

**Chengdu Veniibot Co., Ltd.**

# **MPE ASSESSMENT REPORT**

**Report Type:**

FCC MPE assessment report

**Model:**

N1 MAX

**REPORT NUMBER:**

210200741SHA-002

**ISSUE DATE:**

Sep 29, 2021

**DOCUMENT CONTROL NUMBER:**

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## TEST REPORT

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Report no.: 210200741SHA-002

**Applicant:** Chengdu Veniibot Co., Ltd.  
No.403-404, 4/F, Block B3, Tianfu Software Park, High-tech Area,  
Chengdu, Sichuan, China

**Manufacturer:** Chengdu Veniibot Co., Ltd.  
No.403-404, 4/F, Block B3, Tianfu Software Park, High-tech Area,  
Chengdu, Sichuan, China

**Factory:** Enterecos (Guangdong) Technologies Co., Ltd  
1st floor, unit1 of 2nd floor, unit2 of 3rd floor and 4th floor,  
Building A and Building B, Huoju Road 4, Tanzhou Town, Zhongshan  
City, Guangdong Province, 528467 China

**FCC ID:** 2A2SK-VNM5588

### SUMMARY:

The equipment complies with the requirements according to the following standard(s) or Specification:

KDB447498 D01 General RF Exposure Guidance v06

FCC Part2.1091, FCC Part2.1093 FCC Part1.1307(b)

### PREPARED BY:

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Project Engineer  
Teddy Yin

### REVIEWED BY:

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Reviewer  
Daniel Zhao

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**TEST REPORT****Revision History**

| Report No.       | Version | Description             | Issued Date  |
|------------------|---------|-------------------------|--------------|
| 210200741SHA-002 | Rev. 01 | Initial issue of report | Sep 29, 2021 |
|                  |         |                         |              |
|                  |         |                         |              |

**TEST REPORT****1 GENERAL INFORMATION****1.1 Description of Equipment Under Test (EUT)**

|                       |   |
|-----------------------|---|
| Product name:         | Mopping & vacuuming robot   |
| Type/Model/PMN/HVIN:  | N1 MAX  |
| Description of EUT:   | The EUT is automatically battery-powered cleaner and dry pick up for household indoor use only. The worst data is listed in the report. |
| Rating:               | 14.4VDC<br>Docking Station<br>Input:20VDC<br>Output:20VDC<br>Charger:<br>Input:100-240V~, 50/60Hz<br>Output:20VDC                       |
| Category of EUT:      | Class B   |
| EUT type:             | <input type="checkbox"/> Table top <input checked="" type="checkbox"/> Floor standing   |
| Software Version:     | V1.0  |
| Hardware Version:     | V1.0  |
| Sample No.:           | 0210125-11-004  |
| Sample received date: | Feb 15, 2021  |
| Date of test:         | Feb 15~Jul 28, 2021   |

**1.2 Technical Specification**

|                      |   |
|----------------------|---|
| Frequency Range:     | 2412MHz ~ 2462MHz   |
| Support Standards:   | IEEE 802.11b, IEEE 802.11g, IEEE 802.11n-HT20   |
| Type of Modulation:  | IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK)<br>IEEE 802.11g: OFDM (64-QAM, 16-QAM, QPSK, BPSK)<br>IEEE 802.11n-HT20: OFDM (64-QAM, 16-QAM, QPSK, BPSK) |
| Channel Number:      | 11 Channels for 802.11b, 802.11g and 802.11n(HT20)  |
| Data Rate:           | IEEE 802.11b: Up to 11 Mbps<br>IEEE 802.11g: Up to 54 Mbps<br>IEEE 802.11n-HT20: Up to MCS7   |
| Channel Separation:  | 5 MHz   |
| Antenna Information: | 2.7dBi, PIFA antenna  |

**TEST REPORT****1.3 Description of Test Facility**

|            |  |
|------------|--|
| Name:      | Intertek Testing Services Shanghai                                     |
| Address:   | Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China |
| Telephone: | 86 21 61278200   |
| Telefax:   | 86 21 54262353   |

|   |   |
|---|---|
| The test facility is recognized, certified, or accredited by these organizations: | CNAS Accreditation Lab<br>Registration No. CNAS L0139                         |
|   | FCC Accredited Lab<br>Designation Number: CN0175                              |
|   | IC Registration Lab<br>CAB identifier.: CN0051                                |
|   | VCCI Registration Lab<br>Registration No.: R-14243, G-10845, C-14723, T-12252 |
|   | A2LA Accreditation Lab<br>Certificate Number: 3309.02                         |

**TEST REPORT****2 MPE Assessment**

Test result: Pass

**2.1 MPE Assessment Limit**

Mobile device exposure for standalone operations:

| Frequency range | E-field strength (V/m) | H-field strength (A/m) | B-field (uT)        | Equivalent plane wave power density $S_{eq}$ (W/m <sup>2</sup> ) |
|-----------------|------------------------|------------------------|---------------------|--|
| 0-1 Hz          | -                      | $3,2 \times 10^4$      | $4 \times 10^4$     | -  |
| 1-8 Hz          | 10 000                 | $3,2 \times 10^4/f^2$  | $4 \times 10^4/f^2$ | -  |
| 8-25 Hz         | 10 000                 | $4 000/f$              | $5 000/f$           | -  |
| 0,025-0,8 kHz   | 250/f                  | 4/f                    | 5/f                 | -  |
| 0,8-3 kHz       | 250/f                  | 5                      | 6,25                | -  |
| 3-150 kHz       | 87                     | 5                      | 6,25                | -  |
| 0,15-1 MHz      | 87                     | 0,73/f                 | 0,92/f              | -  |
| 1-10 MHz        | $87/f^{1/2}$           | 0,73/f                 | 0,92/f              | -  |
| 10-400 MHz      | 28                     | 0,073                  | 0,092               | 2  |
| 400-2 000 MHz   | $1,375 f^{1/2}$        | $0,0037 f^{1/2}$       | $0,0046 f^{1/2}$    | $f/200$  |
| 2-300 GHz       | 61                     | 0,16                   | 0,20                | 10   |

Mobile device exposure for simultaneous transmission operations: **the sum of the MPE ratios for all simultaneously transmitting antennas incorporated in a host device is  $\leq 1.0$**

**TEST REPORT****2.2 Assessment Results**

Power density (S) is calculated according to the formula:

$$S = PG / (4\pi R^2)$$

Where S = power density in mW/cm<sup>2</sup>

P = Radiated transmit power in mW

G = numeric gain of transmit antenna

R = distance (cm)

As we can see from the test report 210200741SHA-001:

The maximum radiated power = 20.93dBm = 123.88 mW;

Here R is chosen to be 20cm,

$$S = PG / (4\pi R^2) = 123.88 / (4 * 3.14 * 20 * 20) = 0.0246 \text{ mW/cm}^2 < 1 \text{ mW/cm}^2$$

**TEST REPORT**

**Appendix I**

Definition below must be outlined in the User Manual:

To satisfy FCC RF exposure requirements, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation.

To ensure compliance, operations at closer than this distance is not recommended.

\*\*\*\*\* END \*\*\*\*\*