

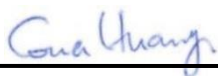
# RF EXPOSURE EVALUATION REPORT

FCC ID : 2ABOF-GXRN8356900  
Equipment : RN System (Multiband)  
Brand Name : Tarana  
Model Name : GXRN8356900  
Applicant : Tarana Wireless, Inc.  
630 Alder Drive, Milpitas, CA 95035  
Manufacturer : Tarana Wireless, Inc.  
630 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 Part2.1091 and it complies with applicable limit.

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 3786) and the FCC designation No. TW3786 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC evaluation.

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Approved by: Cona Huang / Deputy Manager



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## **Table of Contents**

|                                                               |          |
|---------------------------------------------------------------|----------|
| <b>1. DESCRIPTION OF EQUIPMENT UNDER TEST (EUT) .....</b>     | <b>4</b> |
| <b>2. MAXIMUM EIRP OUTPUT POWER.....</b>                      | <b>4</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        |
| 4.2. Collocated Power Density Calculation.....                | 6        |



## History of this test report

| Report No.  | Version | Description             | Issued Date   |
|-------------|---------|-------------------------|---------------|
| FA250408001 | Rev. 01 | Initial issue of report | Jun. 04, 2025 |
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**1. Description of Equipment Under Test (EUT)**

| Product Feature & Specification         |                                                                                                                                                                                           |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Equipment Name                          | RN System (Multiband)                                                                                                                                                                     |
| Brand Name                              | Tarana                                                                                                                                                                                    |
| Model Name                              | GXRN8356900                                                                                                                                                                               |
| FCC ID                                  | 2ABOF-GXRN8356900                                                                                                                                                                         |
| Wireless Technology and Frequency Range | CBRS Band: 3550 MHz ~ 3700 MHz<br>U-NII-3 Band: 5725 MHz ~ 5850 MHz<br>U-NII-5 Band: 5925 MHz ~ 6425 MHz<br>U-NII-7 Band: 6525 MHz ~ 6875 MHz                                             |
| Mode                                    | CBRS Band: 10, 20, 30, 40MHz<br>U-NII-3 Band: 40MHz, 40+40MHz<br>U-NII-5 Band: 40MHz, 40+40MHz, 40+40+40MHz, 40+40+40+40MHz<br>U-NII-7 Band: 40MHz, 40+40MHz, 40+40+40MHz, 40+40+40+40MHz |

**Reviewed by: Jason Wang****Report Producer: Carlie Tsai****2. Maximum EIRP Output Power**

| Mode    | Maximum EIRP power(dBm) |
|---------|-------------------------|
| CBRS    | 47.87                   |
| U-NII-3 | 47.65                   |
| U-NII-5 | 36.00                   |
| U-NII-7 | 36.00                   |

**Remark:**

The maximum EIRP powers are according to the directional gain from Part 15E and Part 96 EMC reports and the maximum power from tune-up procedure.



### **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 66 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         | Maximum Burst Average EIRP Power (dBm) | Duty Cycle (%) | Maximum Source based Time Average EIRP Power (dBm) | Maximum Source based Time Average EIRP Power (mW) | Power Density at 66cm (mW/cm <sup>2</sup> ) | Limit (mW/cm <sup>2</sup> ) | Power Density / Limit |
|--------------|----------------------------------------|----------------|----------------------------------------------------|---------------------------------------------------|---------------------------------------------|-----------------------------|-----------------------|
| CBRS         | 47.87                                  | 41.83          | 44.08                                              | 25614.62                                          | 0.468                                       | 1.000                       | 0.468                 |
| U-NII-3 Band | 47.65                                  | 41.83          | 43.86                                              | 24349.38                                          | 0.445                                       | 1.000                       | 0.445                 |
| U-NII-5 Band | 36.00                                  | 41.83          | 32.21                                              | 1665.28                                           | 0.030                                       | 1.000                       | 0.030                 |
| U-NII-7 Band | 36.00                                  | 41.83          | 32.21                                              | 1665.28                                           | 0.030                                       | 1.000                       | 0.030                 |

**General Note:**

1. According to operation descriptional the maximum transmission duty cycle is 41.83%.

### 4.2. Collocated Power Density Calculation

| CBRS Power Density / Limit | U-NII-3 Power Density / Limit | U-NII-5 Power Density / Limit | U-NII-7 Power Density / Limit | $\Sigma$ (Power Density / Limit) of CBRS + U-NII-3 + U-NII-5 + U-NII-7 |
|----------------------------|-------------------------------|-------------------------------|-------------------------------|------------------------------------------------------------------------|
| 0.468                      | 0.445                         | 0.030                         | 0.030                         | 0.973                                                                  |

**Note:**

1.  $\Sigma$  (Power Density / Limit): This is a summation of [(power density for each transmitter/antenna included in the simultaneous transmission)/ (corresponding MPE limit)], for CBRS + U-NII-3 + U-NII-5 + U-NII-7.
2. Considering the CBRS collocation with the U-NII-3/5/7 transmitter of the EIRP performance listed in the table above, the aggregated (power density /limit) is smaller than 1, and MPE of 4 collocated transmitters is compliant.

## Conclusion:

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