

RF Exposure Evaluation Report

Report No.: RWAP202400215E

Applicant: Invixium Access Inc.

Address: 300-111 Gordon Baker Road, Toronto Canada M2H 3R1

Product Name: IXMC410

Product Model: IXMC410

Multiple Models: N/A

Trade Mark: Invixium

FCC ID: S38-IXMC410

Standards: 47 CFR §1.1310

KDB 447498 D01 General RF Exposure Guidance v06

Test Date: 2024-03-18

Test Result: Complied

Report Date: 2024-03-26

Reviewed by:

Abel Chen

Approved by:

Jacob Kong

Abel Chen

Project Engineer

Jacob Kong

Manager

Prepared by:

World Alliance Testing and Certification (Shenzhen) Co., Ltd

No. 1002, East Block, Laobing Building, Xingye Road 3012, Xixiang street, Bao'an District, Shenzhen,
Guangdong, People's Republic of China



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Revision History

Version No.	Issued Date	Description
00	2024-03-26	Original

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1 General Information

1.1 Client Information

Applicant:	Invixium Access Inc.
Address:	111 Gordon Baker Road, Suite 300, Toronto Ontario Canada M2H 3R1
Manufacturer:	Invixium Access Inc.
Address:	111 Gordon Baker Road, Suite 300, Toronto Ontario Canada M2H 3R1

1.2 Product Description of EUT

Sample Serial Number	6E-1
Sample Received Date	2024-02-28
Sample Status	Good Condition
Frequency Range	BT/BLE: 2402MHz - 2480MHz 2.4G WLAN: 2412-2462MHz 5G WLAN: 5150-5250MHz, 5250-5350MHz, 5470-5730MHz, 5725-5850MHz
Maximum Conducted Output Power	Bluetooth: 6.76dBm BLE: 7.52dBm 2.4G WLAN: 17.35dBm 5G WLAN: 5150-5250MHz: 14.26dBm 5250-5350MHz: 14.59dBm 5470-5730MHz: 14.59dBm 5725-5850MHz: 13.99dBm
Modulation Technology	Bluetooth: GFSK, $\pi/4$ DQPSK, 8DPSK BLE: GFSK 2.4G WLAN: DSSS, OFDM 5G WLAN: OFDM
Antenna Gain [#]	2.4G Band: 2dBi 5G Band: 3.3dBi
Power Supply	DC 3.8V
Adapter Information	N/A
Modification	Sample No Modification by the test lab

1.3 Laboratory Location

<p>World Alliance Testing and Certification (Shenzhen) Co., Ltd No. 1002, East Block, Laobing Building, Xingye Road 3012, Xixiang street, Bao'an District, Shenzhen, Guangdong, People's Republic of China Tel: +86-755-29691511, Email: qa@watc.com.cn</p> <p>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. : 463912, the FCC Designation No. : CN5040.</p> <p>The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0160.</p>
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2 RF Exposure Evaluation

2.1 Standard

According to §1.1310, radio frequency devices shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission’s guideline.

Table 1 to § 1.1310(e)(1)–Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(i) Limits for Occupational/Controlled Exposure				
0.3–3.0	614	1.63	*(100)	≤6
3.0–30	1842/f	4.89/f	*(900/f ²)	<6
30–300	61.4	0.163	1.0	<6
300–1,500			f/300	<6
1,500–100,000			5	<6
(ii) 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 ²)	<30
30–300	27.5	0.073	0.2	<30
300–1,500			f/1500	<30
1,500–100,000			1.0	<30

f = frequency in MHz. * = Plane-wave equivalent power density.

Calculation formula:

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/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, the power gain factor, is normally numeric gain;

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

For simultaneously transmit system, the calculated power density should comply with:

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

2.2 Result

Radio	Frequency (MHz)	Maximum Conducted Power including Tune-up Tolerance		Antenna Gain		Min. test separation distance (cm)	Power Density (mW/cm ²)	MPE Limit (mW/cm ²)	Verdict
		(dBm)	(mW)	(dBi)	(numeric)				
BT	2402-2480	7.0	5	2	1.58	20	0.0016	1	Pass
BLE	2402-2480	8.0	6.31	2	1.58	20	0.0020	1	Pass
2.4G WLAN	2412-2462	17.8	60.26	2	1.58	20	0.0189	1	Pass
5G WLAN	5180-5240	15.0	31.62	3.3	2.14	20	0.0135	1	Pass
	5260-5320	15.0	31.62	3.3	2.14	20	0.0135	1	Pass
	5500-5720	15.0	31.62	3.3	2.14	20	0.0135	1	Pass
	5745-5825	15.0	31.62	3.3	2.14	20	0.0135	1	Pass

Note: The Maximum Conducted Power including Tune-up Tolerance was declared by manufacturer.

Result: Complied.

---End of Report---