

RF Exposure Evaluation Report

Product : RingConn Gen 2 Air Smart Ring
Trade mark : RingConn
Model/Type reference : See section 3.2
Serial Number : N/A
Report Number : EED32R80006502
FCC ID : 2A854JZRCA-02
Date of Issue : Feb. 21, 2025
Test Standards : 47 CFR Part 1.1307
47 CFR Part 1.1310
47 CFR Part 2.1091
47 CFR Part 2.1093
KDB 447498 D04 Interim General RF
Exposure Guidance v01
Test result : PASS

Prepared for:

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1 Version

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3 General Information

3.1 Client Information

Applicant:	Shenzhen Ninenovo Technology Limited
Address of Applicant:	Room 1403, Building 2, Chongwen Park, Nanshan Zhiyuan, No.3370, Liuxian Avenue, Fuguang Community, Taoyuan Street, Nanshan District, Shenzhen, Guangdong, China
Manufacturer:	Shenzhen Ninenovo Technology Limited
Address of Manufacturer:	Room 1403, Building 2, Chongwen Park, Nanshan Zhiyuan, No.3370, Liuxian Avenue, Fuguang Community, Taoyuan Street, Nanshan District, Shenzhen, Guangdong, China
Factory:	Shenzhen Ninenovo Technology Limited
Address of Factory:	Room 1403, Building 2, Chongwen Park, Nanshan Zhiyuan, No.3370, Liuxian Avenue, Fuguang Community, Taoyuan Street, Nanshan District, Shenzhen, Guangdong, China

3.2 General Description of EUT

Product Name:	RingConn Gen 2 Air Smart Ring
Model No.:	RCA-02, RCA-02-6, RCA-02-7, RCA-02-8, RCA-02-9, RCA-02-10, RCA-02-11, RCA-02-12, RCA-02-13, RCA-02-14
Test Model No.:	RCA-02-08
Trade mark:	RingConn

3.3 Product Specification subjective to this standard

Frequency Range:	2402MHz~2480MHz	
Modulation Type:	GFSK	
Test Power Grade:	Default	
Test Software of EUT:	sscom5.13.1.exe	
Antenna Type:	Ceramic Antenna	
Antenna Gain:	2.5dBi	
Power Supply:	Battery:	DC 3.85V
Sample Received Date:	Jan. 06, 2025	
Sample tested Date:	Jan. 06, 2025 to Feb. 13, 2025	

Remark:

Model No.: RCA-02, RCA-02-6, RCA-02-7, RCA-02-8, RCA-02-9, RCA-02-10, RCA-02-11, RCA-02-12, RCA-02-13, RCA-02-14

Only the model RCA-02-08 was tested. The PCB of different models are consistent, only the shell size is different. The differences between different models are shown in the table below:

Model	inner diameter	Smart Ring colour
RCA-02	19.0×6.8mm	Dune Gold, Galaxy Silver.
RCA-02-6	16.5×6.8mm	Dune Gold, Galaxy Silver.
RCA-02-7	17.4×6.8mm	Dune Gold, Galaxy Silver.
RCA-02-8	18.2×6.8mm	Dune Gold, Galaxy Silver.

RCA-02-9	19.0×6.8mm	Dune Gold, Galaxy Silver.
RCA-02-10	19.9×6.8mm	Dune Gold, Galaxy Silver.
RCA-02-11	20.7×6.8mm	Dune Gold, Galaxy Silver.
RCA-02-12	21.5×6.8mm	Dune Gold, Galaxy Silver.
RCA-02-13	22.3×6.8mm	Dune Gold, Galaxy Silver.
RCA-02-14	23.1×6.8mm	Dune Gold, Galaxy Silver.

3.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax: +86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

3.5 Deviation from Standards

None.

3.6 Abnormalities from Standard Conditions

None.

3.7 Other Information Requested by the Customer

None.

4 SAR Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Limits

The SAR-based exemption formula of § 1.1307(b)(3)(i)(B), repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold P_{th} (mW).

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by Formula

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right)$$

and f is in GHz, d is the separation distance (cm), and $ERP_{20 \text{ cm}}$ is per Formula (B.1).

$$P_{th} \text{ (mW)} = ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases} \quad (\text{B.1})$$

The 1 mW Blanket Exemption of § 1.1307(b)(3)(i)(A) applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power of no more than 1 mW, regardless of separation distance.

4.1.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

4.1.3 EUT RF Exposure Evaluation

For Stand alone:

Frequency (MHz)	Estimation distance (cm)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	ERP (dBm)	ERP (mW)	Limit (mW)	MPE ratio	Result
2402	0.5	-3.67	2.50	-3.32	0.4656	2.7877	0.1670	Pass

Note:

- ① EIRP=conducted power+antenna gain;
- ② ERP=EIRP-2.15;
- ③ $EIRP(dBm) = \text{Field strength of the fundamental signal}(dBuV/m@3m) - 95.23$;
- ④ $ERP(mW) = 10^{(ERP(dBm)/10)}$;
- ⑤ The estimation distance is 0.5cm;
- ⑥ The test data please refer to the report of EED32R80006501 and only the worst case data was recorded in the report.

Statement

1. This report is considered invalid without approved signature, special seal and the seal on the perforation;
2. The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified;
3. The result(s) shown in this report refer(s) only to the sample(s) tested;
4. Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule stated in ILAC-G8:09/2019/CNAS-GL015:2022;
5. Without written approval of CTI, this report can't be reproduced except in full;

*** End of Report ***