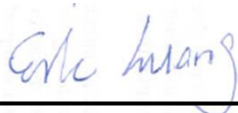


# RF Exposure Evaluation Report

**APPLICANT** : Ubiquiti Networks, Inc.  
**EQUIPMENT** : rocket PRISM AC  
**BRAND NAME** : UBIQUITI  
**MODEL NAME** : R2AC  
**FCC ID** : SWX-R2ACN  
**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 / 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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**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	685 Third Avenue, 27th Floor New York, New York 10017 USA

Manufacturer	
Company Name	Ubiquiti Networks, Inc.
Address	685 Third Avenue, 27th Floor New York, New York 10017 USA

**2. Description of Equipment Under Test (EUT)**

Product Feature & Specification	
EUT Type	rocket PRISM AC
Brand Name	UBIQUITI
Model Name	R2AC
FCC ID	SWX-R2ACN
Wireless Technology and Frequency Range	WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz
Mode	802.11ac VHT10/VHT20/VHT40
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**

**General note :**

There are four kinds of 2.4GHz WLAN output Power mode on this device :

- (1) When equipped with 13 dBi antenna (model no. AMO-2G13), the maximum output power as follows :

Mode	Maximum Average Power (dBm)
2.4GHz WLAN	24.5

- (2) When equipped with 15 dBi antenna (model no. AM-2G15-120), the maximum output power as follows :

Mode	Maximum Average Power (dBm)
2.4GHz WLAN	22.0

- (3) When equipped with 17 dBi antenna (model no. AM-2G16-90), the maximum output power as follows :

Mode	Maximum Average Power (dBm)
2.4GHz WLAN	19.0

- (4) When equipped with 17 dBi antenna (model no. AM-V2G-Ti), the maximum output power as follows :

Mode	Maximum Average Power (dBm)
2.4GHz WLAN	18.0



### 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 <sup>2</sup> )	Averaging time (minutes)
<b>(A) Limits for Occupational/Controlled Exposures</b>				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f <sup>2</sup> )	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
<b>(B) Limits for General Population/Uncontrolled Exposure</b>				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f <sup>2</sup> )	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 29 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

Antenna Model No.	Band	Frequency (MHz)	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (dBm)	Maximum EIRP (W)	Average EIRP (mW)	Power Density at 29cm (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
AMO-2G13	2.4GHz WLAN	2412.0	13.00	24.50	37.500	5.623	5623.413	0.532	1.000
AM-2G15-120	2.4GHz WLAN	2412.0	15.00	22.00	37.000	5.012	5011.872	0.474	1.000
AM-2G16-90	2.4GHz WLAN	2412.0	17.00	19.00	36.000	3.981	3981.072	0.377	1.000
AM-V2G-Ti	2.4GHz WLAN	2412.0	17.00	18.00	35.000	3.162	3162.278	0.299	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.