



# RF EXPOSURE EVALUATION REPORT

**FCC ID** : S9GQ950US02  
**Equipment** : LTE Access Point  
**Brand Name** : RUCKUS  
**Model Name** : Q950-US02  
**Applicant** : Ruckus Wireless Inc.  
350 W. Java Dr., Sunnyvale CA 94089  
**Manufacturer** : Ruckus Wireless Inc.  
350 W. Java Dr., Sunnyvale CA 94089  
**Standard** : 47 CFR Part 2.1091

We, SPORTON INTERNATIONAL INC has been evaluated this product in accordance with 47 CFR Part 2.1091 and it complies with applicable limit.

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 1190) and the FCC designation No. TW1190 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC evaluation.

*Cona Huang*

Approved by: Cona Huang / Deputy Manager



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

Product Feature & Specification	
EUT Type	LTE Access Point
Brand Name	RUCKUS
Model Name	Q950-US02
FCC ID	S9GQ950US02
Wireless Technology and Frequency Range	LTE Band 48: 3550 MHz ~ 3700 MHz
Mode	LTE: QPSK, 16QAM, 64QAM, 256QAM
HW Version	1.0
SW Version	4.1.0.22
EUT Stage	Identical Prototype

Reviewed by: Jason Wang

Report Producer: Carlie Tsai

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

Mode		Maximum Average power(dBm)
LTE	Band 48	35.30



### 3. 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 75 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



**4. Radio Frequency Radiation Exposure Evaluation**

**4.1. Power Density Calculation**

Band	Frequency (MHz)	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (dBm)	Maximum EIRP (W)	Average EIRP (mW)	Power Density at 75cm (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
LTE Band 48	3550	13.00	35.30	48.3	67.61	67608.30	0.957	1.000

**Conclusion:**

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