中认信通
CHINA CERTIFICATION ICT CO., LTD (DONGGUAN)

ACCREDITED
TESTING LABORATORY
CERTIFICATE # 6356.01

MAXIMUM PERMISSIBLE EXPOSURE EVALUATION REPORT

Applicant: **SHENZHEN TENDA TECHNOLOGY CO.,LTD.**

Address: 6-8 Floor, Tower E3, No. 1001, Zhongshanyuan Road, Nanshan District, Shenzhen, China. 518052

FCC ID: **V7TRX12P2**

HVIN: **RX12 Pro**

Product Name: **AX3000 Dual Band Gigabit Wi-Fi 6 Router**

Standard(s): **47 CFR §1.1310, 47 CFR §2.1091, 47 CFR §15.247(i),47 CFR §15.407(f)**

The above device has been tested and found compliant with the requirement of the relative standards by China Certification ICT Co., Ltd (Dongguan)

Report Number: **CR230957522-00E**

Date Of Issue: **2023/11/30**

Reviewed By: **Julie Tan** Julie Tan

Title: RF Engineer

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Test Facility

The Test site used by China Certification ICT Co., Ltd (Dongguan) to collect test data is located on the No. 113, Pingkang Road, Dalang Town, Dongguan, Guangdong, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 442868, the FCC Designation No. : CN1314.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0123.

Declarations

China Certification ICT Co., Ltd (Dongguan) is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with a triangle symbol "▲". Customer model name, addresses, names, trademarks etc. are not considered data.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	CR230957522-00E	Original Report	2023/11/30

1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

1.1.1 General:

EUT Name:	AX3000 Dual Band Gigabit Wi-Fi 6 Router
EUT Model:	RX12 Pro
Multiple Models:	TX12 Pro,RX12,TX12
Rated Input Voltage:	DC12V from adapter
EUT Received Date:	2023/10/9
EUT Received Status:	Good

2. SUMMARY OF TEST RESULTS

Standard(s)/Rule(s)	Description of Test	Result
§15.407 (f) & §1.1310 & §2.1091	RF Exposure Evaluation	Compliant

3 RF EXPOSURE EVALUATION (MPE)

3.1 RF Exposure Evaluation

3.1.1 Applicable Standard

According to subpart 15.247(i)& 15.407(f) and subpart §1.1310, systems operating under the provisions of this 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.

Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

(B) Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	**Electric Field Strength (V/m)**	**Magnetic Field Strength (A/m)**	**Power Density (mW/cm^2)**	**Averaging Time (minutes)**
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f²)	30
30–300	27.5	0.073	0.2	30
300–1500	/	/	f/1500	30
1500–100,000	/	/	1.0	30

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

According to §1.1310 and §2.1091 RF exposure is calculated.

3.1.2 Calculation formula:

Prediction of power density at the distance of the applicable MPE limit
$S = PG/4\pi R^2$ = power density (in appropriate units, e.g. mW/cm^2);
P = power input to the antenna (in appropriate units, e.g., mW);
G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain;
R = distance to the center of radiation of the antenna (appropriate units, e.g., cm);

For simultaneously transmit system, the calculated power density should comply with:

$$\sum_i \frac{S_i}{S_{Limit,i}} \leq 1$$

3.1.3 Calculated Data:

Operation Modes	Frequency (MHz)	Antenna Gain		Conducted output power including Tune-up Tolerance		Evaluation Distance (cm)	Power Density (mW/cm^2)	MPE Limit (mW/cm^2)
		(dBi)	(numeric)	(dBm)	(mW)			
2.4G WiFi	2412-2462	7.84	6.08	28	630.96	30.00	0.339	1.0
5G WiFi	5150-5250	8.93	7.82	21.0	125.89	30.00	0.015	1.0
	5250-5350	8.97	7.89	20.5	112.20	30.00	0.078	1.0
	5725-5850	8.24	6.67	19.5	89.13	30.00	0.053	1.0

Note:
Antenna gain includes bearmforming gain for WLAN 2.4G and 5250-5350MHz/5725-5850MHz(the maximum power at 802.11a mode for 5150-5250MHz band was used for RF exposure evaluation).
The Maximum Conducted Power including Tune-up Tolerance was declared by manufacturer.

For Simultaneous transmission:

2.4G WiFi and 5G WiFi can transmit simultaneously:

$$\sum_i \frac{S_i}{S_{Limit,i}} \leq 1$$

$= S_{2.4\ G\ WiFi} / S_{limit\text{-}2.4\ G\ WiFi} + S_{5\ G\ WiFi} / S_{limit\text{-}5\ G\ WiFi}$

=0.339/1+0.078/1

=0.418

< 1.0

Result: Compliant. The device compliant Simultaneous transmission at 30cm distances.

===== END OF REPORT =====