中认信通
CHINA CERTIFICATION ICT CO., LTD (DONGGUAN)

ACCREDITED
TESTING LABORATORY
CERTIFICATE # 6356.01

RF EXPOSURE EVALUATION

Applicant: **Globalscale Technologies INC**

Address: Building43,Industrial zone5,Huaidecuigang Fuyong Street,Baoan District

FCC ID: **YCJ-GTIRW610N**

Product Name: **Wi-Fi6+BLE module**

Standard(s): **47 CFR §1.1310, 47 CFR §2.1091**
447498 D01 General RF Exposure Guidance v06

The above device has been tested and found compliant with the requirement of the relative standards by China Certification ICT Co., Ltd (Dongguan)

Report Number: **CR230848801-00F**

Date Of Issue: **2023/11/3**

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Approved By: **Sun Zhong** Sun Zhong
Title: Manager

Test Laboratory: **China Certification ICT Co., Ltd (Dongguan)**
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Test Facility

The Test site used by China Certification ICT Co., Ltd (Dongguan) to collect test data is located on the No. 113, Pingkang Road, Dalang Town, Dongguan, Guangdong, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 442868, the FCC Designation No. : CN1314.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0123.

Declarations

China Certification ICT Co., Ltd (Dongguan) is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with a triangle symbol "▲". Customer model name, addresses, names, trademarks etc. are not considered data.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	CR230848801-00F	Original Report	2023/11/3

1.1 Applicable Standard

According to subpart §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

(B) Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	**Electric Field Strength (V/m)**	**Magnetic Field Strength (A/m)**	**Power Density (mW/cm^2)**	**Averaging Time (minutes)**
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f²)	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;

According to §1.1310 and §2.1091 RF exposure is calculated.

1.2 Calculation formula:

For Power Density:
Prediction of power density at the distance of the applicable MPE limit
$S = PG/4\pi R^2$ = power density (in appropriate units, e.g. mW/cm^2);
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, the power gain factor, is normally numeric gain;
R = distance to the center of radiation of the antenna (appropriate units, e.g., cm);

E Field:
The antenna of the product, under normal use condition is at least 20cm away from the body of the user. So, this product under normal use is located on electromagnetic field between the human body.

$$E = \frac{\sqrt{30PG(\theta,\phi)}}{r}$$

Where:
P= Tune-up average conducted power
G= antenna gain relative to an isotropic antenna
θ,ϕ = elevation and azimuth angles to point of investigation
r= distance from observation point to the antenna

1.3 EUT Information▲:

Operation Modes	Operation Frequency (MHz)	Max Conducted output power including Tune-up Tolerance (dBm)	Maximum Antenna Gain (dBi)
BLE	2402-2480	2.5	2.0
2.4G Wifi	2412-2462	16.5	0.67
5G Wifi	5150-5250	14.5	0.97
	5250-5350	13.0	1.35
	5470-5725	16.0	1.88
	5725-5850	16.0	2.24
Note: 1. The Above Parameters were provided by the manufacturer.			

1.4 Calculated Data:

Power Density Calculation:

Operation Modes	Frequency (MHz)	Antenna Gain		Conducted output power including Tune-up Tolerance		Evaluation Distance (cm)	Power Density (mW/cm^2)	MPE Limit (mW/cm^2)
		(dBi)	(numeric)	(dBm)	(mW)			
BLE	2402-2480	2.0	1.58	2.5	1.78	20.00	0.0006	1.0
2.4G Wifi	2412-2462	0.67	1.17	16.5	44.67	20.00	0.0104	1.0
5G Wifi	5150-5250	0.97	1.25	14.5	28.18	20.00	0.0070	1.0
	5250-5350	1.35	1.36	13.0	19.95	20.00	0.0054	1.0
	5470-5725	1.88	1.54	16.0	39.81	20.00	0.0122	1.0
	5725-5850	2.24	1.67	16.0	39.81	20.00	0.0133	1.0

Simultaneous transmission:

The 2.4G Wifi and 5G Wifi can't transmit simultaneously, but BLE can transmit simultaneously with 2.4G Wifi/5G Wifi:

$$\sum_i \frac{S_i}{S_{Limit,i}} \le 1$$

$= S_{5G\ Wifi} / S_{limit\text{-}5G\ Wifi} + S_{BLE}/S_{limit\text{-}BLE}$

=0.0133/1+0.0006/1

=0.0139

< 1.0

Result: The device meet FCC MPE at 20 cm distance

===== END OF REPORT =====