



# RF EXPOSURE EVALUATION REPORT

**FCC ID** : 2ABOF-G1BN6ASI002  
**Equipment** : Base Node (BN)  
**Brand Name** : TARANA  
**Model Name** : G1BN6ASI002  
**Marketing Name** : TARANA G1  
**Applicant** : Tarana Wireless  
: 590 Alder Drive, Milpitas, CA 95035  
**Manufacturer** : Tarana Wireless, Inc.  
: 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 Part2.1091 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. 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 RF AVERAGE OUTPUT POWER AMONG PRODUCTION UNITS .....</b>	<b>4</b>
<b>3. DETERMINATION OF EXEMPTION .....</b>	<b>5</b>
<b>4. RF EXPOSURE EVALUATION .....</b>	<b>6</b>
4.1. Standalone Power Density Calculation .....	6
4.2. Collocated Power Density Calculation.....	6





**1. Description of Equipment Under Test (EUT)**

Product Feature & Specification	
EUT Type	Base Node (BN)
Brand Name	TARANA
Model Name	G1BN6ASI002
Marketing Name	TARANA G1
FCC ID	2ABOF-G1BN6ASI002
Wireless Technology and Frequency Range	U-NII-3 Band: 5725 MHz ~ 5850 MHz U-NII-5 Band: 5925 MHz ~ 6425 MHz U-NII-7 Band: 6525 MHz ~ 6875 MHz
Mode	40MHz 40+40MHz 40+40+40+40MHz
<b>Remark:</b> 1. Based on the original filing Sporton SAR report No.: FA230625004 to updated mode.	

Reviewed by: Jason Wang

Report Producer: Daisy Peng

**2. Maximum RF average output power among production units**

Mode	Maximum Average power(dBm)
U-NII-3	19.69
U-NII-5	19.10
U-NII-7	18.70

### 3. Determination of exemption

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 26 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. RF 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 26cm (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Power Density / Limit
WLAN U-NII-3 Band	16.30	19.69	36.0	3.97	3971.92	0.468	1.000	0.468
WLAN U-NII-5 Band	16.90	19.10	36.0	3.98	3981.07	0.469	1.000	0.469
WLAN U-NII-7 Band	17.30	18.70	36.0	3.98	3981.07	0.469	1.000	0.469

#### 4.2. Collocated Power Density Calculation

<UNII-3 + UNII-5>

UNII-3 Power Density / Limit	UNII-5 Power Density / Limit	$\Sigma$ (Power Density / Limit) of UNII-3 + UNII-5
0.468	0.469	0.937

<UNII-3 + UNII-7>

UNII-3 Power Density / Limit	UNII-7 Power Density / Limit	$\Sigma$ (Power Density / Limit) of UNII-3 + UNII-7
0.468	0.469	0.937

<UNII-5 + UNII-7>

UNII-5 Power Density / Limit	UNII-7 Power Density / Limit	$\Sigma$ (Power Density / Limit) of UNII-5 + UNII-7
0.469	0.469	0.938

**Note:**

- $\Sigma$  (Power Density / Limit): This is a summation of [(power density for each transmitter/antenna included in the simultaneous transmission)/ (corresponding MPE limit)], for UNII-3+UNII5, UNII-3+UNII7, UNII5+UNII7
- Considering the UNII3 module collocation with the UNII5/7 transmitter of the EIRP performance listed in the table above, the aggregated (power density /limit) is smaller than 1, and MPE of 2 collocated transmitters is compliant

### Conclusion:

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