

## RF Exposure Report

**Report No.:** SABGTL-WTW-P20100274

**FCC ID:** RX3-WBU053LGABT

**Test Model:** WBU053-LGABT

**Received Date:** Dec. 30, 2019

**Date of Evaluation:** Feb. 19, 2020  
Oct. 31 ~ Nov. 10, 2020

**Issued Date:** Nov. 11, 2020

**Applicant:** Hon Hai Precision Industry Co., Ltd.

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(R.O.C.)

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

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**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
SABGTL-WTW-P20100274	Original Release	Nov. 11, 2020

## 1 Certificate of Conformity

**Product:** 802.11a/b/g/n 2T2R with Bluetooth combo wireless module

**Brand:** Foxconn

**Test Model:** WBU053-LGABT

**Sample Status:** Engineering Sample

**Applicant:** Hon Hai Precision Industry Co., Ltd.

**Date of Evaluation:** Feb. 19, 2020

Oct. 31 ~ Nov. 10, 2020

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

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

**Guidance :**  
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 :**

  
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**Date:** Nov. 11, 2020

**Approved by :**

  
Bruce Chen / Senior Project Engineer

**Date:** Nov. 11, 2020

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

## 2.4 Calculation Result of Maximum Conducted Power

Band	Frequency Band (MHz)	Max AV. Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
WLAN	2412-2462	17.21	6.17	20	0.043	1.00
	5180-5240	14.30	4.87	20	0.016	1.00
	5260-5320	14.19	4.87	20	0.016	1.00
	5500-5720	14.69	5.57	20	0.021	1.00
	5745-5825	14.67	4.57	20	0.017	1.00
BT EDR	2402-2480	8.85	2.42	20	0.003	1.00
BT LE	2402-2480	8.61	2.42	20	0.003	1.00

Note:

- Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
- 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
- 2.4GHz: Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 6.17$  dBi

5.0GHz:

**For U-NII-1 Band:**

Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 4.87$  dBi.

**For U-NII-2A:**

Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 4.87$  dBi.

**For U-NII-2C Band:**

Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 5.57$  dBi.

**For U-NII-3 Band:**

Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 4.57$  dBi.

2.4GHz: BT Antenna gain = 2.42 dBi.

**Conclusion:**

The formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

WLAN + BT =  $0.043/1 + 0.003/1 = 0.046$

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

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