



RF Exposure Evaluation Report

APPLICANT : Ubiquiti Networks, Inc.
EQUIPMENT : Access Point
BRAND NAME : UBIQUITI
MODEL NAME : M5GHP
FCC ID : SWX-M5GHP
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 Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.



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1. Administration Data

1.1. Testing Laboratory

Test Site	SPORTON INTERNATIONAL INC.
Test Site Location	No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978

1.2. Applicant

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

1.3. Manufacturer

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



2. Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT Type	Access Point
Brand Name	UBIQUITI
Model Name	M5GHP
FCC ID	SWX-M5GHP
Wireless Technology and Frequency Range	WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz
Mode	• 802.11a/n HT20/HT40
Antenna Type	Grid Antenna
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

Mode	IEEE 802.11Average Power (dBm)
WIFI 802.11 a	16
WIFI 802.11 HT20	16
WIFI 802.11 HT40	17



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 55 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 Calculations

Band	Frequency (MHz)	Antenna Gain (dBi)	Maximum Power (dBm)	Average EIRP (mW)	Power Density at 55cm (mW/cm ²)	Limit (mW/cm ²)
WLAN5.8GHz 802.11a	5745.0	28.0	16.0	25118.86	0.66	1.00
WLAN5.8GHz 802.11n-HT20	5745.0	28.0	16.0	25118.86	0.66	1.00
WLAN5.8GHz 802.11n-HT40	5745.0	28.0	17.0	31622.78	0.83	1.00

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.