



RF Exposure Evaluation Declaration

FCC ID: 2A5R6AASA-2B-2C

Applicant: AXEND, Inc.

Product: AeroSense Assure Home Care Assistant

Model No.: AASA-2B, AASA-2C, AASA-2B/N, AASA-2C/N

Brand Name: AEROSENSE

FCC Classification: Digital Transmission System (DTS)
Part 15 Low Power Communication Device Transmitter
(DXX)

FCC Rule Part(s): KDB 447498 D01v06

Reviewed By:

Jame Yuan

Approved By:

Robin Wu



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standards through the calibration of the equipment and evaluated measurement uncertainty herein.

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Revision History

Report No.	Version	Description	Issue Date	Note
2201RSU057-U4	Rev. 01	Initial report	04-18-2022	Valid

CONTENTS

Description	Page
1. General Information	4
1.1. Applicant.....	4
1.2. Manufacturer	4
1.3. Testing Facility.....	4
1.4. Product Information	5
1.5. Radio Specification	5
1.6. Antenna Details.....	5
2. RF Exposure Evaluation.....	6
2.1. Test Limits	6
2.2. Test Result.....	7
Appendix A - EUT Photograph	8

1. General Information

1.1. Applicant

AXEND, Inc.

12045 E. Waterfront Drive, Ste 450 Los Angeles CA 90094

1.2. Manufacturer

Time Varying Transmission Co. Ltd

No.9 Venture Road, High-tech District, Xiangtan, Hunan, 411102, China

1.3. Testing Facility

<input checked="" type="checkbox"/>	Test Site – MRT Suzhou Laboratory
	Laboratory Location (Suzhou - Wuzhong) D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China
	Laboratory Location (Suzhou - SIP) 4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China
	Laboratory Accreditations
	A2LA: 3628.01 CNAS: L10551 FCC: CN1166 ISED: CN0001 VCCI: <input type="checkbox"/> R-20025 <input type="checkbox"/> G-20034 <input type="checkbox"/> C-20020 <input type="checkbox"/> T-20020 <input type="checkbox"/> R-20141 <input type="checkbox"/> G-20134 <input type="checkbox"/> C-20103 <input type="checkbox"/> T-20104
<input type="checkbox"/>	Test Site – MRT Shenzhen Laboratory
	Laboratory Location (Shenzhen) 1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China
	Laboratory Accreditations
	A2LA: 3628.02 CNAS: L10551 FCC: CN1284 ISED: CN0105
<input type="checkbox"/>	Test Site – MRT Taiwan Laboratory
	Laboratory Location (Taiwan) No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)
	Laboratory Accreditations
	TAF: L3261-190725 FCC: 291082, TW3261 ISED: TW3261

1.4. Product Information

Product Name	AeroSense Assure Home Care Assistant
Model No.	AASA-2B, AASA-2C, AASA-2B/N, AASA-2C/N
Brand Name	AEROSENSE
Wi-Fi Specification	802.11b/g/n
Radar Specification	60-64G
Antenna Information	Refer to clause 1.6
Accessory	
Adapter	MODEL: XSC-0502000SWCNU INPUT: 100-240V ~ 50/60Hz 0.4A OUTPUT: 5V = 2A
Remark:	
1.The models (AASA-2B and AASA-C) use the different software algorithms, but the same hardware. The difference between AASA-2B and AASA-2B/N only external packing.	
2. The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	

1.5. Radio Specification

Frequency Range	802.11b/g/n-HT20: 2412 ~ 2462MHz
Channel Number	802.11b/g/n-HT20: 11
Type of Modulation	802.11b: DSSS 802.11g/n: OFDM
Data Rate	802.11b: 1/2/5.5/11Mbps 802.11g: 6/9/12/18/24/36/48/54Mbps 802.11n: up to 72.2Mbps

Note: For other features of this EUT, test report will be issued separately.

1.6. Antenna Details

Antenna Type	Frequency Band (MHz)	T _x Paths	Max Antenna Gain (dBi)
on-board ceramic	2412 ~ 2462	1	2.0
Patch	60000-64000	1	3.5

2. RF Exposure Evaluation

2.1. Test Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of 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 ²)	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	f/1500	6
1500-100,000	--	--	1	30

f= Frequency in MHz

Calculation Formula: $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

r = distance between observation point and center of the radiator in cm

P_d is the limit of MPE, 1mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

2.2. Test Result

Product	AeroSense Assure Home Care Assistant
Test Item	RF Exposure Evaluation

Antenna Gain: Refer to clause 1.6.

Test Mode	Frequency Band (MHz)	Conducted Power (dBm)	Antenna Gain (dBi)	Maximum EIRP (dBm)
802.11b/g/n	2412 ~ 2462	25.22	2	27.22
60GHz Radar	57000 ~ 71000	-13.21	3.5	-9.71

Test Mode	Frequency Band (MHz)	Maximum EIRP (dBm)	Compliance Distance (cm)	Power Density (mW/cm ²)	Limit of Power Density (mW/cm ²)
802.11b/g/n	2412 ~ 2462	27.22	20	0.104889	1
60GHz Radar	57000 ~ 71000	-9.71	20	0.000021	1

CONCLUSION:

WLAN 2.4GHz Band, 60G Radar can transmit simultaneously.

The max Power Density at R (20 cm) = $0.104889\text{mW/cm}^2 + 0.000021\text{mW/cm}^2 = 0.10491\text{mW/cm}^2 < 1\text{mW/cm}^2$.

Therefore, the compliance distance is 20cm.

_____ The End _____

Appendix A - EUT Photograph

Refer to “2201RSU057-UE” file.

_____ The End _____