

EN IEC 62311:2020

EN 50665:2017

ASSESSMENT REPORT

For

SHENZHEN TENDA TECHNOLOGY CO., LTD.

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Tested Model: AX12 Pro

Report Type: Original Report	Product Name: AX3000 Dual Band Gigabit Wi-Fi 6 Router
Report Number:	RSZA251230001-01E
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REPORT REVISION HISTORY

Number of Revisions	Report No.	Version	Issue Date	Description
0	RSZA251230001-01E	R1V1	2026-02-06	Initial Release

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Applicant:	SHENZHEN TENDA TECHNOLOGY CO., LTD.
Product Name:	AX3000 Dual Band Gigabit Wi-Fi 6 Router
Tested Model:	AX12 Pro
Power Supply:	DC 12V from adapter
Maximum EIRP:	2.4 G Wi-Fi SISO 802.11b: 18.07 dBm 802.11g: 16.96 dBm MIMO 802.11 n-HT20: 18.41 dBm 802.11 n-HT40: 18.61 dBm 802.11 ax-HE20: 18.25 dBm 802.11 ax-HE40: 18.22 dBm Beamforming 802.11 n-HT20: 19.20 dBm 802.11 n-HT40: 19.33 dBm 802.11 ax-HE20: 19.35 dBm 802.11 ax-HE40: 19.23 dBm 5G Wi-Fi SISO Sub-band 1: 802.11a: 18.89 dBm Sub-band 2: 802.11a: 18.98 dBm MIMO: Sub-band 1: 802.11ac-VHT20: 18.42 dBm 802.11ac-VHT40: 18.08 dBm 802.11ac-VHT80: 18.75 dBm 802.11ax-HE20: 18.36 dBm 802.11ax-HE40: 18.60 dBm 802.11ax-HE80: 18.35 dBm Sub-band 2: 802.11ac-VHT20: 18.50 dBm 802.11ac-VHT40: 18.69 dBm 802.11ac-VHT80: 18.88 dBm 802.11ax-HE20: 18.71 dBm 802.11ax-HE40: 18.52 dBm 802.11ax-HE80: 18.64 dBm 802.11ac-VHT160: 18.47 dBm 802.11ax-HE160: 18.03 dBm Beamforming: Sub-band 1: 802.11ac-VHT20: 19.09 dBm 802.11ac-VHT40: 18.35 dBm 802.11ac-VHT80: 18.94 dBm 802.11ax-HE20: 18.64 dBm 802.11ax-HE40: 17.42 dBm 802.11ax-HE80: 18.84 dBm Sub-band 2: 802.11ac-VHT20: 19.37 dBm 802.11ac-VHT40: 18.91 dBm 802.11ac-VHT80: 19.27 dBm 802.11ax-HE20: 18.72 dBm 802.11ax-HE40: 17.42 dBm 802.11ax-HE80: 18.53 dBm 802.11ac-VHT160: 18.63 dBm 802.11ax-HE160: 18.35 dBm
RF Function:	2.4 G Wi-Fi; 5G Wi-Fi

Operating Band/Frequency:	2.4 G Wi-Fi 2412-2472 MHz (802.11b/g/n-HT20/ax-HE20), 2422~2462 MHz (802.11n-HT40/ax-HE40) 5G Wi-Fi Sub-band 1: 5150~5250 MHz Sub-band 2: 5250~5350 MHz
Channel Separation:	2.4 G Wi-Fi: 5 MHz 5G Wi-Fi: B1:7, B2:7
Modulation Type:	2.4 G Wi-Fi: DSSS, OFDM 5G Wi-Fi: OFDM; OFDMA
★Maximum Antenna Gain:	2.4 G Wi-Fi Antenna Gain: 4.83 dBi 5G Wi-Fi Antenna Gain: 7.06 dBi Beamforming: 3.0 dB

*Adapter information**Model: BW0121201000WE**Input: 100-240V, 50/60Hz, 0.5A**Output: 12.0V, 1.0A 12.0W**Note: The maximum antenna gain was provided by the applicant.**All measurement and test data in this report was gathered from production sample serial number: RSZA251230001-1(Assigned by BACL (Kunshan). The EUT was received on 2025-12-30).***Objective**

This report is prepared for *SHENZHEN TENDA TECHNOLOGY CO., LTD.* in accordance with EN 50665:2017, Generic standard for assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz – 300 GHz) and EN IEC 62311:2020, Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz – 300 GHz) is to demonstrate the compliance of apparatus with the basic restrictions or reference levels on exposure of the general public related to electric, magnetic, electromagnetic fields as well as induced and contact current

The objective is to determine the compliance of EUT with EN IEC 62311:2020, EN 50665:2017.

Technical Requirements Specification in EN IEC 62311:2020**General Description of Applied Standards**

EN IEC 62311 Generic standard to demonstrate the compliance of electronic and electrical apparatus with the basic restrictions related to human exposure to electromagnetic fields (0 Hz–300 GHz) is to demonstrate the compliance of apparatus with the basic restrictions or reference levels on exposure of the general public related to electric, magnetic, electromagnetic fields as well as induced and contact current.

RF Exposure Evaluation

Limit:

According to EN IEC 62311, the criteria listed in the below table shall be used to evaluate the environmental impact of human exposure to radio-frequency (RF) radiation as specified table 2 of Council Recommendation 1999/519/EC.

Reference levels for electric, magnetic and electromagnetic fields
(0 Hz to 300 GHz, unperturbed rms values)

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (μT)	Equivalent plane wave power density S_{eq} (W/m ²)
0-1 Hz	—	$3,2 \times 10^4$	4×10^4	—
1-8 Hz	10 000	$3,2 \times 10^4/f^2$	$4 \times 10^4/f^2$	—
8-25 Hz	10 000	$4\,000/f$	$5\,000/f$	—
0,025-0,8 kHz	$250/f$	$4/f$	$5/f$	—
0,8-3 kHz	$250/f$	5	6,25	—
3-150 kHz	87	5	6,25	—
0,15-1 MHz	87	$0,73/f$	$0,92/f$	—
1-10 MHz	$87/f^{1/2}$	$0,73/f$	$0,92/f$	—
10-400 MHz	28	0,073	0,092	2
400-2 000 MHz	$1,375\ f^{1/2}$	$0,0037\ f^{1/2}$	$0,0046\ f^{1/2}$	$f/200$
2-300 GHz	61	0,16	0,20	10

Notes:

1. f as indicated in the frequency range column.

Calculation method

The antenna of the product, under normal use condition is at least 20cm away from the body of the user. Warning statement of the user for keeping 20cm separation distance and the prohibition of operating to a person has been printed on the user manual. So, this product under normal use is located on electromagnetic far field between the human body.

Far Field Calculation Formula

$$E = \frac{\sqrt{30PG(\theta, \phi)}}{r}$$

G = antenna gain relative to an isotropic antenna
 θ, ϕ = elevation and azimuth angles to point of investigation
 r = distance from observation point to the antenna

Calculation Data

Function	Frequency Range (MHz)	★Tune-up EIRP (dBm)	Tune-up EIRP (mW)	E-Field Strength (V/m)	E-Field Limit (V/m)	Result
2.4G Wi-Fi (SISO)	2412-2472	18.5	70.79	7.29	61	Pass
2.4G Wi-Fi (MIMO)	2422-2462	19.0	79.43	7.72	61	Pass
2.4G Wi-Fi (Beamforming)	2422-2462	19.50	89.13	8.19	61	Pass
5G Wi-Fi (SISO)	5150-5250	19.0	79.43	7.72	61	Pass
	5250-5350	19.0	79.43	7.72	61	Pass
5G Wi-Fi (MIMO)	5150-5250	19.0	79.43	7.72	61	Pass
	5250-5350	19.0	79.43	7.72	61	Pass
5G Wi-Fi (Beamforming)	5150-5250	19.50	89.13	8.19	61	Pass
	5250-5350	19.50	89.13	8.19	61	Pass

Note:

1. Antenna Gain (numeric): 4.83 dBi for 2.4G Wi-Fi, 7.06 dBi for 5G Wi-Fi, 3.0 dB for Beamforming
2. The distance from observation point to the antenna is 20cm.

Conclusion: The RF Exposure is compliance

EXHIBIT A - EUT PHOTOGRAPHS

Refer to report No.: RSZA251230001-01B.

Declarations

1. The laboratory is not responsible for the authenticity of any information provided by the applicant. Information from the applicant that may affect test results is marked with “★”.
2. The test data was only valid for the test sample(s). This report must not be duplicated or used in part without prior written consent from the laboratory.
3. This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.
4. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.
5. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor $k=2$ with the 95.45% confidence interval.

*******END OF REPORT*******