







# ISO/IEC17025 Accredited Lab.

Report No: FCC 1104204-02

File reference No: 2011-07-20

Applicant: Gajah International (HK) Co., Ltd

Product: MID

Brand Name: N/A

Model No: M7003

Test Standards: FCC Part 15 Subpart B: 2009

Test result:

It is herewith confirmed and found to comply with the requirements

set up by ANSI C63.4&FCC Part 15 regulations for the evaluation of

electromagnetic compatibility

Approved By

Teny Tany

Terry Tong

Manager

Dated: July 20, 2011

Results appearing herein relate only to the sample tested

The technical reports is issued errors and omissions exempt and is subject to withdrawal at

# SHENZHEN TIMEWAY TECHNOLOGY CONSULTING CO LTD

East 5/Block 4, Anhua Industrial Zone, No.8, Tairan Rd. Chegongmiao, FuTian District, Shenzhen, CHINA.

Tel (755) 83448688 Fax (755) 83442996

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Date: 2011-07-20



# **Special Statement:**

The testing quality ability of our laboratory meet with "Quality Law of People's Republic of China" Clause 19.

The testing quality system of our laboratory meet with ISO/IEC-17025 requirements, which is approved by CNAS. This approval result is accepted by MRA of APLAC.

Our test facility is recognized, certified, or accredited by the following organizations:

### **CNAS-LAB Code: L2292**

The EMC Laboratory has been assessed and in compliance with CNAS-CL01 accreditation criteria for testing Laboratories (identical to ISO/IEC 17025:2005 General Requirements) for the Competence of testing Laboratories.

# FCC-Registration No.: 899988

The EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 899988.

# **IC- Registration No.: IC5205A-01**

adopt any other remedies which may be appropriate."

The EMC Laboratory has been registered and fully described in a report filed with the (IC) Industry Canada. The acceptance letter from the IC is maintained in our files. Registration IC No.: 5205A-01.

# VCCI- Registration No.: R-3015 and C-3332

The EMC Laboratory has been registered and fully described in a report filed with the (VCCI) Voluntary Control Council for Interference. The acceptance letter from the VCCI is maintained in our files. Registration IC No.: R-3015 and C-3332

Date: 2011-07-20



# **Test Report Conclusion**

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### 1.0 General Details

1.1 Test Lab Details

Name: SHENZHEN TIMEWAY TECHNOLOGY CONSULTING CO LTD

Address: East 5/Block 4, Anhua Industrial Zone, No.8, Tairan Rd. CheGongMiao, FuTian District,

Shenzhen, CHINA.

Telephone: (755) 83448688 Fax: (755) 83442996

1.2 Applicant Details

Applicant: Gajah International (HK) Co., Ltd

Address: 9A, Block Yinxing, Huamaoxin Garden, 7001 Hongli W, Shenzhen, Guangdong, China

Telephone: 86-755-82970307 Fax: 86-755-82970571

1.3 Description of EUT

Product: MID

Manufacturer: Gajah International (HK) Co., Ltd

Brand Name: N/A Model Number: M7003

Rating: Model: PS12K0901500; Input: 100-240V AC, 50/60Hz, 0.35A; Output: DC9V, 1.5A

1.4 Submitted Sample: 2 Sample

1.5 Test Duration

2011-07-01 to 2011-07-19

1.6 Test Uncertainty

Conducted Emissions Uncertainty =3.6dB

Radiated Emissions Uncertainty =4.7dB

1.7 Test Engineer

The sample tested by

Print Name: Terry Tang

"The report refers only to the sample tested and does not apply to the bulk production.

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#### 2.0 List of Measurement Equipment

#### 2.1 **Conducted Emission Test**

				Calibration	Calibration
Name	Model No.	Serial No.	Manufacturer	Date	Cycle
EMI Test Receiver	ESCS30	100139	RS	2011.4.26	1Year
PULSE LIMITER	ESH3-Z2	100281	RS	2011.4.26	1Year
LISN	LS16C	10010947251	AFJ	2011.4.26	1Year
LISN (Three Phase)	NSLK 8126	8126453	Schwarebeck	2011.4.26	1Year

#### 2.2 Radiated electromagnetic disturbance test

1.2 Itaaiatea eleen elimagileite aletai ealite teet					
				Calibration	Calibration
Name	Model No.	Serial No.	Manufacturer	Date	Cycle
EMI Test Receiver	ESVD	100008	RS	2011.4.26	1Year
Coaxial Switch	MP59B	M70585	ANRITSU	N/A	N/A
Spectrum Analyzer	8595E	3441A00893	НР	2011.4.26	1Year
Amplifier	8447D	2727A05017	HP	2011.4.26	1Year
Bilog Antenna	VULB9163	9163/340	Schwarebeck	2011.4.26	1Year
Horn Antenna	BBHA 9120D	9120D-631	Schwarebeck	2011.4.26	1Year

#### 2.3 Auxiliary Equipment

				Calibration	Calibration
Name	Model No.	Serial No.	Manufacturer	Date	Cycle
U-disk	U208		Netac		FCC DOC
				Data cable	
				of 1.0m	
Earphone				length	
SD Card			Kingston		
PC	R400		IBM		FCC DOC
				Data cable	
				of 1.0m	
Keyboard			DELL	length	FCC DOC
				Data cable	
				of 1.0m	
Mouse			DELL	length	FCC DOC

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Supplier or others persons directly concerned. Shenzhen Timeway Technology Consulting co., Ltd will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the certainty of the crops of the consent. into any discussion of correspondence with any third party concerning the contents of the report.

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#### 3.0 **Technical Details**

Date: 2011-07-20

3.1 **Investigations Requested** Perform Electromagnetic Interference [EMI] tests for FCC Requirement.

3.2 Test Standards

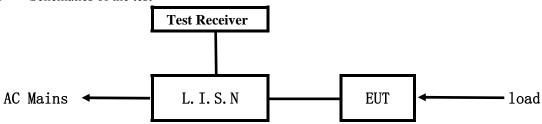
FCC Part 15 Subpart B: 2009

Date: 2011-07-20



### 4.0 Conducted Power line Test

#### 4.1 Schematics of the test

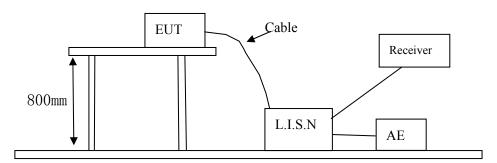


**EUT**: Equipment Under Test

### 4.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.4-2009. The Frequency spectrum From 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.4 –2009. Cables and peripherals were moved to find the maximum emission levels for each frequency.

Test Voltage: 120V~, 60Hz Block diagram of Test setup



## 4.3 Power line conducted Emission Limit

Eraguanay (MHz)	Class A Li	mits dB(μV)	Class B Limits dB(μV)		
Frequency(MHz)	Quasi-peak Level	Average Level	Quasi-peak Level	Average Level	
$0.15 \sim 0.50$	79.00	66.00	66.00~56.00*	56.00~46.00*	
$0.50 \sim 5.00$	73.00	60.00	56.00	46.00	
5.00 ~ 30.00	73.00	60.00	60.00	50.00	

Notes:

- 1. \*decreasing linearly with logarithm of frequency.
- 2. The tighter limit shall apply at the transition frequencies

#### 4.4 Test Results

The frequency spectrum from 0.15MHz to 30MHz was investigated. All reading are quasi-peak values with a resolution bandwidth of 9kHz.

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Date: 2011-07-20

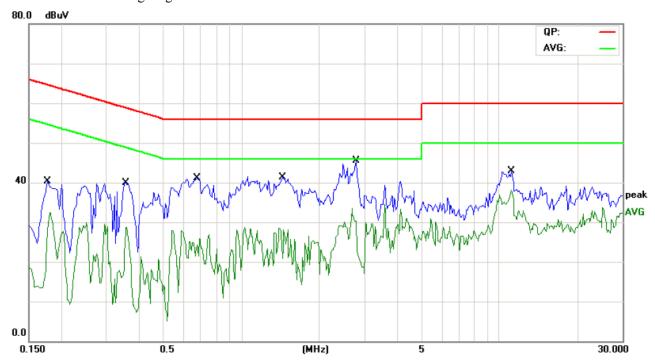


# A Conducted Emission on Line Terminal of the power line (150kHz to 30MHz)

EUT set Condition: Keep EUT Transmitting under WIFI mode, Read SD card, Play USB

And Run EMC test program

Results: Pass



Eraguanav		Reading	(dB µ V)		Limit	
Frequency (MHz)	Neutr	Neutral		Line		V)
(WITIZ)	Quasi-peak	Average	Quasi-peak	Average	Quasi-peak	Average
0.1773			36.30	27.04	64.61	54.61
0.3570			37.00	23.50	58.80	48.80
0.6734			37.88	25.49	56.00	46.00
1.4430			35.51	23.58	56.00	46.00
2.7828			35.97	25.01	56.00	46.00
11.1327			36.35	25.65	56.00	46.00

<sup>&</sup>quot;The report refers only to the sample tested and does not apply to the bulk production.

Date: 2011-07-20

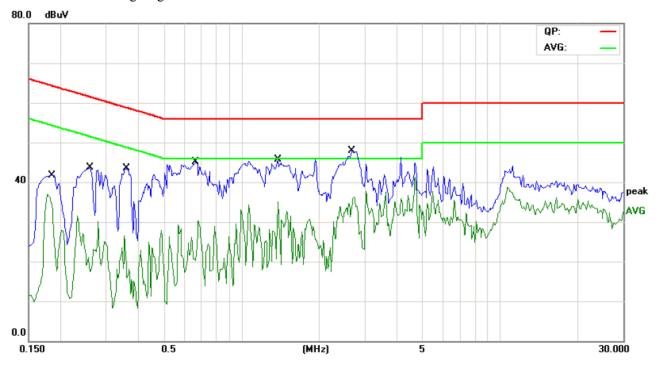


# B Conducted Emission on Neutral Terminal of the power line (150kHz to 30MHz)

EUT set Condition: Keep EUT Transmitting under WIFI mode, Read SD card, Play USB

And Run EMC test program

Results: Pass



Eraguanav		Reading(dB µ V) Limit		B μ V)		t
Frequency (MHz)	Neutr	al	Line	;	(dB µ	V)
(IVIIIZ)	Quasi-peak	Average	Quasi-peak	Average	Quasi-peak	Average
0.1812	40.47	29.87			64.43	54.43
0.2594	39.34	20.50			61.45	51.45
0.3608	40.89	26.98			58.71	48.71
0.6656	41.38	26.27			56.00	46.00
1.3844	40.15	28.31			56.00	46.00
2.6773	42.09	29.18			56.00	46.00

<sup>&</sup>quot;The report refers only to the sample tested and does not apply to the bulk production.

Date: 2011-07-20



# C: Conducted Emission on Live Terminal (150kHz to 30MHz)

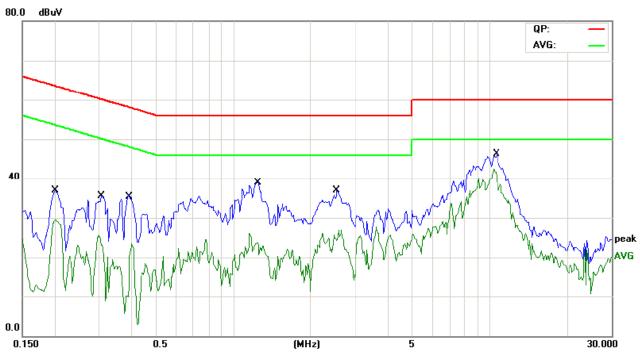
### **EUT Operating Environment**

Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Connect to PC and Full Load** 

**Equipment Level: Class B** 

**Results: PASS** 



Frequency	Line	Reading(dE		BμV) Limit(dBμV)	
(MHz)	Line	Quasi-peak	Average	Quasi-peak	Average
0.2008	Live	34.63	29.87	63.57	63.57
0.3063	Live	33.20	24.02	60.07	60.07
0.3961	Live	32.80	24.50	57.93	57.93
1.2477	Live	30.48	19.78	56.00	56.00
2.5367	Live	31.54	23.36	56.00	56.00
10.7188	Live	40.86	30.20	60.00	60.00

<sup>&</sup>quot;The report refers only to the sample tested and does not apply to the bulk production.

Date: 2011-07-20



# D: Conducted Emission on Neutral Terminal (150kHz to 30MHz)

# **EUT Operating Environment**

Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Connect to PC and Full Load** 

**Equipment Level: Class B** 

**Results: PASS** 



Frequency	Line	Reading(dBµV)		Limit(dBµV)	
(MHz)	Line	Quasi-peak	Average	Quasi-peak	Average
0.2008	Neutral	36.96	31.18	63.57	53.57
0.2555	Neutral	34.08	24.34	61.57	51.57
0.3883	Neutral	37.89	25.88	58.10	48.10
1.1344	Neutral	35.39	26.09	56.00	46.00
2.5953	Neutral	38.98	29.69	56.00	46.00
10.5625	Neutral	47.46	38.46	60.00	50.00

<sup>&</sup>quot;The report refers only to the sample tested and does not apply to the bulk production.

Date: 2011-07-20



#### 5.0 Radiated Disturbance Test

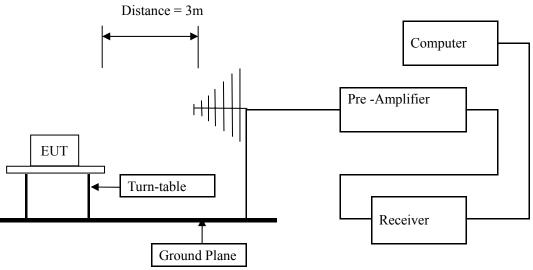
#### 5.1 Schematics of the test



#### 5.2 Test Method and test Procedure:

The EUT was tested according to ANSI C63.4 –2009; The frequency spectrum from 30MHz to 10GHz was investigated. All reading from 30MHz to 1GHz are quasi-peak 0values with a resolution bandwidth of 120KHz. All readings are above 1GHz, peak values with a resolution bandwidth of 1MHz. Measurements were made at 3 meters.

Test Voltage: 120V~, 60Hz Block diagram of Test setup



### 5.3 Radiated Emission Limit

Frequency Range (MHz)	Distance (m)	Field strength (dB $\mu$ V/m)
30-88	3	40.00
88-216	3	43.50
216-960	3	46.00
Above 960	3	54.00

Note: The lower limit shall apply at the transition frequencies

### 5.4 Test result

The frequency spectrum from 30MHz to 1GHz was investigated. All reading from 30MHz to 1GHz are quasi-peak values with a resolution bandwidth of 120kHz. All readings are above 1GHz, peak values with a resolution bandwidth of 1MHz. Measurements were made at 3 meters.

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# A: Radiated Disturbance (30MHz----1000MHz)

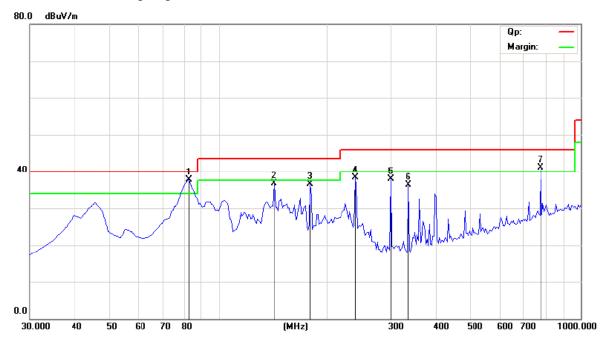
# **EUT Operating Environment**

Temperature: 25°C Humidity: 55%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Connected to PC and Full Load** 

**Equipment Level: Class B** 

**Results: Pass** 



Frequency (MHz)	Level@3m (dBμV/m)	Antenna Polarity	Limit@3m (dBµV/m)
82.5272	37.75	Н	40.00
142.7452	36.76	Н	43.50
179.6793	36.50	Н	43.50
239.9396	38.21	Н	46.00
300.2004	37.82	Н	46.00
335.1904	36.21	Н	46.00
780.3405	41.11	Н	46.00

<sup>&</sup>quot;The report refers only to the sample tested and does not apply to the bulk production.

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# A1: Radiated Disturbance (1000MHz----6000MHz)

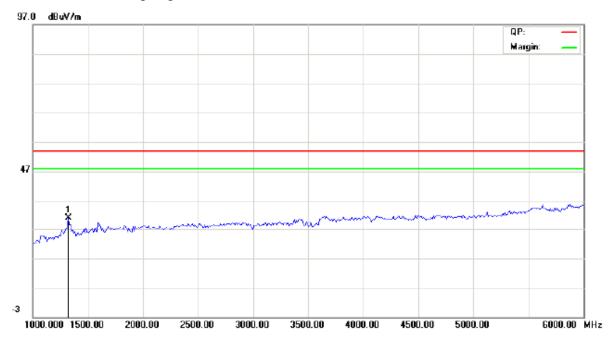
## **EUT Operating Environment**

Temperature: 25°C Humidity: 55%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Connected to PC and Full Load** 

**Equipment Level: Class B** 

**Results: Pass** 



Frequency (MHz)	Level@3m (dBµV/m)	Antenna Polarity	Limit@3m (dBµV/m)
1320.641	31.07 (PK)	Н	54.00 (AV)

<sup>&</sup>quot;The report refers only to the sample tested and does not apply to the bulk production.



#### B: Radiated Disturbance (30MHz----1000MHz)

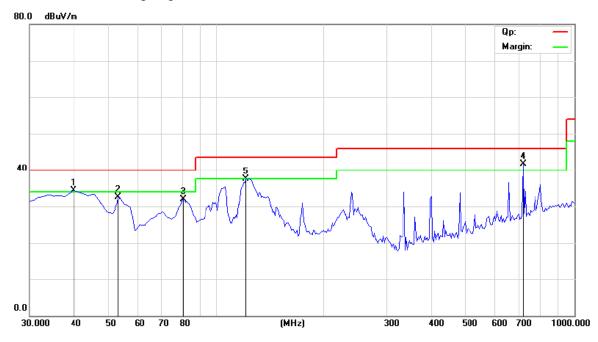
# **EUT Operating Environment**

Temperature:25°C Humidity: 55%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Connected to PC and Full Load** 

**Equipment Level: Class B** 

**Results: Pass** 



Frequency (MHz)	Level@3m ( $dB\mu V/m$ )	Antenna Polarity	Limit@3m ( $dB\mu V/m$ )
39.7371	34.31	V	40.00
53.3267	32.44	V	40.00
80.8042	31.99	V	40.00
720.0802	41.68	V	46.00
121.3627	37.46	V	43.50

<sup>&</sup>quot;The report refers only to the sample tested and does not apply to the bulk production.

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# B1: Radiated Disturbance (1000MHz----6000MHz)

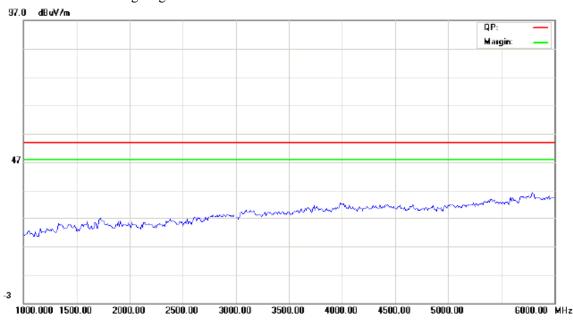
### **EUT Operating Environment**

Temperature:25°C Humidity: 55%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Connected to PC and Full Load** 

**Equipment Level: Class B** 

**Results: Pass** 



Frequency (MHz)	Level@3m (dBµV/m)	Antenna Polarity	Limit@3m (dBµV/m)
		V	



# C: Radiated Disturbance (30MHz----1000MHz)

## **EUT Operating Environment**

Temperature:25°C Humidity: 55%RH Atmospheric Pressure: 101 KPa

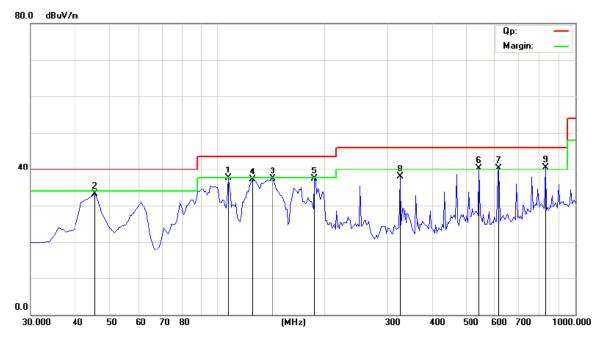
EUT set Condition: Keep EUT Transmitting under WIFI mode, Read SD card, Play USB And Run

EMC test program

**Equipment Level: Class B** 

**Results: Pass** 

Please refer to following diagram for individual



Frequency (MHz)	Level@3m (dBμV/m)	Antenna Polarity	Limit@3m (dBµV/m)
107.7553	37.51	Н	43.50
45.5510	33.20	Н	40.00
142.7692	37.35	Н	43.50
125.2505	37.13	Н	43.50
187.4550	37.24	Н	43.50
539.2985	40.31	Н	46.00
613.1662	40.29	Н	46.00
323.5271	37.99	Н	46.00
828.9380	40.55	Н	46.00

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# D: Radiated Disturbance (30MHz----1000MHz)

# **EUT Operating Environment**

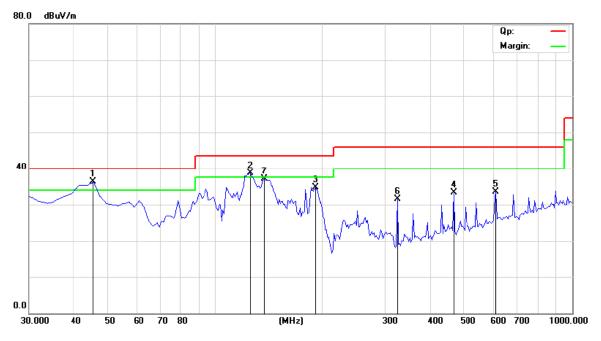
Temperature:25°C Humidity: 55%RH Atmospheric Pressure: 101 KPa

EUT set Condition: Keep EUT Transmitting under WIFI mode, Read SD card, Play USB And Run

EMC test program

**Equipment Level: Class B** 

**Results: Pass** 



Frequency (MHz)	Level@3m (dBμV/m)	Antenna Polarity	Limit@3m (dBµV/m)
45.5511	36.23	V	43.50
125.2505	38.67	V	43.50
191.3427	34.72	V	43.50
467.3747	33.39	V	46.00
613.1662	33.59	V	46.00
323.5271	31.41	V	47.00
136.9138	37.10	V	43.50

<sup>&</sup>quot;The report refers only to the sample tested and does not apply to the bulk production.

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## C1: Radiated Disturbance (1000MHz----6000MHz)

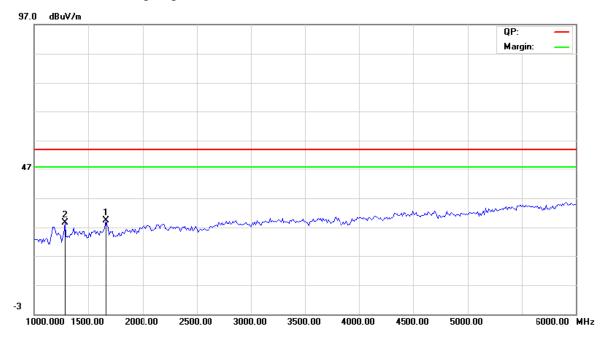
## **EUT Operating Environment**

Temperature:25°C Humidity: 55%RH Atmospheric Pressure: 101 KPa

EUT set Condition: Read SD card, Play USB And Run EMC test program

**Equipment Level: Class B** 

**Results: Pass** 



Frequency (MHz)	Level@3m (dBµV/m)	Antenna Polarity	Limit@3m (dBµV/m)
1661.322	29.34 (PK)	Н	54.00 (AV)
1280.561	28.66 (PK)	Н	54.00 (AV)

<sup>&</sup>quot;The report refers only to the sample tested and does not apply to the bulk production.

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### D1: Radiated Disturbance (1000MHz----6000MHz)

### **EUT Operating Environment**

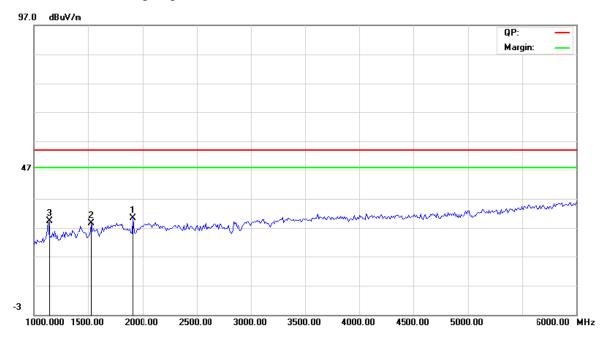
Temperature:25°C Humidity: 55%RH Atmospheric Pressure: 101 KPa

EUT set Condition: Read SD card, Play USB And Run EMC test program

**Equipment Level: Class B** 

**Results: Pass** 

Please refer to following diagram for individual



Frequency (MHz)	Level@3m (dBμV/m)	Antenna Polarity	Limit@3m (dBµV/m)
1911.823	30.44 (PK)	V	54.00 (AV)
1531.062	28.63 (PK)	V	54.00 (AV)
1130.261	29.35 (PK)	V	54.00 (AV)

Note: Due to the PK final radiated level less than the AV limit, so necessary take down the AV final radiated level

<sup>&</sup>quot;The report refers only to the sample tested and does not apply to the bulk production.

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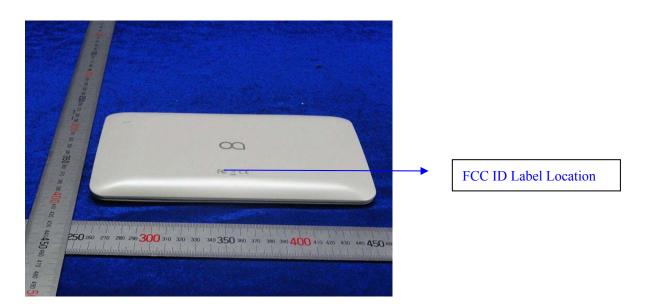
### 6.0 FCC Label

#### FCC ID: UFKM7003

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The label must not be a stick-on paper label. The label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

# Mark Location: On the product body



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Date: 2011-07-20



# Photo of testing

### **Conducted Emissions**





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Date: 2011-07-20



### **Radiated Emissions**







NOTE: For the product photos, please see test report TW1104204-01

# -End of the report-

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