



RF Exposure Evaluation Report

Equipment : MAX-STREAM AC5400 MU-MIMO Tri-Band Router
Brand Name : LINKSYS
Model No. : EA9500 V2, EA9400 V2, EA9500S
FCC ID : Q87-EA9500V2
Standard : 47 CFR Part 2.1091
Applicant : Linksys LLC
121 Theory Drive Irvine, CA 92617

The product sample received on Mar 07, 2017 and completely tested on Apr. 20, 2017. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with 47 CFR Part 2.1091, and pass the limit.

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Cliff Chang
SPORTON INTERNATIONAL INC.





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APPENDIX A. PHOTOGRAPHS OF EUT		

REVISION HISTORY

[illegible]

1 General Description

1.1 EUT General Information

RF General Information			
Evaluation Mode	Frequency Range (MHz)	Operating Frequency (MHz)	Modulation Type
2.4GHz WLAN	2400-2483.5	2412-2462	802.11b: DSSS (DBPSK, DQPSK, CCK) 802.11g/n: OFDM (BPSK, QPSK, 16QAM, 64QAM) 802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM)
5GHz WLAN	5150-5250 5725-5850	5180-5240 5745-5825	802.11a/n: OFDM (BPSK, QPSK, 16QAM, 64QAM) 802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM)
Bluetooth	2400-2483.5	2402-2480	BR / EDR: FHSS (GFSK / $\pi/4$ -DQPSK / 8DPSK) LE: DSSS (GFSK)

1.2 Table for Multiple Listing

The model names in the following table are all refer to the identical product.

Model Name	Description
EA9500 V2	All the models are identical, the difference model names served as marketing strategy.
EA9400 V2	
EA9500S	

Note: From the above models, model: EA9500 V2 was selected as representative model for the test and its data was recorded in this report

1.3 Testing Location

Testing Location		
☐	HWA YA	ADD : No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL : 886-3-327-3456 FAX : 886-3-327-0973
☒	JHUBEI	ADD : No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C. TEL : 886-3-656-9065 FAX : 886-3-656-9085

2 Maximum Permissible Exposure

2.1 Limit of Maximum Permissible Exposure

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	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

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz ; *Plane-wave equivalent power density

2.2 MPE Calculation Method

The MPE was calculated at 31 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

E = Electric field (V/m)

P = RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = \frac{30 \times P \times G}{377 \times d^2}$$



2.3 Calculated Result and Limit

Exposure Environment: General Population / Uncontrolled Exposure

Simultaneous Transmission Analysis Mode:

WLAN 2.4GHz+WLAN 5GHz Band1+WLAN 5GHz Band4+Bluetooth

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	EIRP (W)	Distance (cm)	S (mW/cm ²)	S Limit (mW/cm ²)	Ratio (S/Limit)
5.2G;D1D	8.54	27.33	35.87	3.86367	31	0.31994	1.00000	0.31994
5.8G;D1D	8.19	27.75	35.93	3.91742	31	0.32439	1.00000	0.32439
2.4G;D1D	7.70	28.23	35.93	3.91742	31	0.32439	1.00000	0.32439
2.4G;BT-BR	2.14	10.80	12.94	0.01968	31	0.00163	1.00000	0.00163
							Sum Ratio	0.97035
							Ratio Limit	1