

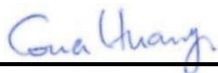
# RF EXPOSURE EVALUATION REPORT

FCC ID : 2ABOF-G1-BN5ASI002  
Equipment : Base Node (BN)  
Brand Name : Tarana  
Model Name : G1BN5ASI002  
Marketing Name : G1-BN5ASI002  
Applicant : Tarana Wireless  
590 Alder Drive, Milpitas, CA 95035  
Manufacturer : Tarana Wireless  
590 Alder Drive, Milpitas, CA 95035  
Standard : 47 CFR Part 2.1091

We, SPORTON INTERNATIONAL INC has been evaluated this product in accordance with 47 CFR Part 2.1091 and it complies with applicable limit.

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 1190) and the FCC designation No. TW1190 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC evaluation.

The results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full



Approved by: Cona Huang / Deputy Manager



**SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory**  
No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



## **Table of Contents**

|   |          |
|---|----------|
| <b>1. DESCRIPTION OF EQUIPMENT UNDER TEST (EUT) .....</b>     | <b>4</b> |
| <b>2. MAXIMUM OUTPUT POWER .....</b>                          | <b>5</b> |
| <b>3. RF EXPOSURE LIMIT INTRODUCTION .....</b>                | <b>5</b> |
| <b>4. RADIO FREQUENCY RADIATION EXPOSURE EVALUATION .....</b> | <b>6</b> |
| 4.1. Standalone Power Density Calculation .....               | 6        |



## History of this test report

| Report No. | Version | Description             | Issued Date   |
|------------|---------|-------------------------|---------------|
| FA063029   | Rev. 01 | Initial issue of report | Dec. 30, 2020 |
| FA063029   | Rev. 02 | Update output power     | Sep. 03, 2021 |
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**1. Description of Equipment Under Test (EUT)**

| Product Feature & Specification         |  |
|---|--|
| EUT Type                                | Base Node (BN)   |
| Brand Name                              | Tarana   |
| Model Name                              | G1BN5ASI002  |
| Marketing Name                          | G1-BN5ASI002   |
| FCC ID                                  | 2ABOF-G1-BN5ASI002                                       |
| Wireless Technology and Frequency Range | 5G B1: 5150 MHz ~ 5250 MHz<br>5G B4: 5725 MHz ~ 5825 MHz |
| SW Version                              | SYS.A3.B10.XXX.0.561.008.01                              |
| EUT Stage                               | Identical Prototype                                      |

**Remark:** The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

**Reviewed by:** Jason Wang

**Report Producer:** Paula Chen

## 2. Maximum output power

| Mode  | Maximum Average Power (dBm) |
|-------|-----------------------------|
| 5G B1 | 18.20                       |
| 5G B4 | 18.30                       |

Remark:

The maximum output was according tune-up document

## 3. RF Exposure Limit Introduction

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

| Frequency range (MHz)  | Electric field strength (V/m) | Magnetic field strength (A/m) | Power density (mW/cm <sup>2</sup> ) | Averaging time (minutes) |
|--|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
| <b>(A) Limits for Occupational/Controlled Exposures</b>        |                               |                               |                                     |                          |
| 0.3-3.0  | 614                           | 1.63                          | *(100)                              | 6                        |
| 3.0-30   | 1842/f                        | 4.89/f                        | *(900/f <sup>2</sup> )              | 6                        |
| 30-300   | 61.4                          | 0.163                         | 1.0                                 | 6                        |
| 300-1500   |                               |                               | f/300                               | 6                        |
| 1500-100,000   |                               |                               | 5                                   | 6                        |
| <b>(B) Limits for General Population/Uncontrolled Exposure</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                       |

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

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

Where:

S = Power Density

P = Output Power at Antenna Terminals

G = Gain of Transmit Antenna (linear gain)

R = Distance from Transmitting Antenna



## **4. Radio Frequency Radiation Exposure Evaluation**

### **4.1. Standalone Power Density Calculation**

| Band  | Antenna Gain (dBi) | Maximum Power (dBm) | Maximum EIRP (dBm) | Maximum EIRP (W) | Average EIRP (mW) | Power Density at 20cm (mW/cm <sup>2</sup> ) | Limit (mW/cm <sup>2</sup> ) |
|-------|--------------------|---------------------|--------------------|------------------|-------------------|---|-----------------------------|
| 5G B1 | 16.5               | 18.20               | 34.70              | 2.95             | 2951.21           | 0.587                                       | 1.000                       |
| 5G B4 | 16.4               | 18.30               | 34.70              | 2.95             | 2951.21           | 0.587                                       | 1.000                       |

### **Conclusion:**

According to 47 CFR §2.1091, the RF exposure analysis concludes that the RF Exposure is FCC compliant.