

## RF Exposure Report

**Report No.:** SA170906C12F

**FCC ID:** PY318200411

**Test Model:** EX7700

**Received Date:** Aug. 25, 2017

**Test Date:** Aug. 25, 2017 ~ Jan. 25, 2018

**Issued Date:** Apr. 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

**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   |
|--------------|-------------------|---------------|
| SA170906C12F | Original release. | Apr. 18, 2018 |

## 1 Certificate of Conformity

**Product:** Nighthawk X6 AC2200 Tri-band WiFi Range Extender

**Brand:** NETGEAR

**Test Model:** EX7700

**Sample Status:** Engineering sample

**Applicant:** NETGEAR, INC.

**Test Date:** Aug. 25, 2017 ~ Jan. 25, 2018

**Standards:** FCC Part 2 (Section 2.1091)

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.1

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:** Apr. 18, 2018  
Celine Chou / Specialist

**Approved by :** Bruce Chen , **Date:** Apr. 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 <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 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 <sup>2</sup> ) | Limit (mW/cm <sup>2</sup> ) |
|----------------------|-----------------|--------------------|---------------|-------------------------------------|-----------------------------|
| CDD Mode             |                 |                    |               |                                     |                             |
| 2412-2462            | 24.93           | 5.71               | 20            | 0.231                               | 1                           |
| 5180-5240            | 23.24           | 5.01               | 20            | 0.133                               | 1                           |
| 5745-5825            | 27.89           | 4.65               | 20            | 0.357                               | 1                           |
| Beamforming Mode     |                 |                    |               |                                     |                             |
| 2412-2462            | 24.10           | 5.71               | 20            | 0.190                               | 1                           |
| 5180-5240            | 23.24           | 5.01               | 20            | 0.133                               | 1                           |
| 5745-5825            | 27.89           | 4.65               | 20            | 0.357                               | 1                           |

Note: The Max Power = Max tune up power

2412~2462MHz Directional gain = 5.71dBi

5180~5240MHz Directional gain = 5.01dBi

5745~5825MHz Directional gain = 4.65dBi

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

WLAN 2.4GHz + WLAN 5GHz band 1 + WLAN 5GHz band 4 =  $0.231 + 0.133 + 0.357 = 0.721 < 1$

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