

# RF Exposure Report

**Project Number:** 5262251

**Proposal:** SUW-202412007540  
(10172024NG-1.3)

**Report Number:** SUW5262251EMC06

**Revision:** 1

**Client:** Traffic and Parking Control Co., LLC

**Equipment Under Test:** RRFB Pedestrian Crosswalk System

**Marketing Name:** BLE Module

**Model Number:** TAPCO-B301

**Contains FCC ID:** 2ANWN-RM8003-03, 2ANWN-NINAB30  
XPYUBX21BE02

**Applicable Standards:** 47 CFR §§ 2.1091 (Mobile)

FCC KDB 447498 D01 General RF Exposure Guidance v06

FCC OET Bulletin 65

**Revision issued:** 5 August 2025

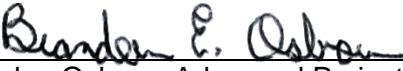
**Result:** Compliant



FOR THE SCOPE OF ACCREDITATION UNDER 17025 CERTIFICATE NUMBER: 3212.01

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## 1 General Information

### 1.1 Client Information

Company Name: Traffic and Parking Control Co., LLC  
Address: 5100 W. Brown Deer Rd  
City, State, Zip, Country: Brown Deer, WI 53223, USA

### 1.2 Test Laboratory

Name: SGS North America, Inc.  
Address: 620 Old Peachtree Road NW, Suite 100  
City, State, Zip, Country: Suwanee, GA 30024, USA

Accrediting Body: A2LA  
Type of lab: Testing Laboratory  
Certificate Number: 3212.01

### 1.3 General Information of EUT

Type of Product: BLE Module  
Marketing Name: BLE Module  
Model Number: TAPCO-B301  
Hardware Version:  
Firmware Version: 1  
Module Models: NINAB30, LARA6410  
Frequency Ranges: 2402 – 2480 Mhz (Bluetooth LE)  
902 – 928 MHz (Lora)  
1850 – 1910 MHz (LTE Band 2)  
1710 – 1780 MHz (LTE Band 66)  
824 – 849 MHz (LTE Band 5)  
699 – 716 MHz (LTE Band 12)  
777 – 787 MHz (LTE Band 13)  
788 – 798 MHz (LTE Band 14)  
663 – 698 MHz (LTE Band 71)  
Antenna Gain\*: External Monopole, 2402-2480MHz, 3.0dBi  
External Whip, 868-928MHz, 3.0dBi  
External Dome Type-N / (0.0dBi, 699-960MHz / 1.7dBi 1710-1990MHz / 2.9dBi 2100-2700MHz respectively)  
Max Conducted Output Power\*: Bluetooth LE: 8.45dBi  
900MHz LoRa: 20.45dBi  
LTE bands: 24.0dBm

*\*Data was not measured by SGS laboratory and therefore SGS is not responsible for accuracy. Data obtained via customer, specification sheet, previous regulatory filing or other.*

### 1.4 Operating Modes and Conditions

Maximum power levels were utilized for all calculations. Simultaneous transmission is possible with one LTE band, a LoRa channel and BLE.

The separation distance from antenna and/or radiating structure is 20cm.

## 2 RF Exposure

### 2.1 Test Results

Test Description	Product Specific Standard	Test Result
RF Exposure	FCC Part 1.1310	Compliant

### 2.2 Test Method

The formula below calculates power density.

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

Or

Where;

S = Power density (mW/cm<sup>2</sup>)

P = Maximum sourced based average power delivered to antenna port (mW)

G = Maximum power gain of the antenna in the direction of interest relative to an isotropic radiator (dBi)

R = Distance between by-stander and antenna (cm)

EIRP = Equivalent (or effective) isotropically radiated power

### 2.3 Single transmission RF Exposure Levels (mW/cm<sup>2</sup>)

Type	Band of Operation MHz	Conducted Power w/tolerance dBm	Antenna Gain	Cable Loss	Average EIRP		Distance (R) cm	Power Density EIRP <sub>Avg</sub> /(4πR <sup>2</sup> ) mW/cm <sup>2</sup>	FCC mW/cm <sup>2</sup>	% of Limit	Verdict
					dBm	mW					
LTE Band 2	1850-1910	24.0	1.7	0.0	25.7	372	20	0.074	1.00	7%	Pass
LTE Band 5	824-849	24.0	0.0	0.0	24.0	251	20	0.050	0.55	9%	Pass
LTE Band 12	699-716	24.0	0	0	24	251	20	0.050	0.47	11%	Pass
LTE Band 13	777-787	24.0	0	0	24.0	251	20	0.050	0.52	10%	Pass
LTE Band 14	788-798	24.0	0.0	0.0	24.0	251	20	0.050	0.53	10%	Pass
LTE Band 66	1710-1780	24.0	1.7	0	25.7	372	20	0.074	1.00	7%	Pass
LTE Band 71	663-698	24.0	0	0	24.0	251	20	0.050	0.44	11%	Pass
LoRa	902-928	20.45	3.0	0.0	23.5	221	20	0.044	0.60	7%	Pass
Bluetooth	2400-2483.5	8.45	3.0	0.0	11.5	14	20	0.003	1.00	0%	Pass

## 2.4 **Simultaneous Conditions**

Simultaneous transmissions are evaluated using the equation and highest results from each technology.

$$\frac{S_1}{S_1 \text{ Limit}} + \frac{S_2}{S_2 \text{ Limit}} + \dots + \frac{S_n}{S_n \text{ Limit}} \leq 1.0$$

### Example

LTE (11%) + LoRa (7%) + BLE (0%) equals 18% < 1.0 (100%)

### 3 Revision History

Revision Level	Description of changes	Revision Date
0	Initial Release	29 April 2025
1	Recalculated RF power to match initial certifications and updated EUT name and model numbers.	5 August 2025