# RF Exposure Report

| | |
|---|---|
| **Report No.:** | SABHJS-WTW-P20080454 |
| **FCC ID:** | PD5-NSE1000 |
| **Test Model:** | NSE1000 |
| **Received Date:** | Aug. 24, 2020 |
| **Test Date:** | Sep. 03 ~ Sep. 25, 2020 |
| **Issued Date:** | Dec. 28, 2020 |
| **Applicant:** | Delta Electronics, Inc. |
| **Address:** | No. 252, Shang Ying Rd., Kuei San District, Taoyuan City 33341, Taiwan |
| **Issued By:** | Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch<br>Lin Kou Laboratories |
| **Lab Address:** | No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan |
| **Test Location:** | No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, Taiwan |
| **FCC Registration / Designation Number:** | 788550 / TW0003 |

Testing Laboratory
2021

## Table of Contents

## Release Control Record

| Issue No. | Description | Date Issued |
|---|---|---|
| SABHJS-WTW-P20080454 | Original release | Dec. 28, 2020 |

## 1 Certificate of Conformity

| | |
|---|---|
| **Product:** | Wireless Access Point |
| **Brand:** | Nile Global |
| **Test Model:** | NSE1000 |
| **Sample Status:** | Engineering sample |
| **Applicant:** | Delta Electronics, Inc. |
| **Test Date:** | Sep. 03 ~ Sep. 25, 2020 |
| **Standards:** | FCC Part 2 (Section 2.1091) |
| **References Test Guidance:** | KDB 447498 D01 General RF Exposure Guidance v06<br>IEEE C95.3 -2002 |

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 :** Pettie Chen , **Date:** Dec. 28, 2020

Pettie Chen / Senior Specialist

**Approved by :** Bruce Chen , **Date:** Dec. 28, 2020

Bruce Chen / Senior 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 ($mW/cm^2$) | Average Time (minutes) |
|---|---|---|---|---|
| Limits For General Population / Uncontrolled Exposure | | | | |
| 0.3-1.34 | 614 | 1.63 | (100)* | 30 |
| 1.34-30 | 824/f | 2.19/f | ($180/f^2$)* | 30 |
| 30-300 | 27.5 | 0.073 | 0.2 | 30 |
| 300-1500 | … | … | f/1500 | 30 |
| 1500-100,000 | … | … | 1.0 | 30 |

f = Frequency in MHz; *Plane-wave equivalent power density

### 2.2 MPE Calculation Formula

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

where

Pd = power density in $mW/cm^2$

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 21cm 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 Average Power (dBm) | Antenna Gain (dBi) | Distance (cm) | Power Density ($mW/cm^2$) | Limit ($mW/cm^2$) |
|---|---|---|---|---|---|
| WLAN: CDD Mode | | | | | |
| 2412-2462 | 27.92 | 5.54 | 21 | 0.400 | 1 |
| 5180-5240 | 23.83 | 7.31 | 21 | 0.235 | 1 |
| 5745-5825 | 27.37 | 7.31 | 21 | 0.530 | 1 |
| WLAN: Beamforming Mode | | | | | |
| 2412-2462 | 27.22 | 5.54 | 21 | 0.341 | 1 |
| 5180-5240 | 22.56 | 7.31 | 21 | 0.175 | 1 |
| 5745-5825 | 27.37 | 7.31 | 21 | 0.530 | 1 |
| BT LE | | | | | |
| 2402-2480 | 8.37 | 2.42 | 21 | 0.002 | 1 |

*Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

Note:
1. Directional gain:
2.4GHz: Directional Gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/2$] = 5.54dBi
5.0GHz: Directional Gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \cdots + 10^{GN/20})^2/2$] = 7.31dBi
BT LE: Antenna gain: 2.42dBi
2. The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

**Conclusion:**

The formula of calculated the MPE is:

CPD1 / LPD1 + CPD2 / LPD2 + ……etc. < 1

CPD = Calculation power density

LPD = Limit of power density

1. BT LE + WLAN 5G = 0.002 / 1 + 0.530 / 1 = 0.532 < 1
2. WLAN 2.4G+ WLAN 5G = 0.400 / 1 + 0.530 / 1 = 0.930 < 1

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

**---END---**