

# RF EXPOSURE REPORT

**REPORT NO.:** SA130812C17A

**MODEL NO.:** DNUB-O1

**FCC ID:** NKR-O1

**RECEIVED:** Dec. 16, 2013

**TESTED:** Jan. 07 ~ Jan. 10, 2014

**ISSUED:** Feb. 17, 2014

**APPLICANT:** Wistron NeWeb Corp.

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**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 Tsuen, Kwei  
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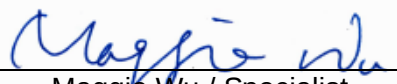
## RELEASE CONTROL RECORD

| ISSUE NO.    | REASON FOR CHANGE | DATE ISSUED   |
|--------------|-------------------|---------------|
| SA130812C17A | Original release. | Feb. 17, 2014 |

## 1. CERTIFICATION

**PRODUCT:** 11abgn 2x2 USB Module  
**MODEL:** DNUB-O1  
**BRAND:** OKI  
**APPLICANT:** Wistron NeWeb Corp.  
**TESTED:** Jan. 07 ~ Jan. 10, 2014  
**TEST SAMPLE:** ENGINEERING SAMPLE  
**STANDARDS:** **FCC Part 2 (Section 2.1091)**  
**FCC OET Bulletin 65, Supplement C (01-01)**  
**IEEE C95.1**

The above equipment (model: DNUB-O1) 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 :** Feb. 17, 2014  
Maggie Wu / Specialist

**APPROVED BY :**  , **DATE :** Feb. 17, 2014  
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

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

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**.

## 2.4 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> ) |
|----------------------|-----------------|--------------------|---------------|-------------------------------------|-----------------------------|
| 2412-2462            | 26.69           | 3.08               | 20            | 0.189                               | 1                           |
| 5180-5240            | 16.35           | 4.85               | 20            | 0.026                               | 1                           |
| 5260-5320            | 16.54           | 5.44               | 20            | 0.031                               | 1                           |
| 5500-5700            | 16.54           | 6.18               | 20            | 0.037                               | 1                           |
| 5745-5825            | 24.96           | 7.38               | 20            | 0.341                               | 1                           |

### 2.4GHz Band:

Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 3.08\text{dBi}$

### 5GHz Band:

#### 5180-5240MHz:

Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 4.85\text{dBi}$

#### 5260-5320MHz:

Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 5.44\text{dBi}$

#### 5500-5700MHz:

Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 6.18\text{dBi}$

#### 5745-5825MHz:

Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 7.38\text{dBi}$

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