




RF Exposure Evaluation Report

Equipment : Wireless Access Point
Brand Name : 
Model No. : AP7465CE, AP7465XXXXXX (The "X" in the model name can be 0 to 9 , A to Z , dash or blank)
FCC ID : O2U-AP7465
Standard : 47 CFR Part 2.1091
Applicant : COMPAL BROADBAND NETWORKS,INC.
13F-1, No.1, Taiyuan 1st St., Zhubei City, Hsinchu County 30288, Taiwan, R.O.C.
Manufacturer : COMPAL BROADBAND NETWORKS,INC.
13F-1, No.1, Taiyuan 1st St., Zhubei City, Hsinchu County 30288, Taiwan, R.O.C.

The product sample received on Sep. 09, 2017 and completely tested on Jan. 16, 2018. 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.





TABLE OF CONTENTS

1 GENERAL DESCRIPTION4

1.1 EUT General Information4

1.2 Table for Multiple Listing4

1.3 Testing Location4

2 MAXIMUM PERMISSIBLE EXPOSURE5

2.1 Limit of Maximum Permissible Exposure5

2.2 Calculated Result and Limit.....6

PHOTOGRAPHS OF EUT V01



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)
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)

1.2 Table for Multiple Listing

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

Model Name	Description
AP7465CE	All the models are identical, the difference model served as marketing strategy.
AP7465XXXXXX(The "X" in the model name can be 0 to 9 , A to Z , dash or blank)	

Note: From the above models, model: AP7465CE was selected as representative model for the test and its data was recorded in this report.

1.3 Testing Location

Testing Location		
<input type="checkbox"/>	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
<input checked="" type="checkbox"/>	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

Test site Designation No. TW0006 with FCC.

Test site registered number IC 4086D with Industry Canada.



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 densityMPE Calculation Method

The MPE was calculated at 21 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

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

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

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



2.2 Calculated Result and Limit

Exposure Environment: General Population / Uncontrolled Exposure

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Tune-up EIRP (W)	Distance (cm)	S (mW/cm ²)	S Limit (mW/cm ²)
2.4G;D1D	3.13	26.76	29.89	0.50	30.39	1.09396	21	0.19750	1.00000
5.2G;D1D	5.65	29.95	35.60	0.40	36.00	3.98107	21	0.71873	1.00000
5.8G;D1D	5.11	29.89	35.00	0.50	35.50	3.54813	21	0.64025	1.00000

Simultaneous Transmission Analysis Mode: WLAN 2.4GHz+WLAN 5GHz

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Tune-up EIRP (W)	Distance (cm)	S (mW/cm ²)	S Limit (mW/cm ²)	Ratio (S/Limit)
2.4G;D1D	3.13	26.76	29.89	0.50	30.39	1.09396	21	0.19750	1.00000	0.19750
5.2G;D1D	5.65	29.95	35.60	0.40	36.00	3.98107	21	0.71873	1.00000	0.71873
									Sum Ratio	0.91623
									Ratio Limit	1