

RF EXPOSURE REPORT

REPORT NO.: SA131106C22
MODEL NO.: EAP210/OWL530
FCC ID: VZ9130002
RECEIVED: Nov. 06, 2013
TESTED: Jan. 15, 2014 ~ Jan. 17, 2014
ISSUED: Aug. 12, 2014

APPLICANT: 4IPNET, INC.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA131106C22	Original release	Aug. 12, 2014



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1. CERTIFICATION

PRODUCT: Enterprise Access Point
MODEL NO.: EAP210/OWL530
BRAND: 4ipnet
APPLICANT: 4IPNET, INC.
TESTED: Jan. 15, 2014 ~ Jan. 17, 2014
TEST SAMPLE: Identical Prototype
STANDARDS: **FCC Part 2 (Section 2.1091)**
FCC OET Bulletin 65, Supplement C (01-01)
IEEE C95.1

The above equipment (model: EAP210/OWL530) 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.

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Gordon Lin / Assistant 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

$$P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$$

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 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**.

2.4 Calculation result of maximum conducted power

FREQUENCY BAND	MODE	MAX POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
2412 ~ 2462	802.11b	25.31	5	20	0.214	1
	802.11g	24.29	5	20	0.169	1
	802.11n (20MHz)	24.72	5	20	0.187	1
	802.11n (40MHz)	25.11	5	20	0.204	1
5180 ~ 5240	802.11a	12.33	5	20	0.011	1
	802.11n (20MHz)	12.29	5	20	0.011	1
	802.11n (40MHz)	10.43	5	20	0.007	1
5745 ~ 5825	802.11a	22.47	5	20	0.111	1
	802.11n (20MHz)	22.47	5	20	0.111	1
	802.11n (40MHz)	22.49	5	20	0.112	1

CONCLUSION:

Both of the WLAN 2.4G & WLAN 5G can transmit simultaneously, the formula of calculated the MPE is:

$CPD1 / LPD1 + CPD2 / LPD2 + \dots \text{etc.} < 1$

CPD = Calculation power density

LPD = Limit of power density

$WLAN\ 2.4G + WLAN\ 5.0G = 0.214 + 0.112 = 0.326$

Therefore, the maximum calculation of this situation is 0.915, which is less than the “1” limit.