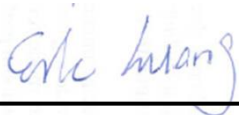


RF Exposure Evaluation Report

APPLICANT : Ubiquiti Networks, Inc.
EQUIPMENT : Rocket® ac Prism
BRAND NAME : UBIQUITI
MODEL NAME : R2AC
FCC ID : SWX-R2AC
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.)



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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA581010	Rev. 01	Initial issue of report	Aug. 09, 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	12F, No.105, Song Ren Rd.,SinYi District, Taipei 110,Taiwan

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

2. Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT Type	Rocket® ac Prism
Brand Name	UBIQUITI
Model Name	R2AC
FCC ID	SWX-R2AC
Wireless Technology and Frequency Range	WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz
Mode	• 802.11n/ac HT10/HT20/HT40/VHT10/VHT20/VHT40
Antenna Type and Gain	Omni Antenna (Gain: 13 dBi) Sector Antenna (Gain: 17 dBi) Dish Antenna (Gain: 24 dBi)
EUT Stage	Identical Prototype

Remark: 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

WLAN 2.4GHz						
Mode	Data Rate	CH.	Freq.(MHz)	Average Power (dBm)		
				Ant Gain 13	Ant Gain 17	Ant Gain 24
802.11n (HT10)	MCS0	1	2412	18	13.5	5.5
802.11n (HT10)	MCS0	6	2437	18.5	15	6
802.11n (HT10)	MCS0	11	2462	18.5	6	6
802.11n (HT20)	MCS0	1	2412	8.5	6.5	1
802.11n (HT20)	MCS0	6	2437	18.5	13.5	6
802.11n (HT20)	MCS0	11	2462	10.5	8.5	6
802.11n (HT40)	MCS0	3	2422	17	4.5	-2
802.11n (HT40)	MCS0	6	2437	9.5	8.5	1.5
802.11n (HT40)	MCS0	9	2452	7.5	6	1.5
802.11ac (VHT10)	MCS0	1	2412	18	13.5	5.5
802.11ac (VHT10)	MCS0	6	2437	18.5	15	5.5
802.11ac (VHT10)	MCS0	11	2462	18.5	6	6
802.11ac (VHT20)	MCS0	1	2412	8.5	6.5	0.5
802.11ac (VHT20)	MCS0	6	2437	18.5	13.5	5.5
802.11ac (VHT20)	MCS0	11	2462	10.5	8.5	6
802.11ac (VHT40)	MCS0	3	2422	17.5	4	-2
802.11ac (VHT40)	MCS0	6	2437	10	9	1
802.11ac (VHT40)	MCS0	9	2452	7.5	6	1



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

<Calculated with 13dBi antenna gain>

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	2437.0	13.00	18.50	31.500	1.413	1412.538	0.281	1.000

<Calculated with 17dBi antenna gain>

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	2437.0	17.00	15.00	32.000	1.585	1584.893	0.315	1.000

<Calculated with 24dBi antenna gain>

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	2437.0	24.00	6.00	30.000	1.000	1000.000	0.199	1.000

Conclusion:

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