FCC RF EXPOSURE REPORT

FCC ID: 2A3WK-AP6NA

Project No.	:	2111C065
Equipment	:	Wireless Access Point
Brand Name	:	NOMADIX
Test Model	:	AP 6NA
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. 22, 2022
Issued Date	:	Feb. 23, 2022
Report Version	:	R01
Test Sample	:	Engineering Sample No.: DG2021110933, DG2021110930
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.

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ACCREDITED
TESTING CERT #5123.02

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REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue	Jan. 26, 2022
R01	Updated the applicant and manufacturer information.	Feb. 23, 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:

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

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 2.4GHz:
Antenna Specification:

Ant.	Manufacturer	P/N	Antenna Type	Connector	Gain (dBi)
1	Fujian HCXG Electronic Technology Co., LTD	617211H9JL	PIFA	RF generation terminal 113	6.96
2	Fujian HCXG Electronic Technology Co., LTD	617211H9JL	PIFA	RF generation terminal 113	3.07
3	Fujian HCXG Electronic Technology Co., LTD	617211H9JL	PIFA	RF generation terminal 113	3.55
4	Fujian HCXG Electronic Technology Co., LTD	617211H9JL	PIFA	RF generation terminal 113	4.34

Note:
1) This EUT supports CDD, and all antenna gains are not equal, so Directional gain=10log[$(10^{G1/20}+10^{G2/20}+...10^{GN/20})^2$/N]dBi, that is Directional gain=10log[$(10^{6.96/20}+10^{3.07/20}+10^{3.55/20}+10^{4.34/20})^2$/4]dBi =10.64. So, the output power limit is 30-(10.64-6)=25.36, the power spectral density limit is 8-(10.64-6)=3.36.
2) The antenna gain is provided by the manufacturer.

Table for Antenna Configuration:

Operating Mode / TX Mode	4TX
IEEE 802.11b	V(Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11g	V(Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11n(HT20)	V(Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11n(HT40)	V(Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11ax(HE20)	V(Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11ax(HE40)	V(Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)

For 5GHz:
Antenna Specification:
For UNII-1 & UNII-2A:

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)
1	Fujian HCXG Electronic Technology Co., LTD	617211H9JL	PIFA	RF generation terminal 113	6.37
2	Fujian HCXG Electronic Technology Co., LTD	617211H9JL	PIFA	RF generation terminal 113	5.49
3	Fujian HCXG Electronic Technology Co., LTD	617211H9JL	PIFA	RF generation terminal 113	3.90
4	Fujian HCXG Electronic Technology Co., LTD	617211H9JL	PIFA	RF generation terminal 113	4.01

For UNII-2C & UNII-3:

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)
1	Fujian HCXG Electronic Technology Co., LTD	617211H9JL	PIFA	RF generation terminal 113	2.72
2	Fujian HCXG Electronic Technology Co., LTD	617211H9JL	PIFA	RF generation terminal 113	2.62

Note:
1) This EUT supports CDD, and all antenna gains are not equal, so Directional gain=10log[$(10^{G1/20}+10^{G2/20}+...10^{GN/20})^2$/N]dBi,
For UNII-1 & UNII-2A: Directional gain=10log[$(10^{6.37/20}+10^{5.49/20}+10^{3.90/20}+10^{4.01/20})^2$/4]dBi =11.03. So, the UNII-1 output power limit is 30-(11.03-6)=24.97, the UNII-2A output power limit is 23.98-(11.03-6)=18.95. The UNII-1 power spectral density limit is 17-(11.03-6)=11.97, the UNII-2A power spectral density limit is 11-(11.03-6)=5.97.
For UNII-2C & UNII-3: Directional gain=10log[$(10^{2.72/20}+10^{2.62/20})^2$/2]dBi =5.68.
2) The antenna gain is provided by the manufacturer.

Table for Antenna Configuration:
For UNII-1 & UNII-2A:

Operating Mode / TX Mode	4TX
IEEE 802.11a	V(Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11n(HT20)	V(Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11n(HT40)	V(Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11ac(VHT20)	V(Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11ac(VHT40)	V(Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11ac(VHT80)	V(Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11ac(VHT160)	V(Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11ax(HE20)	V(Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11ax(HE40)	V(Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11ax(HE80)	V(Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)
IEEE 802.11ax(HE160)	V(Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4)

For UNII-2C & UNII-3:

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)

For BT LE:
Antenna Specification:

Ant.	Manufacturer	P/N	Antenna Type	Connector	Gain (dBi)
1	Fujian HCXG Electronic Technology Co., LTD	617211H9JL	PIFA	RF generation terminal 113	4.60

Note: The antenna gain is provided by the manufacturer.

3. TEST RESULTS

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
10.64	11.5878	20.49	111.9438	0.16525	1	Complies

For 5GHz UNII-1 & 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
11.03	12.6765	23.13	205.5891	0.33199	1	Complies

For 5GHz UNII-2C & 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
5.68	3.6983	24.71	295.8012	0.13936	1	Complies

For BT 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
4.60	2.8840	8.12	6.4863	0.00238	1	Complies

For the max simultaneous transmission MPE:

Ratio				Total	Limit of Ratio	Test Result
BT LE	2.4GHz	5GHz UNII-1 & UNII-2A	5GHz UNII-2C & UNII-3			
0.00238	0.16525	0.33199	0.13936	0.63898	1	Complies

Note: The calculated distance is 25 cm.

End of Test Report