

# RF Exposure Evaluation Report

**Report No.:** 2405X57681EG

**Applicant:** Intellian Technologies, Inc.

**Address:** 18-7, Jinwisandan-ro, Jinwi-myeon (Chungho-ri), Pyeongtaek-si,  
Gyeonggi-do 17709 Korea

**Product Name:** CNX-Mobility

**Product Model:** BL6066

**Multiple Models:** N/A

**Trade Mark:** **Intellian**

**FCC ID:** XXZ-BL6066

**Standards:** 47 CFR §1.1310  
KDB 447498 D01 General RF Exposure Guidance v06

**Test Date:** 2024-10-31

**Test Result:** Complied

**Report Date:** 2024-11-01

**Reviewed by:**

*Frank Yin*

**Approved by:**

*Jacob Kong*

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**Prepared by:**

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## Revision History

Version No.	Issued Date	Description
00	2024-11-01	Original

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# 1 General Information

## 1.1 Client Information

Applicant:	Intellian Technologies, Inc.
Address:	18-7, Jinwisandan-ro, Jinwi-myeon (Chungho-ri), Pyeongtaek-si, Gyeonggi-do 17709 Korea
Manufacturer:	Intellian Technologies, Inc.
Address:	18-7, Jinwisandan-ro, Jinwi-myeon (Chungho-ri), Pyeongtaek-si, Gyeonggi-do 17709 Korea

## 1.2 Product Description of EUT

The EUT is CNX-Mobility that contains 2.4G and 5G WLAN radios, this report covers the full testing of the 2.4G WLAN radio.

Sample Serial Number	2RN4-2 for CE&RE test, 2RN4-3 for RF conducted test(assigned by WATC)
Sample Received Date	2024-09-25
Sample Status	Good Condition
Frequency Range	2.4G WLAN: 2412MHz - 2462MHz 5.2G WLAN: 5150MHz – 5250MHz 5.3G WLAN: 5250MHz – 5350MHz 5.6G WLAN: 5470MHz – 5725MHz 5.8G WLAN: 5725MHz – 5850MHz
Maximum Conducted Output Power	2.4G WIFI: 18.25dBm 5G WIFI: 5150MHz – 5250MHz: 18.88dBm 5250MHz – 5350MHz: 11.62dBm 5470MHz – 5725MHz: 17.61dBm 5725MHz – 5850MHz: 26.76dBm
Modulation Technology	DSSS, OFDM, OFDMA
Antenna Gain <sup>#</sup>	2.4G WIFI: Antenna 0: 4.6dBi Antenna 1: 4.7 dBi 5G WIFI: Antenna 0: 5.0dBi Antenna 1: 5.3dBi
Spatial Streams	MIMO (2TX, 2RX)
Power Supply	DC 56V from AC adapter
Adapter Information	N/A
Modification	Sample No Modification by the test lab

## 1.3 Laboratory Location

World Alliance Testing & 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](mailto:qa@watc.com.cn)

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.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0160.

## 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 <sup>2</sup> )	Averaging time (minutes)
<b>(i) Limits for Occupational/Controlled Exposure</b>				
0.3–3.0	614	1.63	*(100)	≤6
3.0–30	1842/f	4.89/f	*(900/f <sup>2</sup> )	<6
30–300	61.4	0.163	1.0	<6
300–1,500			f/300	<6
1,500–100,000			5	<6
<b>(ii) Limits for General Population/Uncontrolled Exposure</b>				
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
300–1,500			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/cm<sup>2</sup>);

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 <sup>2</sup> )	MPE Limit (mW/cm <sup>2</sup> )	Verdict
		(dBm)	(mW)	(dBi)	(numeric)				
2.4G WLAN	2412-2462	18.5	70.79	7.7	5.89	20	0.083	1.0	Pass
5G WLAN	5150-5250	19.0	79.43	8.3	6.76	20	0.107	1.0	Pass
	5250-5350	12.0	15.85	8.3	6.76	20	0.021	1.0	Pass
	5470-5725	18.0	63.10	8.3	6.76	20	0.085	1.0	Pass
	5745-5825	27.0	501.19	8.3	6.76	20	0.674	1.0	Pass

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

### Simultaneously transmit Consideration:

According to applicant, the WLAN 2.4G and 5G can transmission simultaneously.

The ratio=0.083/1+0.674/1=0.757<1.0

**Result: Complied.**

**---End of Report---**