


FCC RF EXPOSURE REPORT

FCC ID: 2ATAZ-MWI3000W4P

Equipment : Intelligent Wireless Access Point
 Model No. : TS-MWI3000W4P, 1LAN-WAP-6W
 Trade mark :



Product No. : POC230817006-S001
 Applicant : Technity Solutions Inc.
 Address : 500 Cochrane Drive, Unit 1, Markham, ON, Canada, L3R 8E2
 Manufacturer : Technity Solutions Inc.
 Address : 500 Cochrane Drive, Unit 1, Markham, ON, Canada, L3R 8E2
 Receipt Date : 2023.08.17
 Issued Date : 2023.09.13
 Test Sample : Final Sample
 Standard(s) : CFR47 FCC Part 1: Section 1.1310
 CFR47 FCC Part 2: Section 2.1091
 FCC KDB Publication 447498 v06
 FCC KDB Publication 865664 D02 v01r02

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History of this test report

Original Report Issue Date: 2023.09.13

- No additional attachment
- Additional attachments were issued following record

Attachment No.	Issue Date	Description

1. TEST FACILITY

Company:	Shenzhen Haiyun Standard Technical CO., Ltd.
Address:	No. 110-113, 115, 116, Block B, Jinyuan Business Building, Bao'an District, Shenzhen, China
CNAS Registration Number:	CNAS L18252
CAB identifier:	CN0145
A2LA Certificate Number:	6823.01
Telephone:	0755-26024411

2. MPE CALCULATION METHOD

➤ Product Classification

This device defined as a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at 20 cm is normally maintained between the transmitter's radiating structure(s) and the body of the user or nearby persons.

Max 1.8 dBi for Bluetooth, Max 6.61 dBi for 2.4GHz Wi-Fi MIMO mode, Max 7.41 dBi for 5GHz Wi-Fi MIMO mode, Max 6.56 dBi for WiFi 6e Wi-Fi MIMO mode

➤ Radio Frequency Exposure Limit

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)
300-1,500	--	--	f/1500
1,500-100,000	--	--	1.0

➤ Radio Frequency Exposure Calculation Formula

$$S = \frac{PG}{4\pi R^2}$$

where: S = power density (in appropriate units, e.g. mW/cm²)

P = power input to the antenna (in appropriate units, e.g., mW)

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

or:

$$S = \frac{EIRP}{4\pi R^2}$$

where: EIRP = equivalent (or effective) isotropically radiated power

➤ **Table for Filed Antenna**

For BLE

Ant.	Brand	Antenna Type	Connector	Gain (dBi)
1	N/A	multilayer chip	N/A	1.5

For 2.4G WIFI

Ant.	Brand	Antenna Type	Connector	Gain (dBi)
1	N/A	PCB	N/A	3.76
2	N/A	PCB	N/A	3.98

For 5G WIFI

Ant.	Brand	Antenna Type	Connector	Gain (dBi)
1	N/A	PCB	N/A	5.86
2	N/A	PCB	N/A	6.36

3. TEST RESULTS

Worse case data:

Operating Mode	Freq.	Maximum conducted output power	Directional Antenna Gain	Calculated maximum EIRP		MPE Limit	MPE Value
	(MHz)			(dBm)	(dBi)		
BLE	2402-2480	1.74	1.5	3.24	2.11	1	0.0004
2.4G Wifi ant1	2412-2462	15.57	3.76	19.33	85.70	1	0.0171
2.4G Wifi ant2	2412-2462	16.22	3.98	20.20	104.71	1	0.0208
5G Wifi ant1	5180-5825	15.03	5.86	20.91	123.31	1	0.0245
5G Wifi ant2	5180-5825	15.73	6.36	22.09	161.81	1	0.0322

Note: 1. The calculated distance is 20 cm.

2. The 2.4G Wifi function can not transmit at the same time with the 5G Wifi function, the wifi function can transmit at the same time with the BLE function.

Simultaneous transmitting consideration(worst case)

The ratio= $MPE_{5G\ Wifi\ ant1}/limit + MPE_{5G\ Wifi\ ant2}/limit + MPE_{BLE}/limit = 0.0245/1 + 0.0322/1 + 0.0004/1 = 0.0571 < 1.0$

Result: Complies

(END OF REPORT)