

## RF Exposure Report

**Report No.:** SA170301C16

**FCC ID:** PY317100372

**Test Model:** EX8000

**Received Date:** Mar. 01, 2017

**Test Date:** Mar. 10 ~ Apr. 21, 2017

**Issued Date:** Jun. 22, 2017

**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.)



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### Release Control Record

Issue No.	Description	Date Issued
SA170301C16	Original release.	Jun. 22, 2017

## 1 Certificate of Conformity

**Product:** Nighthawk X6S AC3000 Tri-Band WiFi Range Extender

**Brand:** NETGEAR

**Test Model:** EX8000

**Sample Status:** Engineering sample

**Applicant:** NETGEAR, INC.

**Test Date:** Mar. 10 ~ Apr. 21, 2017

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

**Prepared by :**



**Date:**

Jun. 22, 2017

Suntee Liu / Specialist

**Approved by :**



**Date:**

Jun. 22, 2017

Ken Liu / Senior Manager

## 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

$$Pd = (Pout * G) / (4 * pi * r^2)$$

where

Pd = power density in mW/cm<sup>2</sup>

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 24cm 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					
WLAN 2412~2462	29.26	2.61	24	0.213	1
WLAN 5180~5240	29.22	4.18	24	0.302	1
WLAN 5260~5320	23.26	4.18	24	0.077	1
WLAN 5500~5700	23.17	7.76	24	0.171	1
WLAN 5745~5825	29.55	7.43	24	0.689	1
Beamforming Mode NSS1					
WLAN 2412~2462	29.17	2.61	24	0.208	1
WLAN 5180~5240	29.22	4.18	24	0.302	1
WLAN 5260~5320	23.26	4.18	24	0.077	1
WLAN 5500~5700	21.14	7.76	24	0.107	1
WLAN 5745~5825	27.74	7.43	24	0.454	1
Beamforming Mode NSS2					
WLAN 5745~5825	29.55	4.86	24	0.381	1

Note: The Max Power = Max tune up power  
 2412~2462MHz Directional gain = 2.61dBi  
 5180~5240MHz NSS1 Directional gain = 4.18dBi  
 5260~5320MHz NSS1 Directional gain = 4.18dBi  
 5500~5700MHz NSS1 Directional gain = 7.76dBi  
 5745~5825MHz NSS1 Directional gain = 7.43dBi  
 5745~5825MHz NSS2 Directional gain = 4.86dBi

**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 4 =  $0.213 + 0.689 = 0.902 < 1$   
 Max.: WLAN 5GHz band 1 + WLAN 5GHz band 4 =  $0.302 + 0.689 = 0.991 < 1$

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