RF EXPOSURE

EXEMPT REPORT

APPLICANT	:	2361162 Ontario Inc. o/a MiAlert
PRODUCT NAME	:	miPosition LoRa Repeater
MODEL NAME	:	miPos2Repeater
BRAND NAME	:	N/A
FCC ID	:	2AZU7-MIPOS2RPTR
STANDARD(S)	:	FCC 47CFR Part 2(2.1093)
RECEIPT DATE	:	2021-05-31
TEST DATE	:	2021-06-10 to 2021-08-12
ISSUE DATE	:	2021-09-06

Edited by: Peng Mi

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MORLAB

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DIRECTORY

Change History		
Version	**Date**	**Reason for change**
1.0	2021-09-06	First edition

1. Technical Information

Note: Provide by applicant.

1.1 Applicant and Manufacturer Information

Applicant:	2361162 Ontario Inc. o/a MiAlert
Applicant Address:	27 Armthorpe Rd, Brampton, Ontario, Canada, L6T M54
Manufacturer:	NiceRF Wireless Technology LTD.
Manufacturer Address:	309-314, Bldg A,Hongdu business building, Xin'an street, Zone 43, Baoan Dist, Shenzhen 518101, China

1.2 Equipment Under Test (EUT) Description

Product Name:	miPosition LoRa Repeater
Sample No.:	1#
Hardware Version:	v1.0
Software Version:	v1.0
Equipment Type:	GFSK
Operating Frequency Range:	Beacon: 2402MHz RF2401: 2475MHz 902.92MHz ~ 927.92MHz
Antenna Type:	2402MHz/2475MHz: PCB Antenna 902.92MHz ~ 927.92MHz: Spring Antenna
Antenna Gain:	2402MHz: 0dBi; 2475MHz: -1dBi; 902.92MHz ~ 927.92MHz: 2.15dBi

1.3 Applied Reference Documents

Leading reference documents for testing:

Identity	Document Title	Method Determination /Remark
FCC 47CFR Part 2(2.1093)	Radio Frequency Radiation Exposure Evaluation: portable devices	No deviation
KDB 447498 D01v06	General RF Exposure Guidance	No deviation
Note 1: Additions to, deviation, or exclusions from the method shall be judged in the "method determination" column of add, deviate or exclude from the specific method shall be explained in the "Remark" of the above table. **Note 2:** When the test result is a critical value, we will use the measurement uncertainty give the judgment result based on the 95% confidence intervals.		

2. Device Category and RF Exposure Limit

Per user manual, this device is a miPosition LoRa Repeater. Based on 47CFR 2.1093, this device belongs to portable device category with General Population/Uncontrolled exposure.

Portable Devices:

47CFR 2.1093(b)

For purposes of this section, a portable device is defined as a transmitting device designed to be used so that the radiating structure(s) of the device is/are within 20 centimeters of the body of the user.

General Population/Uncontrolled Exposure:

47CFR 2.1093(d) (2)

Limits for General Population/Uncontrolled exposure: 0.08 W/kg as averaged over the whole-body and spatial peak SAR not exceeding 1.6 W/kg as averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 4 W/kg, as averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube). General Population/Uncontrolled limits apply when the general public may be exposed, or when persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or do not exercise control over their exposure. Warning labels placed on consumer devices such as cellular telephones will not be sufficient reason to allow these devices to be evaluated subject to limits for occupational/controlled exposure in paragraph (d)(1) of this section.

3. RF Output Power

Frequency(MHz)	Max. Emission E(dBμV/m)	Max. Emission (W)	Time-averaging EIRP (mW)
2402	98.50	0.0841	2.1238
2475	87.92	0.0249	0.1858
902.92	84.74	0.0173	0.0894
914.92	93.36	0.0466	0.6503
927.92	91.22	0.0364	0.3973

Note 1: According to KDB 447498 Section 4.3, SAR test exclusion conditions are based on source-based time-averaged maximum conducted output power of the RF channel requiring evaluation, adjusted for tune-up tolerance, and the minimum test separation distance required for the exposure conditions.

Note 2: The maximum average emission refers to report (Report No.: SZ21050054W01/W02).

4. RF Exposure Evaluation

➢ **Standalone Transmission SAR Evaluation:**

1. According to KDB 447498 section 4.3.1, the 1-g SAR test exclusion thresholds at test separation Distances≤ 50 mm are determined by:
   [(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]·[√f(GHz)] ≤ 3.0.
   · f(GHz) is the RF channel transmit frequency in GHz
   · Power and distance are rounded to the nearest mW and mm before calculation
   · The result is rounded to one decimal place for comparison

2. Standalone SAR measurement is not required for the EIRP is less than the exempt condition according to FCC KDB 447498 D01v06 4.3.2).

➢ **Simultaneous SAR Evaluation:**

This device incorporates three transmitters but the three transmitters do not support MIMO function, therefore simultaneous SAR evaluation is not required.

Annex A Testing Laboratory Information

1. Identification of the Responsible Testing Laboratory

Laboratory Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Laboratory Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
Telephone:	+86 755 36698555
Facsimile:	+86 755 36698525

2. Identification of the Responsible Testing Location

Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China

END OF REPORT