

## RF Exposure Report

**Report No.:** SA181023C12A

**FCC ID:** PY318300422

**Test Model:** EX7300v2

**Series Model:** EX6400v2

**Received Date:** Oct. 23, 2018

**Test Date:** Nov. 05 ~ Dec. 26, 2018

**Issued Date:** Jan. 07, 2019

**Applicant:** NETGEAR, INC.

**Address:** 350 East Plumeria Drive San Jose, CA 95134

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

**Lab Address:** No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C.)

**Test Location:** No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)

**FCC Registration /  
Designation Number:** 788550 / TW0003



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### Release Control Record

Issue No.	Description	Date Issued
SA181023C12A	Original release	Jan. 07, 2019

## 1 Certificate of Conformity

**Product:** Nighthawk X4 AC2200 WiFi Mesh Extender, AC1900 WiFi Mesh Extender

**Brand:** NETGEAR

**Test Model:** EX7300v2

**Series Model:** EX6400v2

**Sample Status:** Engineering sample

**Applicant:** NETGEAR, INC.

**Test Date:** Nov. 05 ~ Dec. 26, 2018

**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 RF characteristics under the conditions specified in this report.

**Prepared by :**  , **Date:** Jan. 07, 2019  
Polly Chien / Specialist

**Approved by :**  , **Date:** Jan. 07, 2019  
Bruce Chen / 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 <sup>2</sup> )	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/cm<sup>2</sup>

$P_{out}$  = 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 21cm 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 <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
<b>Model: EX7300v2</b>					
CDD Mode					
2412-2462	26.19	7.60	21	0.432	1
5180-5240	29.32	5.49	21	0.546	1
5260-5320	23.64	5.48	21	0.147	1
5500-5720	23.34	5.11	21	0.126	1
5745-5825	29.35	5.14	21	0.507	1
Beamforming Mode					
5180-5240	29.05	5.49	21	0.513	1
5180-5240	23.64	5.48	21	0.147	1
5260-5320	23.34	5.11	21	0.126	1
5745-5825	29.29	5.14	21	0.500	1
<b>Model: EX6400v2</b>					
CDD Mode:					
2412-2462	24.88	6.07	21	0.225	1

Note:

**Model: EX7300v2**

2412 ~ 2462MHz:  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/4] = 7.60\text{dBi}$

5180 ~ 5240MHz: Directional gain = 5.49dBi

5260 ~ 5320MHz: Directional gain = 5.48dBi

5500 ~ 5700MHz: Directional gain = 5.11dBi

5745 ~ 5825MHz: Directional gain = 5.14dBi

**Model: EX6400v2**

2412 ~ 2462MHz:  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/3] = 6.07\text{dBi}$

**Conclusion:**

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

$CPD1 / LPD1 + CPD2 / LPD2 + \dots \text{etc.} < 1$

CPD = Calculation power density

LPD = Limit of power density

$2.4G + 5G = 0.432 / 1 + 0.546 / 1 = 0.978$

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

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