

RF Exposure Report

Report No.: SA140901E08F

FCC ID: PY314200280

Test Model: EX7000

Received Date: July 01, 2015

Test Date: Sep. 16, 2015

Issued Date: Sep. 25, 2015

Applicant: NETGEAR, Inc.

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Release Control Record

Issue No.	Description	Date Issued
SA140901E08F	Original release.	Sep. 25, 2015

1 Certificate of Conformity

Product: AC1900 WiFi Range Extender

Brand: NETGEAR

Test Model: EX7000

Sample Status: ENGINEERING SAMPLE

Applicant: NETGEAR, Inc.

Test Date: Sep. 16, 2015

Standards: FCC Part 2 (Section 2.1091)

KDB 447498 D03

IEEE C95.1

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.

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Phoenix Huang / Specialist

Approved by : May Chen, **Date:** Sep. 25, 2015
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

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

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 27cm 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:

Antenna No.	Brand	Model	Antenna Gain (dBi)	Frequency range (MHz ~ MHz)	Antenna Type	Connector Type
Antenna L	Netgear	NA	2	2412~2477 5150~5250 5250~5350 5470~5725 5725~5850	Dipole	Re-SMA
Antenna M	Netgear	NA	2	2412~2477 5150~5250 5250~5350 5470~5725 5725~5850	Dipole	Re-SMA
Antenna R	Netgear	NA	2	2412~2477 5150~5250 5250~5350 5470~5725 5725~5850	Dipole	Re-SMA

3 Calculation Result of Maximum Conducted Power

For 2.4GHz and 5GHz (U-NII-1 band) data was copied from the original test report (Report No.: SA140901E08)

Frequency Band (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
2412-2462	970.44	6.77	27	0.50354	1
5180-5240	432.772	6.77	27	0.22455	1
5745-5825	659.393	6.77	27	0.34214	1

NOTE:

2.4GHz: Directional gain = 2dBi + 10log(3) = 6.77dBi

5GHz: Directional gain = 2dBi + 10log(3) = 6.77dBi

Conclusion:

Both of the 2.4GHz and 5GHz WLAN can transmit simultaneously, the formula of calculated the MPE is:

$$CPD_1 / LPD_1 + CPD_2 / LPD_2 + \dots \text{etc.} < 1$$

CPD = Calculation power density

LPD = Limit of power density

Therefore, the worst-case situation is $0.50354 / 1 + 0.34214 / 1 = 0.846$, which is less than "1". This confirmed that the device comply with FCC 1.1310 MPE limit.

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