RF Exposure Report

Report No.:	SA160315E13
FCC ID:	YZKECW5212
Test Model:	ECW5212
Received Date:	Mar. 15, 2016
Test Date:	Mar. 29, 2016
Issued Date:	Apr. 12, 2016
Applicant:	Edgecore Networks Corporation
Address:	No.1 Creation Rd.3, Hsinchu Science Park, Hsinchu, 30077, Taiwan, R.O.C.
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
Lab Address:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.
Test Location (1):	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.
Test Location (2):	No. 49, Ln. 206, Wende Rd., Shangshan Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan R.O.C.

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Release Control Record

Issue No.	Description	Date Issued
SA160315E13	Original release.	Apr. 12, 2016

1 Certificate of Conformity

Product:	802.11a/ac/b/g/n Wireless Access Point
Brand:	Edge-corE
Test Model:	ECW5212
Sample Status:	ENGINEERING SAMPLE
Applicant:	Edgecore Networks Corporation
Test Date:	Mar. 29, 2016
Standards:	FCC Part 2 (Section 2.1091) KDB 447498 D01 General RF Exposure Guidance v06 IEEE C95.1-1992

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. 12, 2016

Midoli Peng / Specialist

Approved by : _____, **Date:** Apr. 12, 2016

May Chen / 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 28cm away from the body of the user. So, this device is classified as **Mobile Device**.

2.4 Antenna Gain

The antennas provided to the EUT, please refer to the following table:

For 2.4GHz									
Antenna No	PCB Chain No.	Brand	Model	Antenna Type	Antenna Connector	Gain (dBi) <excluding cable loss>	Cable Loss(dB)	Cable Length (mm)	Frequency (GHz to GHz)
1	Chain 0 (2.4GHz)	NA	120G00000112A	Monopole	i-PEX	5.87	0.34 (black)	70	2.4~2.4835
2	Chain 1 (2.4GHz)	NA	120G00000112A	Monopole	i-PEX	5.87	0.43 (white)	110	2.4~2.4835
For 5GHz									
Antenna No	PCB Chain No.	Brand	Model	Antenna Type	Antenna Connector	Gain (dBi) <excluding cable loss>	Cable Loss(dB)	Cable Length (mm)	Frequency (GHz to GHz)
3	Chain 0 (5GHz)	NA	120G00000120A	Monopole	i-PEX	8	0.65 (red)	120	5.15~5.85
4	Chain 1 (5GHz)	NA	120G00000120A	Monopole	i-PEX	8	0.7 (blue)	115	5.15~5.85

3 Calculation Result of Maximum Conducted Power

Frequency Band (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
2412-2462	985.291	8.5	28	0.70801	1
5180-5240	239.918	10.34	28	0.26335	1
5745-5825	137.893	10.34	28	0.15136	1

NOTE:
2.4GHz: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 / 2] = 8.5$dBi
5GHz: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 / 2] = 10.34$dBi

Conclusion:

The formula of calculated the MPE is:

CPD1 / LPD1 + CPD2 / LPD2 + ……etc. < 1

CPD = Calculation power density

LPD = Limit of power density

WLAN 2.4GHz + WLAN 5GHz = 0.70801 + 0.26335 = 0.97136

Therefore the maximum calculations of above situations are less than the "1" limit.

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