RF Exposure Evaluation Report

Applicant:	Inepro BV
Address of Applicant:	Pondweg 7, 2153 PK Nieuw-Vennep, The Netherlands
Equipment Under Test (EUT)	
Product Name:	Red Spider
Model No.:	Red Spider
Trade mark:	Red Spider
FCC ID:	2AFBFRS0001
Applicable standards:	FCC CFR Title 47 Part 2 (§2.1091)
Date of sample receipt:	08 Sep., 2022
Date of Test:	09 Sep., to 02 Nov., 2022
Date of report issue:	02 Feb., 2023
Test Result:	PASS

Tested by:	Mike.ou ***Test Engineer***	***Date:***	*02 Feb., 2023*
Reviewed by:	Vivner Zhang ***Project Engineer***	***Date:***	*02 Feb., 2023*
Approved by:	Manager Zhang ***Manager***	***Date:***	*02 Feb., 2023*

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in above the application standard version. Test results reported herein relate only to the item(s) tested.

1 Version

Version No.	Date	Description
00	*03 Nov., 2022*	*Original*
01	*15 Dec., 2022*	*Updated page 1/4/6*
02	*02 Feb., 2023*	*Updated page 4/6.*

2 Contents

Page

3 General Information

3.1 Client Information

Applicant:	Inepro BV
Address:	Pondweg 7, 2153 PK Nieuw-Vennep, The Netherlands
Manufacturer/Factory:	Inepro BV
Address:	Pondweg 7, 2153 PK Nieuw-Vennep, The Netherlands

3.2 General Description of E.U.T.

Product Name:	Red Spider
Model No.:	Red Spider
Operation Frequency:	BLE: 2402MHz~2480MHz NFC:13.56MHz, 125KHz
Modulation technology:	BLE: GFSK; NFC: ASK
Antenna Type:	Internal Antenna
Antenna gain:	BLE: 0.5 dBi; NFC: 0 dBi
Test Sample Condition:	The test samples were provided in good working order with no visible defects.

3.3 Operating Modes

Operating mode	Detail description
BLE mode	Keep the EUT in continuously transmitting in BLE mode
NFC mode	Keep the EUT in continuously transmitting in NFC mode

3.4 Additions to, deviations, or exclusions from the method

No

3.5 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **FCC - Designation No.: CN1211**

JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.

- **ISED – CAB identifier.: CN0021**

The 3m Semi-anechoic chamber and 10m Semi-anechoic chamber of JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

- **CNAS - Registration No.: CNAS L15527**

JianYan Testing Group Shenzhen Co., Ltd. is accredited to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L15527.

- **A2LA - Registration No.: 4346.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: https://portal.a2la.org/scopepdf/4346-01.pdf

3.6 Laboratory Location

JianYan Testing Group Shenzhen Co., Ltd.
Address: No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China.
Tel: +86-755-23118282, Fax: +86-755-23116366
Email: info-JYTee@lets.com, Website: http://jyt.lets.com

4 Technical Requirements Specification

4.1 Limits

RF Exposure Test Exemptions for Single Source

1-mW Test Exemption

Per § 1.1307(b)(3)(i)(A), a single RF source is *exempt RF device* (from the requirement to show data demonstrating compliance to RF exposure limits, as previously mentioned) if the available maximum time-averaged power is no more than 1 mW, regardless of separation distance.
This exemption applies to all operating configurations and exposure conditions, for the frequency range 100 kHz to 100 GHz, regardless of fixed, mobile, or portable device exposure conditions. This is a standalone exemption, and it cannot be applied in conjunction with any other test exemption.

4.2 Result

According to the calculation formula of power:
EIRP = P*G = $(E*d)^2/30$, So P = $(E*d)^2/(30*G)$.
Where:
P = transmitter output power in watts,
G = numeric gain of the antenna in the direction of interest relative to an isotropic radiator (unitless),
E = electric field strength in V/m, --- $10^{((dBuV/m)/20)}/10^6$,
d = measurement distance in meters (m)---3m,

NFC worse case below:

Frequency (MHz)	Maximum field strength@3m (dBuV/m)	Maximum field strength@3m (V/m)	Antenna Gain (dBi)	Antenna Gain (numeric)	Distance (m)	Output power (mW)	Limit for SAR test exemption (mW)
0.125	72.91	0.004	0	1	3	0.006	1
13.56	58.06	0.001	0	1	3	0.001	1

BLE worse case below:

Frequency (MHz)	Maximum Output power (dBm)	Maximum Output power (mW)	Limit for SAR test exemption(mW)
2440	-2.361	0.581	1

Note: Just the worst case mode was shown in report.

4.3 Conclusion

The device is exempt from the SAR test and satisfies RF exposure evaluation.

------End of report------