

RF Exposure Evaluation Report

APPLICANT	:	Ubiquiti Networks, Inc.
EQUIPMENT	:	airCube loco
BRAND NAME	:	UBIQUITI
MODEL NAME	:	ACB-LOCO
FCC ID	:	SWX-ACBLOCO
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.

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Reviewed by: Eric Huang / Manager

Approved by: Jones Tsai / Manager



SPORTON INTERNATIONAL INC.

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Table of Contents

1.	ADMINISTRATION DATA	4
	1.1. Testing Laboratory	4
2.	DESCRIPTION OF EQUIPMENT UNDER TEST (EUT)	5
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



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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	airCube loco			
Brand Name	UBIQUITI			
Model Name	ACB-LOCO			
FCC ID	SWX-ACBLOCO			
Wireless Technology and Frequency Range	WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz			
Mode	802.11b/g/n HT20/HT40			
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	Maximum Average power(dBm)
2.4GHz WLAN	20.5



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 O	ccupational/Controlled Expos	sures	20 20	
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	xposure		
0.3-1.34	614	1.63	*(100)	30	
1.34-30 824/		f 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 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	4.00	20.50	24.500	0.282	281.838	0.056	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.