RF Exposure Report

Report No.:	SA130709C02E
FCC ID:	RYK-WPEA252NI
Test Model:	WPEA-252NI
Received Date:	Jul. 09, 2013
Test Date:	Jul. 11 ~ Jul. 12, 2013 Apr. 21 ~ Apr. 24, 2015
Issued Date:	Apr. 28, 2015
Applicant:	SparkLAN Communications, Inc.
Address:	8F., No. 257, Sec. 2, Tiding Blvd., Neihu District, Taipei City 11493, Taiwan (R.O.C.)
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan, R.O.C.
Test Location:	No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

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Release Control Record

Issue No.	Description	Date Issued
SA130709C02E	Original release	Apr. 28, 2015

1 Certificate of Conformity

Product:	802.11abgn Mini PCIe module
Brand:	SparkLAN
Test Model:	WPEA-252NI
Sample Status:	Engineering sample
Applicant:	SparkLAN Communications, Inc.
Test Date:	Jul. 11 ~ Jul. 12, 2013 Apr. 21 ~ Apr. 24, 2015
Standards:	FCC Part 2 (Section 2.1091) KDB 447498 D03 IEEE C95.1

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by : _____ , **Date:** Apr. 28, 2015

Pettie Chen / Senior Specialist

Approved by : _____ , **Date:** Apr. 28, 2015

Ken Liu / Senior Manager

2 RF Exposure

2.1 Limits For Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Average Time (minutes)
Limits For General Population / Uncontrolled Exposure				
300-1500	…	…	F/1500	30
1500-100,000	…	…	1.0	30

F = Frequency in MHz

2.2 MPE Calculation Formula

$Pd = (Pout*G) / (4*pi*r^2)$

where

Pd = power density in mW/cm^2

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

2.3 Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

3 Calculation Result Of Maximum Conducted Power

Frequency Band (MHz)	Modulation Mode	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
2412-2462	802.11b	21.30	3	20	0.054	1
	802.11g	24.34	6.01	20	0.216	1
	802.11n (HT20)	26.36	6.01	20	0.343	1
	802.11n (HT40)	25.92	6.01	20	0.310	1
5180-5240	802.11a	13.98	5	20	0.016	1
	802.11n (HT20)	14.87	8.01	20	0.039	1
	802.11n (HT40)	13.74	8.01	20	0.030	1
5260-5320	802.11a	13.94	5	20	0.016	1
	802.11n (HT20)	14.90	8.01	20	0.039	1
	802.11n (HT40)	13.65	8.01	20	0.020	1
5500-5720	802.11a	13.91	5	20	0.015	1
	802.11n (HT20)	14.78	8.01	20	0.038	1
	802.11n (HT40)	13.75	8.01	20	0.030	1
5745-5825	802.11a	13.89	5	20	0.015	1
	802.11n (HT20)	14.59	8.01	20	0.036	1
	802.11n (HT40)	14.05	8.01	20	0.032	1

NOTE:

2.4GHz Band: 802.11n(HT20)/ 802.11n(HT40): Directional gain = 3dBi + 10log(2) = 6.01dBi

5GHz Band: 802.11n(HT20)/ 802.11n(HT40): Directional gain = 5dBi + 10log(2) = 8.01dBi

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