

RF Exposure Report

Report No.: SA160715C03A

FCC ID: PY316100334

Test Model: EX6150v2

Received Date: Oct. 21, 2016

Test Date: Oct. 30 ~ Dec. 01, 2016

Issued Date: Dec. 05, 2016

Applicant: NETGEAR Inc.

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

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Release Control Record

Issue No.	Description	Date Issued
SA160715C03A	Original release	Dec. 05, 2016

1 Certificate of Conformity

Product: AC1200 WiFi Range Extender

Brand: NETGEAR

Test Model: EX6150v2

Sample Status: Engineering sample

Applicant: NETGEAR Inc.

Test Date: Oct. 30 ~ Dec. 01, 2016

Standards: FCC Part 2 (Section 2.1091)
KDB 447498 D01 (October 23, 2015)
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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Approved by : Ken Liu , **Date:** Dec. 05, 2016
Ken Liu / Senior 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 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

3 Calculation Result Of Maximum Conducted Power

Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
CDD Mode					
2412-2462	26.70	5.30	20	0.315	1
5180-5240	26.70	6.49	20	0.415	1
5260-5320	23.68	6.49	20	0.207	1
5500-5700	23.66	6.49	20	0.206	1
5745-5825	27.06	6.49	20	0.451	1
Beamforming Mode					
2412-2462	26.74	5.30	20	0.318	1
5180-5240	26.60	6.49	20	0.405	1
5260-5320	23.34	6.49	20	0.191	1
5500-5700	23.31	6.49	20	0.190	1
5745-5825	26.95	6.49	20	0.439	1

Note:

2.4GHz: Directional gain = 2.29dBi + 10log(2) = 5.30dBi

5GHz: Directional gain = 3.48dBi + 10log(2) = 6.49dBi

Conclusion:

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 2.4GHz + WLAN 5GHz = 0.318 + 0.451 = 0.769

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

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