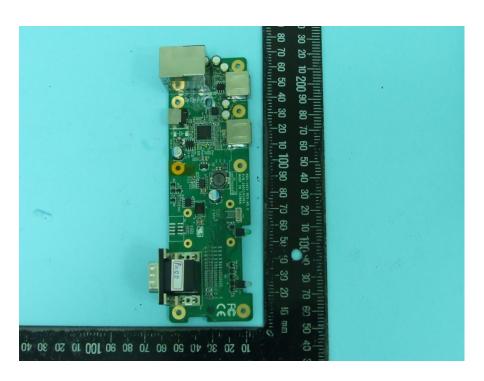


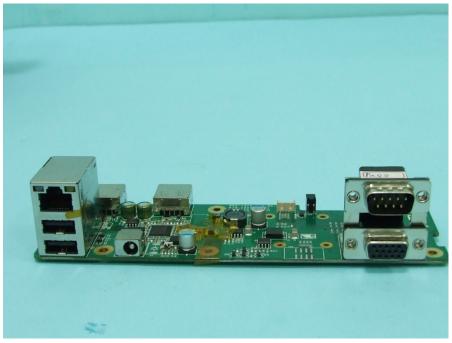








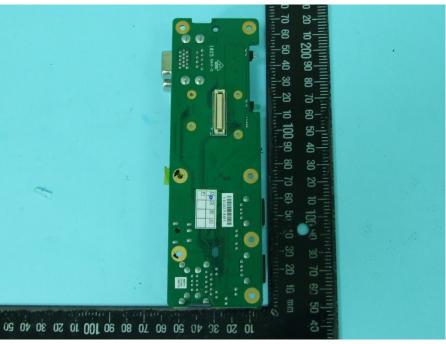






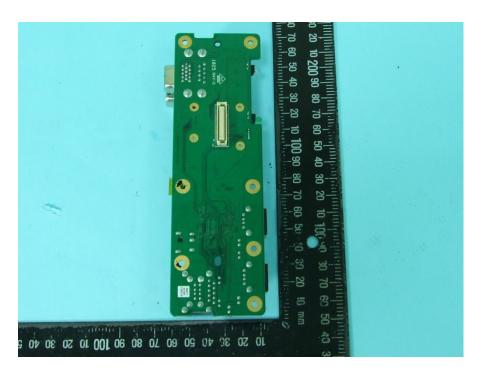


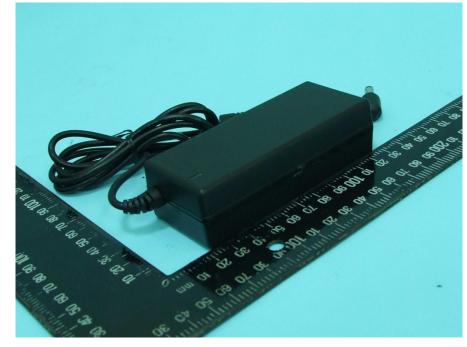




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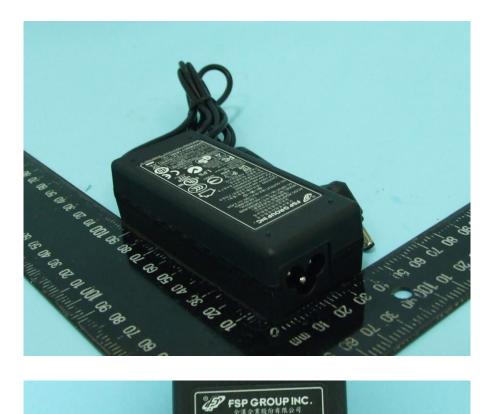






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