

## RF Exposure Report

**Report No.:** SABHJS-WTW-P20090518

**FCC ID:** PD5-NWA1000

**Test Model:** NWA1000

**Received Date:** Sep. 23, 2020

**Test Date:** Sep. 29, 2020 ~ Jun. 18, 2021

**Issued Date:** Jun. 21, 2021

**Applicant:** Delta Electronics, Inc.

**Address:** 31-1 Shien Pan Rd., Kuei San Industrial Zone, Taoyuan City, 333 Taiwan

**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 /** 788550 / TW0003  
**Designation Number:**



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**Release Control Record**

Issue No.	Description	Date Issued
SABHJS-WTW-P20090518	Original release	Jun. 21, 2021

## 1 Certificate of Conformity

**Product:** Wireless Access Point

**Brand:** Nile Global

**Test Model:** NWA1000

**Sample Status:** Engineering sample

**Applicant:** Delta Electronics, Inc.

**Test Date:** Sep. 29, 2020 ~ Jun. 18, 2021

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

**References Test Guidance:** KDB 447498 D01 General RF Exposure Guidance v06

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 :** Polly Chien , **Date:** Jun. 21, 2021  
Polly Chien / Specialist

**Approved by :** Bruce Chen , **Date:** Jun. 21, 2021  
Bruce Chen / Senior 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

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

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 31cm 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> )
WLAN CDD Mode: QCN-5124 Module					
2412-2462	27.98	10.01	31	0.521	1
WLAN CDD Mode: QCN-5154 Module					
5180-5240	26.79	9.93	31	0.389	1
5260-5320	23.59	9.93	31	0.186	1
5500-5700	23.86	9.93	31	0.198	1
5745-5825	27.68	9.93	31	0.478	1
WLAN Beamforming Mode: QCN-5124 Module					
2412-2462	25.78	10.01	31	0.314	1
WLAN Beamforming Mode: QCN-5154 Module					
5180-5240	25.85	9.93	31	0.313	1
5260-5320	20.05	9.93	31	0.082	1
5500-5700	19.93	9.93	31	0.080	1
5745-5825	25.97	9.93	31	0.322	1
WLAN CDD Mode: QCA-9889 Module					
2412-2462	18.63	4.6	31	0.017	
5180-5240	16.91	5	31	0.013	1
5260-5320	17.04	5	31	0.013	1
5500-5700	16.92	5	31	0.013	1
5745-5825	16.89	5	31	0.013	1
BT LE: CSR8811 Module					
2402-2480	8.13	4.4	31	0.001	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 =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/4] = 10.01\text{dBi}$

5GHz: Directional Gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2/4] = 9.93\text{dBi}$

BT LE: Antenna gain: 4.4dBi

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

\* WLAN 2.4GHz and WLAN 5GHz technologies can transmit simultaneously except BT.

[QCN-5124 Module](#) + [QCN-5154 Module](#):

WLAN 2.4G+ WLAN 5G =  $0.521 / 1 + 0.478 / 1 = 0.999 < 1$

[QCA-9889 Module](#):

WLAN 2.4G+ WLAN 5G =  $0.017 / 1 + 0.013 / 1 = 0.030 < 1$

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

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