RF Exposure Evaluation Report

APPLICANT	:	**Rolling Wireless S.à r.l.**
EQUIPMENT	:	**Module**
BRAND NAME	:	**Rolling Wireless**
MODEL NAME	:	**RL9424**
FCC ID	:	**2AX2URL9424**
STANDARD	:	**47 CFR Part 2.1091**

The product evaluation date was started from Jul. 08, 2022 and completed on Jul. 08, 2022. We, Sporton International Inc. (Shenzhen), would like to declare that the device has been evaluated in accordance with 47 CFR Part2.1091, and pass the limit. Without written approval of Sporton International Inc. (Shenzhen), the test report shall not be reproduced except in full.

Si Zhang

Approved by: Si Zhang

ACCREDITED Cert #5145.01

Sporton International Inc. (Shenzhen)
1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055
People's Republic of China

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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA262008	Rev. 01	Initial issue of report.	Jul. 19, 2022

1. Administration Data

1.1. Testing Laboratory

Sporton International Inc. (Shenzhen) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Testing Laboratory			
Test Firm	Sporton International Inc. (Shenzhen)		
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	SAR01-SZ	CN1256	421272

Applicant	
Company Name	Rolling Wireless S.à r.l.
Address	15, rue Edward Steichen, 2540 Luxembourg

Manufacturer	
Company Name	Rolling Wireless S.à r.l.
Address	15, rue Edward Steichen, 2540 Luxembourg

2. Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT Type	Module
Brand Name	Rolling Wireless
Model Name	RL9424
FCC ID	2AX2URL9424
Wireless Technology and Frequency Range	LTE Band 7 : 2500 MHz ~ 2570 MHz
Mode	LTE: QPSK / 16QAM
Antenna Gain	WWAN: 2.0 dBi
Antenna Type	WWAN: Dipole Antenna
HW Version	1.0
SW Version	AFPQ9X40A_01.04.03.00
EUT Stage	Production Unit

Remark:

1. There are two antennas on the jig, the main antenna supports TX/RX, and the diversity antenna supports RX only.
2. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

Comments and Explanations:
1. The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.
2. The maximum RF output tune up power, antenna gain also the safe distance used for evaluate RF exposure were declared by manufacturer.

3. Maximum RF average output tune up power among production units

<LTE>

Mode		Maximum Average power(dBm)
LTE	Band 7	25.70

4. RF Exposure Limit Introduction

1. Per 1.1307(b)(3), (i) For single RF sources (i.e., any single fixed RF source, mobile device, or portable device, as defined in paragraph (b)(2) of this section): A single RF source is exempt if:

   (A) The available maximum time-averaged power is no more than 1 mW, regardless of separation distance. This exemption may not be used in conjunction with other exemption criteria other than those in paragraph (b)(3)(ii)(A) of this section. Medical implant devices may only use this exemption and that in paragraph (b)(3)(ii)(A);

   (B) Or the available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold Pth (mW) described in the following formula. This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive). Pth is given by:

$$\mathrm{P}_{th}\ (\mathrm{mW}) = \begin{cases} \mathrm{ERP}_{20\ cm}\ (\mathrm{d}/20\ \mathrm{cm})^{x} & d \le 20\ cm \\ \mathrm{ERP}_{20\ cm} & 20\ cm < d \le 40\ cm \end{cases} \quad [1]$$

Where $\mathrm{x} = -\log_{10}\left(\frac{60}{ERP_{20\ cm}\sqrt{f}}\right)$ and f is in GHz [2]

and $\mathrm{ERP}_{20\ cm}\ (\mathrm{mW}) = \begin{cases} 2040\mathrm{f} & 0.3\ GHz < f \le 1.5\ GHz \\ 3060 & 1.5\ GHz < f \le 6\ GHz \end{cases}$ [3]

5. Radio Frequency Radiation Exposure Evaluation

5.1. Standalone assessment

Band	Antenna Gain (dBi)	Maximum Conducted Power (dBm)	Maximum EIRP (dBm)	Maximum ERP (dBm)	Maximum ERP (mW)	Separation Distance (cm)	Part1.1307 (b) Threshold (mW)
LTE Band 7	2.00	25.70	27.70	25.55	358.92	20	3060.000

Note:
1. The relationship between EIRP and ERP is: ERP (dBm) = EIRP - 2.15
2. Chose the maximum power to do MPE analysis.

Conclusion:

According to 47 CFR §1.1307(b), the RF exposure analysis concludes that the RF Exposure is FCC compliant.

------THE END------