RF Exposure Evaluation Report

APPLICANT : Ubiquiti Network, Inc

EQUIPMENT: Access Point

BRAND NAME: UBIQUITI

MODEL NAME: NBE-5AC-16

FCC ID : SWX-NBE5AC16D

STANDARD : 47 CFR Part 2.1091

We, SPORTON INTERNATIONAL INC., would like to declare that the device has been evaluated in accordance with 47 CFR Part 2.1091 and pass the limit. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by: Eric Huang / Deputy Manager

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Approved by: Jones Tsai / Manager





Report No. : FA570611

SPORTON INTERNATIONAL INC.

No.52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Taoyuan City, Taiwan (R.O.C.)

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: SWX-NBE5AC16D Page Number : 1 of 5
Report Issued Date : Jul. 27, 2015

Report Version : Rev. 01

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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA570611	Rev. 01	Initial issue of report	Jul. 27, 2015

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1. Administration Data

1.1. <u>Testing Laboratory</u>

Testing Laboratory						
Test Site SPORTON INTERNATIONAL INC.						
Test Site Location	No.52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978					

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Applicant				
Company Name	Ubiquiti Network, Inc			
Address	12F, No.105, Song Ren Rd.,SinYi District, Taipei 110,Taiwan			

Manufacturer Manufacturer				
Company Name	Ubiquiti Network, Inc			
Address	12F, No.105, Song Ren Rd.,SinYi District, Taipei 110,Taiwan			

2. <u>Description of Equipment Under Test (EUT)</u>

Product Feature & Specification						
EUT Type	EUT Type Access Point					
Brand Name	UBIQUITI					
Model Name	me NBE-5AC-16					
FCC ID	SWX-NBE5AC16D					
Wireless Technology and Frequency Range	5.8GHz WLAN: 5735 MHz ~ 5840 MHz					
Mode	802.11ac					
Antenna Type Dish Antenna						
EUT Stage	Production Unit					

3. Maximum RF average output power among production units

Band / Mode	IEE	n) VHT80	
Danu / Ivioue	VHT10 / VHT20 / VHT30	VHT40 / VHT50 / VHT60	VHT80
5.8GHz Band	27.50	26.50	22.50

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4. RF Exposure Limit Introduction

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

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Frequency range (MHz) Electric field strength (V/m)		Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)	
Ric Si	(A) Limits for O	cupational/Controlled Expos	sures	W: 122	
0.3-3.0	614	1.63	*(100)	6	
3.0-30	1842/	f 4.89/1	*(900/f2)	6	
30-300	61.4	0.163	1.0	6	
300-1500			f/300	6	
1500-100,000			5	6	
	(B) Limits for Gene	ral Population/Uncontrolled I	Exposure		
0.3-1.34	614	1.63	*(100)	30	
1.34-30	824/	2.19/1	*(180/f2)	30	
30-300	27.5	0.073	0.2	30	
300-1500			f/1500	30	
1500-100,000			1.0	30	

The MPE was calculated at 43 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$S=\frac{PG}{4\pi R^2}$$

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Where:

S = Power Density

P = Output Power at Antenna Terminals

G = Gain of Transmit Antenna (linear gain)

R = Distance from Transmitting Antenna

5. Radio Frequency Radiation Exposure Evaluation

5.1. Standalone Power Density Calculation

Band	Frequency (MHz)	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (dBm)	Maximum EIRP (W)	Average EIRP (mW)	Power Density at 43cm (mW/cm^2)	Limit (mW/cm^2)
5GHz WLAN	5735.0	16.00	27.50	43.500	22.387	22387.211	0.964	1.000

Note: For conservativeness, the lowest uplink frequency of each band is used to determine the MPE limit of that band

Conclusion:

According to 47 CFR §2.1091, the RF exposure analysis concludes that the RF Exposure is FCC compliant.

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