

|                                     |                                |
|-------------------------------------|--------------------------------|
| Product Name: Wireless Access Point | Report No: FCC022022-05522RF14 |
| Product Model: AP 6SA               | Security Classification: Open  |
| Version: V1.0                       | Total Page: 7                  |

## TIRT Testing Report



| Prepared By: | Checked By: | Approved By: |  |
|--------------|-------------|--------------|---------------------------------------------------------------------------------------|
| Stone Tang   | Randy Lv    | Daniel Chen  |                                                                                       |
| Stone Tang   | Randy Lv    | Daniel chen  |                                                                                       |

# FCC RF EXPOSURE REPORT

## FCC ID: 2A3WK-AP6SA

**Project No.** : 2022-05522  
**Equipment** : Wireless Access Point  
**Brand Name** :   
**NOMADIX**®

**Test Model** : AP 6SA  
**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** : 2022.05.11  
**Date of Test** : 2022.05.13-2022.07.14  
2022.09.15-2022.09.28  
**Issued Date** : 2022.10.24  
**Report Version** : V1.0  
**Test Sample** : Engineering Sample No.: 20220421018665  
**Standard(s)** : FCC Guidelines for Human Exposure IEEE C95.1 & FCC Part 2.1091  
FCC Title 47 Part 2.1091

- The test result referred exclusively to the presented test model /sample.
- Without written approval of TIRT Inc. the test report shall not reproduced except in full.

Lab: Beijing TIRT Technology Service Co.,Ltd Shenzhen  
Add: 101, 3 # Factory Building, Gongjin Electronics Shatin Community, Kengzi Street, Pingshan  
District, Shenzhen, China  
TEL: +86-0755-27087573

**REPORT ISSUED HISTORY**

| Report No.          | Version | Description     | Issued Date | Note  |
|---------------------|---------|-----------------|-------------|-------|
| FCC022022-05522RF14 | R00     | Original Report | 2022.10.24  | Valid |

**1. TEST FACILITY**

|                                         |                                                                                                                    |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Company:                                | Beijing TIRT Technology Service Co.,Ltd Shenzhen                                                                   |
| Address:                                | 101, 3 # Factory Building, Gongjin Electronics Shatin Community, Kengzi Street, Pingshan District, Shenzhen, China |
| CNAS Registration Number:               | CNAS L14158                                                                                                        |
| A2LA Registration Number:               | 6049.01                                                                                                            |
| FCC Accredited Lab. Designation Number: | CN1309                                                                                                             |
| FCC Test Firm Registration Number:      | 825524                                                                                                             |
| Telephone:                              | +86-0755-27087573                                                                                                  |

## 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    | N/A   | N/A        | Internal     | N/A       | 2.14       |

Note: The antenna gain is provided by the manufacturer.

For 2.4GHz:

Antenna Specification:

| Ant. | Brand                                                                              | P/N             | Antenna Type | Connector                  | Gain (dBi) |
|------|------------------------------------------------------------------------------------|-----------------|--------------|----------------------------|------------|
| 1    |   | NDS-2.4G-WX-21  | PIFA         | RF Generation Terminal 113 | 4.39       |
| 2    |  | NDS-2.4G2-WX-21 | PIFA         | RF Generation Terminal 113 | 2.75       |

Note:

- This EUT supports CDD, and all antenna gains are not equal, Directional gain =  $G_{ANT} + \text{Array Gain}$ .  
For power measurements, Array Gain=0dB ( $N_{ANT} \leq 4$ ), so the Directional gain=4.39.  
For power spectral density measurements,  $N_{ANT}=2$ ,  $N_{SS} = 1$ .  
So the Directional gain= $G_{ANT} + \text{Array Gain} = G_{ANT} + 10\log(N_{ANT}/N_{SS})\text{dBi} = 4.39 + 10\log(2/1)\text{dBi} = 7.40$ .
- 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                                                                             | P/N          | Antenna Type | Connector                  | Gain (dBi) |
|------|-----------------------------------------------------------------------------------|--------------|--------------|----------------------------|------------|
| 1    |  | NDS-5G-WX-21 | PIFA         | RF Generation Terminal 113 | 3.62       |
| 2    |  | C168-JL-3917 | PIFA         | IPEX                       | 4.67       |

Note:

- 1) This EUT supports CDD, and all antenna gains are not equal, Directional gain =  $G_{ANT} + \text{Array Gain}$ .  
For power measurements, Array Gain=0dB ( $N_{ANT} \leq 4$ ), so the Directional gain=4.67.  
For power spectral density measurements,  $N_{ANT}=2$ ,  $N_{SS} = 1$ .  
Then the Directional gain= $G_{ANT} + \text{Array Gain} = G_{ANT} + 10\log(N_{ANT}/N_{SS})\text{dBi} = 4.67 + 10\log(2/1)\text{dBi} = 7.68$ .
- 2) 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 802.11ac(VHT160) |         | 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) |
| IEEE 802.11ax(HE160)  |         | V (Ant. 1 + Ant. 2) |

### 3. TEST RESULTS

For BT LE:

| Directional Gain (dBi) | Directional Gain (numeric) | Max. Output Power (dBm) | Max. Output Power (mW) | Power Density (S) (mW/cm <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|------------------------|----------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 2.14                   | 1.6368                     | 8.35                    | 6.8391                 | 0.00223                                 | 1                                                | Complies    |

For 2.4GHz:

| Directional Gain (dBi) | Directional Gain (numeric) | Max. Output Power (dBm) | Max. Output Power (mW) | Power Density (S) (mW/cm <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|------------------------|----------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 4.39                   | 2.7479                     | 20.35                   | 108.3927               | 0.05929                                 | 1                                                | Complies    |

For 5GHz:

| Directional Gain (dBi) | Directional Gain (numeric) | Max. Output Power (dBm) | Max. Output Power (mW) | Power Density (S) (mW/cm <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result |
|------------------------|----------------------------|-------------------------|------------------------|-----------------------------------------|--------------------------------------------------|-------------|
| 4.67                   | 2.9309                     | 17.79                   | 60.1174                | 0.03507                                 | 1                                                | Complies    |

**For the max simultaneous transmission MPE:**

| Ratio   |         |         | Total   | Limit of Ratio | Test Result |
|---------|---------|---------|---------|----------------|-------------|
| BT LE   | 2.4GHz  | 5GHz    |         |                |             |
| 0.00223 | 0.05929 | 0.03507 | 0.09659 | 1              | Complies    |

Note: The calculated distance is 20 cm.

**End of Test Report**