

## RF Exposure Report

**Report No.:** SA171229C02C

**FCC ID:** RC6-APH50C

**Test Model:** APH50c, APH51c

**Received Date:** Jun. 14, 2018

**Test Date:** Jun. 19 ~ Jul. 03, 2018 and Nov. 28 ~ Nov. 29, 2018

**Issued Date:** Dec. 05, 2018

**Applicant:** Amigo Technology Inc.

**Address:** No. 82, Gongye 2nd Rd., Annan Dist., Tainan City 709, Taiwan (R.O.C.)

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

**Lab Address:** No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C.)

**Test Location:** No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)

**FCC Registration /  
Designation Number:** 788550 / TW0003



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### Release Control Record

| Issue No.    | Description      | Date Issued   |
|--------------|------------------|---------------|
| SA171229C02C | Original release | Dec. 05, 2018 |

## 1 Certificate of Conformity

**Product:** Indoor Access Point

**Brand:** Amigo

**Test Model:** APH50c, APH51c

**Sample Status:** Engineering sample

**Applicant:** Amigo Technology Inc.

**Test Date:** Jun. 19 ~ Jul. 03, 2018 and Nov. 28 ~ Nov. 29, 2018

**Standards:** FCC Part 2 (Section 2.1091)  
KDB 447498 D01 General RF Exposure Guidance v06  
IEEE C95.1-1992

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 :** Celine Chou , **Date:** Dec. 05, 2018  
Celine Chou / Senior Specialist

**Approved by :** Bruce Chen , **Date:** Dec. 05, 2018  
Bruce Chen / 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 |                               |                               |                                     |                        |
| 300-1500                                              | ...                           | ...                           | F/1500                              | 30                     |
| 1500-100,000                                          | ...                           | ...                           | 1.0                                 | 30                     |

F = Frequency in MHz

### 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 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

### 3 Calculation Result of Maximum Conducted Power

| Function | Frequency Band (MHz) | Max Power (dBm) | Antenna Gain (dBi) | Distance (cm) | Power Density (mW/cm <sup>2</sup> ) | Limit (mW/cm <sup>2</sup> ) |
|----------|----------------------|-----------------|--------------------|---------------|-------------------------------------|-----------------------------|
| WLAN     | 2412-2462            | 25.02           | 5.83               | 20            | 0.242                               | 1                           |
|          | 5180-5240            | 22.49           | 7.74               | 20            | 0.210                               | 1                           |
|          | 5745-5825            | 23.55           | 7.74               | 20            | 0.268                               | 1                           |
| BT LE    | 2402-2480            | 3.39            | 3.88               | 20            | 0.001                               | 1                           |

Note:

2.4GHz: Directional gain =  $2.82\text{dBi} + 10\log(2) = 5.83\text{dBi}$

5GHz: Directional gain =  $4.73\text{dBi} + 10\log(2) = 7.74\text{dBi}$

#### Conclusion:

Both of the WLAN 2.4G & WLAN 5G & BT LE can transmit simultaneously, the formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

$2.4\text{G} + 5\text{G} + \text{BT LE} = 0.242 / 1 + 0.268 / 1 + 0.001 / 1 = 0.511$

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

---END---