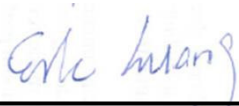


RF Exposure Evaluation Report

APPLICANT : Ubiquiti Networks, Inc.
EQUIPMENT : UniFi® AC In-Wall Wi-Fi Access Point
BRAND NAME : UBIQUITI
MODEL NAME : UAP-AC-IW
FCC ID : SWX-UAPACIW
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



Approved by: Jones Tsai / Manager



SPORTON INTERNATIONAL INC.

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



Table of Contents

1. ADMINISTRATION DATA	4
1.1. Testing Laboratory	4
2. DESCRIPTION OF EQUIPMENT UNDER TEST (EUT)	4
3. MAXIMUM RF AVERAGE OUTPUT POWER AMONG PRODUCTION UNITS	5
4. RF EXPOSURE LIMIT INTRODUCTION	6
5. RADIO FREQUENCY RADIATION EXPOSURE EVALUATION	7
5.1. Standalone Power Density Calculation	7



Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA6O0709-01	Rev. 01	Initial issue of report	Nov. 30, 2016

1. Administration Data

1.1. Testing Laboratory

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

Applicant	
Company Name	Ubiquiti Networks, Inc.
Address	2580 Orchard Pkwy., San Jose, CA95131, U.S.A

Manufacturer	
Company Name	Ubiquiti Networks, Inc.
Address	2580 Orchard Pkwy., San Jose, CA95131, U.S.A

2. Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT Type	UniFi® AC In-Wall Wi-Fi Access Point
Brand Name	UBIQUITI
Model Name	UAP-AC-IW
FCC ID	SWX-UAPACIW
Wireless Technology and Frequency Range	WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz
Mode	· 802.11a/b/g/n/ac HT20/HT40/VHT20/VHT40/VHT80
EUT Stage	Identical Prototype
Remark:	
1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.	

**3. Maximum RF average output power among production units**

Mode		Maximum Average Power (dBm)
2.4GHz WLAN Ant 1+2	802.11b	20.5
	802.11g	16.0
	802.11n-HT20	16.5
	802.11n-HT40	18.5
5.2/5.8GHz WLAN Ant 1+2	802.11a	19.5
	802.11n-HT20	22.0
	802.11n-HT40	23.5
	802.11ac-VHT20	22.0
	802.11ac-VHT40	24.5
	802.11ac-VHT80	20.5

Note: MIMO Ant. 1+2 average power is a combined result from sum of the power
MIMO Ant. 1 and MIMO Ant. 2



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.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f ²)	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	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 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

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

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 20cm (mW/cm ²)	Limit (mW/cm ²)
2.4GHz WLAN	2412.0	1.00	20.50	21.500	0.141	141.254	0.028	1.000
5.2 / 5.8GHz WLAN	5180.0	2.00	24.50	26.500	0.447	446.684	0.089	1.000

Note: For conservativeness, the lowest 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.