FCC
TEST REPORT

Prepared for :

Shenzhen Yunlink Technology Co., Ltd.

B3 Building, An'le Industrial Zone, Hangcheng Road, Gushu, Xixiang Town, Bao'an, Shenzhen Guangdong Province, China

FCC ID:	**2ADUG-AC3000**
Product:	**Wireless Mangement Platform**
Trade Name:	**N/A**
Model Name:	**AC3000; Serial model(s) see page 2**
Date of Test:	**May. 17, 2016 - May. 24, 2016**
Date of Report:	**May. 24, 2016**
Report Number:	**HUAK16005245-E**

Prepared By :

Shenzhen HUAK Testing Technology Co., Ltd.

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TEST REPORT VERIFICATION

Applicant	:	Shenzhen Yunlink Technology Co., Ltd.
Address	:	B3 Building, An'le Industrial Zone, Hangcheng Road, Gushu, Xixiang Town, Bao'an, Shenzhen Guangdong Province, China
Manufacturer	:	Shenzhen Yunlink Technology Co., Ltd.
Address	:	B3 Building, An'le Industrial Zone, Hangcheng Road, Gushu, Xixiang Town, Bao'an, Shenzhen Guangdong Province, China
EUT Description	:	Wireless Mangement Platform
(A) Model No.	:	AC3000
(B) Serial No.	:	AC6000, AC8000, AC1000, AC950, AC960, AC980
(C) Trade Mark	:	N/A
(D) Power Supply	:	AC120V/60Hz

Standards..... FCC Part 15 Subpart B
ANSI C63.4: 2014

This device described above has been tested by HUAK, and the test results show that the equipment under test (EUT) is in compliance with Part 15 of FCC Rules. And it is applicable only to the tested sample identified in the report.

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Test Result..... **Pass**

Date of Test: May. 17, 2016 - May. 24, 2016

Testing Engineer **:** Eric Xie

(Eric Xie)

Technical Manager **:** Dora Qin

(Dora Qin)

Authorized Signatory **:**

(Kait Chen)

1. TEST SUMMARY

Test procedures according to the technical standards:

EMC Emission				
Standard	Test Item	Limit	Judgment	Remark
FCC Part 15 Subpart B ANSI C63.4:2014	Conducted Emission	Class B	PASS	
	Radiated Emission	Class B	PASS	

NOTE:

(1) 'N/A' denotes test is not applicable in this Test Report

(2) For client's request and manual description, the test will not be executed.

1.1 TEST FACILITY

Test Firm : Shenzhen WST Testing Technology Co., Ltd.
Certificated by FCC, Registration No.: 939433

Address : 1F, No.9 Building,TGK Science & Technology Park, Yangtian Rd.,
NO.72 Bao'an Dist., Shenzhen, Guangdong, China. 518101

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y** ± **U**，where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**，providing a level of confidence of approximately **95** %.

A. Conducted Measurement :

Test Site	Method	Measurement Frequency Range	U，(dB)	NOTE
WSTC01	ANSI	150 KHz ~ 30MHz	3.2	

B. Radiated Measurement :

Test Site	Method	Measurement Frequency Range	U，(dB)	NOTE
WSTA01	ANSI	30MHz ~ 1000MHz	4.7	

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	Wireless Mangement Platform
Model Name	AC3000
Serial Model	AC6000, AC8000, AC1000, AC950, AC960, AC980
Model Difference	All the model are the same circuit, except the appearance colour, this report only test mode name: AC3000.
FCC ID:	2ADUG-AC3000
Product Description	The EUT is a Wireless Mangement Platform. Operating frequency: N/A Connecting I/O port: N/A Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.
Power Source	AC Voltage
Power Rating	AC120V/60Hz
Adapter Model	N/A

2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	Running

For Conducted Test	
Final Test Mode	Description
Mode 1	Running

For Radiated Test	
Final Test Mode	Description
Mode 1	Running

2.3 DESCRIPTION OF TEST SETUP

Operation of EUT during testing

2.4 MEASUREMENT INSTRUMENTS LIST

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMI Receiver	Rohde & Schwarz	ESCI	100627	May 19, 2016	1 Year
2.	LISN	SchwarzBeck	NSLK 8126	8126377	May 19, 2016	1 Year
3.	RF Switching Unit	Compliance Direction	RSU-M2	38303	May 19, 2016	1 Year
4.	EMI Test Software ES-K1	Rohde & Schwarz	N/A	N/A	N/A	N/A
5.	EMI Test Receiver	Rohde & Schwarz	ESCI	100627	May 19, 2016	1 Year
6.	Trilog Broadband Antenna	Schwarzbeck	VULB9163	VULB 9163-289	May 17, 2016	1 Year
7.	Pre-amplifier	Compliance Direction	PAP-0203	22008	May 19, 2016	1 Year
8.	EMI Test Software EZ-EMC	SHURPLE	N/A	N/A	N/A	N/A
9.	EMI Receiver	Rohde & Schwarz	ESCI	100627	May 19, 2016	1 Year
10.	LISN	SchwarzBeck	NSLK 8126	8126377	May 19, 2016	1 Year
11.	RF Switching Unit	Compliance Direction	RSU-M2	38303	May 19, 2016	1 Year
12.	EMI Test Software ES-K1	Rohde & Schwarz	N/A	N/A	N/A	N/A
13.	EMI Receiver	Rohde & Schwarz	ESCI	100627	May 19, 2016	1 Year
14.	EMI Receiver	Rohde & Schwarz	ESCI	100627	May 19, 2016	1 Year
15.	LISN	SchwarzBeck	NSLK 8126	8126377	May 19, 2016	1 Year
16.	RF Switching Unit	Compliance Direction	RSU-M2	38303	May 19, 2016	1 Year
17.	EMI Test Software ES-K1	Rohde & Schwarz	N/A	N/A	N/A	N/A
18.	Programmable AC Power source	SOPH POWER	PAG-1050	630250	May 26, 2015	1 Year
19.	Harmonic and Flicker Analyzer	LAPLACE	AC2000A	272629	May 26, 2015	1 Year
20.	Harmonic and Flicker Test Software AC 2000A	LAPLACE	N/A	N/A	N/A	N/A
21.	ESD Simulators	KIKUSUI	KES4021	LJ003477	May 25, 2015	1 Year
22.	EFT Generator	EMPEK	EFT-4040B	0430928N	May 19, 2016	1 Year
23.	Shielding Room	ChangZhou ZhongYu	JB88	SEL0166	May 19, 2016	1 Year
24.	Signal Generator 9KHz~2.2GHz	R&S	SML02	SEL0143	May 19, 2016	1 Year
25.	Signal Generator 9KHz~1.1GHz	R&S	SML01	SEL0135	May 19, 2016	1 Year
26.	Power Meter	R&S	NRVS	SEL0144	May 19, 2016	1 Year
27.	RF Level Meter		URV35	SEL0137	May 19, 2016	1 Year

28.	Audio Analyzer	R&S	UPL	SEL0136	May 19, 2016	1 Year
29.	RF-Amplifier 150KHz~150MHz	BONN Elektronik	BSA1515-25	SEL0157	May 19, 2016	1 Year
30.	Stripline Test Cell	Erika Fiedler	VDE0872	SEL0167	N/A	N/A
31.	TV Test Transmitter	R&S	SFM	SEL0159	May 17, 2016	1 Year
32.	TV Generator PAL	R&S	SGPF	SEL0138	May 19, 2016	1 Year
33.	TV Generator Ntsc	R&S	SGMF	SEL0140	May 19, 2016	1 Year
34.	TV Generator Secam	R&S	SGSF	SEL0139	May 19, 2016	1 Year
35.	TV Test Transmitter 0.3MHz~3300MHz	R&S	SFQ	SEL0142	May 19, 2016	1 Year
36.	MPEG2 Measurement Generator	R&S	DVG	SEL0141	May 19, 2016	1 Year
37.	Spectrum Analyzer	R&S	FSP	SEL0177	May 19, 2016	1 Year
38.	Matching	R&S	RAM	SEL0146	N/A	N/A
39.	Matching	R&S	RAM	SEL0148	N/A	N/A
40.	Absorbing Clamp	R&S	MDS21	SEL0158	May 17, 2016	1 Year
41.	Coupling Set	Erika Fiedler	Rco, Rci, MC, AC, LC	SEL0149	N/A	N/A
42.	Filters	Erika Fiedler	Sr, LBS	SEL0150	N/A	N/A
43.	Matching Network	Erika Fiedler	MN, T1	SEL0151	N/A	N/A
44.	Fully Anechoic Room	ChangZhou ZhongYu	854	SEL0169	Jun. 10, 2015	1 Year
45.	Signal Generator	R&S	SML03	SEL0068	May 17, 2016	1 Year
46.	RF-Amplifier 30M~1GHz	Amplifier Reasearch	250W1000A	SEL0066	Oct. 24, 2015	1 Year
47.	RF-Amplifier 0.8~3.0GHz	Amplifier Reasearch	60S1G3	SEL0065	Oct. 24, 2015	1 Year
48.	Power Meter	R&S	NRVD	SEL0069	May 17, 2016	1 Year
49.	Power Sensor	R&S	URV5-Z2	SEL0071	May 17, 2016	1 Year
50.	Power Sensor	R&S	URV5-Z2	SEL0072	May 17, 2016	1 Year
51.	Software EMC32	R&S	EMC32-S	SEL0082	N/A	N/A
52.	Log-periodic Antenna	Amplifier Reasearch	AT1080	SEL0073	N/A	N/A
53.	Antenna Tripod	Amplifier Reasearch	TP1000A	SEL0074	N/A	N/A
54.	High Gain Horn Antenna(0.8-5GHz)	Amplifier Reasearch	AT4002A	SEL0075	N/A	N/A

3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *
0.50 -5.0	73.00	60.00	56.00	46.00
5.0 -30.0	73.00	60.00	60.00	50.00

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

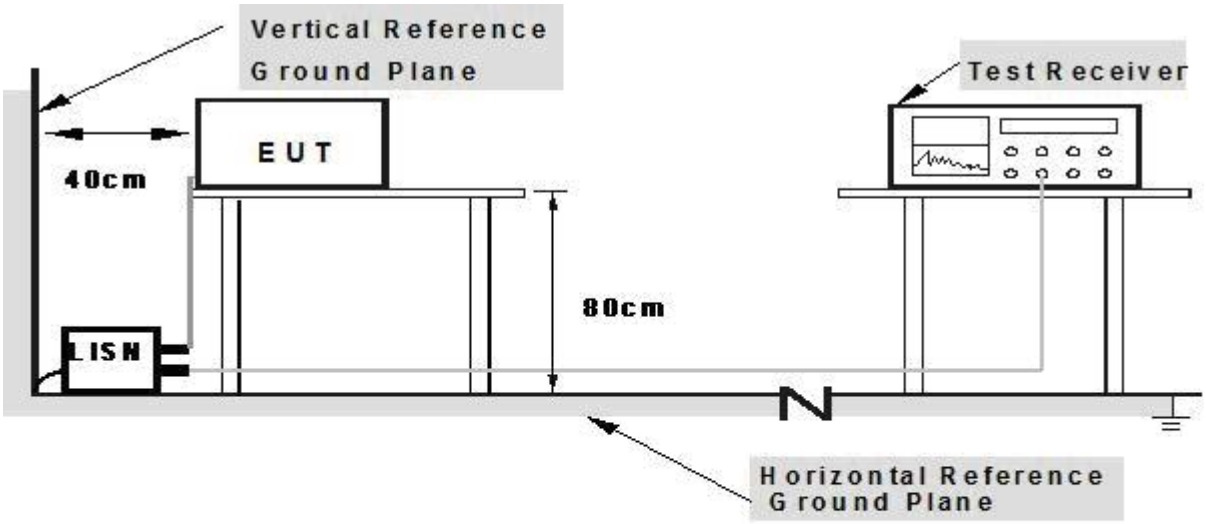
The following table is the setting of the receiver

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

3.1.2 TEST PROCEDURE

a. The EUT was placed 0.4 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
d. LISN at least 80 cm from nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.1.3 TEST SETUP



Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

3.1.4 EUT OPERATING CONDITIONS

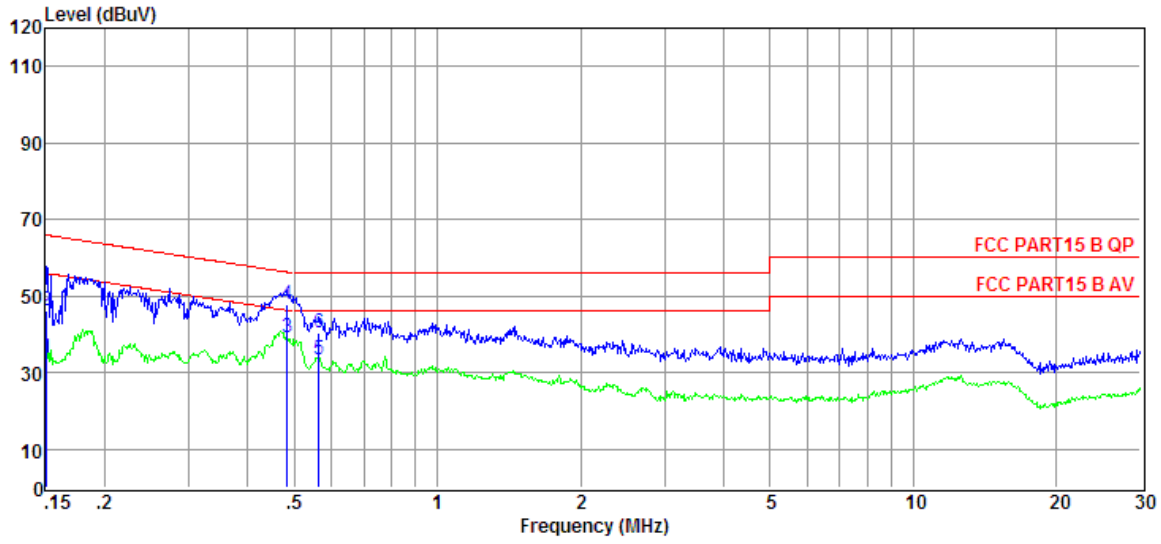
The EUT tested system was configured as the statements of **2.3** Unless otherwise a special operating condition is specified in the follows during the testing.

3.1.5 TEST RESULTS

EUT：	Wireless Mangement Platform	Model Name. ：	AC3000
Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Test Date :	2016-05-19
Test Mode：	Running	Phase :	L
Test Voltage ：	120V/60Hz		

Item (Mark)	Freq (MHz)	Read Level (dBμV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBμV)	Limit Line (dBμV)	Over Limit (dB)	Detector	Phase
1	0.15	14.34	9.61	0.02	9.86	33.83	55.96	-22.13	Average	LINE
2	0.15	26.74	9.61	0.02	9.86	46.23	65.96	-19.73	QP	LINE
3	0.48	19.48	9.61	0.02	9.86	38.97	46.27	-7.30	Average	LINE
4	0.48	28.23	9.61	0.02	9.86	47.72	56.27	-8.55	QP	LINE
5	0.56	13.84	9.61	0.03	9.86	33.34	46.00	-12.66	Average	LINE
6	0.56	20.76	9.61	0.03	9.86	40.26	56.00	-15.74	QP	LINE

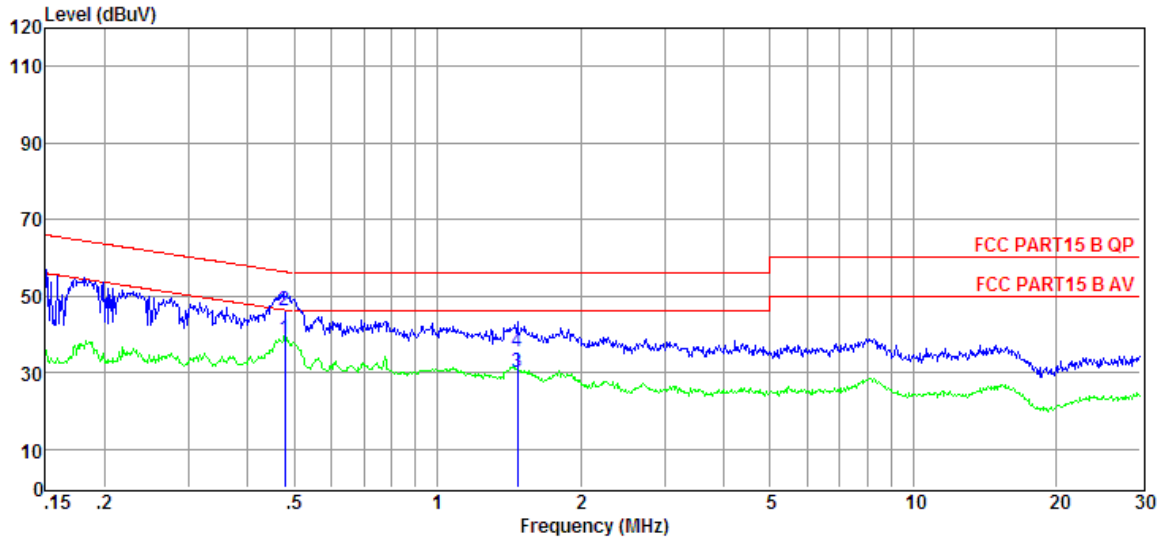
Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. N/A means All Data have pass Limit



EUT：	Wireless Mangement Platform	Model Name. ：	AC3000
Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Test Date：	2016-05-19
Test Mode：	Running	Phase：	N
Test Voltage ：	120V/60Hz		

Item (Mark)	Freq (MHz)	Read Level (dBμV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBμV)	Limit Line (dBμV)	Over Limit (dB)	Detector	Phase
1	0.48	19.36	9.61	0.02	9.86	38.85	46.36	-7.51	Average	NEUTRAL
2	0.48	26.68	9.61	0.02	9.86	46.17	56.36	-10.19	QP	NEUTRAL
3	1.47	10.58	9.62	0.03	9.86	30.09	46.00	-15.91	Average	NEUTRAL
4	1.47	16.14	9.62	0.03	9.86	35.65	56.00	-20.35	QP	NEUTRAL

Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. N/A means All Data have pass Limit



3.2 RADIATED EMISSION MEASUREMENT

3.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

FREQUENCY (MHz)	Class A (at 10m)	Class B (at 3m)
	dBuV/m	dBuV/m
30 ~ 88	39.0	40.0
88 ~ 216	43.5	43.5
216 ~ 960	46.5	46.0
Above 960	49.5	54.0

Notes:

(1) The limit for radiated test was performed according to as following: FCC PART 15B /ICES-003.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

3.2.2 TEST PROCEDURE

a. The measuring distance of at 10 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.

b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.

c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

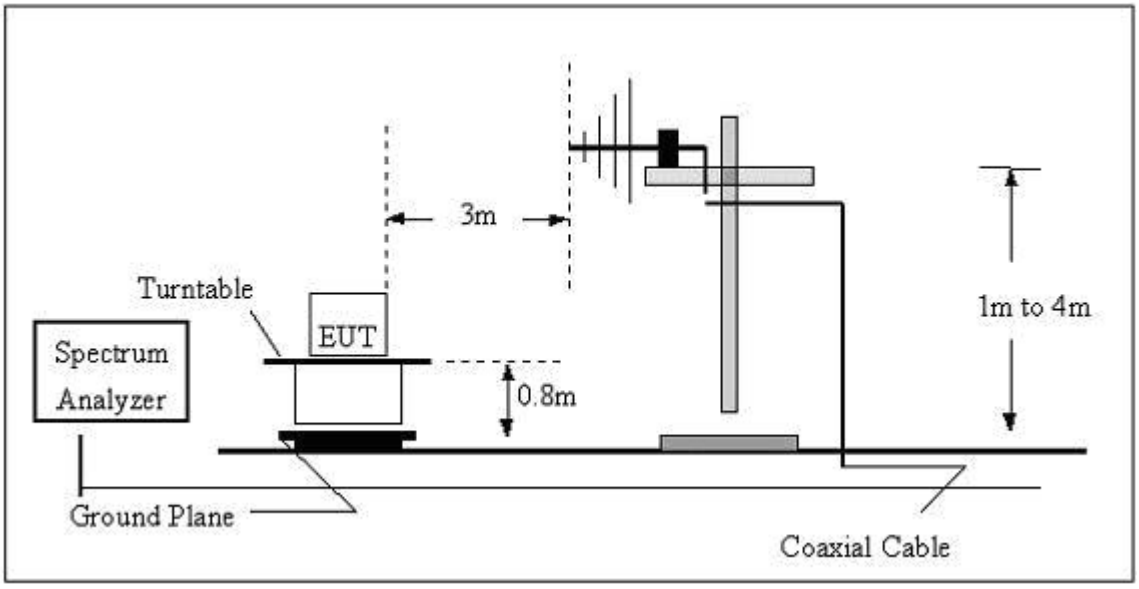
d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured, above 1G Average detector mode will be instead.

e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP(AV) Limits and then no additional QP Mode measurement performed.

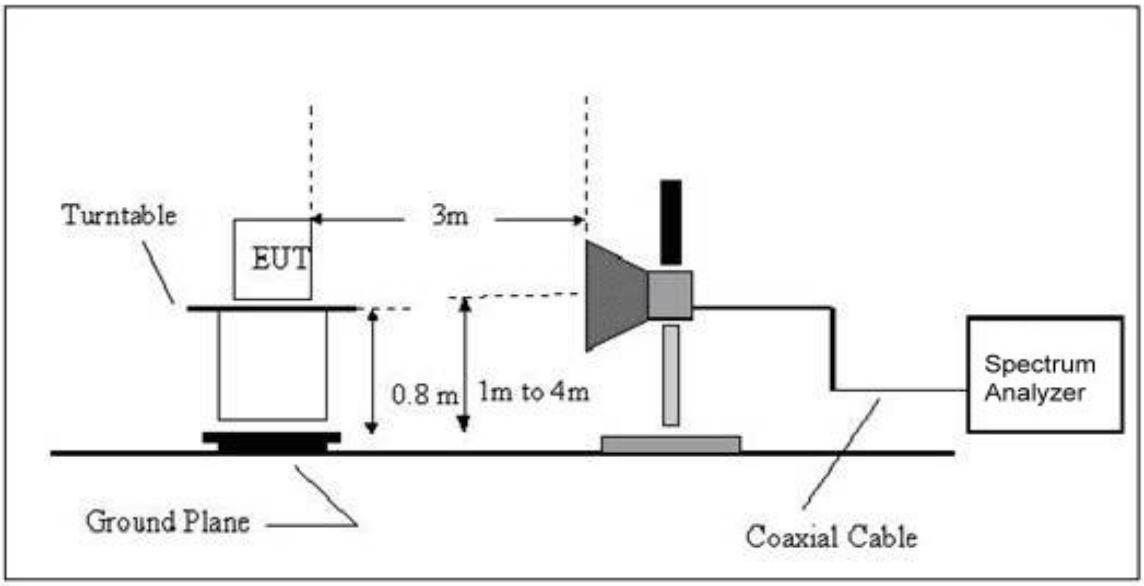
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.2.3 TEST SETUP

(A) Radiated Emission Test Set-Up Frequency Below 1 GHz



(B) Radiated Emission Test Set-Up Frequency Above 1GHz



3.2.4 EUT OPERATING CONDITIONS

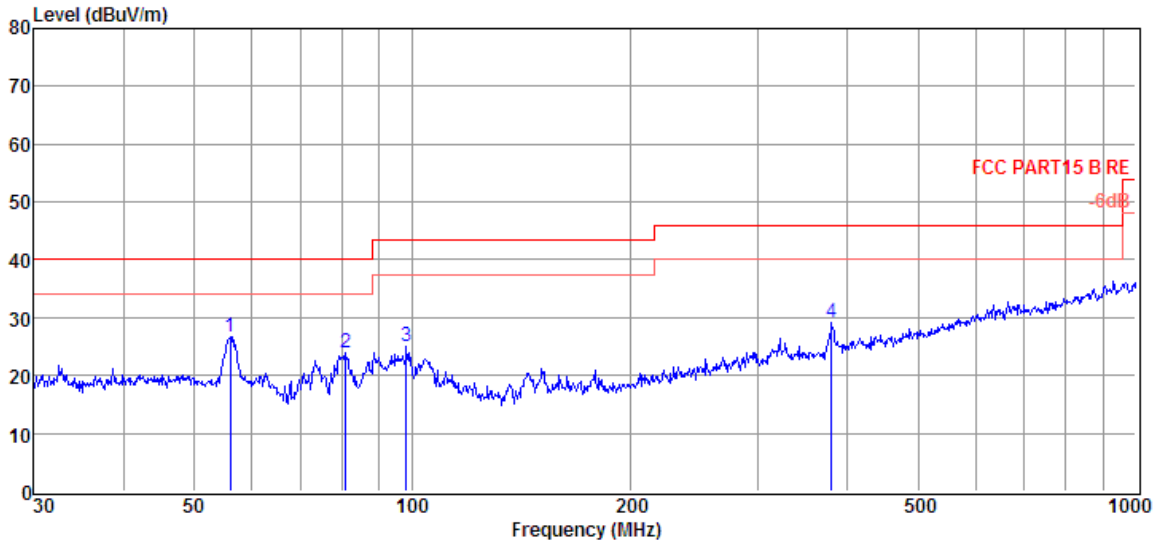
The EUT tested system was configured as the statements of **2.3** Unless otherwise a special operating condition is specified in the follows during the testing.

3.2.5 TEST RESULTS

EUT：	Wireless Mangement Platform	Model Name ：	AC3000
Temperature：	24 ℃	Relative Humidity：	54%
Pressure：	1010 hPa	Test Date :	2016-05-20
Test Mode ：	Running	Polarization :	Horizontal
Test Power ：	120V/60Hz		

Item (Mark)	Freq (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	56.00	11.07	11.60	3.94	26.61	40.00	-13.39	Peak	HORIZONTAL
2	80.93	12.15	7.54	4.16	23.85	40.00	-16.15	Peak	HORIZONTAL
3	98.14	8.99	11.85	4.28	25.12	43.50	-18.38	Peak	HORIZONTAL
4	379.91	8.17	15.20	5.72	29.09	46.00	-16.91	Peak	HORIZONTAL

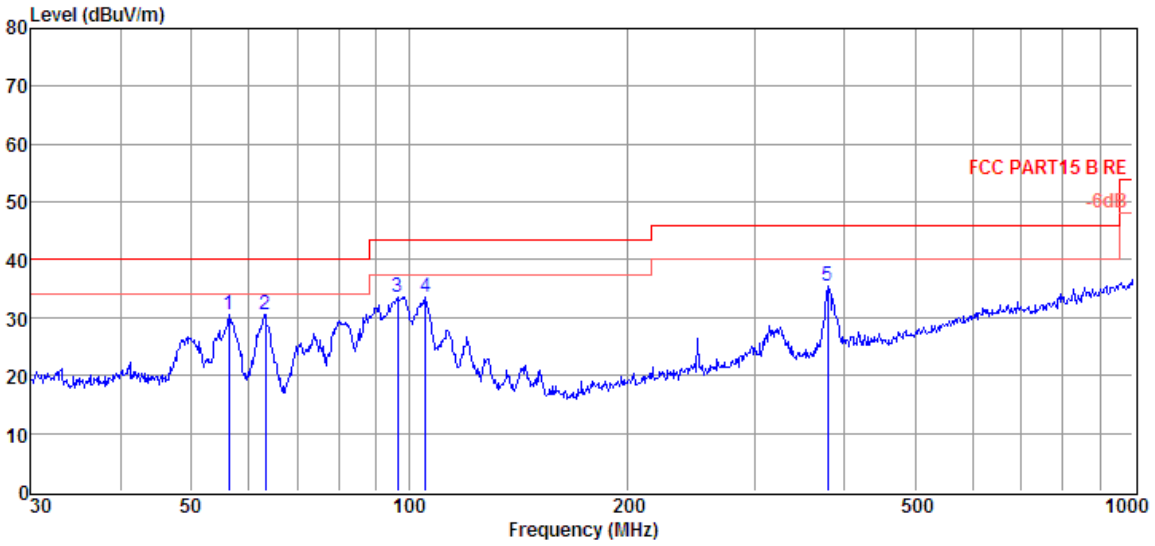
Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Antenna Factor + Cable Loss.
3. N/A means All Data have pass Limit



EUT：	Wireless Mangement Platform	Model Name ：	AC3000
Temperature：	24 ℃	Relative Humidity：	54%
Pressure：	1010 hPa	Test Date：	2016-05-20
Test Mode ：	Running	Polarization：	Vertical
Test Power ：	120V/60Hz		

Item (Mark)	Freq (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	56.40	14.92	11.62	3.94	30.48	40.00	-9.52	Peak	VERTICAL
2	63.31	16.31	10.22	4.00	30.53	40.00	-9.47	Peak	VERTICAL
3	96.44	17.60	11.72	4.27	33.59	43.50	-9.91	Peak	VERTICAL
4	105.27	17.62	11.57	4.33	33.52	43.50	-9.98	Peak	VERTICAL
5	378.58	14.56	15.20	5.71	35.47	46.00	-10.53	Peak	VERTICAL

Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Antenna Factor + Cable Loss.
3. N/A means All Data have pass Limit



3.2.6 TEST RESULTS(Above 1GHz)

EUT：	Wireless Mangement Platform	Model Name ：	AC3000
Temperature：	24 ℃	Relative Humidity：	54%
Pressure：	1010 hPa	Test Date :	N/A
Test Mode ：	N/A		
Test Power ：	N/A		

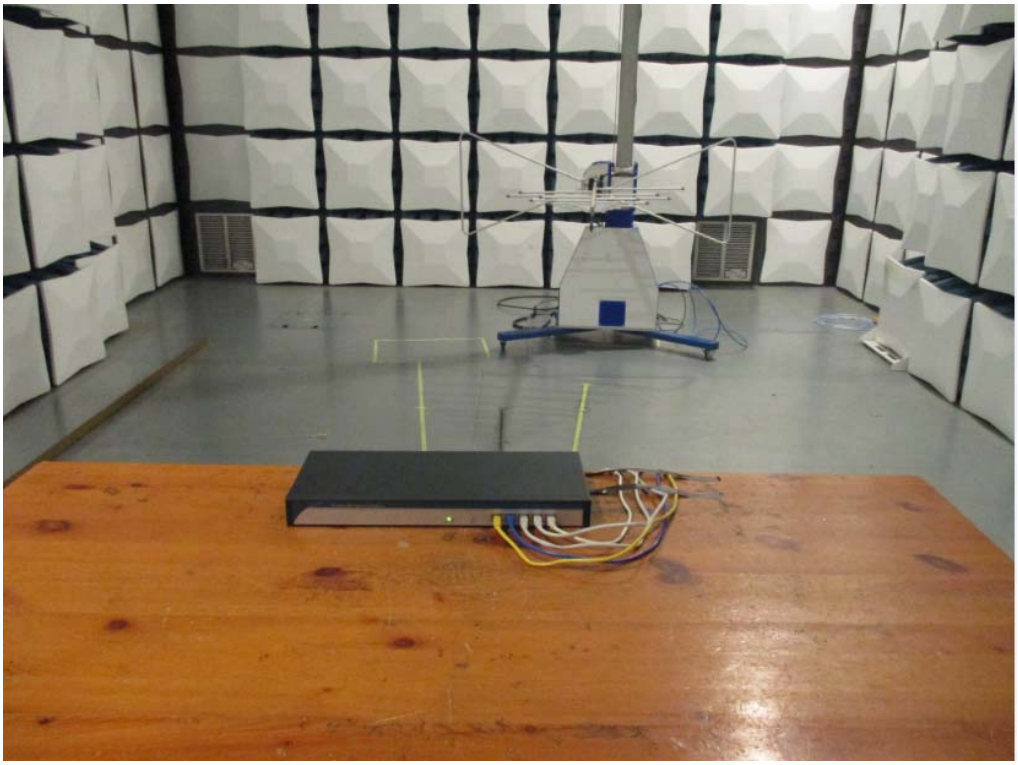
Note:

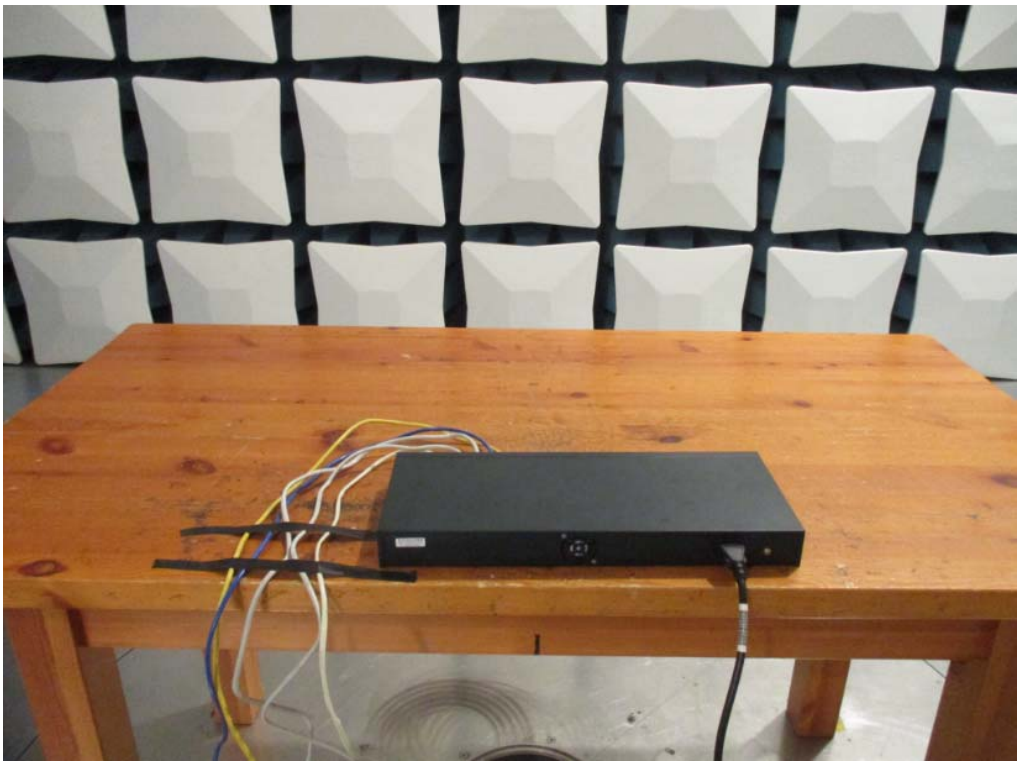
1) N/A - denotes test is not applicable in this test report

2) There was not any unintentional transmission in standby mode

4. **EUT TEST PHOTO**

Radiated Measurement Photos





Conducted Measurement Photos