

## 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.

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



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### 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  
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 <sup>2</sup> )	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 <sup>2</sup> )*	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<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 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 <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
<b>WLAN: CDD Mode</b>					
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
<b>WLAN: Beamforming Mode</b>					
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
<b>BT LE</b>					
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 =  $10 \log[(10^{G^1/20} + 10^{G^2/20} + \dots + 10^{G^N/20})^2/2]$  = 5.54dBi

5.0GHz: Directional Gain =  $10 \log[(10^{G^1/20} + 10^{G^2/20} + \dots + 10^{G^N/20})^2/2]$  = 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:

$CPD1 / LPD1 + CPD2 / LPD2 + \dots \text{etc.} < 1$

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.

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