

Certificate No: FD402416

# CATE 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.

: xxxRTC-900B-WBGHxxx-xxxx

1. xxx=TF-(TF: Toxic Free) or blank

2. xxx is for marketing purpose

3. xxxx=SW revision, ex: 1110=rev1, x:0~9

APPLICANT : AAEON Technology Inc.

5F. No. 135, Lane 235, Pao Chiao Rd.,

Hsin-Tien Dist., New Taipei City,

Taiwan, R.O.C





#### **CERTIFY THAT:**

The equipment is in accordance with the procedures are given in ANSI C63.4-2009 and the energy emitted by this equipment was Passed CISPR PUB. 22 and FCC Part 15 Subpart B in both radiated and conducted emissions Class B limits. The test was carried out on Nov. 19, 2014 SPORTON INTERNATIONAL INC. LAB.

Kero Kuo

**Assistant Manager** 



Report No.: FD4O2416

## **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 and Canada Standard ICES-003 Issue 5

Equipment : Rugged Tablet Computer

Model No. : xxxRTC-900B-WBGHxxx-xxxx

xxx=TF-(TF: Toxic Free) or blank
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Filing Type : Declaration of Conformity

Applicant: AAEON Technology Inc.

5F, No. 135, Lane 235, Pao Chiao Rd.,

Hsin-Tien Dist., New Taipei City,

Taiwan, R.O.C

- The test result refers exclusively to the test presented test model / sample.
- Without written approval of SPORTON International Inc., the test report shall not be reproduced except in full.
- Certificate or Test Report must not be used by the applicant to claim the product in this test report endorsement by TAF or 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.

TEL: 886-3-327-3456 FAX: 886-3-327-0973



## **Table of Contents**

History of this test report	ii
CERTIFICATE OF COMPLIANCE	1
1. General Description of Equipment under Test	2
1.1 Applicant	
1.2 Manufacturer	2
1.3 Basic Description of Equipment under Test	2
1.4 Feature of Equipment under Test	2
2. Test Configuration of Equipment under Test	3
2.1 Test Manner	3
2.2 Description of Test System	
2.3 Connection Diagram of Test System for Conducted Emission Test	
2.4 Connection Diagram of Test System for Radiation Emission	6
3. Test Software	7
4. General Information of Test	8
4.1 Test Facility	8
4.2 Uncertainty of Test Site	8
4.3 Test Voltage	8
4.4 Standard for Methods of Measurement	_
4.5 Test in Compliance with	8
4.6 Frequency Range Investigated:	
4.7 Test Distance	8
5. Test of Conducted Powerline	
5.1 Test Procedures	
5.2 Typical Test Setup Layout of Conducted Powerline	
5.3 Test Result of AC Powerline Conducted Emission	
5.4 Photographs of Conducted Power line Test Configuration	13
6. Test of Radiated Emission	15
6.1 Test Procedures	
6.2 Typical Test Setup Layout of Radiated Emission	
6.3 Test Result of Radiated Emission (Below 1GHz)	
6.4 Photographs of Radiated Emission (Below 1GHz) Test Configuration	
6.5 Test Result of Radiated Emission (Above 1GHz)	
6.6 Photographs of Radiated Emission (Above 1GHz) Test Configuration	
7. List of Measuring Equipment Used	25
8. Modification of EUT	27
Annendix A Photographs of FIIT	A1 - A17

TEL: 886-3-327-3456 FAX: 886-3-327-0973 Issued Date : Jan. 07, 2014

## History of this test report

Original Report Issue Date: Jan. 07, 2014

- No additional attachment.
- □ Additional attachment were issued as following record:

Report No.	Issue Date	Description

TEL: 886-3-327-3456 FAX: 886-3-327-0973 Issued Date : Jan. 07, 2014

Report No.: FD4O2416



Report No. : FD4O2416

Certificate No. : FD4O2416

## CERTIFICATE OF COMPLIANCE

Authorized under Declaration of Conformity

according to

47 CFR FCC Rules and Regulations Part 15 Subpart B, Class B Digital Device and Canada Standard ICES-003 Issue 5

**Equipment**: Rugged Tablet Computer

Model No. : xxxRTC-900B-WBGHxxx-xxxx

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3. xxxx=SW revision, ex: 1110=rev1, x:0~9

Applicant : AAEON Technology Inc.

5F, No. 135, Lane 235, Pao Chiao Rd.,

Hsin-Tien Dist., New Taipei City,

Taiwan, R.O.C

#### I HEREBY CERTIFY THAT:

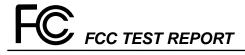
The measurements shown in this test report were made in accordance with the procedures given in ANSI C63.4 - 2009 and the energy emitted by this equipment were *passed* CISPR PUB. 22 and FCC Part 15 Subpart B and Canada Standard ICES-003 Issue 5 in both radiated and conducted emission Class B limits. The product sample received on Oct. 27, 2014 and completely tested on *Nov. 19, 2014* at SPORTON International Inc. LAB.

Kero Kuo

**Assistant Manager** 

#### SPORTON International Inc.

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



## 1. General Description of Equipment under Test

#### 1.1 Applicant

AAEON Technology Inc.

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

#### 1.2 Manufacturer

Same as 1.1

#### 1.3 Basic Description of Equipment under Test

Equipment : Rugged Tablet Computer

Model No. : xxxRTC-900B-WBGHxxx-xxxx

xxx=TF-(TF: Toxic Free) or blank
 xxx is for marketing purpose

3. xxxx=SW revision, ex: 1110=rev1, x:0~9

Report No.: FD4O2416

Trade Name : AAEON

Power Supply Type : From switching

The maximum operating frequency: 2.4G Hz

#### 1.4 Feature of Equipment under Test

Please refer to user's manual

 SPORTON International Inc.
 Page Number
 2 of 27

 TEL: 886-3-327-3456
 Issued Date
 Jan. 07, 2014

## 2. Test Configuration of Equipment under Test

#### 2.1 Test Manner

a. The EUT has been associated with peripherals pursuant to ANSI C63.4-2009 and configuration operated in a manner which tended to maximize its emission characteristics in a typical application.

Report No.: FD4O2416

b. The complete test system included LCD Monitor"24" \*1, USB 2.0 Flash Disk\*1, Earphone\*1, microSD Card\*1, SIM Card\*1, EASY Card\*1, Notebook\*1, AP Router\*1, Base Station\*1, and EUT for EMI test.

Test Items	Function Type
	Mode 1: R/W, play mp3,HDMI+VGA 1280*800 60Hz,earphone,BT+WiFi,WCDMA 2100 Band 1 Link, adapter
	Mode 2. R/W, play mp4,HDMI 1920*1200 60Hz,speaker,BT+WiFi,WCDMA 2100 Band 1 idle, adapter
	Mode 3. R/W, play photo+mp3,VGA 1280*800 60Hz,speaker,BT+WiFi,WCDMA 2100 Band 1 Link ,adapter (Vertical)
AC Conducted Emission	Mode 4. R/W,CCD(rear),HDMI+VGA 1024*768 60Hz,earphoner,BT+WiFi,WCDMA 2100 Band 1 Link, adapter
	Mode 5. R/W,CCD(front),HDMI+VGA 1280*800 60Hz,earphoner,BT+WiFi,WCDMA 2100 Band 1 Link, adapter
	Mode 6. R/W,VGA 1280*800 60Hz,GPS,earphoner,BT+WiFi,WCDMA 2100 Band 1 Link, adapter
	The following test mode was referred to pretest worst case "Mode 1" as AC Conducted Emission final test result.
	Mode 1: R/W, play mp3,HDMI+VGA 1280*800 60Hz,earphone,BT+WiFi,WCDMA 2100 Band 1 Link, adapter
	Mode 2. R/W, play mp4,HDMI 1920*1200 60Hz,speaker,BT+WiFi,WCDMA 2100 Band 1 idle, adapter
Radiated	Mode 3. R/W, play photo+mp3,VGA 1280*800 60Hz,speaker,BT+WiFi,WCDMA 2100 Band 1 Link, adapter (Vertical)
Emissions Below 1GHz	Mode 4. R/W,CCD(rear),HDMI+VGA 1024*768 60Hz,earphoner,BT+WiFi,WCDMA 2100 Band 1 Link, adapter
	Mode 5. R/W,CCD(front),HDMI+VGA 1280*800 60Hz,earphoner,BT+WiFi,WCDMA 2100 Band 1 Link, adapter
	Mode 6. R/W,VGA 1280*800 60Hz,GPS,earphoner,BT+WiFi,WCDMA 2100 Band 1 Link, battery
	The following test mode was referred to pretest worst case "Mode 1" for Radiated Emission final test result.
Radiated	Mode 1: R/W,play mp3,HDMI+VGA 1280*800 60Hz,earphone,BT+WiFi,WCDMA 2100 Band
Emissions Above 1GHz	1 Link,adapter

b. Frequency range investigated: Conducted 150 kHz to 30 MHz, Radiated 30 MHz to 13,000 MHz.

 SPORTON International Inc.
 Page Number
 : 3 of 27

 TEL: 886-3-327-3456
 Issued Date
 : Jan. 07, 2014



### 2.2 Description of Test System

#### <For conducted emission and radiated emission below 1GHz>

No.	Description	Manufacturer	Model	FCC ID	Signal Cable Description
Loca	al				
1	LCD Monitor"24"	DELL	U2410F	DoC	HDMI Cable, D-Shielded, 2.0m
2	USB 2.0 Flash Disk	TRANSCEND	JetFlash V85	DoC	-
3	Earphone	i-Acon	HOH-323-BK	N/A	Audio Cable, Non-Shielded, 2.0m
4	Micro SD Card	TRANSCEND	16GB	DoC	-
5	SIM Card	R&S	Chunghwa Telecom	N/A	-
6	EASY Card	EASY CARD	N/A	N/A	-
Rem	ote				
7	Notebook	DELL	E5520	DoC	-
8	AP Router	D-LINK	DIR-600B5	KA2DIR600B5	-
9	Base Station	R&S	CMU200	N/A	-

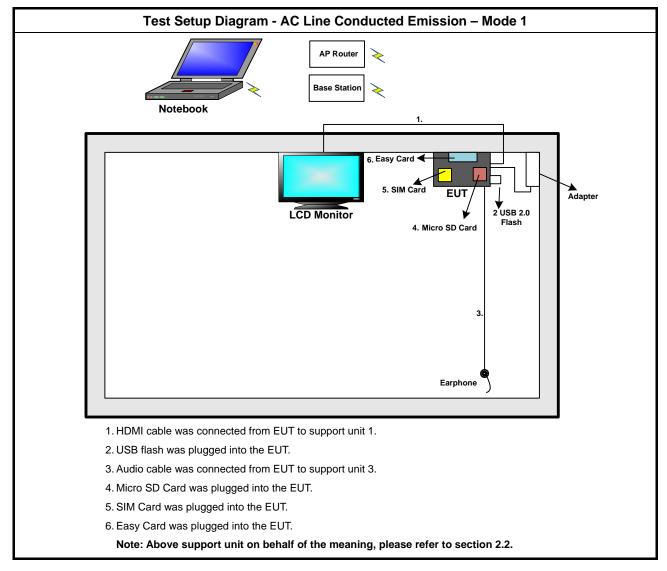
Report No.: FD4O2416

#### <For radiated emission above 1GHz>

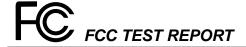
No.	Description	Manufacturer	Model	FCC ID	Signal Cable Description
Loca	al				
1	LCD Monitor"24"	DELL	2408WFPB	DoC	HDMI Cable, D-Shielded, 2.0m
2	USB 2.0 Flash Disk	TRANSCEND	JetFlash V85	DoC	-
3	Earphone	i-Acon	HOH-323-BK	N/A	Audio Cable, Non-Shielded, 2.0m
4	Micro SD Card	Transcend	8GB	DoC	-
5	SIM Card	R&S	Chunghwa Telecom	N/A	-
6	EASY Card	EASY CARD	N/A	N/A	-
Rem	ote				
7	Notebook	DELL	VOSTRO 3350	DoC	-
8	AP Router	ASUS	RT-AC66U	MSQ-RTAC66U	-
9	Base Station	R&S	CMU200	N/A	-



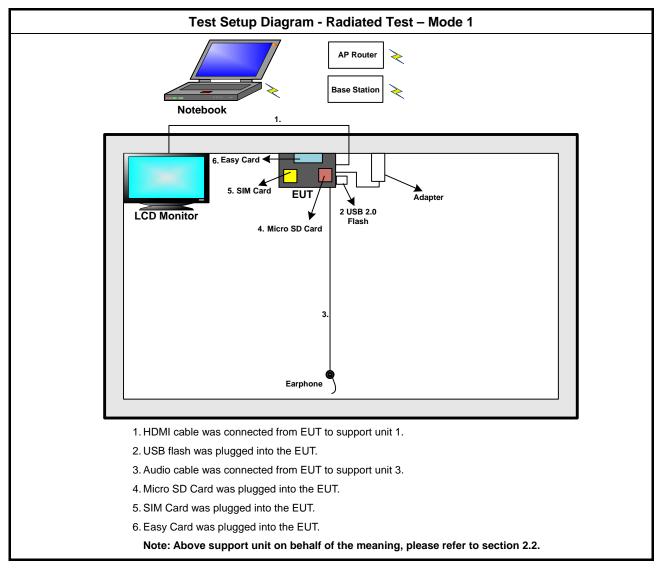
#### 2.3 Connection Diagram of Test System for Conducted Emission Test



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#### 2.4 Connection Diagram of Test System for Radiation Emission



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#### 3. Test Software

#### Conduction & Radiated Test - Mode 1:

One executive program was used as the test software under Win 8.

The programs were executed as follows:

- a. EUT executed "WinEMC" Test" to demonstrate "H pattern" on the Monitor.
- b. EUT executed "WinEMC" to carry out continuous R/W function from USB Flash Disk and Micro SD Card.

Report No.: FD4O2416

- c. EUT executed "Media player" to play audio sound via speaker or earphone.
- d. EUT turned on Camera function to record audio and video signal.
- e. EUT turned on wireless link function to maintain connection with the AP Router.
- f. EUT turned on BT function to maintain connection with the remote notebook.
- g. EUT executed "Proxy TAP16.6" and turned on NFC function to link with the Easy Card.
- h. EUT opened 3G function to maintain connection with Base station.

 SPORTON International Inc.
 Page Number
 7 of 27

 TEL: 886-3-327-3456
 Issued Date
 Jan. 07, 2014



#### 4. General Information of Test

#### 4.1 Test Facility

#### For conducted emission

Test Site Location : No. 3, Lane 238, Kangle St., Neihu Chiu, Taipei 114, Taiwan, R.O.C.

Report No.: FD4O2416

TEL: 886-2-2631-4739 FAX: 886-2-2631-9740

Test Site No. : CO01-NH For radiated emission below 1GHz

Test Site Location : No. 3, Lane 238, Kangle St., Neihu Chiu, Taipei 114, Taiwan, R.O.C.

TEL: 886-2-2631-4739 FAX: 886-2-2631-9740

Test Site No. : OS02-NH 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: 886-3-327-0973

Test Site No. : 03CH04-HY

#### 4.2 Uncertainty of Test Site

Test Items	Test Site No.	Uncertainty	Remark
Conducted Emissions	CO01-NH	± 2.6dB	Confidence levels of 95%
Radiated Emissions below 1GHz	OS02-NH	± 3.0dB	Confidence levels of 95%
Radiated Emissions above 1GHz	03CH04-HY	± 4.7dB	Confidence levels of 95%

#### 4.3 Test Voltage

120V / 60Hz

#### 4.4 Standard for Methods of Measurement

ANSI C63.4-2009

#### 4.5 Test in Compliance with

CISPR PUB. 22 and FCC Part 15 and Canada Standard ICES-003 Issue 5

#### 4.6 Frequency Range Investigated:

a. Conducted emission test: from 150 kHz to 30 MHz

b. Radiated emission test: 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 ~ 9GHz)

c. The test distance of radiated emission from antenna to EUT is 1 M (from 9GHz ~ 13GHz)

 SPORTON International Inc.
 Page Number
 : 8 of 27

 TEL: 886-3-327-3456
 Issued Date
 : Jan. 07, 2014



#### 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, Clause 7. 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 producing maximum conducted emissions.

Report No.: FD4O2416

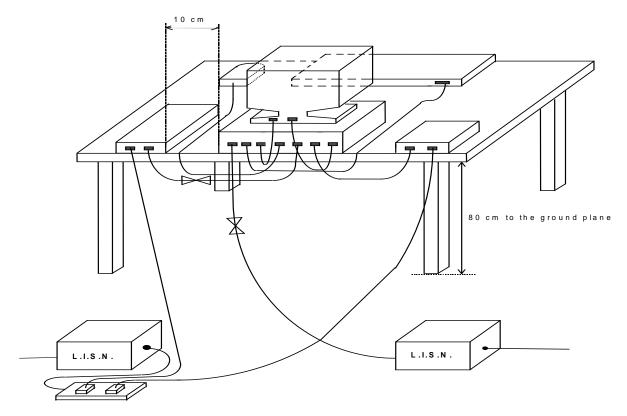
#### 5.1 Test Procedures

- a. The EUT was warmed up for 15 minutes before testing started.
- b. The EUT was placed on a desk 0.8 meters height from the metal ground plane and 0.4 meter from the conducting wall of the shielding room and it was kept at least 0.8 meters from any other grounded conducting surface.
- c. Connect EUT to the power mains through a line impedance stabilization network (LISN).
- d. All the support units are connected to the other LISN.
- e. The LISN provides 50 ohm coupling impedance for the measuring instrument.
- f. The CISPR states that a 50 ohm, 50 micro henry LISN should be used.
- g. Both sides of AC line were checked for maximum conducted interference.
- h. 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.

 SPORTON International Inc.
 Page Number
 : 9 of 27

 TEL: 886-3-327-3456
 Issued Date
 : Jan. 07, 2014

#### 5.2 Typical Test Setup Layout of Conducted Powerline



Report No.: FD4O2416

- a. AMN and ISN are 80 cm from the EUT and at least 80 cm from other units and other metal planes.
- b. EUT is connected to one artificial mains network (AMN).
- c. All other units of a system are powered from a second AMN. A multiple outlet strip can be used for multiple mains cords.
- d. Rear of EUT to be flushed with rear of table top.
- e. Peripherals shall be placed at a distance of 10 cm from each other and from the controller, except for the monitor which, if this is an acceptable installation practice, shall be placed directly on the top of the controller.
- f. If cables, which hang closer than 40 cm to the horizontal metal ground plane, cannot be shortened to appropriate length, the excess shall be folded back and forth forming a bundle 30 cm to 40 cm long.
- g. Mains cords and signal cables shall be positioned for their entire lengths, as far as possible, at 40 cm from the vertical reference plane.
- h. Cables of hand operated devices, such as keyboards, mice, etc. shall be placed as for normal usage.

FCC TEST REPORT Report No. : FD4O2416

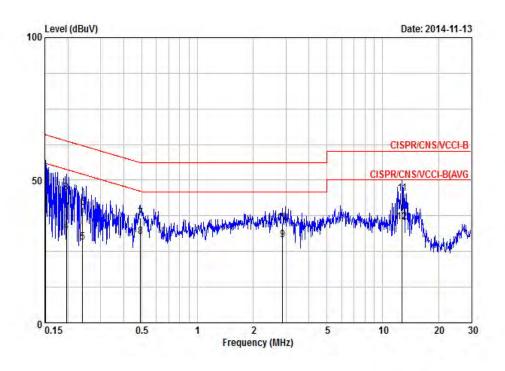
#### 5.3 Test Result of AC Powerline Conducted Emission

Test Mode	Mode 1	Test Site No.	CO01-NH
Test Frequency	0.15 MHz ~ 30 MHz	Test Engineer	Willy
Temperature	<b>22</b> °C	Relative Humidity	53 %

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

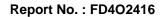
■ The test was passed at the minimum margin that marked by the frame in the following data

#### Line



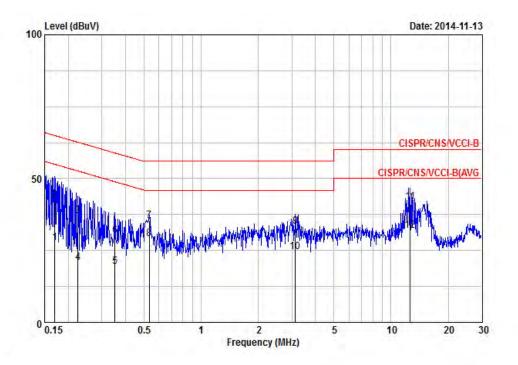
	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1 8	0.151	53.44	-12.51	65.96	42.76	10.58	0.10	OP
2	0.151	40.73	-15.22	55.96	30.05	10.58	0.10	AVERAGE
3	0.197	45.69	-18.07	63.76	35.02	10.56	0.10	QP
4	0.197	31.99	-21.77	53.76	21.32	10.56	0.10	AVERAGE
5	0.240	28.08	-24.01	52.08	17.44	10.54	0.10	AVERAGE
6	0.240	40.37	-21.72	62.08	29.73	10.54	0.10	QP
7	0.491	36.86	-19.28	56.14	26.24	10.49	0.12	QP
8	0.491	30.22	-15.92	46.14	19.60	10.49	0.12	AVERAGE
9	2.884	28.96	-17.04	46.00	18.19	10.58	0.20	AVERAGE
10	2.884	35.18	-20.82	56.00	24.41	10.58	0.20	QP
11	12.716	45.27	-14.73	60.00	34.18	10.79	0.30	QP
12	12.716	35.43	-14.57	50.00	24.34	10.79	0.30	AVERAGE

SPORTON International Inc.Page Number: 11 of 27TEL: 886-3-327-3456Issued Date: Jan. 07, 2014





#### Neutral



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.169	27.54	-27.45	54.99	17.35	10.09	0.10	AVERAGE
1 2	0.169	42.51	-22.48	64.99	32.32	10.09	0.10	QP
3	0.224	37.10	-25.56	62.66	26.92	10.08	0.10	QP
4	0.224	20.78	-31.88	52.66	10.60	10.08	0.10	AVERAGE
5	0.352	19.31	-29.61	48.91	9.13	10.08	0.10	AVERAGE
6	0.352	30.14	-28.78	58.91	19.96	10.08	0.10	QP
7	0.532	35.25	-20.75	56.00	25.03	10.08	0.13	QP
8	0.532	28.93	-17.07	46.00	18.71	10.08	0.13	AVERAGE
9	3.140	33.23	-22.77	56.00	22.88	10.15	0.20	QP
10	3.140	24.57	-21.43	46.00	14.22	10.15	0.20	AVERAGE
11	12.582	41.91	-18.09	60.00	31.26	10.35	0.30	QP
12	12.582	31.86	-18.14	50.00	21.21	10.35	0.30	AVERAGE

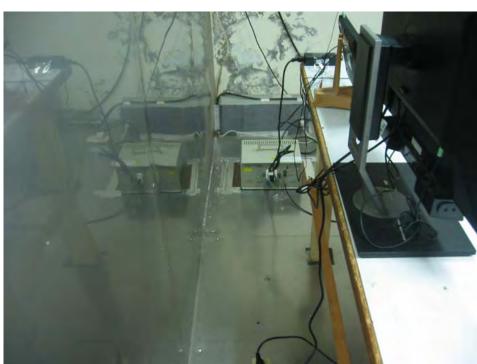
## 5.4 Photographs of Conducted Power line Test Configuration

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



Report No.: FD4O2416

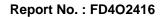
FRONT VIEW



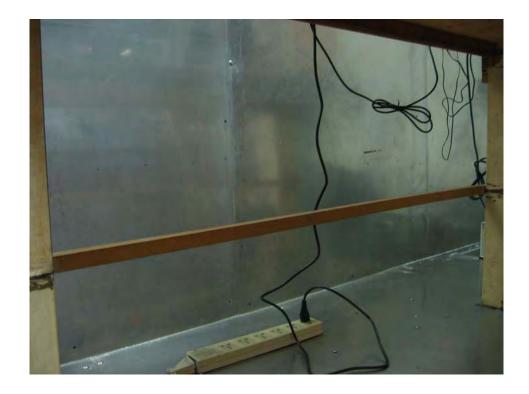
**REAR VIEW** 

 SPORTON International Inc.
 Page Number
 : 13 of 27

 TEL: 886-3-327-3456
 Issued Date
 : Jan. 07, 2014







SIDE VIEW

#### 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, Clause 8. The EUT was placed on a nonmetallic stand, 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.

Report No.: FD4O2416

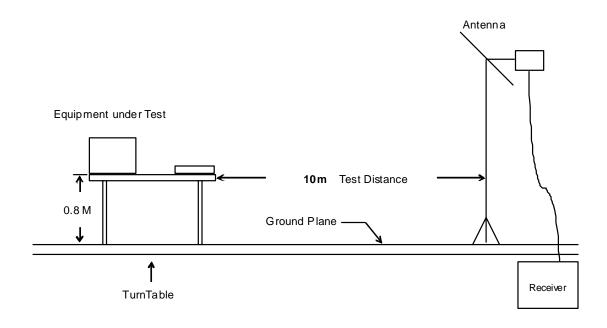
#### 6.1 Test Procedures

- a. The EUT was placed on a rotatable table top 0.8 meter above ground.
- b. The EUT was set 3/1m(above 1GHz)/10m(below 1GHz) from the interference-receiving antenna which was mounted on the top of a variable height antenna tower.
- 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. The FCC Part 15.109 (g) permit parties seeking to authorize a digital device to choose to demonstrate that the device complies with either the Part 15 standards or the international standards found in Publication 22 of the International Special Committee on Radio Interference (CISPR).
- i. 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.
- j. The main board was tested in accordance with section 15.32 of the FCC rules. Testing for radiated emissions was first performed with the main board installed in a typical enclosure but with the enclosure's cover removed so that the internal circuitry is exposed at the top and on at least two sides. And then the EUT was tested with enclosure's cover unless it pass the required limits at first condition.

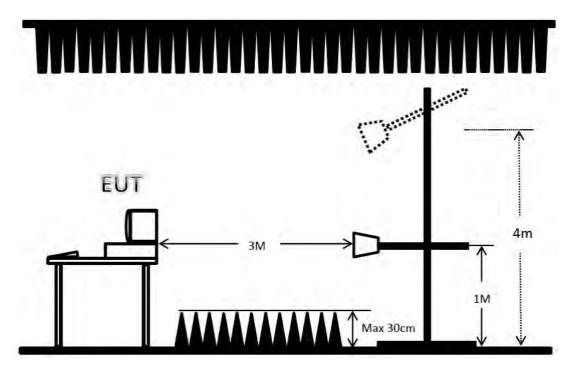


## 6.2 Typical Test Setup Layout of Radiated Emission

#### < Below 1GHz >



#### < Above 1GHz >



TEL: 886-3-327-3456 FAX: 886-3-327-0973

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

Test mode	Mode 1	Test Site No.	OS02-NH
Test frequency	30 MHz ~ 1000 MHz	Test Engineer	chas
Temperature	20 ℃	Relative Humidity	54 %

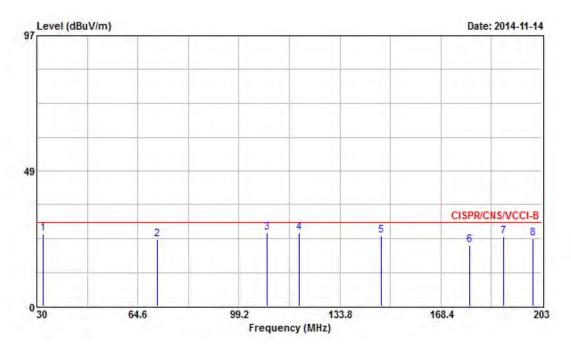
Report No.: FD4O2416

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

2. Corrected Reading: Probe 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

#### Vertical



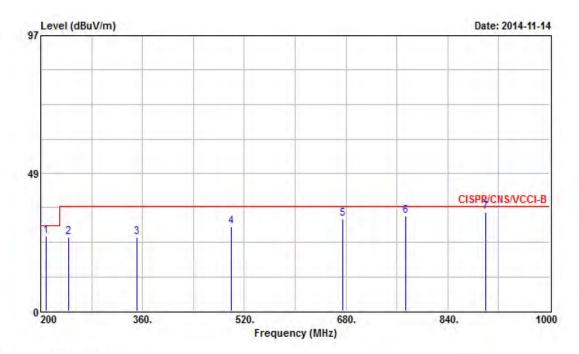
	17.3		Over	Limit	Read	Antenna	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
-	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	32.080	25.82	-4.18	30.00	39.31	17.47	0.80	31.76	QP		1222
2	71.350	23.75	-6.25	30.00	47.74	6.62	1.14	31.75	QP		
3	108.890	26.42	-3.58	30.00	45.16	11.52	1.37	31.63	QP		
4	119.960	26.16	-3.84	30.00	44.11	12.21	1.44	31.60	Peak		
5	147.990	25.18	-4.82	30.00	44.44	10.70	1.59	31.55	Peak	432	200
6	178.260	22.00	-8.00	30.00	42.33	9.40	1.75	31.48	Peak		
7	189.850	24.99	-5.01	30.00	45.28	9.36	1.81	31.46	Peak	444	
8	200.060	24.29	-5.71	30.00	44.45	9.42	1.85	31.43	Peak		

 SPORTON International Inc.
 Page Number
 : 17 of 27

 TEL: 886-3-327-3456
 Issued Date
 : Jan. 07, 2014



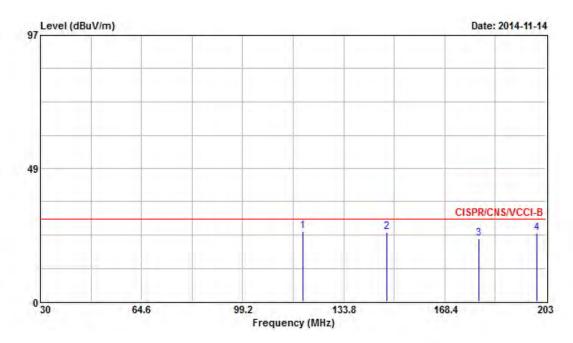
#### Vertical



			Over	Limit	Read	Antenna	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
-	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	10	cm	deg
1	208.000	26.19	-3.81	30.00	45.79	9.93	1.89	31.42	Peak		1444
2	244.000	25.91	-11.09	37.00	43.18	12.02	2.07	31.36	Peak	HHH	HHH
3	351.200	25.82	-11.18	37.00	40.07	14.58	2.50	31.33	Peak	4-4	495
4	499.200	29.84	-7.16	37.00	40.44	17.64	3.09	31.33	Peak		
5	675.200	32.50	-4.50	37.00	40.84	19.21	3.70	31.25	Peak		
6	773.600	33.53	-3.47	37.00	40.67	20.13	3.94	31.21	Peak	Hirt	
7 8	900.000	34.69	-2.31	37.00	40.18	21.33	4.29	31.11	QP	100	180
									-	0.2-1-	_



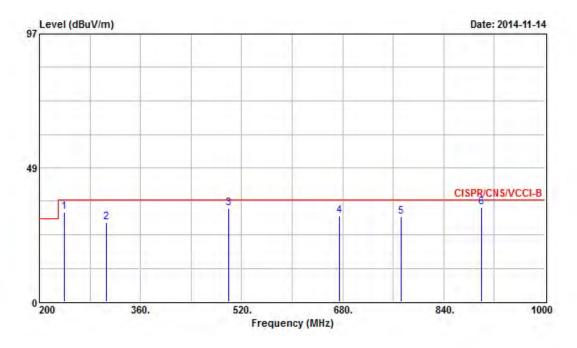
#### Horizontal



			Over	Limit	Read	Antenna	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	1	cm	deg
1	119.960	25.51	-4.49	30.00	43.46	12.21	1.44	31.60	Peak		244
2	148.510	25.18	-4.82	30.00	44.44	10.70	1.59	31.55	Peak		
3	179.990	22.81	-7.19	30.00	43.23	9.30	1.76	31.48	Peak		
4	200.060	25.00	-5.00	30.00	45.16	9.42	1.85	31.43	Peak		



#### Horizontal



		Freq	Level	Over Limit			Antenna Factor		- 1		Ant Pos	Table Pos
	-	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		- Cm	deg
1		240.000	32.42	-4.58	37.00	50.00	11.74	2.04	31.36	Peak	2.4	242
2		305.600	28.80	-8.20	37.00	44.32	13.42	2.33	31.27	Peak		/
3	9	499.200	33.91	-3.09	37.00	44.51	17.64	3.09	31.33	QP	444	
4		675.200	31.04	-5.96	37.00	39.38	19.21	3.70	31.25	Peak		
5		772.800	30.86	-6.14	37.00	38.01	20.12	3.94	31.21	Peak	424	
6	9	900.000	34.00	-3.00	37.00	39.49	21.33	4.29	31.11	QP		

#### 6.4 Photographs of Radiated Emission (Below 1GHz) Test Configuration

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

Mode 1

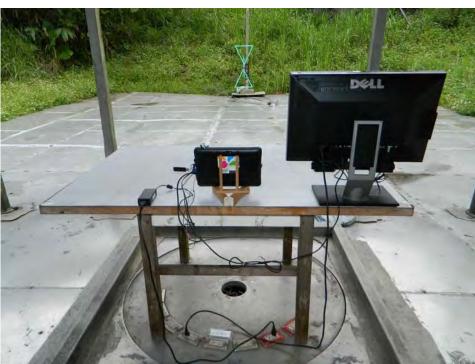


Report No.: FD4O2416

: 21 of 27

: Jan. 07, 2014

**FRONT VIEW** 



**REAR VIEW** 

SPORTON International Inc.Page NumberTEL: 886-3-327-3456Issued Date

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

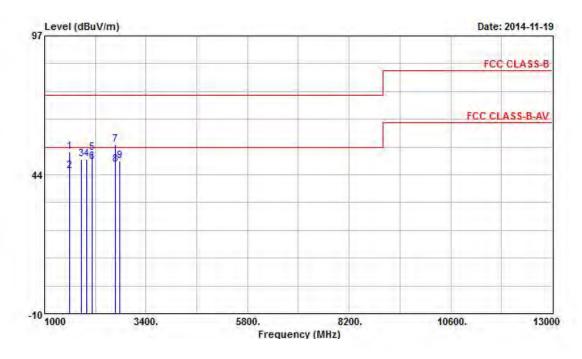
Test mode	Mode 1	Test Site No.	03CH04-HY
Test frequency	1 GHz ~ 13 GHz	Test Engineer	Ou Yen Liang
Temperature	22 ℃	Relative Humidity	51 %

Report No.: FD4O2416

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 Vertical



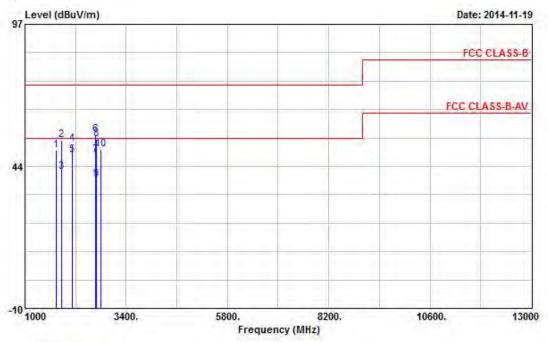
		Freq	Level	Over Limit	Limit Line		Antenna Factor	Preamp Factor	Cable Loss	Ant	12/20/20/20	Remark
	-	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB -	cm	deg	-
1		1598.000	52.46	-21.54	74.00	56.31	25.86	33.71	4.00	100	183	Peak
2		1598.000	45.01	-8.99	54.00	48.86	25.86	33.71	4.00	100	183	Average
3		1868.000	49.38	-24.62	74.00	52.68	26.02	33.58	4.26			Peak
4		2004.000	49.31	-24.69	74.00	52.32	26.10	33.52	4.41			Peak
5		2132.000	51.97	-22.03	74.00	54.65	26.43	33.64	4.52	100	152	Peak
6 @		2132.000	48.57	-5.43	54.00	51.25	26.43	33.64	4.52	100	152	Average
7		2668.000	55.13	-18.87	74.00	56.53	27.63	34.09	5.06	100	195	Peak
8		2668.000	47.38	-6.62	54.00	48.78	27.63	34.09	5.06	100	195	Average
9		2788.000	48.69	-25.31	74.00	49.83	27.87	34.18	5.17		-42	Peak

 SPORTON International Inc.
 Page Number
 22 of 27

 TEL: 886-3-327-3456
 Issued Date
 Jan. 07, 2014



#### **Horizontal**

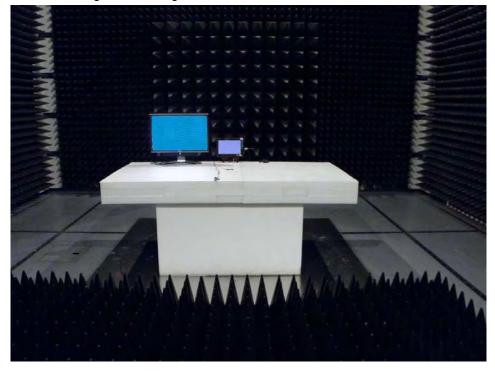


			Over	Limit	Read	Antenna	Preamp	Cable	Ant	Table	
	Freq	Level	Limit	Line	Level	Factor	Factor	Loss	Pos	Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1742.000	49.36	-24.64	74.00	52.90	25.95	33.64	4.15	يتسد	144	Peak
2	1876.000	53.24	-20.76	74.00	56.53	26.03	33.58	4.26	100	252	Peak
3	1876.000	41.28	-12.72	54.00	44.57	26.03	33.58	4.26	100	252	Average
4	2132.000	52.06	-21.94	74.00	54.74	26.43	33.64	4.52	100	226	Peak
5	2132.000	47.56	-6.44	54.00	50.24	26.43	33.64	4.52	100	226	Average
6	2668.000	55.63	-18.37	74.00	57.03	27.63	34.09	5.06	100	186	Peak
7 @	2668.000	47.82	-6.18	54.00	49.22	27.63	34.09	5.06	100	186	Average
8	2700.000	53.57	-20.43	74.00	54.90	27.70	34.12	5.10	100	183	Peak
9	2700.000	38.73	-15.27	54.00	40.06	27.70	34.12	5.10	100	183	Average
10	2804.000	49.77	-24.23	74.00	50.89	27.90	34.19	5.17			Peak

## 6.6 Photographs of Radiated Emission (Above 1GHz) Test Configuration

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

Mode 1



Report No.: FD4O2416

**FRONT VIEW** 



**REAR VIEW** 

 SPORTON International Inc.
 Page Number
 : 24 of 27

 TEL: 886-3-327-3456
 Issued Date
 : Jan. 07, 2014

## 7. List of Measuring Equipment Used

#### < Conducted Emission >

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Receiver	R&S	ESCS 30	100357	9 kHz - 2.75 GHz	Jun. 13, 2014	Conduction (CO01-NH)
LISN	SCHAFFNER	NNB41	06/10024	9kHz - 30MHz	Dec. 05, 2013	Conduction (CO01-NH)
LISN	KYORITSU	KNW-407	8-1010-15	9kHz – 30MHz	N/A	Conduction (CO01-NH)
Power Filter	CORCOM	MR12030	N/A	30A*2	N/A	Conduction (CO01-NH)
RF Cable-CON	Suhner Switzerland	RG223/U	CB004	9kHz - 30MHz	Dec. 11, 2013	Conduction (CO01-NH)

Report No.: FD4O2416

#### < Radiated Emission below 1GHz >

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Open Area Test Site	SPORTON	OATS-10	OS02-NH	30 MHz - 1 GHz 10m, 3m	Dec. 30, 2013	Radiation (OS02-NH)
Amplifier	BURGEON	BPA-530	100203	0.01 MHz - 3 GHz	May 19, 2014	Radiation (OS02-NH)
Receiver	R&S	ESCI	100497	9 kHz – 3 GHz	Apr. 24, 2014	Radiation (OS02-NH)
Bilog Antenna	CHASE	CBL6122B	2884	30 MHz - 2 GHz	Feb. 28, 2014	Radiation (OS02-NH)
Turn Table	EMCO	2080	9508-1805	0 - 360 degree	N/A	Radiation (OS02-NH)
Antenna Mast	ETS	2075-2	2385	1 m - 4 m	N/A	Radiation (OS02-NH)
RF Cable-R10m	MIYAZAKI	5DFB	CB044	30 MHz - 1 GHz	Aug. 29, 2014	Radiation (OS02-NH)

Calibration Interval of instruments listed above is one year.

 SPORTON International Inc.
 Page Number
 : 25 of 27

 TEL: 886-3-327-3456
 Issued Date
 : Jan. 07, 2014

<sup>%</sup> Calibration Interval of instruments listed above is one year.

#### < Radiated Emission above 1GHz >

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Receiver	R&S	ESU	100422	20Hz ~ 26.5GHz	Jun. 19, 2014	Radiation (03CH04-HY)
Amplifier	Agilent	8449B	3008A02326	1GHz ~ 26.5GHz	May. 22, 2014	Radiation (03CH04-HY)
Horn Antenna	SCHWARZBECK	BBHA9120	BBHA9120D1130	1 GHz ~ 18 GHz	Sep.16, 2014	Radiation (03CH04-HY)
Turn Table	Chaintek	3000	MF7802056	0 ~ 360 degree	NCR	Radiation (03CH04-HY)
Antenna Mast	MF	MF-7802	MF780208163	1 m ~ 4 m	NCR	Radiation (03CH04-HY)
RF Cable-HIGH	SUHNER	SUCOFLEX 106	CB063-HF	1 GHz ~ 40 GHz	Nov.20 , 2013	Radiation (03CH04-HY)

Report No.: FD4O2416

 SPORTON International Inc.
 Page Number
 : 26 of 27

 TEL: 886-3-327-3456
 Issued Date
 : Jan. 07, 2014

 $<sup>\</sup>divideontimes$  Calibration Interval of instruments listed above is one year.



## 8. Modification of EUT

Please refer to the Photographs of EUT.

Report No.: FD4O2416

 SPORTON International Inc.
 Page Number
 : 27 of 27

 TEL: 886-3-327-3456
 Issued Date
 : Jan. 07, 2014



Report No. : EP4O2416

## APPENDIX A. Photographs of EUT





TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page Number : A1 of A47
Report Version : Rev. 01

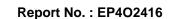


Report No.: EP4O2416





TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page Number : A2 of A47
Report Version : Rev. 01





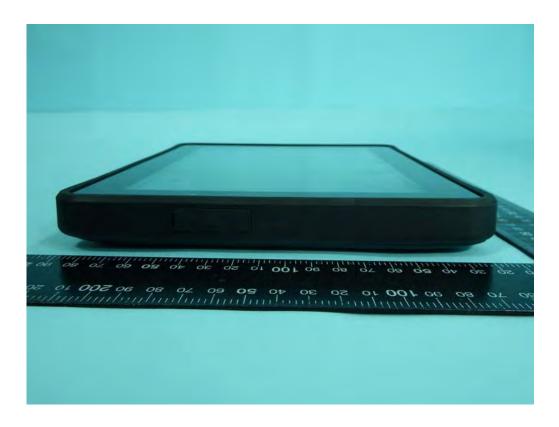


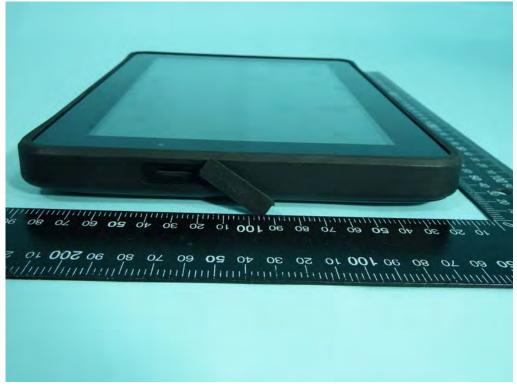


TEL: 886-3-327-3456 FAX: 886-3-327-0973



Report No.: EP4O2416

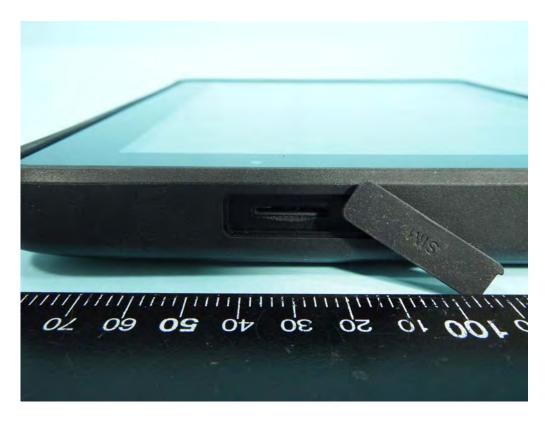




TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page Number : A4 of A47
Report Version : Rev. 01



Report No.: EP4O2416





TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page Number : A5 of A47 Report Version : Rev. 01

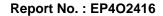


Report No.: EP4O2416



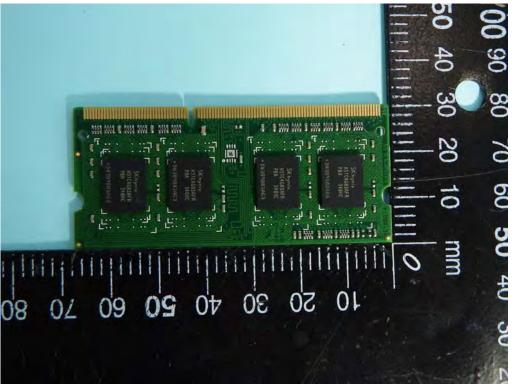


TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page Number : A6 of A47
Report Version : Rev. 01





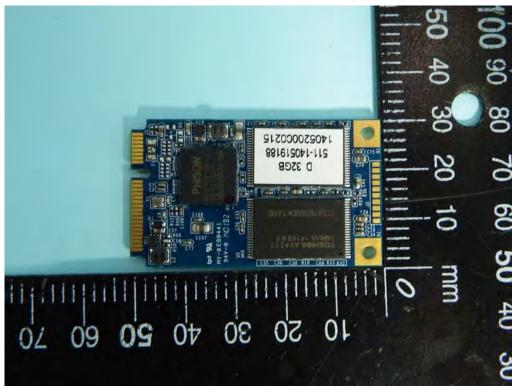




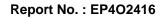




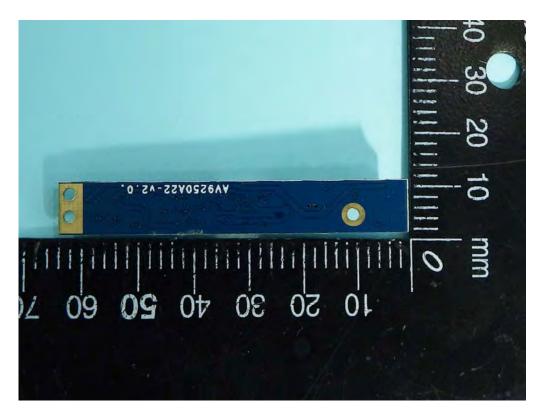


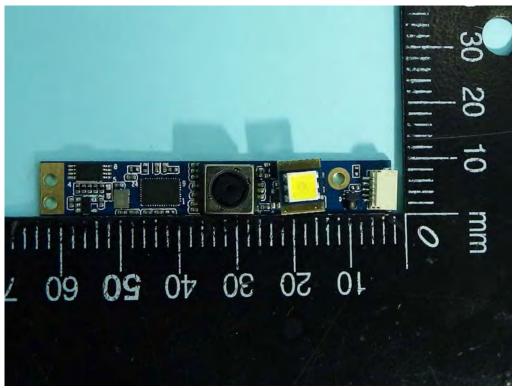


Page Number : A8 of A47
Report Version : Rev. 01



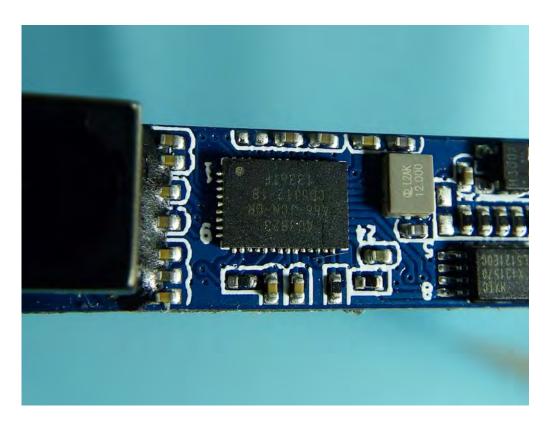








Report No.: EP4O2416





TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page Number : A10 of A47

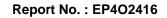
Report Version : Rev. 01





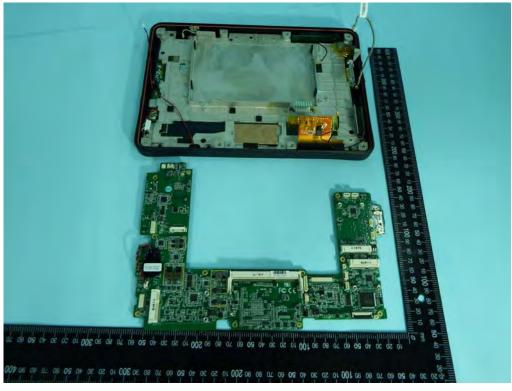




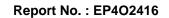






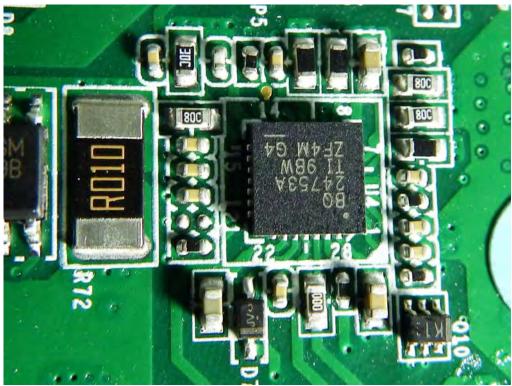


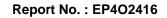
Page Number : A12 of A47 Report Version : Rev. 01



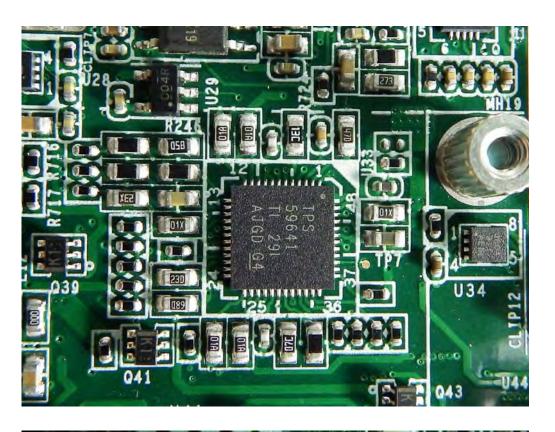


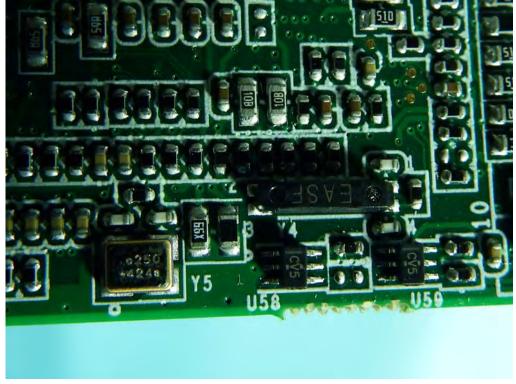




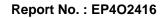




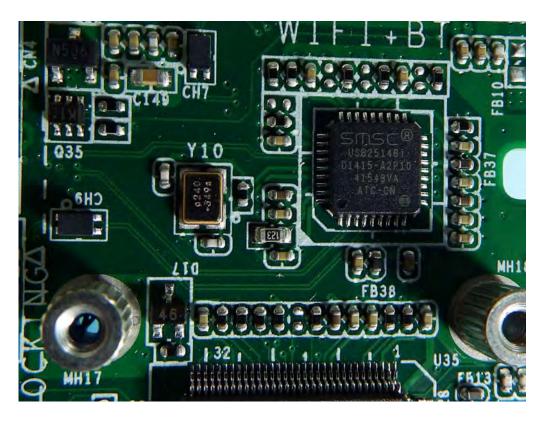


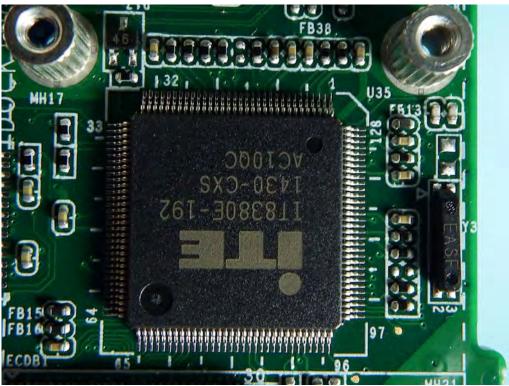


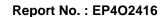
Page Number : A14 of A47
Report Version : Rev. 01



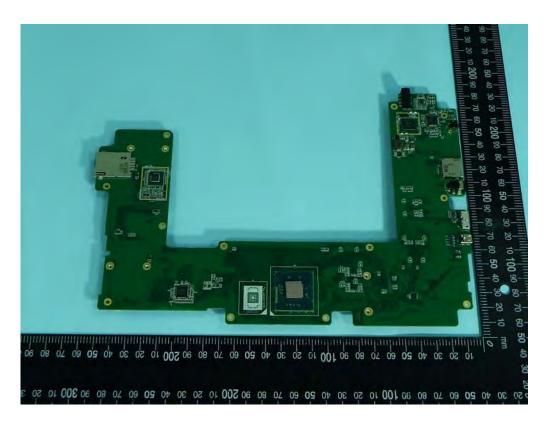










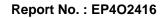




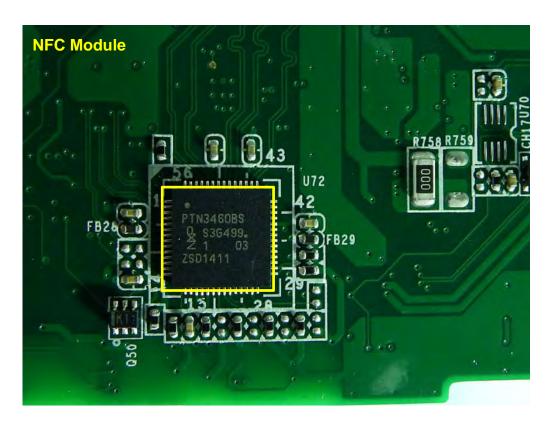
Page Number : A16 of A47

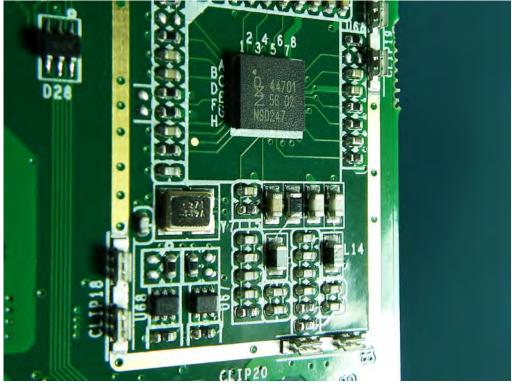
: Rev. 01

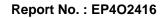
Report Version



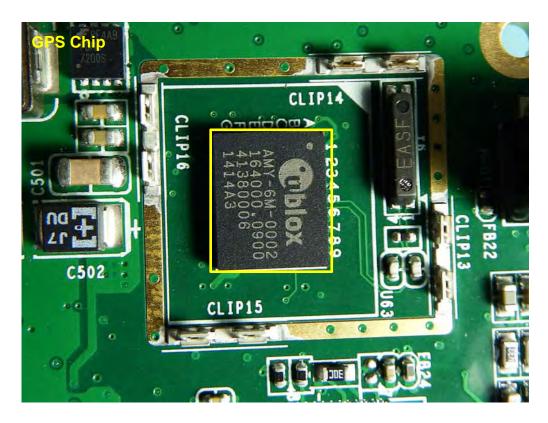










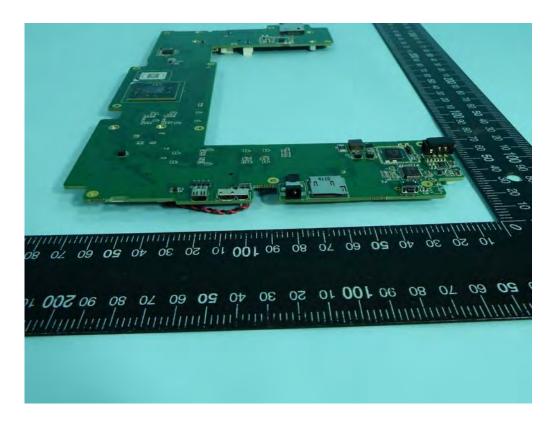


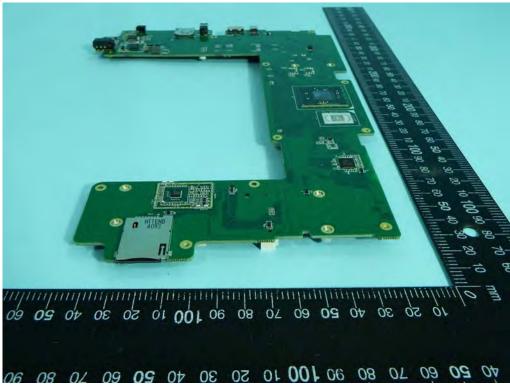


Page Number : A18 of A47
Report Version : Rev. 01



Report No.: EP4O2416





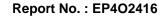
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page Number : A19 of A47
Report Version : Rev. 01



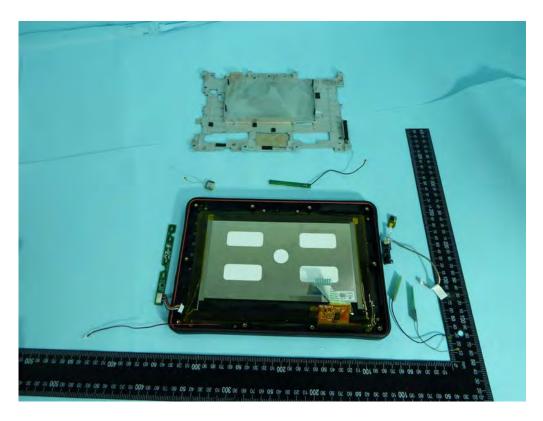
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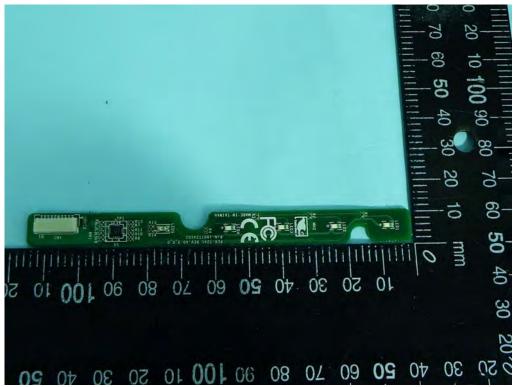




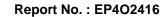




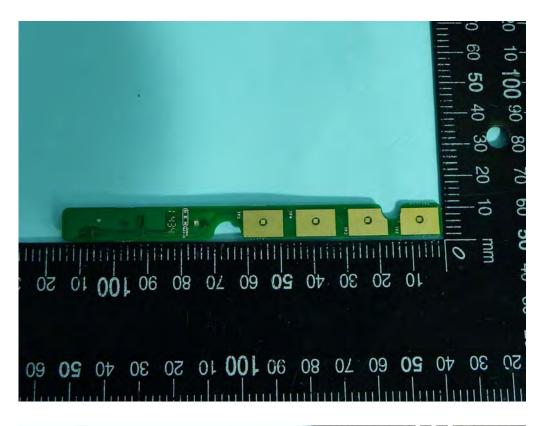


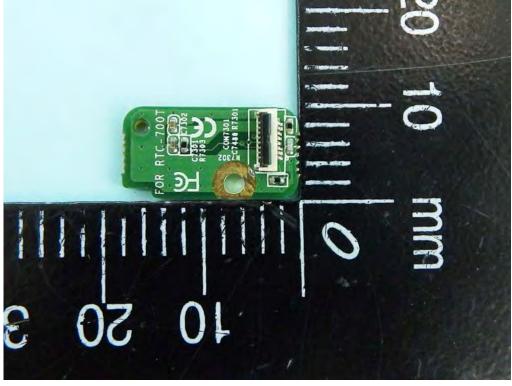


Page Number : A21 of A47
Report Version : Rev. 01

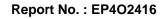




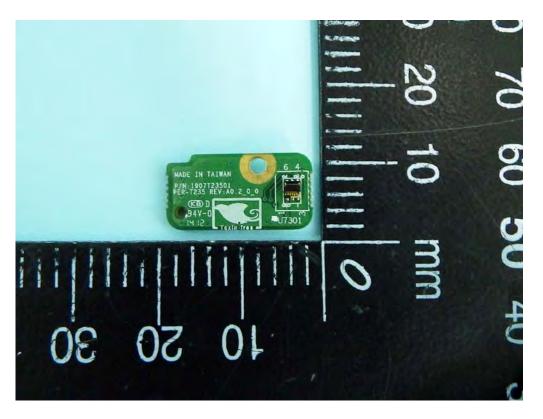


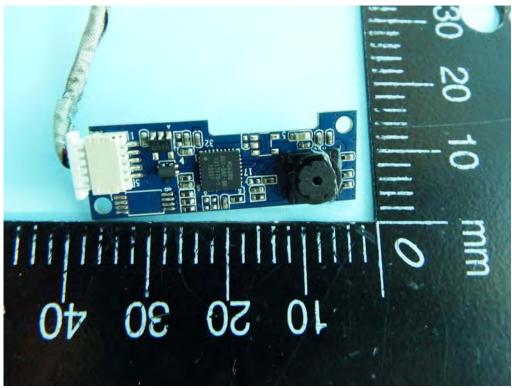


Page Number : A22 of A47 Report Version : Rev. 01

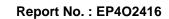




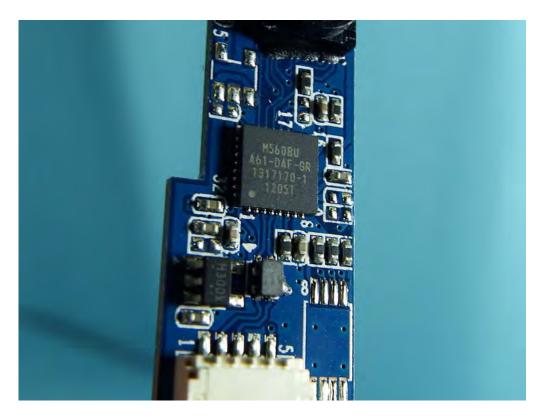




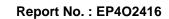
Page Number : A23 of A47 Report Version : Rev. 01



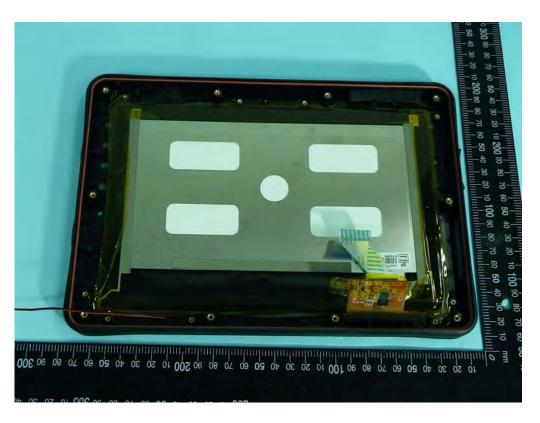










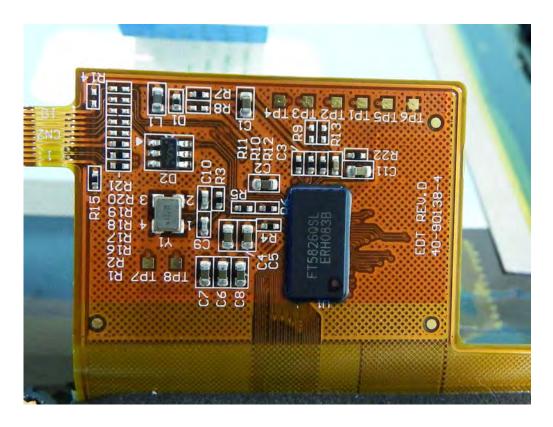


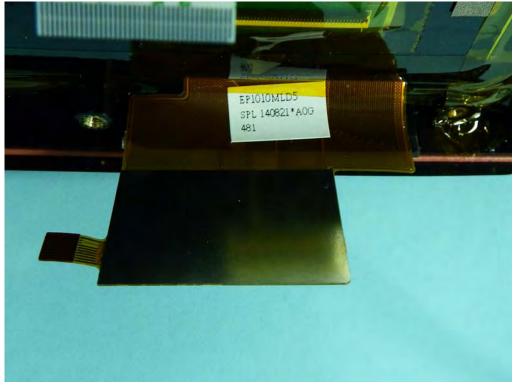


Page Number : A25 of A47 Report Version : Rev. 01

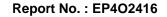






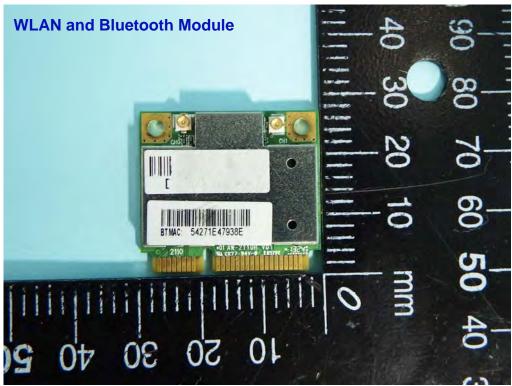


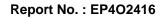
Page Number : A26 of A47
Report Version : Rev. 01



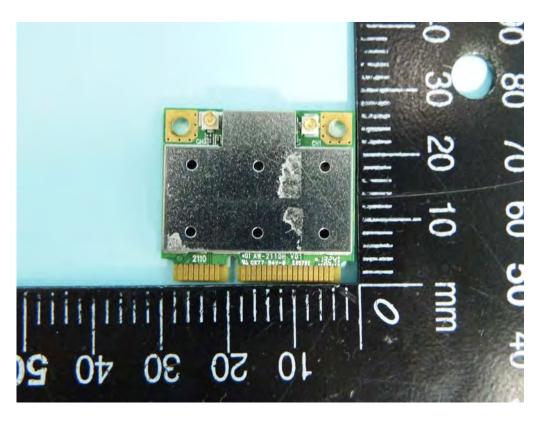


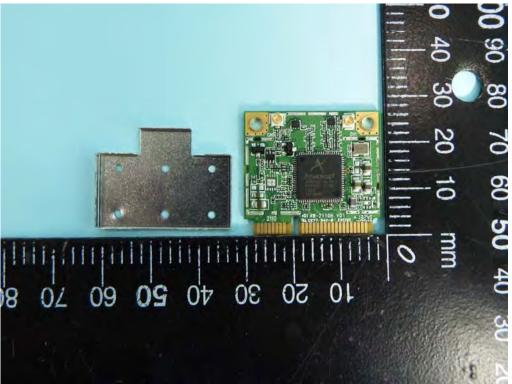








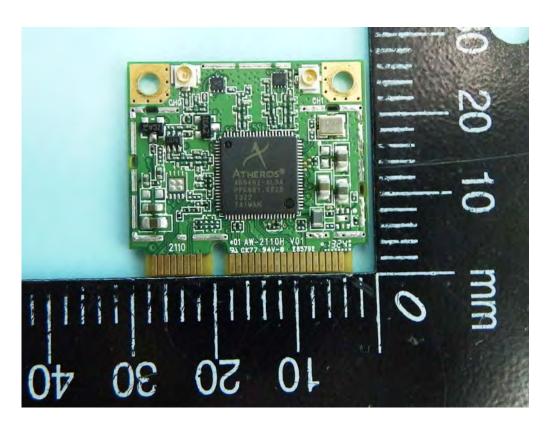


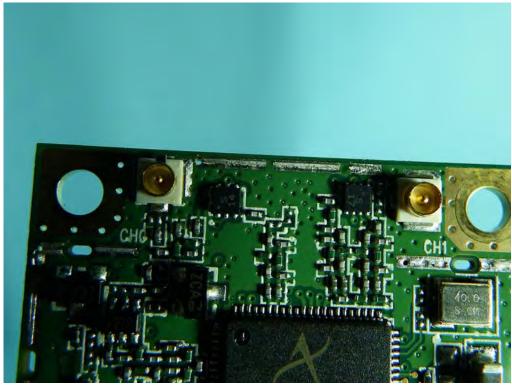


Page Number : A28 of A47 Report Version : Rev. 01

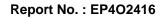








Page Number : A29 of A47 Report Version : Rev. 01

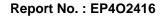




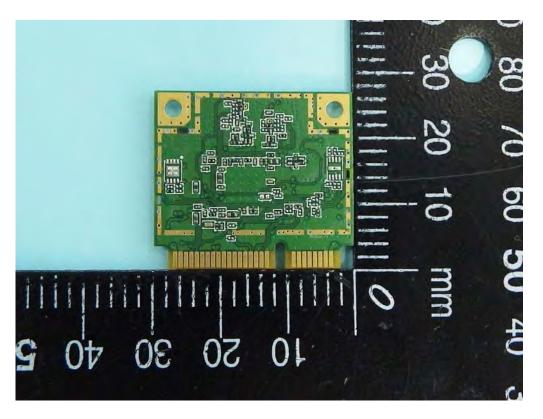


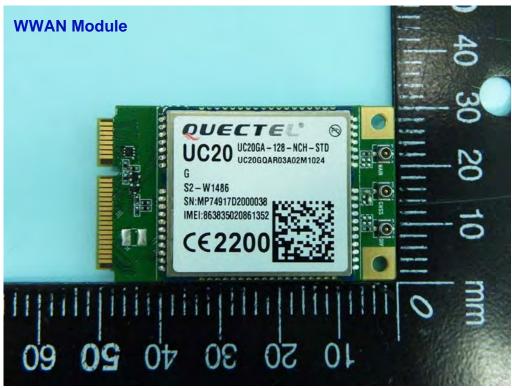


Page Number : A30 of A47
Report Version : Rev. 01

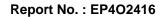




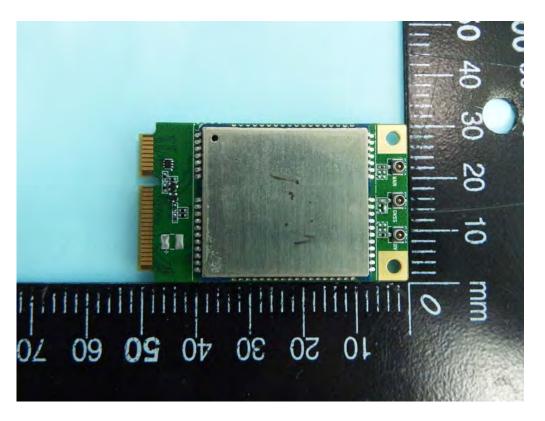


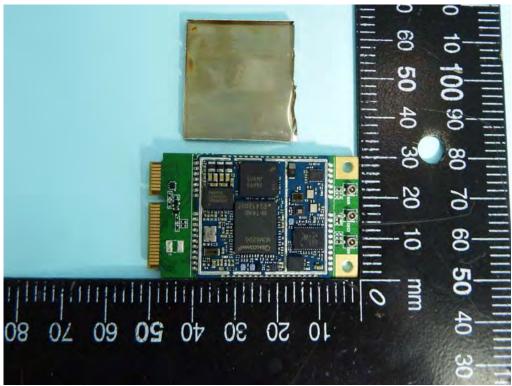


Page Number : A31 of A47
Report Version : Rev. 01





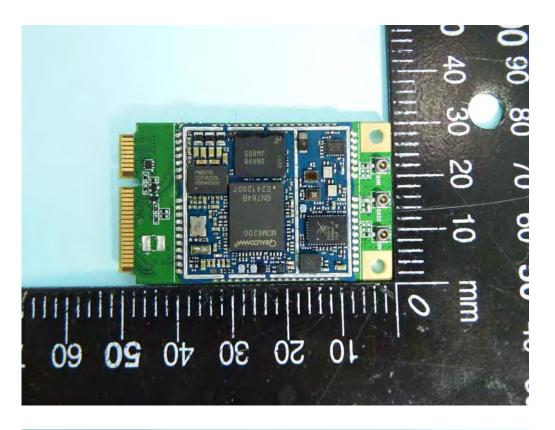


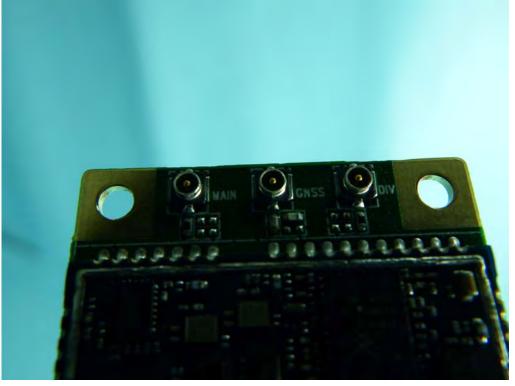


Page Number : A32 of A47 Report Version : Rev. 01

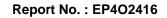




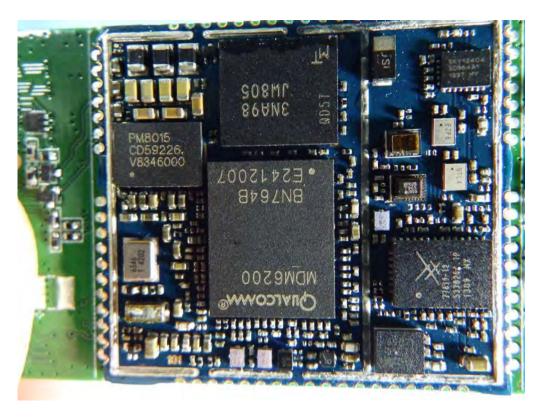


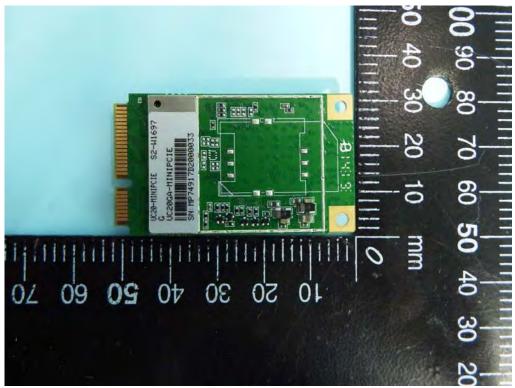


Page Number : A33 of A47 Report Version : Rev. 01



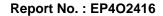




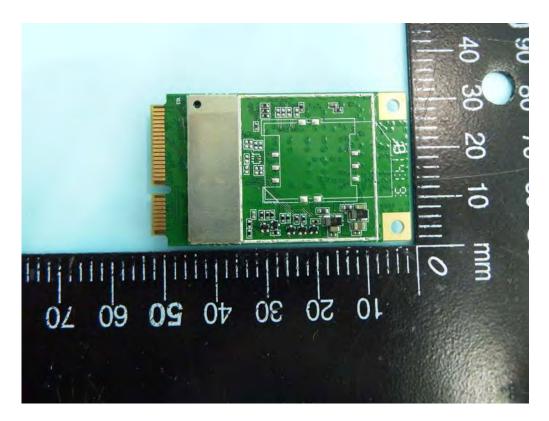


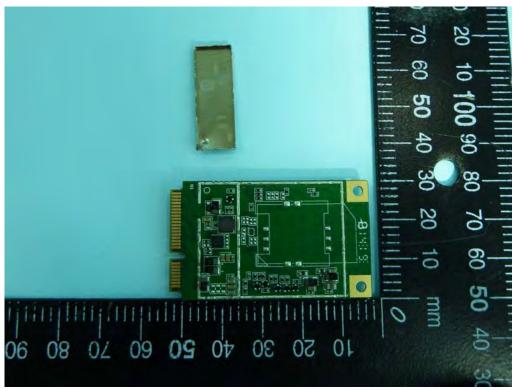
: Rev. 01

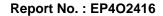
Report Version



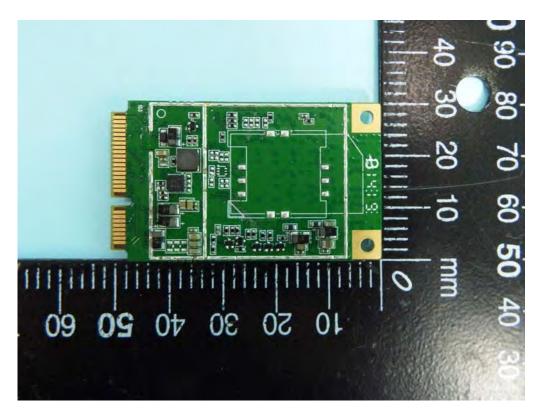


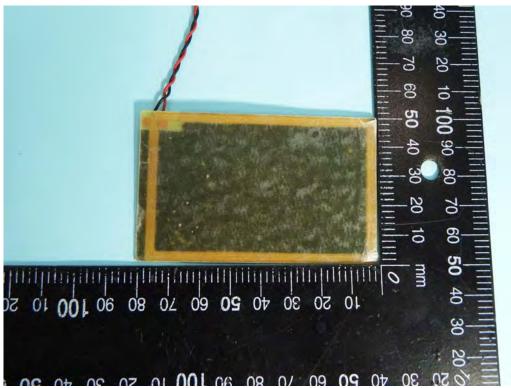


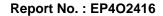




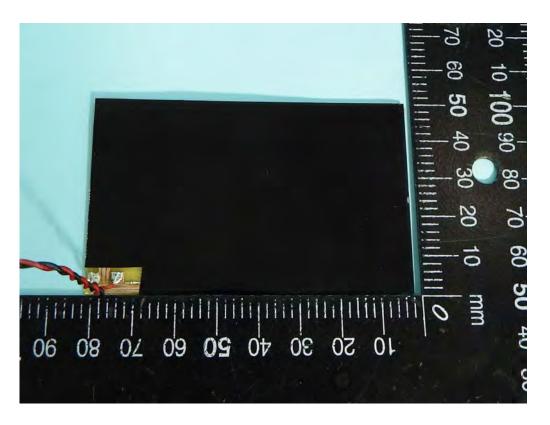


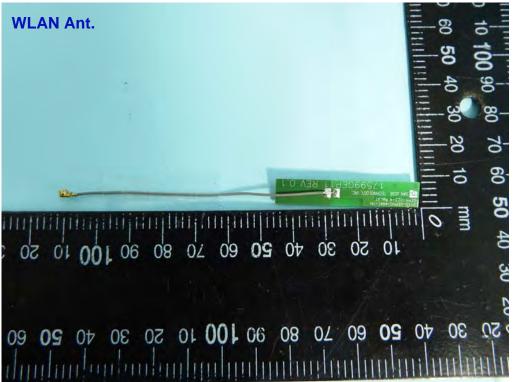




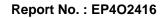




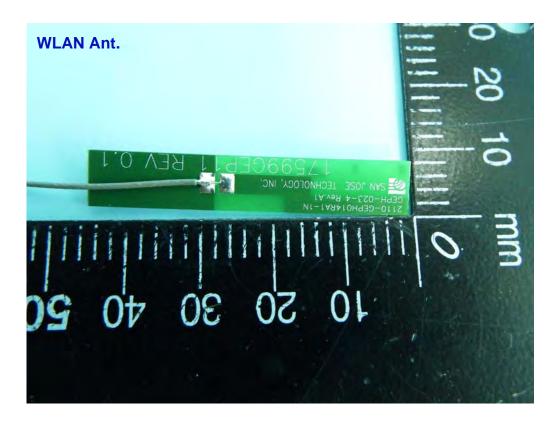


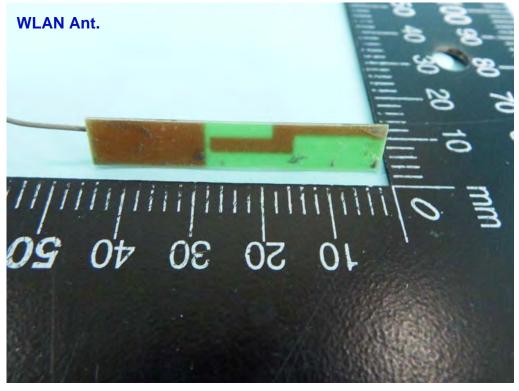


Page Number : A37 of A47 Report Version : Rev. 01





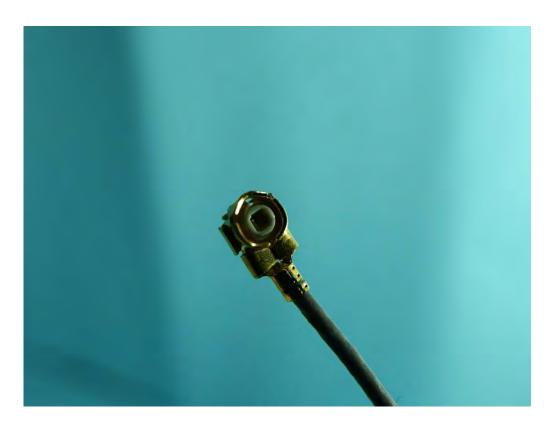


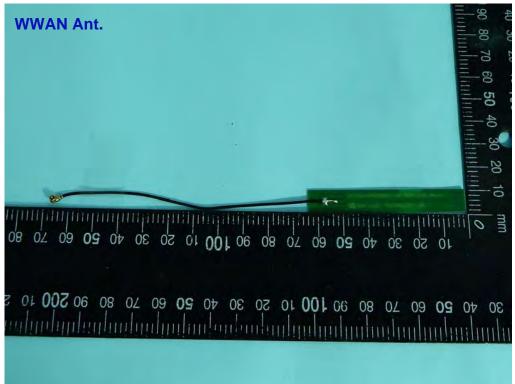


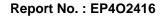
Page Number : A38 of A47 Report Version : Rev. 01



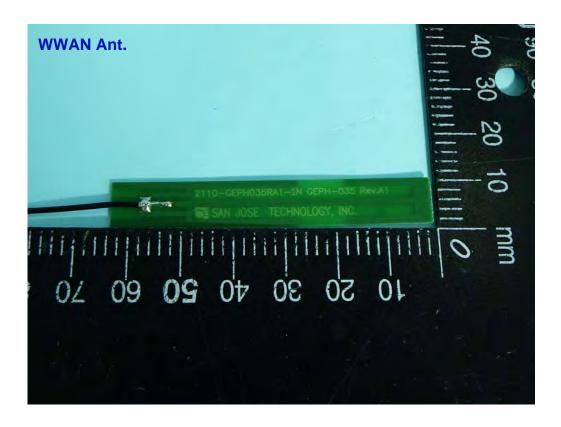
Report No.: EP4O2416

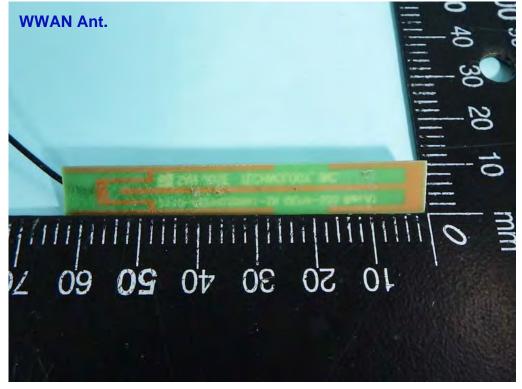






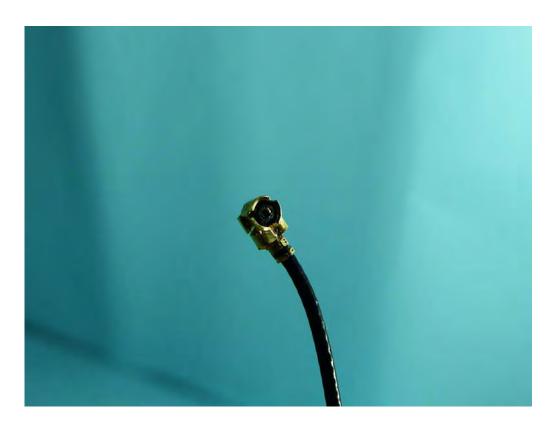


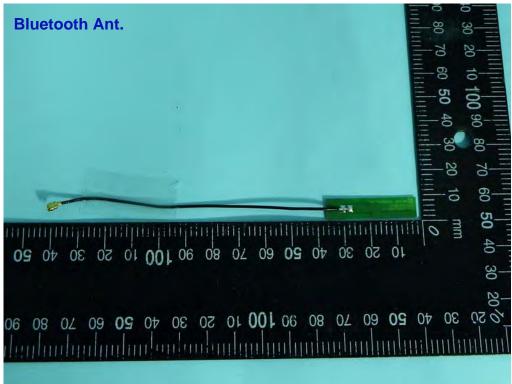




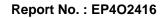


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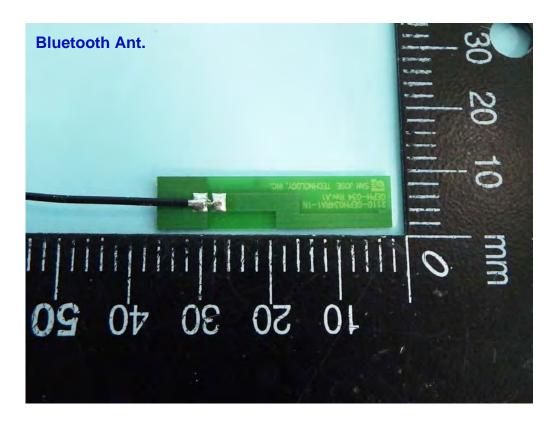


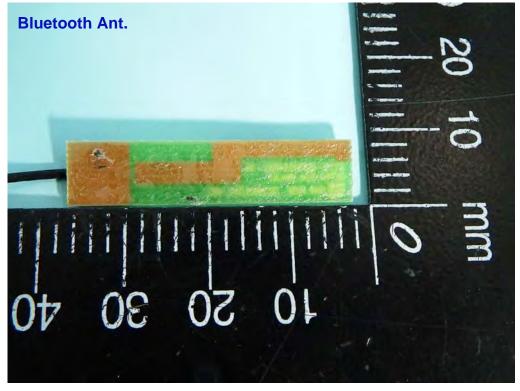


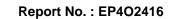
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page Number : A41 of A47
Report Version : Rev. 01





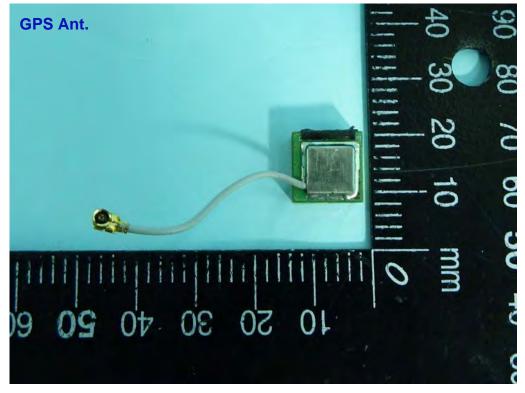




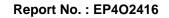




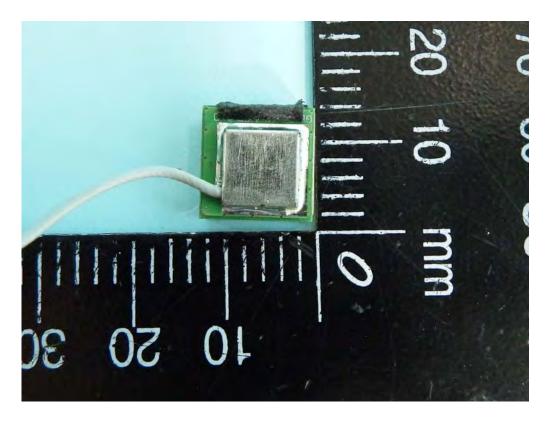


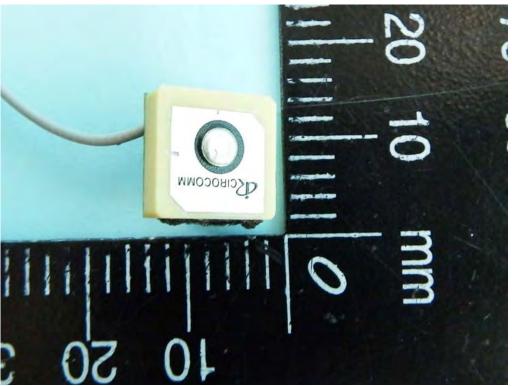


Page Number : A43 of A47 Report Version : Rev. 01





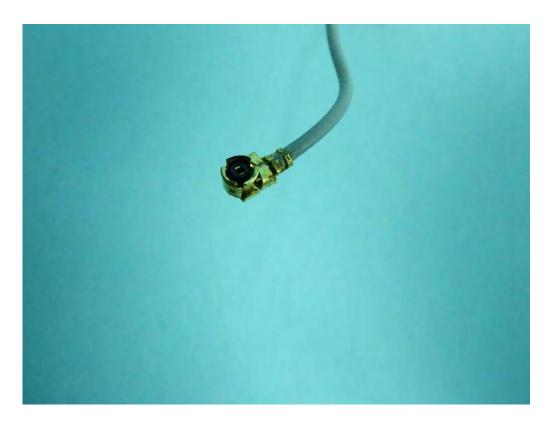




Page Number : A44 of A47 Report Version : Rev. 01

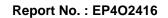


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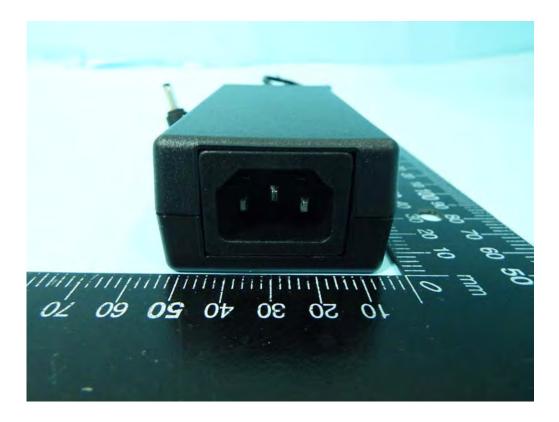




TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page Number : A45 of A47 Report Version : Rev. 01











Report No.: EP4O2416



TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page Number : A47 of A47 Report Version : Rev. 01