

ELECTROMAGNETIC EMISSION COMPLIANCE REPORT FOR LOW-POWER, NON-LICENSED TRANSMITTER

Test Report No. : OT-195-RWD-010
AGR No. : A194A-177
Applicant : UbeesLab
Address : 14F Saman Bldg., 520, Teheran-ro, Gangnam-gu, Seoul, Republic of Korea
Manufacturer : FALINUX
Address : B-1001 Indeokwon-IT-Valley, 40, Imi-ro, Uiwang-si, Gyeonggi-do, Republic of Korea
Type of Equipment : SOCCERBEE POD
FCC ID. : 2ATBU-UBLAB01
Model Name : UBLAB01
Multiple Model Name : N/A
Serial number : N/A
Total page of Report : 7 pages (including this page)
Date of Incoming : April 17, 2019
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SUMMARY

The equipment complies with the regulation; *FCC PART 15 SUBPART C Section 15.247*

This test report only contains the result of a single test of the sample supplied for the examination.

It is not a generally valid assessment of the features of the respective products of the mass-production.

Reviewed by:



Ha-Ram Lee / Assistant Manager
ONETECH Corp.

Approved by:



Jae-Ho Lee / Chief Engineer
ONETECH Corp.

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Revision History

| Rev. No. | Issue Report No. | Issued Date | Revisions | Section Affected |
|----------|------------------|--------------|---------------|------------------|
| 0 | OT-195-RWD-010 | May 09, 2019 | Initial Issue | All |
| | | | | |
| | | | | |

1. VERIFICATION OF COMPLIANCE

Applicant : UbeesLab
Address : 14F Saman Bldg., 520, Teheran-ro, Gangnam-gu, Seoul, Republic of Korea
Contact Person : Joonhyup, Seo/Director
Telephone No. : +82-2-511-5461
FCC ID : 2ATBU-UBLAB01
Model Name : UBLAB01
Serial Number : N/A
Date : May 09, 2019

| | |
|---|--------------------------------------|
| EQUIPMENT CLASS | DTS – DIGITAL TRNSMISSION SYSTEM |
| KIND OF EQUIPMENT | SOCCERBEE POD |
| THIS REPORT CONCERNS | Original Grant |
| MEASUREMENT PROCEDURES | ANSI C63.10: 2013 |
| TYPE OF EQUIPMENT TESTED | Pre-Production |
| KIND OF EQUIPMENT AUTHORIZATION REQUESTED | Certification |
| EQUIPMENT WILL BE OPERATED UNDER FCC RULES PART(S) | FCC PART 15 SUBPART C Section 15.247 |
| Modifications on the Equipment to Achieve Compliance | None |
| Final Test was Conducted On | 3 m, Semi Anechoic Chamber |

-. The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.

2. GENERAL INFORMATION

2.1 Product Description

The UbeesLab, Model UBLAB01 (referred to as the EUT in this report) is a SOCCERBEE POD. The product specification described herein was obtained from product data sheet or user's manual.

| | |
|---|-----------------------|
| Device Type | SOCCERBEE POD |
| Operating Frequency | 2 402 MHz ~ 2 480 MHz |
| RF Output Power | -4.87 dBm |
| Number of Channel | 40 Channel |
| Modulation Type | GFSK |
| Antenna Type | PCB Antenna |
| Antenna Gain | 0.006 dBi |
| List of each Osc. or crystal Freq.(Freq. \geq 1 MHz) | 32 MHz, 32.768 kHz |
| Rated Supply Voltage | DC 3.7 V |

Note: GPS / GNSS is Rx only. Therefore, GPS / GNSS does not affect BLE Tx.

2.2 Alternative type(s)/model(s); also covered by this test report.

-. None

3. EUT MODIFICATIONS

-. None

4. RF Exposure Evaluation

4.1 Standard Applicable

According to 1.1307 (b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

According to the procedure, KDB 447498 D01, the standalone SAR test exclusion threshold is

$$[(\text{Max. Power of channel, including tune-up tolerance, mW})/(\text{Min. test separation distance, mm})] \times [\sqrt{f(\text{GHz})}] < 3$$

4.2 EUT Description

| | |
|--------------------------------|---|
| Kind of EUT | SOCCERBEE POD |
| Operating Frequency Band | <input type="checkbox"/> Wireless Microphone: 494.000 MHz ~ 501.000 MHz and 498.200 MHz ~ 505.200 MHz <input type="checkbox"/> WLAN: 2 412 MHz ~ 2 462 MHz <input type="checkbox"/> WLAN: 5 180 MHz ~ 5 240 MHz <input type="checkbox"/> WLAN: 5 745 MHz ~ 5 825 MHz <input type="checkbox"/> Bluetooth: 2 402 MHz ~ 2 480 MHz <input checked="" type="checkbox"/> Bluetooth BLE: 2 402 MHz ~ 2 480 MHz |
| MAX. RF OUTPUT POWER | -4.87 dBm |
| Antenna Gain | 0.006 dBi |
| Exposure Evaluation Applied | <input type="checkbox"/> MPE <input type="checkbox"/> SAR <input checked="" type="checkbox"/> N/A |

4.3 Test Result of SAR Exclusion for Portable Devices

$[(\text{Max. Power of channel, including tune-up tolerance, mW})/(\text{Min. test separation distance, mm})] \times [\sqrt{f(\text{GHz})}]$

$$= (0.37/5) \times \sqrt{2.480} = 0.12 < 3$$

Conclusion: The SAR test exclusion threshold is less than 3, so the device meets the RF Exposure Requirement and excluded SAR Test.

| Frequency (MHz) | Target Power W/tolerance (dBm) | Max tune up power (dBm) | Max tune up power (mW) | Separation distance (mm) | RF exposure |
|--------------------|--------------------------------------|-------------------------------|------------------------------|--------------------------------|-------------|
| 2 480 | -4.87 ± 0.5 | -4.37 | 0.37 | 5 | 0.12 |



Tested by: Yu-Seog Sim / Assistant Manager