

JianYan Testing Group Shenzhen Co., Ltd.

Report No.: JYTSZ-R12-2201829

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: Date: 02 Feb., 2023

Reviewed by: Date: 02 Feb., 2023

Approved by: 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.

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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.	





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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

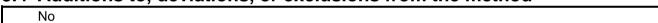
3.2 General Description of E.U.T.

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





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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, Xingiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China.

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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 timeaveraged 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-----

JianYan Testing Group Shenzhen Co., Ltd. Report Template No.: JYTSZ4b-177-C 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