

FCC RF EXPOSURE REPORT

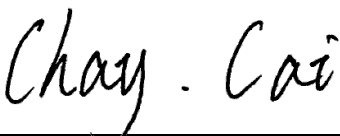
FCC ID: 2A3WK-AP6RA

Project No. : 2111C067
Equipment : Wireless Access Point
Brand Name : 
Test Model : AP 6RA
Series Model : N/A
Applicant : Nomadix, Inc.
Address : 21600 Oxnard Street - 19th floor, Woodland Hills, California, United States
Manufacturer : Nomadix, Inc.
Address : 21600 Oxnard Street - 19th floor, Woodland Hills, California, United States
Date of Receipt : Nov. 09, 2021
Date of Test : Nov. 10, 2021 ~ Jan. 21, 2022
Issued Date : Feb. 25, 2022
Report Version : R01
Test Sample : Engineering Sample No.: DG2021110941
Standard(s) : FCC Guidelines for Human Exposure IEEE C95.1 & FCC Part 2.1091
FCC Title 47 Part 2.1091, OET Bulletin 65 Supplement C

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.



Prepared by : Sheldon Ou



Approved by : Chay Cai



TESTING CERT #5123.02

Add: No. 3 Jinshagang 1st Rd. Shixia, Dalang Town Dongguan City, Guangdong 523792

People's Republic of China.

Tel: +86-769-8318-3000

Web: www.newbtl.com

REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue.	Jan. 27, 2022
R01	Updated the applicant and manufacturer information.	Feb. 25, 2022

1. TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No. 3 Jinshagang 1st Rd. Shixia, Dalang Town Dongguan City, Guangdong 523792 People's Republic of China.

BTL's Registration Number for FCC: 357015

BTL's Designation Number for FCC: CN1240

2. MPE CALCULATION METHOD

Calculation Method of RF Safety Distance:

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

where:

S = power density

P = power input to the antenna

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

For LE:

Antenna Specification:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1		EXD-2425515909 VH-70-5MHF	Internal	MHF	4.5

Note:

1) The antenna gain is provided by the manufacturer.

For 2.4GHz:

Antenna Specification:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1		EXD-2425515909VH-70-5MHF	Internal	MHF	9
2		EXD-2425515909VH-70-5MHF	Internal	MHF	9

Note:

1) This EUT supports CDD, and all antennas have the same gain, Directional gain = $G_{ANT} + \text{Array Gain}$. For power measurements, Array Gain=0dB ($N_{ANT} \leq 4$), so the Directional gain=9. So, the power limit is $30 - (9 - 6) = 27$.

For power spectral density measurements, $N_{ANT} = 2$, $N_{SS} = 1$.

So the Directional gain = $G_{ANT} + \text{Array Gain} = G_{ANT} + 10 \log(N_{ANT} / N_{SS}) \text{dBi} = 9 + 10 \log(2/1) \text{dBi} = 12.01$.

Then, the power spectral density limit is $8 - (12.01 - 6) = 1.99$.

2) The antenna gain is provided by the manufacturer.

Table for Antenna Configuration:

Operating Mode	TX Mode	2TX
IEEE 802.11b		V(Ant. 1 + Ant. 2)
IEEE 802.11g		V(Ant. 1 + Ant. 2)
IEEE 802.11n(HT20)		V(Ant. 1 + Ant. 2)
IEEE 802.11n(HT40)		V(Ant. 1 + Ant. 2)
IEEE 802.11ax(HE20)		V(Ant. 1 + Ant. 2)
IEEE 802.11ax(HE40)		V(Ant. 1 + Ant. 2)

For 5GHz:

Antenna Specification:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1		EXD-2425515909VH-70-5MHF	Internal	MHF	9
2		EXD-2425515909VH-70-5MHF	Internal	MHF	9

Note:

- This EUT supports CDD, and all antennas have the same gain, Directional gain = $G_{ANT} + \text{Array Gain}$. For power measurements, Array Gain=0dB ($N_{ANT} \leq 4$), so the Directional gain=9. So, the UNII-1 and UNII-3 output power limit is $30-(9-6)=27$, the UNII-2A and UNII-2C output power limit is $23.98-(9-6)=20.98$. For power spectral density measurements, $N_{ANT}=2$, $N_{SS} = 1$. So the Directional gain= $G_{ANT} + \text{Array Gain} = G_{ANT} + 10\log(N_{ANT}/N_{SS})\text{dBi} = 9 + 10\log(2/1)\text{dBi} = 12.01$. Then, the UNII-1 power spectral density limit is $17-(12.01-6)=10.99$, the UNII-2A, UNII-2C power spectral density limit is $11-(12.01-6)=4.99$, the UNII-3 power spectral density limit is $30-(12.01-6)=23.99$.
- The antenna gain is provided by the manufacturer.

Table for Antenna Configuration:

Operating Mode	TX Mode	2TX
IEEE 802.11a		V (Ant. 1 + Ant. 2)
IEEE 802.11n(HT20)		V (Ant. 1 + Ant. 2)
IEEE 802.11n(HT40)		V (Ant. 1 + Ant. 2)
IEEE 802.11ac(VHT20)		V (Ant. 1 + Ant. 2)
IEEE 802.11ac(VHT40)		V (Ant. 1 + Ant. 2)
IEEE 802.11ac(VHT80)		V (Ant. 1 + Ant. 2)
IEEE 802.11ax(HE20)		V (Ant. 1 + Ant. 2)
IEEE 802.11ax(HE40)		V (Ant. 1 + Ant. 2)
IEEE 802.11ax(HE80)		V (Ant. 1 + Ant. 2)

3. TEST RESULTS

For LE:

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
4.5	2.8184	9.97	9.9312	0.00557	1	Complies

For 2.4GHz:

Directional Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
9	7.9433	15.67	36.8978	0.05834	1	Complies

For 5GHz UNII-1:

Directional Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
9	7.9433	12.66	18.4502	0.02917	1	Complies

For 5GHz UNII-2A:

Directional Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
9	7.9433	12.83	19.1867	0.03034	1	Complies

For 5GHz UNII-2C:

Directional Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
9	7.9433	13.85	24.2661	0.03837	1	Complies

For 5GHz UNII-3:

Directional Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
9	7.9433	13.75	23.7137	0.03749	1	Complies

For the max simultaneous transmission MPE:

Ratio			Total	Limit of Ratio	Test Result
LE	2.4GHz	5GHz			
0.00557	0.05834	0.03837	0.10228	1	Complies

Note: The calculated distance is 20 cm.

End of Test Report