

RF Exposure Report

Report No.: SA181023C12

FCC ID: PY318300422

Model: EX7300v2

Series Model: EX6400v2

Received Date: Oct. 23, 2018

Test Date: Oct. 31 ~ Dec. 18, 2018

Issued Date: Dec. 18, 2018

Applicant: NETGEAR, INC.

Address: 350 East Plumeria Drive San Jose, CA 95134

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

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

FCC Registration / 788550 / TW0003

Designation Number:



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Release Control Record

Issue No.	Description	Date Issued
SA181023C12	Original release.	Dec. 18, 2018

1 Certificate of Conformity

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

Brand: NETGEAR

Model: EX7300v2

Series Model: EX6400v2

Sample Status: Engineering sample

Applicant: NETGEAR, INC.

Test Date: Oct. 31 ~ Dec. 18, 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 : Polly Chien , **Date:** Dec. 18, 2018
Polly Chien / Specialist

Approved by : Bruce Chen , **Date:** Dec. 18, 2018
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 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

$$P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$$

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 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 ²)	Limit (mW/cm ²)
Model: EX7300v2					
CDD Mode:					
2412-2462	26.19	7.60	21	0.432	1
5180-5240	29.32	5.49	21	0.546	1
5745-5825	29.35	5.14	21	0.507	1
Beamforming Mode					
5180-5240	29.05	5.49	21	0.513	1
5745-5825	29.29	5.14	21	0.500	1
Model: EX6400v2					
CDD Mode:					
2412-2462	24.88	6.07	21	0.225	1

Note:

Model: EX7300v2

CDD Mode:

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

5745 ~ 5825MHz: Directional gain = 5.14dBi

Beamforming Mode:

5180 ~ 5240MHz: Directional gain = 5.49dBi

5745 ~ 5825MHz: Directional gain = 5.14dBi

Model: EX6400v2

CDD Mode:

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

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

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

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

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