



# MAXIMUM PERMISSIBLE EXPOSURE EVALUATION REPORT

**Applicant: Snorble, Incorporated.**

Address: 65 Fieldstone Rd, Skillman NEW JERSEY 08558 USA

**FCC ID: 2BDTJD**

**Product Name: Snorble Smart Companion**

**Standard(s): 47 CFR §1.1310, 47 CFR §2.1091,  
47 CFR §15.247(i), 47 CFR §15.407(f)**

The above device has been tested and found compliant with the requirement of the relative standards by China Certification ICT Co., Ltd (Dongguan)

**Report Number: CR231061281-00F**

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## Test Facility

The Test site used by China Certification ICT Co., Ltd (Dongguan) to collect test data is located on the No. 113, Pingkang Road, Dalang Town, Dongguan, Guangdong, China.

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. : 442868, the FCC Designation No. : CN1314.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0123.

## Declarations

China Certification ICT Co., Ltd (Dongguan) is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with a triangle symbol “▲”. Customer model name, addresses, names, trademarks etc. are not considered data.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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## DOCUMENT REVISION HISTORY

| Revision Number | Report Number   | Description of Revision | Date of Revision |
|-----------------|-----------------|-------------------------|------------------|
| 1.0             | CR231061281-00F | Original Report         | 2024/1/16        |

## 1. GENERAL INFORMATION

### 1.1 Product Description for Equipment under Test (EUT)

#### 1.1.1 General:

|                             |  |
|-----------------------------|--|
| <b>EUT Name:</b>            | Snorble Smart Companion  |
| <b>EUT Model:</b>           | SN1000   |
| <b>Rated Input Voltage:</b> | DC7.2V from Battery or DC12V from adapter or DC12V from Charger Base |
| <b>EUT Received Date:</b>   | 2023/11/7  |
| <b>EUT Received Status:</b> | Good   |

## **2. SUMMARY OF TEST RESULTS**

| <b>Standard(s)/Rule(s)</b>      | <b>Description of Test</b> | <b>Result</b> |
|---------------------------------|----------------------------|---------------|
| §15.407 (f) & §1.1310 & §2.1091 | RF Exposure Evaluation     | Compliant     |

### **3 RF EXPOSURE EVALUATION (MPE)**

#### **3.1 RF Exposure Evaluation**

##### **3.1.1 Applicable Standard**

According to subpart 15.247(i)& 15.407(f) and subpart §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

| <b>(B) Limits for General Population/Uncontrolled Exposure</b> |                                      |                                      |  |                                 |
|--|--------------------------------------|--------------------------------------|--|---------------------------------|
| <b>Frequency Range (MHz)</b>                                   | <b>Electric Field Strength (V/m)</b> | <b>Magnetic Field Strength (A/m)</b> | <b>Power Density (mW/cm<sup>2</sup>)</b> | <b>Averaging Time (minutes)</b> |
| 0.3–1.34   | 614                                  | 1.63                                 | *(100)                                   | 30                              |
| 1.34–30  | 824/f                                | 2.19/f                               | *(180/f <sup>2</sup> )                   | 30                              |
| 30–300   | 27.5                                 | 0.073                                | 0.2                                      | 30                              |
| 300–1500   | /                                    | /                                    | f/1500                                   | 30                              |
| 1500–100,000   | /                                    | /                                    | 1.0                                      | 30                              |

f = frequency in MHz; \* = Plane-wave equivalent power density;

According to §1.1310 and §2.1091 RF exposure is calculated.

##### **3.1.2 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/cm<sup>2</sup>);

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:

$$\sum_i \frac{S_i}{S_{Limit,i}} \leq 1$$

### 3.1.3 Calculated Data:

| Operation Modes | Frequency (MHz) | Antenna Gain |           | Conducted output power including Tune-up Tolerance |        | Evaluation Distance (cm) | Power Density (mW/cm <sup>2</sup> ) | MPE Limit (mW/cm <sup>2</sup> ) |
|-----------------|-----------------|--------------|-----------|--|--------|--------------------------|-------------------------------------|---------------------------------|
|                 |                 | (dBi)        | (numeric) | (dBm)  | (mW)   |                          |                                     |                                 |
| BLE             | 2402-2480       | 2.5          | 1.78      | 3  | 2.00   | 20.00                    | 0.0007                              | 1.0                             |
| 2.4G WiFi       | 2412-2462       | 2.5          | 1.78      | 22   | 158.49 | 20.00                    | 0.0561                              | 1.0                             |
| 5G WiFi         | 5150-5250       | 7            | 5.01      | 13   | 19.95  | 20.00                    | 0.0199                              | 1.0                             |
|                 | 5725-5850       | 7            | 5.01      | 13   | 19.95  | 20.00                    | 0.0200                              | 1.0                             |

Note:

The Above Parameters were provided by the manufacturer.

| Operation Modes | Frequency (MHz) | Antenna Gain |           | Conducted output power including Tune-up Tolerance |       | Evaluation Distance (cm) | Power Density (mW/cm <sup>2</sup> ) | MPE Limit (mW/cm <sup>2</sup> ) |
|-----------------|-----------------|--------------|-----------|--|-------|--------------------------|-------------------------------------|---------------------------------|
|                 |                 | (dBi)        | (numeric) | (dBm)  | (mW)  |                          |                                     |                                 |
| NFC             | 13.56           | /            | /         | -29.65   | 0.001 | 20.00                    | <<0.0001                            | 0.98                            |
| Radar           | 57000-71000     | /            | /         | 7.67   | 5.85  | 20.00                    | 0.0012                              | 1.0                             |

Note:

1. The Above Parameters were provided by the manufacturer.

2. \*NFC field strength is  $65.55 \text{ B}\mu\text{V/m} @ 3\text{m} = -29.65 \text{ dBm}(0.001\text{mW})$  EIRP. That equal to antenna gain is 0dBi and used the EIRP value as conducted power.

Note:

#### For Simultaneous transmission:

2.4G WiFi can't transmission simultaneously with 5G WiFi ,but Radar ,NFC, BLE can transmission simultaneously with 2.4G WiFi or 5G WiFi:

$$\sum_i \frac{S_i}{S_{Limit,i}} \leq 1$$

$$= S_{2.4 \text{ G WiFi}} / S_{limit-2.4 \text{ G WiFi}} + S_{BLE} / S_{limit-BLE} + S_{NFC} / S_{limit-NFC} + S_{Radar} / S_{limit-Radar}$$

$$= 0.0561/1 + 0.0007/1 + 0.0001/0.98 + 0.0012/1$$

$$= 0.058$$

$$< 1.0$$

**Result: Compliant. The device compliant Simultaneous transmission at 20cm distances.**

===== END OF REPORT =====