A Test Lab Techno Corp.

101-104, 1F, A building, Safflower ridge industrial area, Taoyuan street, Nanshan district, Shenzhen
Tel：+86-755-23987770 / Fax：+86-755-2663777

ACCREDITED
Certificate #3464.02

MPE Report

Test Report No.	:	SZ2105FS11
Applicant	:	Enlighten Company Limited
Product Type	:	Wireless LoRaWAN Sensor
Trade Name	:	Enligten, ChinoINT
Model Number	:	EL-WSX-923, AECIHWSNE2xx
Received Date	:	Apr. 15, 2021
Test Period	:	May 19, 2021
Issue Date	:	May 25, 2021
Test Specification	:	ANSI / IEEE Std.C95.1-1992 / IEEE Std. 1528-2013
		47 CFR § 2.1091
		47 CFR § 1.1310

1. The test operations have to be performed with cautious behavior, the test results are as attached.
2. The test results are under chamber environment of A Test Lab Techno Corp. A Test Lab Techno Corp. does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples.
3. The measurement report has to be written approval of A Test Lab Techno Corp. It may only be reproduced or published in full. This report shall not be reproduced except in full, without the written approval of A Test Lab Techno Corp.
4. This document may be altered or revised by A Test Lab Techno. Corp. personnel only, and shall be noted in the revision section of the document.

Approved By : Louis Shen (Louis Shen)

Tested By : Joyce Feng (Joyce Feng)

Contents

1. Description of Equipment under Test (EUT)

Applicant	Enlighten Company Limited Rm 12, 12/F, Blk A, Profit Industrial Building, No.1-15 Kwai Fung Crescent, Kwai Chung, N.T. Hong Kong				
Manufacturer	Enlighten Company Limited Rm 12, 12/F, Blk A, Profit Industrial Building, No.1-15 Kwai Fung Crescent, Kwai Chung, N.T. Hong Kong				
Product Type	Wireless LoRaWAN Sensor				
Trade Name	Enligten, ChinoINT				
Model Number	EL-WSX-923, AECIHWSNE2xx				
Model Difference Description	Due to market demand, the models are differ from each other in brand, the PCB layout, circuit, and schematic design are the same.				
Test Model	EL-WSX-923				
FCC ID	2AZMI-EL-WSX-923				
Frequency Range	Operate Band			Frequency Range (MHz)	
	SRD			923.200	
Antenna Information	ANT	Model	Type	Max. Gain (dBi)	
	ANT-0	HY-057	wire antenna	SRD	2.5
RF Evaluation	0.000217 mW/cm^2				
Test mode	Continuous TX Mode				
Temperature Range	5 ~ 40℃				

The above equipment was tested by A Test Lab Techno Corp. For compliance with the requirements set forth in 47 CFR § 2.1091 / 47 CFR § 1.1310. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties

2. Human Exposure Assessment

Due to the design and installation of this product, it is not possible to conduct SAR evaluation. This is because client either manufactures or supplies the antenna(s) that will be used in the installation of this product. Therefore, this product will be evaluated as a mobile device per 47 CFR § 1.1310 titled “Radiofrequency radiation exposure limits”, generally referred to as MPE limits.

In 47 CFR § 2.1091, paragraph (b) defines a mobile device as “a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 cm is normally maintained between the transmitter’s radiating structure(s) and the body of the user or nearby persons. ” This product is intended to be installed into a vehicle such that the unit is physically secured at one location. In the installation guide supplied with the product,

Client has made the following statement: “IMPORTANT: To meet the FCC’s RF Exposure Guidelines, the antenna should be installed so there is at least 20 cm of separation between the body of the user and nearby persons and the antenna”. Based on the installation of the transceiver and the antenna, the transmitters radiating structure is more than 20 cm from the user. Thus, this product is a “mobile device” as defined in section § 2.1091 paragraph (b).

Exposure evaluation
$$S = \frac{PG}{4\pi R^2}$$ Where S: power density P: power input to the antenna G: power gain of the antenna in the direction of interest relative to an isotropic radiator. R: distance to the center of radiation of the antenna.

3. RF Output Power

Operate Band	Frequency (MHz)	Packet Type	Conducted power (dBm)
SRD	923.2	---	N/A

4. Test Result

Antenna	Band	Frequency (MHz)	Limit (mw)/cm^2	Distance [R] (cm)	Power [P] (dBm)	ANT Gain (dBi)	Numeric Gain [G]	Duty Cycle	Power with Duty cycle [TP] (mW)	Power Density [S] (mw)/cm^2
SRD	SRD	923.2	0.615	20	-2.12	2.5	1.78	1	1093	0.000217

Note:

1. Mobile or fixed location transmitters, minimum separation distance is 20 cm, even if calculations indicate MPE distance is less.
2. The Numeric Gain calculated by 10^(ant. Gain(dBi) /10).
3. Each band max power which perform MPE of any configurations.