



# RADIO TEST REPORT

Report No: STS2104117H01

Issued for

Bowei Technology Co., Ltd

2F, Building No. 6C, 1658, Gumei Rd., Xuhui District,  
Shanghai, China

<b>Product Name:</b>	Wi-Fi 6 MESH AP
<b>Brand Name:</b>	<b>AZORES</b>
<b>Model Name:</b>	AX6600
<b>Series Model:</b>	N/A
<b>FCC ID:</b>	2AVWB-AX6600
<b>Test Standard:</b>	FCC 47CFR §2.1091

Any reproduction of this document must be done in full. No single part of this document may be reproduced without permission from STS, all test data presented in this report is only applicable to presented test sample.





### Test Report Certification

**Applicant's Name**..... : Bowei Technology Co., Ltd  
 Address ..... : 2F, Building No. 6C, 1658, Gumei Rd., Xuhui District, Shanghai, China  
**Manufacturer's Name** ..... : TDG Technology Co., Ltd  
 Address ..... : No.1 Yatai Road, Jiaxing City, Zhejiang Province, P.R.C.

#### Product Description

Product Name..... : Wi-Fi 6 MESH AP  
 Brand Name ..... : **AZORES**  
 Model Name ..... : AX6600  
 Series Model..... : N/A

**Standards** ..... : FCC 47CFR §2.1091

This report shall not be reproduced except in full, without the written approval of STS, this document only be altered or revised by STS, personal only, and shall be noted in the revision of the document.

#### Date of Test .....

Date of receipt of test item ..... : 22 Apr. 2021  
 Date (s) of performance of tests ..... : 22 Apr. 2021 ~ 18 May 2021  
 Date of Issue..... : 18 May 2021  
 Test Result..... : **Pass**

Testing Engineer : *Chris Chen*

(Chris Chen)

Technical Manager : *Sean She*

(Sean she)

Authorized Signatory : *Vita Li*

(Vita Li)





## TABLE OF CONTENTS

<b>1. GENERAL INFORMATION</b>	<b>5</b>
1.1 GENERAL DESCRIPTION OF THE EUT	5
1.2 TEST FACTORY	6
<b>2. FCC 47CFR §2.1091 REQUIREMENT</b>	<b>7</b>
2.1 TEST STANDARDS	7
2.2 LIMIT	7
2.3 EUT OPERATION CONDITION	7
2.4 CLASSIFICATION	7
2.4 TEST RESULT	8





**Revision History**

Rev.	Issue Date	Report No.	Effect Page	Contents
00	18 May 2021	STS2104117H01	ALL	Initial Issue





## 1. GENERAL INFORMATION

### 1.1 GENERAL DESCRIPTION OF THE EUT

Product Name	Wi-Fi 6 MESH AP	
Brand Name	<b>AZORES</b>	
Model Name	AX6600	
Series Model	N/A	
Product Description	The EUT is Wi-Fi 6 MESH AP	
	Operation Frequency:	802.11b/g/n/ax(20MHz): 2412~2472MHz 802.11n/ax(40MHz):2422~2462MHz IEEE 802.11a/ n(HT20)/ac(VHT20)/ax(VHT20): 5.180GHz-5.240GHz IEEE 802.11n(HT40)/ac(VHT40) /ax(VHT40): 5.190GHz-5.230GHz IEEE 802.11ac(VHT80) /ax(VHT80): 5.210GHz
	2.4G WIFI Modulation Type:	802.11b(DSSS):CCK,DQPSK,DBPSK 802.11g(OFDM):BPSK,QPSK,16-QAM,64-QAM 802.11n(OFDM):BPSK,QPSK,16-QAM,64-QAM
	5G WIFI Modulation Type:	802.11a(OFDM): BPSK,QPSK,16-QAM,64-QAM 802.11n(OFDM): BPSK,QPSK,16-QAM,64-QAM 802.11ac(OFDM): BPSK,QPSK,16-QAM,64-QAM,256-QAM 802.11ax(OFDM, OFDMA): BPSK,QPSK,16-QAM,64-QAM,256-QAM,1024QAM
	2.4G Antenna Gain(dBi):	Antenna number: 2 Antenna A gain : 4dBi, Antenna B gain : 4dBi MIMO technology Directional gain=7.01dBi
	5.2G Antenna Gain(dBi):	Antenna number: 2 Antenna A gain : 4.5dBi, Antenna B gain : 4.5dBi MIMO technology Directional gain=7.51dBi
	5.8G Antenna Gain(dBi):	Antenna number: 4 Antenna 0 gain : 3.5dBi, Antenna 1 gain : 3.5dBi Antenna 2 gain : 3.5dBi, Antenna 3 gain :3.5dBi MIMO technology Directional gain=9.52dBi
	Antenna Designation:	PIFA Antenna
Adapter	Model: BY-SKY120200U70L Input: 100-240V AC, 50/60Hz,0.7A MAX Output:DC12V 2A Model: RD1202000-C55-154MG Input: 100-240V AC, 50/60Hz,1.0A MAX Output: DC12V 2A	
Hardware version number	V1.0.0	
Software version number	V1.0.1	



## 1.2 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD

Add. : A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ,  
Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China

FCC test Firm Registration Number: 625569

IC test Firm Registration Number: 12108A

A2LA Certificate No.: 4338.01





## 2. FCC 47CFR §2.1091 REQUIREMENT

### 2.1 TEST STANDARDS

The limit for Maximum Permissible Exposure (MPE) specified in FCC 1.1310 is followed. The gain of the antennas used in the product is extracted from the Antenna data sheets provided and also the maximum total power input to the antenna is measured. Through the Friis transmission formula and the maximum gain of the antenna, we can calculate the distance, away from the product, where the limit of MPE is reached.

Although the Friis Transmission formula is far field assumption, the calculated result of that is an over-prediction for near field power density. It is taken as worst case to specify the safety range.

### 2.2 LIMIT

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environmental impact of the human exposure to radio-frequency (RF) radiation as specified in 1.1307 (b)

Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )
Limits for Occupational / controlled Exposures			
300 - 1500	--	--	F/300
1500 – 100000	--	--	5.0
Limits for General population / Uncontrolled Exposure			
300 - 1500	--	--	F/1500
1500 – 100000	--	--	1.0

F= Frequency in MHz

Friss Formula

Friss Transmission Formula:  $Pd = (Pout * G) / (4*pi*r^2)$

Where

Pd = power density in mW/cm<sup>2</sup>

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = Distance between observation point and the center of radiator in cm

If we know the maximum gain of the antenna and the total output power to the antenna, through calculation, we will know MPE value at distance 20cm.

### 2.3 EUT OPERATION CONDITION

EUT was enabled to transmit and receive at lowest, middle and highest channels.

### 2.4 CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. Warning statement to the user for keeping at least 20cm or more separation distance from the antenna should be included in the User manual. So, this device is classified as Mobile device.



## 2.4 TEST RESULT

### 2.4G WIFI Turn up

Mode	Detector	Turn up
802.11b	AVG	9±1dBm
802.11g	AVG	8±1dBm
802.11n(HT20)	AVG	11±1dBm
802.11n(HT40)	AVG	11±1dBm
802.11ax(HT20)	AVG	10±1dBm
802.11ax(HT40)	AVG	10±1dBm

### ANT Gain (G)

SISO Mode: 4dBi (gain of antenna in linear scale=2.51)

MIMO Mode: 7.01dBi (gain of antenna in linear scale=5.02)

Protocol	Output Power to Antenna (mW)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Result
802.11b	7.85	0.0004	1	Pass
802.11g	4.81	0.003	1	Pass
802.11n(HT20)	19.68	0.013	1	Pass
802.11n(HT40)	19.68	0.001	1	Pass
802.11ax(HT20)	18.03	0.013	1	Pass
802.11ax(HT40)	15.45	0.012	1	Pass





## 5.2G WIFI Turn up

Mode	Detector	Turn up
802.11a	AVG	5±1dBm
802.11n(HT20)	AVG	8±1dBm
802.11n(HT40)	AVG	8±1dBm
802.11ac(HT20)	AVG	8±1dBm
802.11ac(HT40)	AVG	7±1dBm
802.11ac(HT80)	AVG	7±1dBm
802.11ax(HT20)	AVG	8±1dBm
802.11ax(HT40)	AVG	7±1dBm
802.11ax(HT80)	AVG	8±1dBm

## ANT Gain (G)

SISO Mode: 4.5dBi (gain of antenna in linear scale=2.82)

MIMO Mode: 7.51dBi (gain of antenna in linear scale=5.64)

Protocol	Output Power to Antenna (mW)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Result
802.11a	3.86	0.0002	1	Pass
802.11n(HT20)	6.59	0.007	1	Pass
802.11n(HT40)	6.31	0.007	1	Pass
802.11ac(HT20)	6.41	0.001	1	Pass
802.11ac(HT40)	5.77	0.006	1	Pass
802.11ac(HT80)	5.92	0.007	1	Pass
802.11ax(HT20)	6.85	0.001	1	Pass
802.11ax(HT40)	6.15	0.007	1	Pass
802.11ax(HT80)	6.47	0.007	1	Pass



## 5.8G WIFI Turn up

Mode	Detector	Turn up
802.11a	AVG	8±1dBm
802.11n(HT20)	AVG	13±1dBm
802.11n(HT40)	AVG	13±1dBm
802.11ac(HT20)	AVG	13±1dBm
802.11ac(HT40)	AVG	13±1dBm
802.11ac(HT80)	AVG	20±1dBm
802.11ax(HT20)	AVG	13±1dBm
802.11ax(HT40)	AVG	13±1dBm
802.11ax(HT80)	AVG	19±1dBm

## ANT Gain (G)

SISO Mode: 3.5dBi (gain of antenna in linear scale=2.24)

MIMO Mode: 9.52dBi (gain of antenna in linear scale=8.95)

Protocol	Output Power to Antenna (mW)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Result
802.11a	7.55	0.0003	1	Pass
802.11n(HT20)	24.49	0.044	1	Pass
802.11n(HT40)	23.01	0.041	1	Pass
802.11ac(HT20)	24.89	0.004	1	Pass
802.11ac(HT40)	23.88	0.043	1	Pass
802.11ac(HT80)	106.41	0.189	1	Pass
802.11ax(HT20)	24.32	0.004	1	Pass
802.11ax(HT40)	22.75	0.041	1	Pass
802.11ax(HT80)	83.95	0.149	1	Pass

Note: 2.4G WIFI and 5G WIFI cannot be transmitted at the same time.

\*\*\*\*\*END OF THE REPORT\*\*\*\*\*