RF Exposure Report

Report No.: SA161017C17

FCC ID: PY315400332

Test Model: C6220

Received Date: Oct. 17, 2016

Test Date: Nov. 01, 2016

Issued Date: Nov. 23, 2016

Applicant: NETGEAR, Inc.

Address: 350 East Plumeria Drive San Jose, CA 95134

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.

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Release Control Record

Issue No.	Description	Date Issued
SA161017C17	Original release.	Nov. 23, 2016

1 Certificate of Conformity

Product:	Cable Gateway
Brand:	Netgear
Test Model:	C6220
Sample Status:	ENGINEERING SAMPLE
Applicant:	NETGEAR, INC.
Test Date:	Nov. 01, 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 : Nico Liu , **Date:** Nov. 23, 2016

Nico Liu / Specialist

Approved by : , **Date:** Nov. 23, 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 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

Antenna No.	Brand	Model	Antenna Gain(dBi)	Frequency range	Antenna connector	Antenna Type
ant_1	NA	NA	1.67	2.4~2.4835GHz	R-SMA	Dipole
			2.26	5.15~5.25GHz		
			2.41	5.725~5.85GHz		
ant_2	NA	NA	2.46	2.4~2.4835GH	R-SMA	Dipole
			3.69	5.15~5.25GHz		
			3.73	5.725~5.85GHz		

2.4 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	355.656	5.08	20	0.22791	1
5180-5240	563.676	6.01	20	0.11214	1
5745-5825	709.626	6.11	20	0.57645	1

NOTE: This power include tune-up tolerance range that specified in C6220 Tune Up power table

NOTE:
2.4GHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20})^2$ / 2] = 5.08dBi
5GHz:
UNII-1: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20})^2$ / 2] = 6.01dBi
UNII-3: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20})^2$ / 2] = 6.11dBi

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 = 0.22791 / 1 + 0.57645 / 1 = 0.80436
Therefore the maximum calculations of above situations are less than the "1" limit.

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