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## RF Exposure Report

**Report No.:** SA150310E06

**FCC ID:** PY315100303

**Test Model:** C3700-100NAS

**Received Date:** Mar. 10, 2015

**Test Date:** Apr. 14 to 15, 2015

**Issued Date:** June 17, 2015

**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 (2):** No. 49, Ln. 206, Wende Rd., Shangshan Tsuen, Chiung Lin Hsiang, Hsin  
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### Release Control Record

| Issue No.   | Description       | Date Issued   |
|-------------|-------------------|---------------|
| SA150310E06 | Original release. | June 17, 2015 |



## 1 Certificate of Conformity

**Product:** N600 WIFI Cable Modem Router

**Brand:** NETGEAR

**Test Model:** C3700-100NAS

**Sample Status:** ENGINEERING SAMPLE

**Applicant:** NETGEAR, Inc.

**Test Date:** Apr. 14 to 15, 2015


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

KDB 447498 D03

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:** June 17, 2015  
Lori Chung / Specialist

**Approved by :**  , **Date:** June 17, 2015  
May Chen / 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 20cm away from the body of the user.

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

### 2.4 Antenna Gain

The antennas provided to the EUT, please refer to the following table:

| Antenna No. | PCB Chain No. | Ant. Gain(dBi)<br><Including cable loss> | Frequency range (GHz to GHz) | Ant. Type | Connector Type |
|-------------|---------------|------------------------------------------|------------------------------|-----------|----------------|
| 1           | Left          | 0.3                                      | 2.4~2.4835                   | PIFA      | i-pex(MHF)     |
| 2           |               | 2.6                                      | 5.15~5.85                    |           |                |
| 3           | Right         | 2.3                                      | 2.4~2.4835                   | PIFA      | i-pex(MHF)     |
| 4           |               | 1.8                                      | 5.15~5.85                    |           |                |

### 3 Calculation Result of Maximum Conducted Power

#### 1TX Mode:

| 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            | 311.172        | 2.3                | 20            | 0.10513                             | 1                           |
| 5180-5240, 5745-5825 | 164.816        | 2.6                | 20            | 0.05967                             | 1                           |

#### 2TX Mode:

| 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            | 563.682        | 2.3                | 20            | 0.19044                             | 1                           |
| 5180-5240, 5745-5825 | 332.024        | 2.6                | 20            | 0.12020                             | 1                           |

#### CONCLUSION:

Both of the 2.4GHz and 5GHz can transmit simultaneously, the formula of calculated the MPE is:

$$CPD_1 / LPD_1 + CPD_2 / LPD_2 + \dots \text{etc.} < 1$$

**CPD = Calculation power density**

**LPD = Limit of power density**

Therefore, the worst-case situation is  $0.19044 / 1 + 0.12020 / 1 = 0.311$ , which is less than "1".

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