RF Exposure Report

Report No.:	SA161017C17C R1
FCC ID:	PY320100476
Test Model:	C6230
Received Date:	Oct. 30, 2019
Test Date:	Nov. 08, 2019 ~ Feb. 12, 2020
Issued Date:	Feb. 14, 2020
Applicant:	NETGEAR, INC.
Address:	350 East Plumeria Drive San Jose, CA 95134
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN
FCC Registration / Designation Number:	788550 / TW0003

Testing Laboratory
2021

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Release Control Record

Issue No.	Description	Date Issued
SA161017C17C	Original release	Jan. 07, 2020
SA161017C17C R1	Removed series model and revised FCC ID ReRecalculated MPE value.	Feb. 14, 2020

1 Certificate of Conformity

Product:	Cable Gateway
Brand:	Netgear
Test Model:	C6230
Sample Status:	Engineering sample
Applicant:	NETGEAR, INC.
Test Date:	Nov. 08, 2019 ~ Feb. 12, 2020
Standards:	FCC Part 2 (Section 2.1091)
References Test Guidance:	IEEE C95.3 -2002 KDB 447498 D01 General RF Exposure Guidance v06

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 RF characteristics under the conditions specified in this report.

Prepared by : Celine Chou , **Date:** Feb. 14, 2020

Celine Chou / Senior Specialist

Approved by : Bruce Chen , **Date:** Feb. 14, 2020

Bruce Chen / Senior Project Engineer

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**.

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	24.88	5.22	20	0.204	1
5180-5240	26.46	7.44	20	0.488	1
5745-5825	27.39	7.71	20	0.644	1
Beamforming Mode					
5180-5240	26.31	7.44	20	0.472	1
5745-5825	27.39	7.71	20	0.644	1

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2412-2462MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/2$] = 5.22dBi
5180-5240MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/2$] = 7.44dBi
5745-5825MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/2$] = 7.71dBi

Conclusion:

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

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

CPD = Calculation power density

LPD = Limit of power density

2.4G + 5G = 0.204 / 1 + 0.644 / 1 = 0.848

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

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