

## RF Exposure Report

**Report No.:** SA160623E04A

**FCC ID:** PY326200348

**Test Model:** C7000v2

**Received Date:** July 18, 2016

**Test Date:** Aug. 18, 2016

**Issued Date:** Sep. 07, 2016

**Applicant:** NETGEAR, Inc.

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

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

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### Release Control Record

| Issue No.    | Description       | Date Issued   |
|--------------|-------------------|---------------|
| SA160623E04A | Original release. | Sep. 07, 2016 |

## 1 Certificate of Conformity

**Product:** AC1900 WiFi Cable Modem Router

**Brand:** NETGEAR

**Test Model:** C7000v2

**Sample Status:** ENGINEERING SAMPLE

**Applicant:** NETGEAR, Inc.

**Test Date:** Aug. 18, 2016

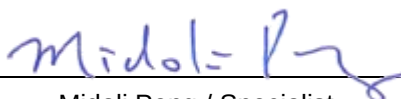
**Standards:** FCC Part 2 (Section 2.1091)

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 EMC characteristics under the conditions specified in this report.

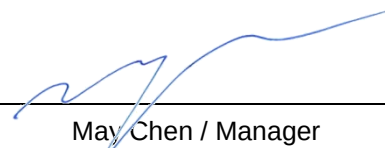
**Prepared by :**

  
Midoli Peng / Specialist

**Date:**

Sep. 07, 2016

**Approved by :**

  
May Chen / Manager

**Date:**

Sep. 07, 2016

## 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 29cm away from the body of the user.

So, this device is classified as **Mobile Device**.

### 2.4 Antenna Gain

| Transmitter Circuit | Brand      | Model | Antenna Gain(dBi) <including cable loss> | Frequency range (MHz ~ MHz) | Antenna Type | Connector Type | Cable Length (mm) |
|---------------------|------------|-------|------------------------------------------|-----------------------------|--------------|----------------|-------------------|
| Chain (2)           | Masterwave | NA    | 2                                        | 2.4~2.4835<br>5.15~5.85     | PCB          | I-pex (MHF)    | 105               |
| Chain (0)           | Masterwave | NA    | 2                                        | 2.4~2.4835<br>5.15~5.85     | PCB          | I-pex (MHF)    | 70                |
| Chain (1)           | Masterwave | NA    | 2                                        | 2.4~2.4835<br>5.15~5.85     | PCB          | I-pex (MHF)    | 101               |

## 2.5 Calculation Result of Maximum Conducted Power

For 2.4GHz and 5GHz (UNII-1 & UNII-3) data were copied from the original test report (Report No.: SA160623E04)

| Frequency Band (MHz) | Max Power (mW) | Antenna Gain (dBi) | Distance (cm) | Power Density (mW/cm <sup>2</sup> ) | Limit (mW/cm <sup>2</sup> ) |
|----------------------|----------------|--------------------|---------------|-------------------------------------|-----------------------------|
| 2412-2462            | 989.004        | 6.77               | 29            | 0.44483                             | 1                           |
| 5180-5240            | 966.405        | 6.77               | 29            | 0.43466                             | 1                           |
| 5260-5320            | 245.398        | 6.77               | 29            | 0.11037                             | 1                           |
| 5500-5700            | 243.493        | 6.77               | 29            | 0.10952                             | 1                           |
| 5745-5825            | 968.131        | 6.77               | 29            | 0.43544                             | 1                           |

NOTE:

2.4GHz: Directional gain = 2dBi + 10log(3) = 6.77dBi

5GHz: Directional gain = 2dBi + 10log(3) = 6.77dBi

### 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 =  $0.44483 / 1 + 0.43544 / 1 = 0.88027$

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

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