



FCC RADIO EXPOSURE TEST REPORT

FCC ID : YZKOAP100
Equipment : DUAL-BAND 11AC WAVE 2 OUTDOOR AP
Brand Name : Edgecore
Model Name : OAP100
Applicant : Edgecore Networks Corporation
No. 1, Creation Rd. III, Science Park Hsin Chu
30077, Taiwan
Manufacturer (1) : Accton Technology Corporation
No. 1, Creation Rd. III, Science Park Hsin Chu
30077, Taiwan
Manufacturer (2) : Accton Technology Corporation Zhunan Factory
1F.& 5F, No. 1, Keyi St., Zhunan Township, Miaoli
County 350 - TAIWAN
Standard : 47 CFR Part 2.1091

The product was received on Jul. 27, 2019, and testing was started from Aug. 15, 2019 and completed on Oct. 09, 2019. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in 47 CFR Part 2.1091 and shown compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.


Approved by: Cliff Chang

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
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Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
2	-	Exposure evaluation	PASS	-

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Sam Chen

Report Producer: Sandy Chuang



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)
Bluetooth	2400-2483.5	2402-2480	LE: GFSK

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 187 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

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;G1D	10.40	25.33	35.73	0.26	35.99	3.97192	187	0.00904	1.00000
5.2G;D1D	15.50	13.06	28.56	0.50	29.06	0.80538	187	0.00385	1.00000
5.8G;D1D	15.50	20.48	35.98	0.01	35.99	3.97192	187	0.00904	1.00000
BLE	4.50	1.12	5.62	0.50	6.12	0.00409	187	0.00001	1.00000
LTE	2.87	50.13	53.00	0.00	53.00	199.52623	187	0.45404	0.46667

Simultaneous Transmission Analysis Mode: WLAN 2.4GHz+WLAN 5GHz+Bluetooth LE+LTE

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;G1D	10.40	25.33	35.73	0.26	35.99	3.97192	187	0.00904	1.00000	0.00904
5.8G;D1D	15.50	20.48	35.98	0.01	35.99	3.97192	187	0.00904	1.00000	0.00904
BLE	4.50	1.12	5.62	0.50	6.12	0.00409	187	0.00001	1.00000	0.00001
LTE	2.87	50.13	53.00	0.00	53.00	199.52623	187	0.45404	0.46667	0.97294
									Sum Ratio	0.99103
									Ratio Limit	1

Note 1: The above antenna gain was declared by manufacturer.

Note 2: The LTE output power follows power limit of standard to calculate the Maximum Permissible Exposure.

—————THE END—————