

# RF EXPOSURE REPORT

Report No.: DDT-B24043013-2E05

|                      |   |                                                                                                         |
|----------------------|---|---------------------------------------------------------------------------------------------------------|
| Applicant            | : | Ruijie Networks Co., Ltd.                                                                               |
| Address              | : | Building 19, Juyuanzhou Industrial Park, No. 618 Jinshan Road, Cangshan District, Fuzhou, Fujian, China |
| Equipment under Test | : | Wireless Access Point                                                                                   |
| Model No.            | : | RG-RAP72Pro                                                                                             |
| Trade Mark           | : | <i>Ruijie Ruijie</i>   REYEE REYEE REYEE<br><small>by Ruijie</small>                                    |
| FCC ID               | : | 2AX5J-RAP72PRO                                                                                          |
| Manufacturer         | : | Ruijie Networks Co., Ltd.                                                                               |
| Address              | : | Building 19, Juyuanzhou Industrial Park, No. 618 Jinshan Road, Cangshan District, Fuzhou, Fujian, China |

**Issued By:** Tianjin Dongdian Testing Service Co., Ltd.

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# REPORT

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**TEST REPORT DECLARE**

|                             |   |                                                                                                            |
|-----------------------------|---|------------------------------------------------------------------------------------------------------------|
| <b>Applicant</b>            | : | Ruijie Networks Co., Ltd.                                                                                  |
| <b>Address</b>              | : | Building 19, Juyuanzhou Industrial Park, No. 618 Jinshan Road,<br>Cangshan District, Fuzhou, Fujian, China |
| <b>Equipment under Test</b> | : | Wireless Access Point                                                                                      |
| <b>Model No.</b>            | : | RG-RAP72Pro                                                                                                |
| <b>Trade mark</b>           | : | <b>Ruijie Ruijie</b>   REYEE REYEE REYEE<br>by Ruijie                                                      |
| <b>Manufacturer</b>         | : | Ruijie Networks Co., Ltd.                                                                                  |
| <b>Address</b>              | : | Building 19, Juyuanzhou Industrial Park, No. 618 Jinshan Road,<br>Cangshan District, Fuzhou, Fujian, China |

**Standard Used:** KDB447498 D01 General RF Exposure Guidance v06**We Declare:**

The equipment described above is assessed by Tianjin Dongdian Testing Service Co., Ltd and in the configuration assessed the equipment complied with the standards specified above. The assessed results are contained in this report and Tianjin Dongdian Testing Service Co., Ltd is assumed of full responsibility for the accuracy and completeness of these assess.

**After evaluation, our opinion is that the equipment In Accordance with above standard.**

|                         |                    |                      |                              |
|-------------------------|--------------------|----------------------|------------------------------|
| <b>Report No:</b>       | DDT-B24043013-2E05 |                      |                              |
| <b>Date of Receipt:</b> | May 27, 2024       | <b>Date of Test:</b> | May 27, 2024 ~ Jun. 29, 2024 |

**Prepared By:***Sunny Zhang***Sunny Zhang/Engineer****Approved By:***Aaron Zhang***Aaron Zhang/Manager**

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Tianjin Dongdian Testing Service Co., Ltd.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.

Revision History

| Rev. | Revisions     | Issue Date    | Revised By |
|------|---------------|---------------|------------|
| ---  | Initial issue | Jun. 29, 2024 |            |
|      |               |               |            |

## 1. General information

### 1.1. Description of Equipment

|                            |                                                                                                                                                                                                                                                                                                                                            |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EUT* Name                  | : Wireless Access Point                                                                                                                                                                                                                                                                                                                    |
| Model Number               | : RG-RAP72Pro                                                                                                                                                                                                                                                                                                                              |
| EUT function description   | : Please reference user manual of this device                                                                                                                                                                                                                                                                                              |
| Power supply               | : 12V DC, 2.5A or PoE 54V DC, 0.5A                                                                                                                                                                                                                                                                                                         |
| Radio Specification        | : IEEE 802.11a/n/ac/ax/be                                                                                                                                                                                                                                                                                                                  |
| Operation frequency        | : 2.4G Band: 2412MHz-2462MHz<br>U-NII-1: 5180MHz-5240MHz<br>U-NII-2A: 5260 MHz-5320 MHz<br>U-NII-2C: 5500 MHz-5700 MHz<br>U-NII-III: 5745MHz-5825MHz                                                                                                                                                                                       |
| Modulation                 | : IEEE 802.11a: OFDM (64QAM, 16QAM, QPSK, BPSK)<br>IEEE 802.11n: OFDM (64QAM, 16QAM, QPSK, BPSK)<br>IEEE 802.11ac: OFDM (256QAM, 64QAM, 16QAM, QPSK, BPSK)<br>IEEE 802.11ax: OFDM, OFDMA (1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK)<br>IEEE 802.11be: OFDM, OFDMA (4096QAM, 1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK)                    |
| Data rate                  | : IEEE 802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps<br>IEEE 802.11n: MCS0-MCS23<br>IEEE 802.11ac: MCS0-MCS9<br>IEEE 802.11ax: MCS0-MCS11<br>IEEE 802.11be: MCS0-MCS13                                                                                                                                                                        |
| Antenna Type               | : PIFA antenna:<br>2.4G Antenna1:2.74dBi, Antenna2: 4.84dBi<br>U-NII-1: Antenna1:2.88dBi, Antenna2: 3.41dBi, Antenna3: 3.65dBi<br>U-NII-2A: Antenna1:3.36dBi, Antenna2: 4.78dBi, Antenna3: 3.48dBi<br>U-NII-2C: Antenna1:4.3dBi, Antenna2: 5.29dBi, Antenna3: 4.59dBi<br>U-NII-III: Antenna1:3.19dBi, Antenna2: 5.41dBi, Antenna3: 4.62dBi |
| Exposure category          | : General population/uncontrolled environment                                                                                                                                                                                                                                                                                              |
| Device Type                | : Mobile Device                                                                                                                                                                                                                                                                                                                            |
| Target power and tolerance | : 2.4G wifi: $19 \pm 2$ dBm, 5G wifi: $28 \pm 2$ dBm                                                                                                                                                                                                                                                                                       |

## 1.2. Assess laboratory

Tianjin Dongdian Testing Service Co., Ltd.

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Tel: +86-22-58038033, <http://www.ddttest.com>, Email: [ddt@dgddt.com](mailto:ddt@dgddt.com)

**NVLAP** (National Voluntary Laboratory Accreditation Program) CODE: 500036-0

**CNAS** (China National Accreditation Service for Conformity Assessment) CODE: L13402

**FCC** Designation Number: CN5004; FCC Test Firm Registration Number: 368676

**ISED** (Innovation, Science and Economic Development Canada) Company Number: 27768

Conformity Assessment Body Identifier: CN0125

**VCCI** Facility Registration Number: C-20089, T-20093, R-20125, G-20122

## 2. RF Exposure Evaluation

### 2.1. Requirement

Systems operating under the provisions of FCC 47 CFR section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with.

Limits for General Population/Uncontrolled Exposure

(B) Limits for General Population / Uncontrolled Exposure

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/cm <sup>2</sup> ) | Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes) |
|-----------------------|-----------------------------------|-----------------------------------|-----------------------------------------|-------------------------------------------------------------------|
| 0.3-1.34              | 614                               | 1.63                              | (100)*                                  | 30                                                                |
| 1.34-30               | 824/f                             | 2.19/f                            | (180/f)*                                | 30                                                                |
| 30-300                | 27.5                              | 0.073                             | 0.2                                     | 30                                                                |
| 300-1500              |                                   |                                   | F/1500                                  | 30                                                                |
| 1500-100,000          |                                   |                                   | 1.0                                     | 30                                                                |

Note: f = frequency in MHz ; \*Plane-wave equivalent power density

### 2.2. Calculation method

$$E(\text{V/m}) = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power Density: } S(\text{mW/cm}^2) = \frac{E^2}{377}$$

**E** = Electric field (V/m)

**P** = Peak RF output power (mW)

**G** = EUT Antenna numeric gain (numeric)=

**d** = Separation distance between radiator and human body (m)

The formula can be changed to

We can change the formula to:

$$S = \frac{30 \times P \times G}{377 \times d^2} \quad \text{or, } d = \sqrt{\frac{30 \times P \times G}{377 \times S}}$$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2 m, as well as the gain of the used antenna, the RF power density can be obtained.

### 2.3. Estimation result

| Worst Mode | Max. Tune Up power (dBm) | Output power (mW) | Antenna Gain (dBi) | Antenna Gain (linear) | MPE Values (mW/cm <sup>2</sup> ) | MPE Limit (mW/cm <sup>2</sup> ) |
|------------|--------------------------|-------------------|--------------------|-----------------------|----------------------------------|---------------------------------|
| 2.4G wifi  | 21.00                    | 125.893           | 4.84               | 3.048                 | 0.0763                           | 1                               |
| 5G wifi    | 30.00                    | 1000              | 5.41               | 3.475                 | 0.6914                           | 1                               |

Simultaneous: 2.4G wifi+5G wifi=0.0763/1+0.6914/1=0.7677<1

Note: The estimation distance is 20 cm

® Conclusion: The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.

END OF REPORT