RF Exposure Report

Report No.:	SABBQZ-WTW-P21020530
FCC ID:	PY321100518
Test Model:	WAX202
Received Date:	Feb. 24, 2021
Test Date:	Mar. 31 ~ May 04, 2021
Issued Date:	May 11, 2021
Applicant and Manufacturer:	NETGEAR INC.
Address:	350 East Plumeria Drive, San Jose, CA 95134, USA

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
SABBQZ-WTW-P21020530	Original release	May 11, 2021

1 Certificate of Conformity

Product:	NETGEAR WiFi 6 AX1800 Access Point
Brand:	Netgear
Test Model:	WAX202
Sample Status:	Engineering sample
Applicant:	NETGEAR, INC.
Test Date:	Mar. 31 ~ May 04, 2021
Standards:	FCC Part 2 (Section 2.1091)
References Test Guidance:	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:** May 11, 2021

Celine Chou / Senior Specialist

Approved by : Bruce Chen , **Date:** May 11, 2021

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 AV Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
CDD Mode					
2412-2462	26.16	5.84	20	0.315	1
5180-5240	29.28	5.37	20	0.580	1
5745-5825	29.32	5.81	20	0.648	1
Beamforming Mode					
2412-2462	26.12	5.84	20	0.312	1
5180-5240	29.24	5.37	20	0.575	1
5745-5825	29.27	5.81	20	0.641	1

Note:
1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

2412-2462MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/2$] = 5.84dBi
5180-5240MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/2$] = 5.37dBi
5745-5825MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/2$] = 5.81dBi

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 = 0.315 / 1 + 0.648 / 1 = 0.963

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

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