

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

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Revision History

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

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1 General Information

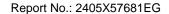
1.1 Client Information

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.

2.40 WEAN Taulo.	
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	2.4G WIFI: 18.25dBm
Output Power	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 [#]	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

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.

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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/cm²)	Averaging time (minutes)				
(i) Limits for Occupational/Controlled Exposure								
0.3-3.0	614	1.63	*(100)	<i>≤</i> 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 Gener	al Population/Uncontrolled Ex	posure					
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:

$$\sum_{i} \frac{S_{i}}{S_{Limit,i}} \le 1$$



2.2 Result

Radio	Frequency (MHz)	Maximum Conducted Power including Tune-up Tolerance		Antenna Gain		Min. test separation distance	Power Density (mW/cm²)	MPE Limit (mW/cm²)	Verdict
		(dBm)	(mW)	(dBi)	(numeric)	(cm)	,		
2.4G WLAN	2412-2462	18.5	70.79	7.7	5.89	20	0.083	1.0	Pass
	5150-5250	19.0	79.43	8.3	6.76	20	0.107	1.0	Pass
5G WLAN	5250-5350	12.0	15.85	8.3	6.76	20	0.021	1.0	Pass
JG WLAIN	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---